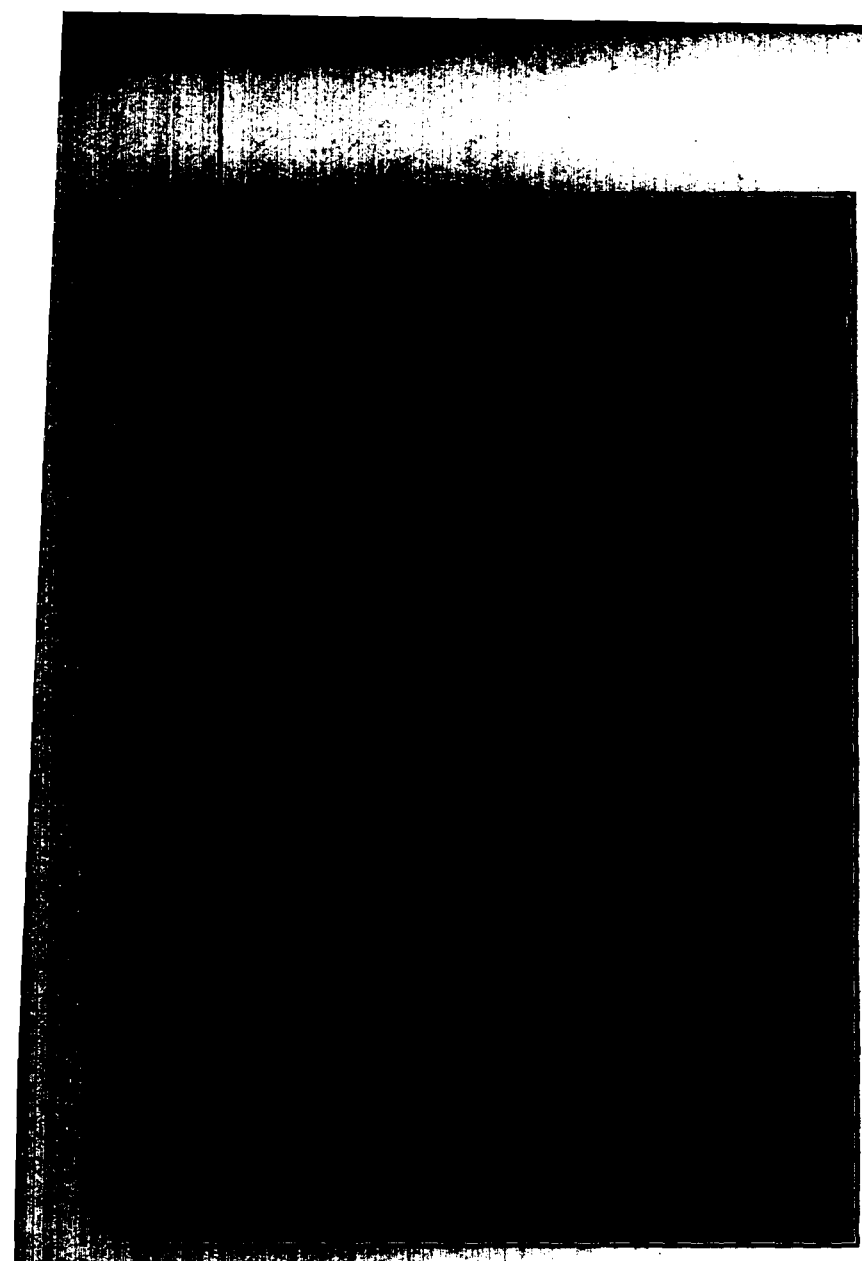

BRIGADIER GENERAL EDWARD S. GODFREY,
UNITED STATES ARMY.


# JOURNAL
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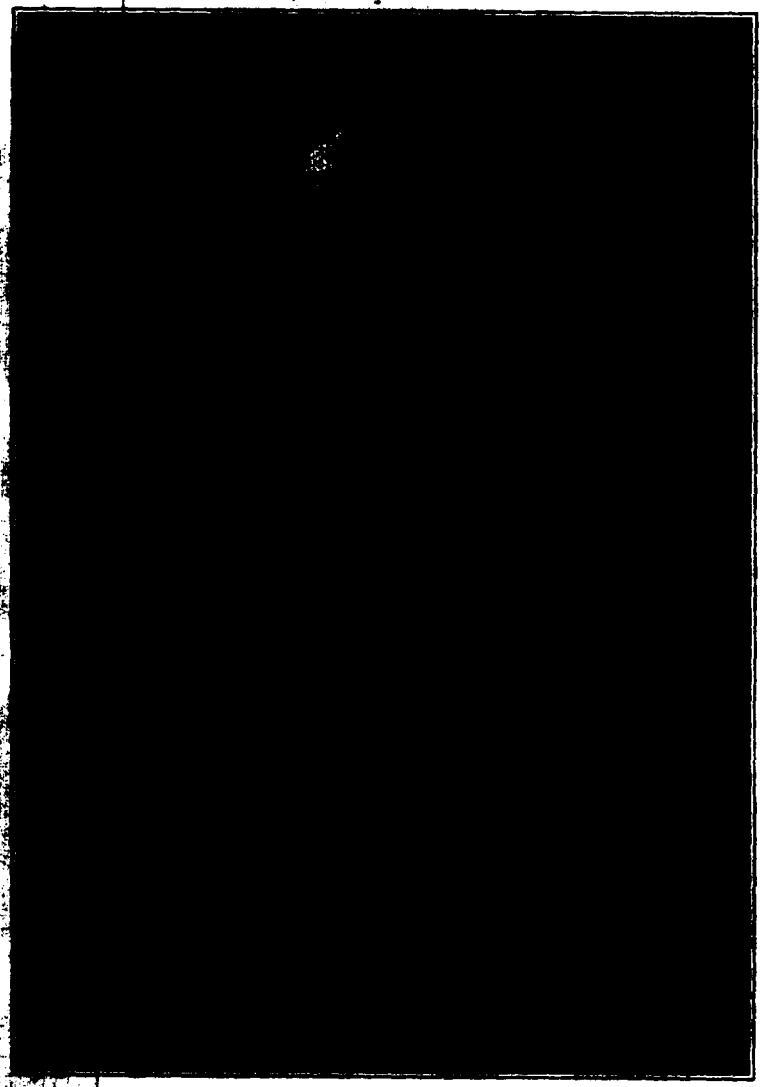

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upon the ground, and in this condition preserves its nutritive qualities for a year, unless heavy rains occur to take the strength out of the grass.

Water is scarce and ranchmen, or station owners as they are called in Australia, are in a measure dependent upon artesian wells, some of which are bored to a depth of 3,000 to 4,000 feet and from which the water comes up boiling hot.

The temperatures in this section are very high; the mercury reached 109 degrees when I was at Winton early last November, and they told me that a record as high as 126 degrees has been reached in that locality.

This country, which reminds one forcibly of western Kansas and Nebraska, is an ideal one for horse breeding. The winters are warm enough for horses to graze the year round. Stock stations are measured, not by the acre, but by the square mile. The one at Oondooroo, where I was most hospitably entertained, had six hundred square miles under fence and was stocked with 100,000 sheep, 20,000 cattle and about six hundred horses. They told me that the stations west of Winton were even much larger.

While I was at Winton last November, a herd of some 7,500 cattle passed through en route to market in New South Wales, about eight hundred miles distant. They had already traveled 2,500 miles from Victoria River, and had been sixteen months on the road. This would be like driving cattle in the United States from Fort Assiniboine, Montana, to St. Louis, Missouri.

The great majority of horses seen were not well bred; but at many of the stations, such as Oondooroo and Eversham, great care is taken in breeding, and one can buy excellent remounts there from $60.00 to $100.00 per head. There has been a great demand in Australia for horses during the past few years, due to the Boer War, Russian-Japanese War, as well as to supply a steady demand for the Indian army, and in consequence horses have more than doubled in price. An unprecedented drought in Queensland from 1901-05, which was so severe as to kill extensive forests and wild animals such as the kangaroo, brought horse raising to a standstill during that time.



More attention is now being given than formerly to the breeding of horses, and the imperative needs of war having ceased, the demand for high class remounts is rather less than it was several years ago.

From Winton we proceeded by stage coach 128 miles to Longreach (427 miles from the coast) over a road so level that it almost might be used for a race course throughout its whole length. This section is but sparsely settled and abounds in wild turkey, or rather a turkey bustard, which is said to be a very palatable game bird. Through here were seen in great numbers flocks of red-breasted galahs or native parrots. In fact, throughout Australia one is struck by the number and variety of birds. The emu is the largest, and its eggs are in great demand as curios. This will doubtless ultimately lead to its extinction as one of the native wild birds. The moa of New Zealand, now extinct, was a bird of similar type and a monster in size, being no less than eleven feet in height. The kangaroo and wallaby are also fast disappearing, although I saw a few in the timbered country of southeast Queensland.

Horses change hands in Australia largely through the medium of horse sales or auctions, and the country abounds in agents, salesmen and auctioneers. A horse sale, for instance, will be advertised several months in advance, to be held in Longreach, by some enterprising agent. Those who have stock for sale will have it on hand at the appointed time to be auctioned off at a time when buyers have gathered from many hundreds of miles around. The method operates in this way to the mutual convenience of both buyer and seller, while the auctioneer reaps a benefit from the percentages of sales. Some of the larger firms have these auctions periodically.

New South Wales and Victoria are older and more thickly settled states than Queensland, and horse breeding has been carried on in these states a greater length of time, but the number of horses in these states is not nearly so great in proportion to the population as in Queensland. As a part of the horses of New South Wales and Victoria are imported from Queensland, it naturally follows that the prices of horses are higher in these states.

It was estimated in 1905 that Queensland, with a population of but 525,728, had 430,565 horses—nearly one horse to every man, woman and child. In that year it exported nearly eighteen thousand horses, at an average value of about $63.00 each. About twenty-eight per cent. of its export of horses went to India that year, sixty-four per cent. to Hong Kong; 582 went to the Philippines.

The saddle horses exported for cavalry purposes are classed as remounts and bounders; the former, which are purchased for the white cavalry, bring £45 in Bombay. The latter are rather inferior, and are assigned to the native cavalry.

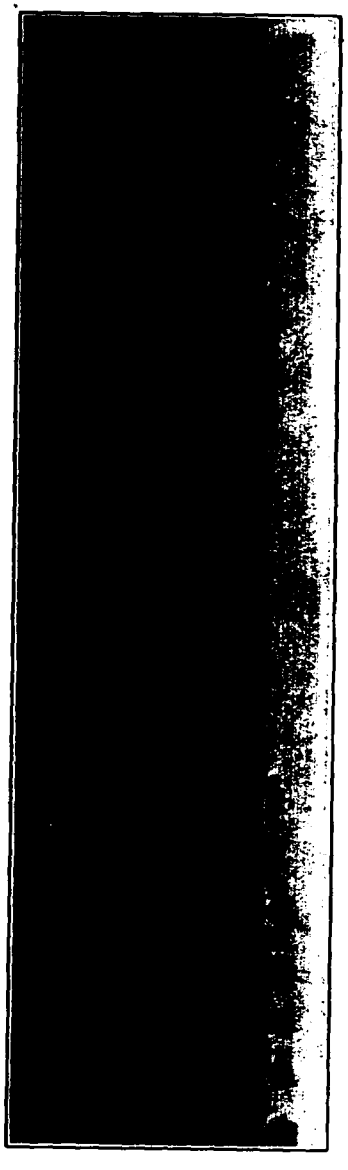
Practically all the horses exported are unbroken, however. They have been broken perhaps to lead and a few have been ridden, but they may practically all be classed as unbroken. If we buy from Australia we must, therefore, make up our minds to do our own horse-breaking.

The dealers say that their customers ordinarily prefer to do their own horse-breaking. However, it is suspected that the real reason is that those raising and dealing in horses do not care to take the trouble to do this work, preferring to shift it to the permanent owners. It would not only require the breeder or dealer to keep horse-breakers employed for the special purpose of breaking horses, but also to keep the animals in training, for unless the horses were frequently ridden they would forget the lessons taught them and soon return to their original unbroken state. To take horses which are simply halter broken and make thoroughly trained cavalry horses of them will entail, of course, considerable labor on the part of troops, but it cannot be said to be outside of their legitimate duties.

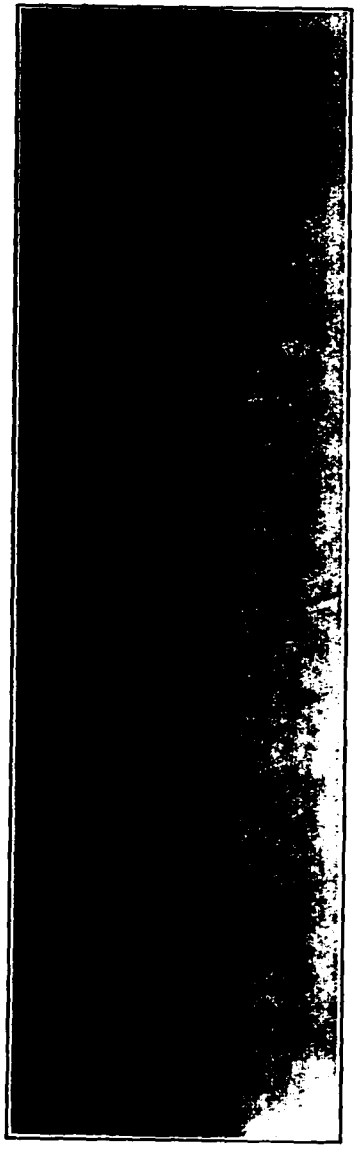
It would seem to be better by far to get blooded horses, conforming closely to the ideal troop horse, and to do our own horse-breaking than to put up with the worthless, ungainly, rough gaited plugs that unfortunately form too large a proportion of the horses now found in our ranks, which disgust and discourage alike the troopers and the officers over them. Australian horses are cheap enough, even high class blooded stock, that one can afford the extra effort to secure superior remounts.

New Zealand and Tasmania were visited, but do not offer as good a field for our purpose as Australia, as they have no





With the exception of the greys this mob comprises native cavalry horses, being portion of a lot of 400 head selected by Mr. Howell for shipment to Bombay by the S. S. *Uganda*, January 15, 1907.



Group of "South African Constabulary" Horses.
Shown to Major Brown and picked out by Mr. Fred Howell, as suitable for the United States Cavalry.

surplus of horses; the rough seas between New Zealand and Australia would prove a disadvantage in the matter of transportation.

Fine blooded horses were observed in both Melbourne and Sydney, but their prices were decidedly higher than the same class of horses in Queensland; this latter state seems to answer our purpose also on account of its nearness. Horse transports from Rockhampton, Queensland, go north along the coast the entire distance inside the Great Barrier Reef, thus traveling in relatively smooth water. Even north of Australia one need seldom be more than twenty-four hours out of sight of land, and the long, heavy roll experienced in mid-ocean does not exist among the islands. In stress of weather the shipmaster can always run with his cargo to the lee of some island until the danger is past. These considerations reduce the risk of transportation to a minimum, and afford a distinct advantage over the Seattle-Manila route.

Good half and three-quarter blood remounts, distinctly high class, although only halter broken, can be purchased in Australia at from $85.00 to $125.00 per head, and the freight, feed and attendance to Manila will be about $35.00 more.

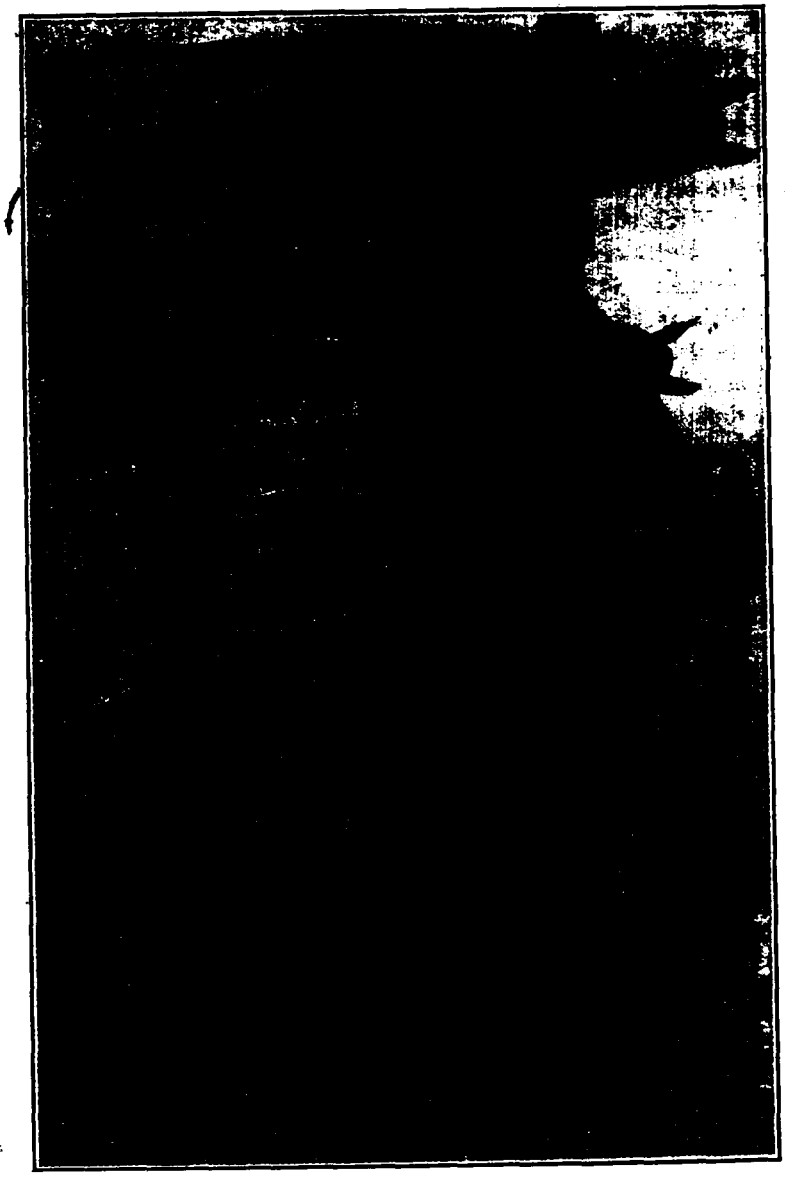
Taking our estimate of cost at $125.00, so as to be well within the limits, it will be seen that these horses can be laid down in Manila for about $160.00 per head.

Australia is preëminently a grazing country, with a population of but 4,500,000, and has a surplus of horses for export, and relatively her horses are cheap. The United States, with its decreasing grazing area, and population of 80,000,000, has use for practically all the horses raised there, and cavalry horses are reported as advancing in price.

It is reported that in 1905 the United States had about seventeen millions of horses, or approximately one to every five in population, while Queensland that year had nearly an average of a horse for every man, woman, and child.

The relative distance of the Philippines from Australia and the United States, and the protected nature of the Brisbane-Manila route, as compared with the long open one, Seattle-Manila, are so well illustrated geographically on the map that further argument seems unnecessary.





AUSTRALIAN HORSES.

The American horses are usually broken so that they can be ridden, but require a thorough course of training covering probably as much time as it will require to break and train the Australian remount, and with the difference that a large part of the remounts received from the United States are of such inferior grade and poor conformation, that it is hopeless ever to make serviceable troop horses out of them.

With short enlistments and inferior horses our cavalry is more and more becoming nothing better than good mounted infantry, and we hear from the umpires at maneuvers well founded criticisms that we are too prone to dismount to use rifle fire rather than to charge with the saber or pistol. The trouble is that our horses are not of that high class required for cavalry action.

The practice is prevalent in Australia of docking horses' tails, and in some sections of branding under the saddle. Our specifications therefor should warn against this for horses intended for the United States government.

Everywhere I went in Australia I was accorded the most hospitable treatment. I had simply to make it known that I was an American officer sizing up the horse market, and I had more offers of assistance than I could take advantage of. The Australians are anxious to increase their trade with the Philippines, and are so courteous and helpful to strangers that any horse board sent there would find their labors certainly no more difficult than in the United States.

# THE STRATEGIC USE OF CAVALRY.

By First Lieutenant S. R. GLEAVES, First Cavalry.*

HAND in hand with the advancement of civilization among the great nations of to-day, there has been the ever increasing development of armed forces capable of protecting their wealth, maintaining their national honor, and securing their political institutions. Military talent has been forced to meet greater demands than ever before; and to manipulate successfully the vast armies now sent into the field, new methods have been evolved and the art of war has been forced into startling changes.

Not least among these is the proper appreciation of the true rôle of cavalry, the strategical arm of the service, as infantry and artillery may be called the tactical arms. The increased power of the modern army is attended with increased difficulties; its great mass is difficult to move accurately and promptly, and, once committed to a false step, maneuvering for a new and more advantageous start is attended with perilous risk.

And so it is that the commander of the army, upon whose orders all movement depends, must have earlier and more accurate information than ever before; the bold and far-reaching action of his cavalry must clear up the situation and furnish him the data for his immediate movements.

The military world, though reluctant to accept our teaching, now gives to the American cavalry of '61-'65 the credit of grasping and applying the new rôle of modern cavalry in such a way as to revolutionize the employment of that arm; the dragoon of Stuart and Sheridan is the type all Europe now strives to produce, and these leaders, and others like them, founded in our Civil War the school of modern cavalry, and securely established for their arm a standard of efficiency never before realized in its history.

*One of a series of papers submitted on "The Conduct of War," Department of Military Art, Staff College, 1907.

It is rather remarkable that we find in the early European wars so few instances of a proper understanding of the possibilities of cavalry. Even Frederick the Great, whose tactical use of the arm is still a model, utterly failed to grasp its powers. In the Napoleonic era we find that Napoleon, "master of all that pertained to war," massed his cavalry into divisions in his first Italian campaign, and, at a later period, formed cavalry brigades and divisions, finally combining them into cavalry corps; both strategically and tactically his cavalry was brilliantly handled. During the long period of peace in Europe following the overthrow of Napoleon, none of the lessons of war were forgotten more completely than those of cavalry service.

The successful strategic and tactical use of cavalry in the Civil War has been already referred to as marking an epoch. Europe, however, was reluctant to study the new methods of our cavalry leaders, and in the War of 1866 which soon followed, the Prussian idea of the use of cavalry soon stood out in painful relief against the background of an otherwise creditable campaign; their cavalry divisions were actually ordered to march in the rear of their armies. We are therefore not surprised to find that, on the day before the decisive battle of Königgratz, the outposts of the two great contending armies faced each other at a distance of four and one-half miles without either suspecting the presence of the other.

But through these failures the Prussians were brought to realize their misconception of the proper employment of cavalry, and in the Franco-German War of 1870 the German cavalry, though not promptly nor aggressively employed during the German concentration along the frontier, was, nevertheless, later handled with great success, pushing out to the front several marches ahead of the main army, and achieving useful results in screening and information service, all, however, with an ease made possible only by the inefficiency of the French cavalry, who had long ago forgotten the teachings of Napoleon.

The Russo-Japanese War will teach us nothing new in cavalry service; the opportunities for good cavalry were evident, but the inefficiency of that arm, except in isolated cases, was manifest throughout the war.



It is seen, therefore, by this outline sketch, that we shall do best to turn to our own records for our instruction.

In campaign the cavalry of an army is now relied upon to carry out two important duties:

First, to supply the necessary information concerning the enemy.

Second, to cover its own army.

In performing the first of these duties, it is evident that aggressive, semi-independent action can alone secure results; the enemy's cavalry will be engaged in a like task, and, realizing its importance, will be prepared to back up these efforts by fighting if necessary. The cavalry of each army will realize the necessity of securing early and accurate information of the enemy's main body; information as to the hostile fighting unit, not the covering body, must serve as data for the orders and movements of our army.

Thus we see that the cavalry carrying out this service must be so organized as to be able to carry into effect certain unchangeable principles:

(1) It must operate aggressively until contact with the enemy's main body is secured, and then maintain uninterrupted touch.

(2) The best way to achieve this result is to defeat the enemy's cavalry.

(3) The cavalry must be unhampered by any but the most general orders, and these from the army commander only. Its movements depend upon those of the enemy, and its distance in front of the main army is, therefore, not to be prescribed.

To carry out these leading principles, the cavalry for this service is now formed into brigades and divisions, and under some circumstances, into cavalry corps, supported by horse artillery and machine guns, and accompanied by the proper complement of auxiliary troops and supply service, to the end that it may be strong in action, self-supporting, and independent of the troops in rear.

Although these cavalry masses contribute, by their interposition far in front and by the information they send back, to the strategic security of the army, the aggressive nature of their

action and the necessity for their constantly hanging on to the enemy's most formidable bodies, naturally do not permit them to undertake a service of direct security. For this covering service we must then provide an entirely separate and distinct cavalry body, and for this the divisional cavalry is maintained. Its employment is tactical and need not be considered here.

It is the cavalry division, then, a mobile, self-sustaining fighting unit in itself, which the army commander will rely upon as his strategic weapon. We must look upon this organization in the new light of modern improvement; as a powerful, self-supporting body of greatest mobility—a new unit which warfare never knew before, combining the offensive and defensive powers of infantry with all the possibilities of cavalry—supported by its own guns, served by its own engineers and signal corps, a combination of the three arms for powerful attack or for protracted defense.

To discuss in detail all the strategic results possible to such a unit, ably led and thoroughly understood by the army commander, would be to exhaust practically the whole range of strategic combinations.

We can only glance at those possibilities most evident and most general in their character, and most likely to occur under normal conditions; their ramifications and opportunities are endless.

For convenience, the strategical duties of cavalry, as the campaign develops from the time of declaration of war, may be considered under two phases:

1. The protection of the strategical concentration of our armies in anticipation of campaign.
2. Strategic aid during the active campaign.

### PROTECTION OF OUR STRATEGIC CONCENTRATION.

When the available military forces of a nation have been mobilized in anticipation of war, it becomes necessary to concentrate them as soon as possible at the points along the frontier previously selected in the general plan. As the offensive promises the greatest results in war, it will usually be the attempt of the military authorities to select these points of concentration



as far to the front as safety permits, and to advance therefrom in overwhelming force upon the declaration of war.

To secure this concentration until the army is ready to move, and to hinder the enemy's concentration, is the duty of the cavalry. If the available cavalry, which must be the first force to arrive, is at all adequate to cope with that of the enemy, this duty must be performed in an aggressive manner, and offensive movements begun immediately. The enemy's cavalry should be attacked and its undivided attention drawn to the service of security; his railway communications from the interior and laterally must be interrupted—not destroyed, usually, since we shall later need them—his telegraphic communication must be severed and his supplies destroyed. The leader of such cavalry must, of course, be resourceful and energetic, but in addition, his military education must be such as to give him a thorough grasp of the strategic situation; upon his conclusions may depend the course of the whole campaign.

He should institute an accurate and rapid service of information to army headquarters, and, early in the operations, the army commander should have information, by the capture of prisoners or otherwise, of the particular hostile organizations, by division or corps designation, in his front.

If we are so unfortunate as to be hopelessly inferior in cavalry, we can do no more than provide for the immediate security by interposing as efficient a cordon as possible along our front, devoting most of our attention to the most probable lines of hostile advance. Under such unfavorable circumstances an active enemy will soon complete his concentration while probably delaying ours, and, possessed of all necessary information, will, if so inclined, throw our army upon the defensive from the very inception of the campaign.

In 1861, at the beginning of our Civil War, the plateau of Manassas had been selected by the Confederate government as the point of concentration for those troops which were to menace Washington and cover Richmond from a Federal advance via the Orange and Alexandria railroad. Another point of concentration was Harper's Ferry, covering a possible Federal advance across the Potomac and up the Shenandoah Valley. The Con-

federate commands at these two places were laterally connected by the Manassas Gap Railroad. Had the Federal cavalry, small though it was, been organized into a single body and then handled with the understanding it received two years later, Johnston's communication with Beauregard would certainly have been interrupted and his opportune arrival on the field of Bull Run would never have taken place.

It is interesting to note that the Germans, during their concentration in the Palatinate in 1870, made the mistake, which the French might have made serious, of employing only a thin, immobile screen of all arms. Von Moltke should have provided this protection by an offensive use of his available cavalry mass —six divisions and five brigades. In addition to the security gained, the French intentions would have been promptly exposed by such a move, and the cautious detraining of the German Second Army five or six marches from the frontier rendered unnecessary.

### STRATEGIC DUTIES DURING ACTIVE OPERATIONS.

The concentration of the field army having been safely effected under cover of the cavalry, every effort of the army commander is centered upon the endeavor to strike the hostile main army as soon as possible, and to strike it under circumstances most favorable to himself and most disadvantageous to the enemy; in his conception of the plan most likely to achieve these results is shown the leader's grasp of the principles of strategy.

Von der Goltz, in his "Conduct of War," states that "rapidity, activity and surprise form the vital element of the strategical offensive." These three principles have long formed the motto of modern cavalry, and it is not surprising that the army commander has come to look upon that arm as his most effective instrument of strategy.

The strategic duties thus opened to cavalry, as the campaign develops, may be outlined as follows:

(*a*) Screening the movements of the army and deceiving the enemy as to the real plan of the army commander.



(*b*) Seizing points which will later become of importance to the main army.

(*c*) Those detached operations of selected troops known as raids.

### SCREENING.

The duty of concealing the strategic maneuvers of the army, and conveying false impressions to the enemy regarding its movements, is one of the most important that cavalry will be called upon to perform.

There is an idea, unfortunately quite general, that a cavalry screen is a cordon of observation groups passively covering the country in the front of the army, like a movable outpost. This is another of the misconceptions traceable to the "normal formation" diagram, and is quite a different method from that employed by the best leaders. The cavalry mass on this duty must be used actively and aggressively, and thrown forward in all available strength into contact at once; it must be less intent upon the security of every trail—the divisional cavalry will attend to that—and more intent upon close contact with the enemy, remembering always that its best guarantee of success is to defeat the enemy's cavalry.

We have noticed Napoleon's use of cavalry. In the Ulm campaign he "pushed Murat down with four divisions of cavalry to within thirteen to twenty miles north of Ulm, and during his further advance one of these divisions (Bourcier's) was pushed still closer toward Ulm and kept there. This division was directed to push constant reconnaissances toward Ulm, which reconnaissances were to proceed 'as far as possible.' Here we see no screen put out in the usual acceptance of the word, but a large body of cavalry pushed down *into contact* with the enemy, and kept there concentrated. This contact was maintained by *active* reconnaissance, and not by a mere passive cordon of posts." (Gough.)

Jackson was the first of our leaders to employ his cavalry properly in this respect, and in his Shenandoah Valley campaign of 1862 furnished an example no less brilliant.

"On the 30th of April, 1862, when Jackson started to withdraw his main forces from in front of Banks in order to concentrate with Johnston for an attack on Milroy, he left his cavalry under Ashby behind to show a front to Banks. This cavalry was not employed in any way as a passive screen, but on the 29th Ashby made a demonstration in force, and on the 30th he drove the Federal cavalry back on their camps. On the 7th of May, the day before Milroy's defeat at McDowell, and when Jackson was fifty miles away, as the crow flies, and farther by the circuitous roads, Banks was under the impression that Jackson was advancing against him, and was at Harrisonburg. A few days previously he had been firmly convinced that Jackson was retreating to Richmond, but the real nature of Jackson's movement was never even guessed by him. During all this time Ashby had been *actively* demonstrating against Banks' front." (Gough.)

After defeating Milroy at McDowell, Jackson retired from the vicinity to operate against Banks, again leaving a screen of cavalry.

### OCCUPATION OF IMPORTANT POINTS.

Owing to its great mobility, and the resisting power guaranteed by dismounted fire action, the use of machine gun batteries, and artillery support, cavalry bodies are essentially fitted to perform the duty of seizing and holding important points and positions in anticipation of the arrival of other troops.

In the Turko-Russian War, 1877-78, Roumania was to form the base of operations for the Czar's army, which was to be concentrated in the vicinity of Bucharest for the invasion of Turkey. There was only one line of railway from the Russian frontier to Bucharest. Within a few miles of the Turkish frontier this important road crossed the Sereth River by a bridge near Galatz.

Immediately upon the declaration of war this vital point was seized and guarded by Russian cavalry who had marched 100 miles for this purpose. A Russian army corps followed as quickly as possible, and this most vulnerable point of the railway, nearer than any other point to the Turkish frontier, was never again in danger.

In our own history this use of the cavalry mass as the strategic advance guard of the army is well illustrated by Buford's delaying action at Gettysburg. With his two small cavalry brigades he delayed Heth's Confederate infantry division at Willoughby Run until the arrival and deployment of the First Federal Corps, under Reynolds. Cemetery Hill was a guarantee of victory to the side possessing it, and but for the check thus given them the Confederates would doubtless have occupied it the first day.



### RAIDS.

The great and varied possibilities presented by this unique and typical form of cavalry action were never so thoroughly appreciated, nor so successfully developed, as by our own cavalrymen of the Civil War. Morgan, Mosby, Forrest and Stuart have perhaps contributed the most remarkable examples of the raiding powers of cavalry to be found in the annals of warfare.

In general terms, the principal objects of raids are to destroy supplies, to interrupt or destroy communications, and to acquire information.

A raiding force may accomplish one or all of these tasks, and by its success delay the enemy's advance, force him to weaken his field army by an increase of precautions and by pursuing detachments, lower the morale of the hostile command and destroy confidence in its commander.

Von Dorn's well-known raid upon the Federal supply depot at Holly Springs, in conjunction with Forrest's raid in west Tennessee, decided one of Grant's campaigns against Vicksburg as surely as a great battle could have done, and shows strikingly what important results can sometimes be effected by destruction of the enemy's most necessary supplies.

While a successful raid will not often be of such far-reaching influence as in the above instance, the consequences of successfully interrupting or destroying any important part of the enemy's line of communications will usually be very serious to him, and may cause him fatal delay. The uniformly successful operations of Morgan and Forrest show important results to their side, and when either leader was in the theater of operations the Federal commander had to reckon upon this embarrass-

ment to his campaign as carefully and as exhaustively as he did upon his plans for battle. "After the battle of Murfreesboro, or Stone River, a forward movement by Rosecrans was impossible until the Confederate cavalry could be checked in its devastating detached operations. The army was dependent mainly upon the Louisville & Nashville Railroad for its supplies; and, owing to the persistent raids of the enemy, that road was operated only seven months and twelve days in 1862. The report of its superintendent for that year states: 'All the bridges and trestleworks on the main stem and branches, with the exception of the bridge over Barren River and four small bridges, were destroyed and rebuilt during the year. Some of the structures were destroyed twice and some three times. In addition to this, most of the water stations, several depots, and a large number of cars were burned, a number of engines badly damaged, and a tunnel in Tennessee nearly filled up for a distance of 800 feet. The enemy's cavalry had steadily increased in numbers, efficiency, and audacity, until it had become a greater problem how to meet this arm of the enemy's force than his infantry.'" (Wagner.)

A raiding column will sometimes be charged primarily with securing information of the enemy's position and communications, with only incidental instructions as to the destruction of supplies or interruption of lines of communication. General Stuart, the leader of Lee's cavalry, more than once rode entirely around the Federal army in the successful performance of this duty. Thus in June, 1862, Lee, having decided to undertake an offensive movement against McClellan, directed Stuart "to make a scout movement to the rear of the enemy," mainly "to gain intelligence of his operations, communications, etc.," and incidentally to capture and destroy supplies. Stuart was absent from June 12th to 16th, in which time he rode completely around the Federal army, gaining much information and destroying a large quantity of supplies. "The greatest results, however, were those which followed from the information obtained by Stuart. All doubt as to the location of the Federal army was solved and the possibility was demonstrated of those movements, which, on the 27th of June, culminated in the defeat of the Federal right wing at Cold Harbor." (Campaigns of Stuart's Cavalry.)



From these illustrations, fairly typifying the possible opportunities and the remarkable results that an efficient raiding force may obtain, it might seem that the cavalry of an army could be employed to no better advantage than in such detached operations. But the history of our Civil War shows that raids are, in the general case, rather to be avoided, particularly in hostile territory; the inevitable damage to horse-flesh, the breaking down of the men, and the demoralizing spirit of plunder likely to arise in even the best disciplined troops, indicate that the results to be expected must be exceedingly important to justify resort to such costly methods. The danger of possible capture is also a factor to be considered, but it is evident that the greatest objection to such detachment of cavalry is the possibility of its absence when a general engagement occurs. Stuart's raid just before the battle of Gettysburg left Lee wholly in the dark regarding the movements of the Union army, and was a most serious error, possibly a fatal one, to the life of the Confederacy.

A raiding column accomplishes its purpose not by force, ordinarily, but by secrecy, celerity, and surprise; good discipline and endurance must be the leading characteristic of the command; for the leader, self-reliance, resourcefulness, boldness, and a just estimate of the extreme powers of horse and man.

It is of practical interest to note, even in outline, the principles of organization and conduct which are pointed out as the most effective by the lessons of the Civil War.

The ideal raiding force, we learn, varies in size between 1,000 and 3,000; the troops selected should be well-mounted veteran cavalry. Discipline, self-reliance, and ability to withstand hardship are essential. The demands upon the leader are such that few officers can meet them successfully at every turn. Military education and experience alone cannot make a great raider; the personal qualities of shrewdness, resourcefulness, audacious boldness, and natural leadership, were the only military assets of Forrest and Morgan, who, without previous military experience or instruction, became the ablest raiders history records.

A small quota of mobile artillery is usually advisable, it seems, mountain guns on pack mules where possible; every wheel in the column is an encumbrance; neglected, unused trails will

become of importance, and the command should be able to move anywhere that a man can lead a horse. The column must count upon living off the country, but where foraging is expected to be of doubtful value, subsistence, reduced to the smallest quantity possible, should be carried on pack animals. Demolition materials should be carried upon pack animals; each trooper should be required to carry fitted horseshoes and nails, extra ammunition, an emergency ration, and nothing else beyond the absolute necessities.

As to conduct, no detailed rules can be applied to raids; each one will be made under circumstances peculiar to itself. The commander must have a definite object in view, and must carefully plan in advance how to meet all the difficulties he can foresee. The force should march upon a single road in constant readiness for action; detachments will probably be lost to the command and should rarely be made; foraging will be necessary, horses must be seized to replace those broken down, and far-reaching measures taken to acquire information and prevent surprise. All such parties are necessary evils, and must be reduced to the minimum.

Space is lacking to analyze the particular methods by which Morgan and Forrest and others were able to achieve their remarkable results. One example will illustrate the difficulties to be expected, and the ready resource required to meet them:

In December, 1862, Forrest was ordered to cross the Tennessee River from the east and operate in western Tennessee, for the purpose of breaking up the enemy's communications and making a diversion in rear of Grant's army, now stretched from Memphis to Corinth, preparing an overland expedition against Vicksburg.

Forrest's command, a newly organized force, numbered in all about 2,100, with a battery of seven guns. Hundreds of these men were armed with shotguns, squirrel rifles, and old flint-lock muskets; proper arms and ammunition were requisitioned for but were not available.

Forrest's task was, from the start, extremely difficult. He had first to cross the Tennessee River, three-quarters of a mile wide, the fifth in magnitude in the United States, picketed by



Federal cavalry on the west side and "patrolled by a fleet of gunboats for no other purpose than to prevent incursions from the east, and in case any such were made, and the invaders once were in the trap, to prevent the possibility of escape." (Wyeth's Life of Forrest.)

Forrest's first measure was to construct two small flatboats and hide them in a slough near Clifton. Here his column began crossing on December 15th. His command was kept as well concealed as possible, and careful observation was instituted to prevent surprise by the gunboats.

Considerable time was taken, as Forrest was desirous of saving his men and horses, at the start of his operations, from the exposure to sickness which swimming the icy river would certainly cause. It was, therefore, not until December 17th that his crossing was effected. The movement, though safely carried out, was discovered, and Sherman promptly reported it, adding, with accurate foresight, "I rather suspect it is the design to draw us back from our purpose of going to Vicksburg." (Official Records.) Grant accordingly reinforced General Sullivan, commanding the troops in the locality, and sent forces from Corinth, Forts Heiman, Henry and Donelson to coöperate in trapping Forrest.

Forrest's next step was to spread the belief, by various strategems, that his force was much stronger than it really was. On December 18th General Sullivan wired Grant from Jackson: "My cavalry was whipped at Lexington to-day. The enemy reported between 10,000 and 20,000."

The uniform success of the remaining operations was terminated by the surprise and defeat of Forrest at Parker's Cross Roads. His command was skillfully withdrawn, in the midst of overwhelming odds, and between 12 M. and 1 o'clock, on January 1st, the Confederates reached the Tennessee and began to recross.

The two flatboats, which had been sunk after the crossing on December 15th to prevent discovery by the Federal gunboats, were of immediate value. Scouts had been sent up and down the river to observe the gunboats, and no delay occurred. Wyeth describes the crossing as follows:

"Ever mindful of his artillery, the first thing Forrest did was to hurry four of his guns across the river on the first trip of the boat, taking the ammunition chests and artillerists with a few of his men. The boats were propelled by two oars near the bow and by poles up the river bank, close to shore where the current was less swift, for about a half mile, and then across the river, drifting down with the current and landing opposite the place of starting. Going and coming this process was rapidly repeated.

"As soon as the cannon and artillerists reached the east shore the horses were hitched on, the pieces hauled up the bank, and immediately thrown into position, two at the point of crossing to command the approach from behind the troops still on the west shore. One was sent up and another down the stream to keep off any craft that might be steaming from either direction, and hold them at safe distance from the mass of men and animals that were working their way across the river.

"Company after company were made to unsaddle their horses and pile their saddles, blankets, guns and other equipment in the boats, and these were carried immediately over with as many men as the boats would hold. Others of the troops rapidly constructed rafts of fence rails and logs that would hold from five to ten men each, and on these frail floats the hardy troopers would launch themselves into the current and paddle across, leaping ashore when the bank was touched and letting the abandoned craft float away on the swift current.

"There was now no time to ferry the horses across and they were forced to swim. Two men would man a canoe or skiff, while a third, holding the bridle of a horse, would strike out with the animals swimming by the side of the boat. When this piloted horse was a short distance from the shore, the other animals, stripped for the plunge, were led to where the bank was perpendicular from the edge of the water, the bridles taken off, and one after another pushed into the stream. They could do nothing but swim, and naturally struck out to follow the lead of the horse already in the river. Fully one thousand of these faithful creatures were thus at the same moment struggling in the swift-flowing water.

"Such was the ready method by which this remarkable man conveyed a force of about 2,000 men and horses, six pieces of artillery, and a train of wagons and captured stores across a river nearly three-quarters of a mile in width, accomplishing the wonderful feat in the short period of ten hours.

"The actual work of the west Tennessee campaign consumed fifteen days, from the 17th of December, the date Forrest completed the passage of the Tennessee, to January 1st, when he recrossed this stream to the eastern shore. In mid-winter, and for nearly one week of this time there was a heavy fall of rain or sleet and snow, and in a section of the country notorious for bad roads, which were rendered practically impassable in wet weather, he had marched with artillery and wagons about three hundred miles, had fought one pitched battle lasting five hours, two other well contested engagements, and from one to two or more skirmishes daily. Of the Union troops they had killed and wounded and captured some 1,500; they had captured in battle five pieces of artillery, eleven caissons and thirty-eight wagons and teams. When Forrest entered west Tennessee more than one-half of his men were without serviceable arms. When he came out from this expedition every soldier of his command had a modern and effective weapon, with abundant ammunition, and was well supplied with blankets and other equipment furnished by the enemy.



"When not fighting the men were hard at work destroying railroads, bridges, trestles, culverts, depots, and rails, and all captured supplies which could not be removed. Two important lines of communication had been wiped out, and the work of destruction had been thorough, as is attested by General Grant, who says:

"'At the same time Forrest got on our line of railroad between Jackson, Tennessee and Columbus, Ky., doing much damage to it. This cut me off from all communication with the North for more than a week, and it was more than two weeks before rations or forage could be issued from stores obtained in the regular way. This demonstrated the impossibility of maintaining so long a line of road over which to draw supplies for an army moving in an enemy's country. I determined therefore to abandon my campaign into the interior with Columbus as a base, and returned to La Grange and Grand Junction, destroying the road to my front and repairing the road to Memphis, making the Mississippi River the line over which to draw supplies.' "

## CONCLUSION.

In meeting the increased demands of modern war, cavalry, even though numerous, and efficiently trained and armed for dismounted action, is dependent for its success upon two factors. In the first place, the army commander must appreciate its limitations, understand its use, and avoid its abuse. He must have digested the lessons of history; he can expect no real benefit

from his cavalry unless he knows enough to put every horseman where he will do the most good; not scattered through the country on outpost, convoy, or orderly duty, but in the ranks of a strong, self-sustaining cavalry mass, his keenest instrument in strategy and his readiest reserve in battle. And when these masses are formed he must realize that their leaders should be trusted and given free hands; their tasks must be clear cut, but the orders from army headquarters few.

In the second place, the leaders who are to solve these problems must be officers of experience in the arm, and of high military attainments; their independence and the consequent demands upon their ability are greater than ever before.

Upon declaration of war the cavalry divisions will be the first troops needed, and they will be needed in sufficient strength to secure results. The obvious lesson is that such cavalry must be kept on hand, since history proves that the arm cannot be successfully extemporized. It is significant to note, in this connection, that the Germans, as a result of their study, are now adding twenty-eight new squadrons to the 485 they already have.

Our own cavalry force, though small in peace and likely to remain so, is efficient and well organized. The military policy of the country will probably never sanction the maintenance, in peace, of a large mounted service, and so the benefits of peace training in higher command will probably be always lost to our officers. As to the enlisted man, whose individual training must ever be the foundation of our efficiency in war, the case is different, and it seems that we should accomplish more.

The reforms most usually preached in European cavalry, chiefly as to the necessity for instruction in dismounted action, do not apply to our own service, yet our training is, in other ways, by no means faultless. Our cavalryman is good now, but he should be better, and it is to field service in general, and the service of information in particular, that his attention must be directed. He must know, better than he does now, how to take care of himself and his horse in campaign, to cook his own ration properly, and to care for his horse's back and feet; he must know how to gain information in the field and, what is just as important, how to communicate it in serviceable shape. Even



with every facility, many of our noncommissioned officers send back their information in such vague, indefinite, general terms, that it is almost valueless. Without sound information, sound deductions are impossible, and our summer maneuvers reveal some remarkable results with the message-blank.

Even though we never regain the five-year enlistment, and must forever see our ranks thinned for lack of a General Service Corps, we may yet improve the usefulness of our cavalry soldier in the field, and incidentally his interest in the service, by eliminating two-thirds of our present close order drill and parade. The knowledge there gained will be of little use to him when he enters upon the actual service for which the government is maintaining him. He should be taken off the drill-ground sooner than he is now, and made the best scout that his intelligence and a three-year enlistment permit.

De Négrier, in his "Lessons of the Russo-Japanese War," recommends that every cavalry regiment should train and maintain a detachment of scouts. We should endeavor to make our regiment all scouts, and however far short of success we may fall, our cavalrymen will certainly be brought a stage nearer than they are to-day to that standard of usefulness which their predecessors set for the world in the days of our Civil and Indian Wars.

# THE SIGNAL CORPS IN MANEUVERS.

By First Lieutenant W. N. HUGHES, Jr., Thirteenth Infantry.*

AS GENERALLY understood the primary duties of the signal corps at maneuvers are to establish telegraphic communication with the outside world, to install, maintain and operate a telephone system within the maneuver camp, and incidentally to establish a few buzzer lines and a few visual signal stations.

## CAMP DUTY.

The signal corps has efficiently performed its duty relative to the telegraph and telephone lines. This duty is similar to that which would be performed in camp on mobilization in one's own country or concentration in friendly territory. However, these lines have not been installed promptly in every maneuver camp on account of the technical equipment not being delivered until after the troops had arrived. In the occupation of Cuba, this equipment was not delivered at Camp Columbia until two days after the signal troops themselves had arrived, and the animals and transportation not until five days later. Inasmuch as the staff corps in a maneuver camp as well as on mobilization are greatly handicapped by the lack of instantaneous communications, the necessary measures should be taken, as a matter of training, to insure the signal corps troops and also their equipment arriving first at the maneuver camp.

## TACTICAL LINES OF INFORMATION.

The buzzer lines and the visual signal stations are for use not in the camp proper but to connect the troops actually engaged in the tactical problems. These lines are properly called tactical lines of information. They are constructed in the presence of the enemy. They are operated by one, any combination or all of the following methods:

1. Mounted orderlies;
2. Visual signals;
3. Wire lines;
4. Wireless telegraphy.

In some of our maneuvers the signal corps troops have been employed in establishing these lines of information, but with indifferent results, for the reason that they themselves have not been properly organized, equipped or trained for such duties. In addition, where lines of information were furnished, in some cases the commanding officers of the troops engaged in the problem did not know how to use them properly, because they were not accustomed to them and the power and limitation of each method of operating them were not clearly understood.

Their use in tactical problems is a vital necessity.

"The fight itself gives the best opportunity for judging the situation. The commander must therefore be kept continually informed by messages from the troops engaged. This was so persistently ignored during the Civil War that General Grant concluded that it was impossible to secure information in the ordinary way, so he was in the habit of sending staff officers with details of orderlies to important points with orders to keep him informed. Napoleon kept a number of his best young generals at his headquarters for similar duties, and each was provided with a dozen horses." ("Field Orders, Messages and Reports," by Major Swift.)

After careful training in garrison the cavalry, the artillery, and the infantry are now brought together on the maneuver ground for joint action. What is the utmost they can do, not separately, but united with the commanding general wielding them as one weapon against the enemy? The most perfect team work known is manifested by the human body, and we speak of "a body of troops" of which the general may be considered the head. There are given to him cavalry as eyes and ears, to see and hear with; artillery as arms with which to strike down the defense and break the morale; and infantry as legs and body to advance with and force the victory. Nevertheless with the

*One of a series of papers submitted by the Student Officers of the Signal School, 1907.

best formed plans, how is he to coördinate them, and use them to the best advantage without means of communication?

In truth the signal corps troops are the *nerves* of the army, and their lines run from the head to every part of it. Without them no vital coöperation can exist any more than the members of the body can be directed by the head without nerves. Consequently the three arms combined have acted like an automaton compared with a live body to what they can do jointly with *perfected* tactical communication.

No one doubts this. There are just two cases where tactical lines of information can be applied. One in attack and the other in defense. In the latter case this theory has been applied in every coast artillery post in the United States where costly and the latest electrical instruments for the rapid transmission of information and orders have been installed to control the fire of, and insure perfect coöperation among, the batteries. At Port Arthur, 203 Meter Hill was captured at the cost of many lives with one object in view—fire control. One Japanese officer located on it, and looking into Port Arthur and the harbor, directed the fire of many guns by means of a telephone.

In attack or defense on the sea, a squadron commander controls and coördinates the movements of the ships of his squadron by visual signals and wireless telegraphy. Now on land, rapid tactical communication in attack has not been developed. The mounted orderly system for transmission of orders and information has been accepted, and improvement by visual signals or electrical apparatus has been opposed on the ground principally that they are immobile and uncertain, which, indeed, are fatal defects if they cannot be removed. In addition, ambitious subordinate commanders often dislike good communication with their superior commanders. They believe it robs them of initiative. Yet how many disasters have been brought on by the rashness of subordinate commanders who, by taking things in their own hands, have frustrated the best conceived plans of their general? Initiative will not be taken away by good communications. Let the juniors accurately report their information and, if in keeping with the general's plan, plenty of initiative will be required of them in execution.



Again, it is certain that greater mobility in laying the lines of information is required in the maneuvers than in battle, because the attack is rapidly carried out, whereas under actual fire in battle, hours, and even days, would be consumed. Also, the mounted orderly appears in the maneuver where he could not live in actual battle. For these reasons the development of rapid communication has been retarded. However, there is no question that mobility can be increased and certainty and reliability insured to a very high degree by properly organizing, equipping and training the signal corps troops. This has been proven at Fort Leavenworth.

### ORGANIZATION.

The signal corps troops are not organized into companies by an act of Congress as are the other troops of the army. A portion of them have been formed into companies by the Chief Signal Officer of the army for administrative purposes and presumably with a view to field work. However, these companies are not respected as units and there are not sufficient companies for maneuvers or field operations. The reason for this is that a greater portion of the signal corps is being used, of necessity, and in compliance with law, in maintaining and operating permanent telegraph lines and cables, as well as installing fire control apparatus. So the plain fact is, that it is short of men and officers, and the shortage falls on the field work in the maneuver camps. This should not be so, because it strikes at the efficiency of our army. A full company should have been sent to every maneuver camp last year to establish tactical lines of information only. A few had a company in name—a company depleted by detached men; others had detachments of thirty or forty men from different companies under strange officers and with untrained animals. Subtracting one-fourth of these men to maintain and operate the camp telephone and telegraph system, dividing the remainder by two—one-half for each side—to operate tactical lines of information and considering they were only partially equipped, it is a marvel they did as well as they did, and no wonder that the value of these lines was not duly appreciated.

The company sent to Cuba was hastily organized with 125 men from one place, but from different companies, twenty-five from another place, and five from still another, and the four officers from four different places. This statement is certainly the strongest argument in favor of the *permanent* organization of signal corps troops for field work.

An ideal field company is one composed of one hundred men and three officers; to consist of two or more platoons; each platoon to be composed of two or more squads of four men each.

### EQUIPMENT.

There is no standard equipment for a field company of the signal corps. Last year the company at Fort Leavenworth was the only one adequately equipped for field work. The company in Cuba is now. Neither are uniformly or completely equipped. In fact, the supply of field equipment is very small. Some of it was actually taken away from the Fort Leavenworth company last year and distributed to other companies and detachments detailed for duty at maneuver camps. Is a battery of artillery ever split up and some of its guns sent to one camp and some to another?

A field company should be equipped with a view to maintaining tactical lines of information by the methods given, namely, orderlies, visual signals, wire lines and wireless telegraphy. Therefore the men should be mounted. Buzzers, telephones, telegraph instruments, visual signaling and wireless apparatus, breast or hand reels, reel carts, and instrument wagons with the proper number of draft animals, should be assigned each company. The proportionate amounts must be determined by the General Staff.

In addition, there should be supplied buzzer wire for the extreme front positions, and field wire—nineteen-strand insulated wire—to be used between the buzzer wire lines and the semi-permanent lines. This equipment does not include the latter lines which need lances, lance wagons, etc. Reference is made only to mobile field lines, which, it is true, if long in use, are replaced by lance lines. Lances have no place in the equipment of a field company.



Now this field wire costs about eighty dollars a mile. Nevertheless it is absolutely necessary, because it lays where it is placed, never kinks or curls up, and no ordinary strain can break it, nor can animals or wheels passing over it for days wear it out. These are the qualities required of a wire to be laid on the ground. Every field company should be equipped with at least forty miles of it. Last summer some of the maneuver camps had only five miles of this wire with the resuit that the signal corps troops could not follow and maintain communication between a camp and even one body of troops on its shortest march. With proper organization and equipment, mobility and certainty are finally insured by training.

### TRAINING.

In problems and on the battlefield the troops will be moving constantly, therefore mobility is absolutely essential in tactical lines of information. To secure this a great deal will be required of the signal troops.

They should know how to ride and how to handle their teams. They should be trained to set up, repair, test and operate all of their technical instruments; to pay out and reel up wire either by hand or from carts; and to do all this with the utmost despatch. In addition, they must coöperate at all times with the fighting troops by knowing from practice where the lines will be needed, and also by actually laying them with the troops as they move on the roads, into positions, or into action.

It has been shown that the signal corps troops have had neither the proper organization nor equipment to train for field work. Furthermore, although the corps is an auxiliary arm and one which should understand how it must conform its operations to the characteristics of the three fighting arms, its troops have been isolated from them at Fort Omaha, Fort Wood and Benicia Barracks. In addition, there is no suitable terrain for field work at either of the first two named places; and Benicia Barracks, where this work is possible, will be abandoned soon and Angel Island occupied, which in this respect is no better than Fort Omaha.

Men who have never ridden a horse, hitched up or driven one, and who have never seen a wire reel cart, cannot be expected to manage a horse or team and operate a reel, and at the same time be the very name itself for nimbleness and quickness in laying or taking up wire lines. The maneuver camp is not the place to do this preliminary training. It must be had in garrisons before the maneuvers, just as the other arms have theirs.

Inasmuch as the field training of signal troops is twofold in nature, to train technically and to train coöperatively, it is evident that the training in its second phase can never be had at the isolated signal corps post. It must be with all the three arms, that is, at brigade posts, where the signal corps troops for field service should be stationed. Here they can become accustomed to the rapid movements of the three arms and follow them wherever they go on the march or in tactical problems, yet never at the expense of efficiency in quickly laying the lines or operating the instruments. Then, again, the line troops themselves could be thoroughly taught respect for, and non-interference with the wires, lessons which they sadly need.

There are now two companies serving with line troops, one at Camp Columbia, Cuba, and the other at Fort Leavenworth. Just before the maneuvers last year, the latter company was taken away from its equipment for over two months and sent to San Francisco, where not men trained for field service but telegraph operators were needed. Are field artillery soldiers ever separated from their equipment and required to do coast artillery work? Then this company was short of men and equipment as already shown. Notwithstanding this, it was trained for field service, and yet its training was apparently of little value to the other troops, for the reasons that the object of its training and its use was not clearly understood. This was due not to the organization, equipment and training of the signal corps troops, but directly to the officers solving the problems.



### OFFICERS' KNOWLEDGE OF THE OBJECT AND USE OF LINES OF INFORMATION.

In the first place, the object in training the Fort Leavenworth company was lost sight of when it was used only to maintain communication between the umpires. If the company was absolutely untrained this might have been good practice for it in operating its instruments—probably better than to have the commanders in the tactical problems believe they could depend upon it for rapid lines of information, when only the slowest could be furnished. But the company was trained and solely with the object in view of assisting the commander of the Browns and the commander of the Blues in solving their tactical problems. To lay tactical lines of information—to be the *nerves* of the maneuvering forces—was its prime object.

In the second place, when a few lines of information were furnished at the maneuver camps, their connection with the problem was often overlooked. There were numerous cases where orderlies or staff officers galloped several miles to deliver messages or orders of a few words when the buzzer or telephone stations were near at hand, both to the sender and the receiver of the message or order.

Now, the first fault here is in *the training* of the officers. A few signal corps men operating a permanent telephone or telegraph line in a post do not necessarily cause an officer to connect them with the trained men in the field operating mobile lines. In the authorized War Department publications on field service and orders, every detail with reference to engineer troops, cavalry, artillery and infantry, operating separately and *jointly*, is carefully worked out. The signal corps troops are referred to only in the most general way. In the model orders there is not one word about "lines of information" or the signal corps troops. So, in the theoretical and preliminary training in solving tactical problems, the use of signal corps troops is almost, if not entirely, lost sight of.

This should not be so. Rapid communications are ever a prime factor in a field problem or battle. Therefore commanders of troops and their staff officers should be trained theoretically and practically in the tactical use of lines of information. In fact, every officer should understand their use.

### THE TACTICAL USE OF LINES OF INFORMATION.

A clear understanding of the powers and limitations of each method of maintaining lines of information is of prime importance in studying their tactical use. The well established and the modern methods are:

1. Mounted orderlies.
2. Visual signals—
   The flag.
   The heliograph.
   The acetylene lamp.
3. Wire lines—
   (*a*) The buzzer wire lines.
   (*b*) The field wire line.
4. Wireless telegraphy.

#### 1. MOUNTED ORDERLIES.

The rates of speed at which a mounted orderly can travel is well known. The use of the orderly depends upon the distance he must travel and the length of the message. At maximum speed he excels all other methods for half a mile with a message under ten words. The same can be said of him at maximum speed for a mile with a message of over fifty words. This comparison does not include an *established* telephone line or a buzzer wire line on which the telephone is used. The orderly's value increases with the length of the message.

Past experience points to the trained orderly or staff officer as the most reliable means of transmitting a brief order on the actual battlefield. However, the orderly is likely to incorrectly transmit a verbal message. He consumes double time in going and returning. Until his return there is no assurance the message has been delivered. He may not be able to deliver the message by failure to locate the officer addressed, or by himself losing his way or being killed. Economy which limits the number of orderlies limits the number of messages which can be sent.

The signal corps furnishes orderlies only to deliver messages which have been received by visual signals, wire or wireless. Other orderlies or orderly systems must be furnished by the line troops themselves.



#### 2. VISUAL SIGNALS.

With a clear view and a good light the flag can be used up to five miles at the rate of twenty letters (four words of five letters) per minute.

Under the same conditions, using the authorized Myer signal code, the heliographs can be used up to eighty miles at the rate of twelve words per minute, and the acetylene lamp at night up to twenty-five miles at the same rate as the heliograph.

Four men establish and operate a station of any of these three methods. For short distances they can carry the apparatus and move at the speed of cavalry. For long distance, pack transportation must be furnished for the apparatus.

An open country is favorable to operating them, and they are indispensable at times. In the battle of Liaoyang a signal station was established on one side of a small impassable fire-swept valley, and the officers there, *where they could see,* directed by flag the fire of many guns which were located on the opposite side of the valley.

Secrecy cannot be maintained with these methods, and rainy, foggy weather makes them inoperative. Methods of electrical transmission are gradually succeeding visual methods, and they should be used in place of visual signals whenever practicable.

#### 3. WIRE LINES.

The liability of wire lines being broken, cut or destroyed, should not be overlooked. The danger in this respect is not as great as it appears at first sight. The danger is from two sources —cavalry raids and individuals.

Cavalry will always be a menace to wire lines. However, the danger will be greatly lessened, if not eliminated, from future wars by the fact it will be met by the greater quickness in securing information insured by modern lines of information which strikes at the very element of the cavalry's success, which is *surprise*. Ignorance, therefore, of its size and movements will not be so great and its quickness, in a measure, can be fore-

stalled. In addition, the wire will not be on lances, but on the ground, and often hidden in the grass and weeds. It will be constantly patrolled and tested, one signal corps man being assigned to each mile for this purpose, so that, even if cut or destroyed, it will be quickly repaired.

The danger from individuals is reduced by the foregoing precautions. To insure better protection, the troops should be trained to avoid interfering with the wires. Persons caught cutting the wires should be shot on the spot. The Japanese in friendly territory and the Russians in unfriendly territory experienced no trouble with their wire lines being cut by the enemy. With the Russians the trouble was caused rather by the carelessness and ignorance of their own soldiers in tearing down or cutting the wires. Even if the worst happens to the wire lines the old orderly system of transmitting information still remains.

### (*a*) BUZZER WIRE LINE.

Buzzer wire can be laid from a hand or breast reel at the average rate of six miles per hour. Using the Morse alphabet the buzzer can be used at the rate of 100 letters per minute. Using the telephone, one-half as fast as dictation can be written, because the message must be repeated back to insure accuracy in transmitting. The buzzer can be used even where there are small breaks in the line, the high electromotive force jumping the gap. It can be used with railroad tracks and ordinary wire fences in place of wire. The cavalry buzzer weighing five pounds is easily carried by a soldier mounted or dismounted. The wire is easily broken by horses and wagons, and little respected by untrained troops. However, when operative, it can be used for thousands of messages.

### (*b*) THE FIELD WIRE LINE.

The rate of transmitting letters* is the same as on the buzzer line. The wire can be laid up to twenty miles at the average rate of five miles per hour with wheel transportation; on very muddy roads at the rate of two and a half miles per hour, using pack mules. One man per mile is required to lay, test, inspect, repair and patrol it. The wire is not easily broken.



It should be well concealed, where possible, by throwing into the grass and weeds along the road.

Telegraph instruments, buzzer or telephones, can work on it, and when properly arranged telegraph instruments and telephones can be used on it at the same time without interference. It can be reeled out at one end and reeled up on the other, and thus keep moving columns twenty miles apart in constant communication. It should be replaced by permanent lance lines when in use for over three or four days.

### 4. WIRELESS TELEGRAPHY.

Wireless telegraphy can be used at the average rate of fifty letters per minute. The field set can be used for sending up to a radius of twenty miles. However, messages from a much greater distance can be received. Each field wireless outfit requires three pack mules for transportation.* The station set requires wheel transportation. A set can be set up and be ready to transmit and receive messages in fifteen minutes. It has nothing to fear from the operation of cavalry, but during an electrical storm it is practically inoperative. Its military use has not been fully developed.

### GENERAL PRINCIPLES.

Resuming the subject of the tactical use of lines of information, in the battle of Mukden, not only the Japanese army and division commanders, but also the brigade commanders, were connected by wire. At vital points telephone lines were pushed right up on the firing line. In the Third Army's turning movement against the Russian right flank over one hundred and fifty miles of wire were laid. Thus Oyama was at all times in touch with it, knew of its progress, and regulated the frontal attacks accordingly. In fact, similar to a war game, Oyama with his map in front of him, and with colored pins and blocks on it representing the bodies of troops, sat calmly with his staff, and by telegraph and principally by telephone, directed and followed the movements of the separate parts of his immense command.

These uses are worthy of study. However, among the attachés there were no trained signal officers and the reports

*See post, for photographs of field wireless outfit.

made are meager in details. Yet it is known that their lines of information, while far in advance of those used in former wars, by no means approached perfection.

In studying lines of information with respect to tactics in maneuvers, it is well to consider the object of tactics. They are two-fold, viz.: (1) Separating the army to march and live; (2) Concentrating it to fight while the enemy is at disadvantage. Rapid communication is invaluable in accomplishing these ends, which are *perfect control* and *quick action* while the disadvantage exists.

Now every tactical problem varies in its details, and the commander of each force is constantly confronted with new situations which cannot be met automatically by any set rules. Judgment must be used in applying the essential principles which govern. So with tactical lines of information, judgment must dictate when and where to lay the lines, and what method to use. The acumen for this judgment comes only of practice and experience. The primary object is to secure and maintain constant unfailing communications. Then economy and the powers and limitations of each distinct method as well as their adaption to the particular problem must control.

The suggestions given below are applicatory in general to any problem and do not specify units. Often, in small problems in maneuvers, it will be practical to connect battalions, and even companies, occupying important positions, whereas, in actual battle this would not be done on account of economy. Yet the training is excellent for the signal corps troops and also for the commanding officers, and the lines should be so used when possible.

In order to show the uses to which lines of information may be put they will be treated when the troops are:

I. On the defensive;
II. On the offensive.

### I. TROOPS ON THE DEFENSIVE (TEMPORARY).

The principal object of the lines in this case is to know quickly on which flank the enemy is attacking and to be able to reinforce promptly the part attacked.



In an orderly retreat there must be a line of information between the rear guard commander and the commanding general.

If the retreat is on several roads, each column must be connected with the commanding general.

Lateral buzzer lines from the head of the retreating forces should be laid with a view to their possible use by rear guard patrols, as they passed them, when retiring.

For the service of security and information, lines should connect any advance posts with the outpost, which subject will be treated in full under the offensive. The interior lines should connect the immediate subordinate commanders of sectors, or of the infantry, the cavalry and the artillery with the commanding general, who in turn should be connected with the base. If companies are provided with cavalry buzzers, they should be utilized in connecting the companies occupying important positions (flanks for example) with regimental headquarters.

### II. TROOPS ON THE OFFENSIVE.

1. Movement to the front;
2. Lateral movements;
3. At a halt;
4. In attack;

### 1. MOVEMENT TO THE FRONT.

A movement to the front may be over one or over several roads.

When over several roads, each body of troops should be separately connected with the commanding general.

The main body of advance guard should be connected at all times with the advancing column by a line of information.

If a halt for over ten miutes is made, a buzzer line, using a cavalry buzzer and a hand reel, should be laid back from the point to the main body of the advance guard.

Where independent cavalry is used, one or more lines should be laid immediately behind it as fast as possible. Staff officers and orderlies should be instructed to deliver messages to the detachments laying these lines. With a well trained detachment it should be but little behind the cavalry.

### 2. LATERAL MOVEMENT.

A body of troops moving laterally with reference to the enemy should be connected as for troops moving to the front. The line in this case, if long, is very much exposed. Therefore, as soon as the march to the front is resumed, a more direct line should be laid to the base in place of the lateral one.

It is impossible to maintain a constant line of information from a flank guard to its main body. However, if large, a wireless set should be used in the morning and evening and at halts when necessary. If small, a buzzer line should be used in place of the wireless set.

### 3. AT A HALT.

When the order to bivouac is given, the point should be immediately connected with the main body of the advance guard by a buzzer line.

Lines of information for the outpost should be laid at once, connecting the supports, the reserves and the main body. Buzzer lines should be established to the detached posts and to Cossack posts on the most important roads by which the enemy may approach.

The detachments making important reconnaissances should be connected with the outpost by cavalry buzzer lines, laid by hand reels.

### 4. IN ATTACK.

An attack is a deliberate act, first of preparation and then of decisive action. Every arrangement is effected to successfully launch the attack. Here lines of information are of the greatest value to control the long line in a modern deployment for battle.

In a frontal attack, or containing movement, every commander from the colonel back must be connected by lines of information. They must run back from every important part of the line. Every commander must be connected with his local reserves and the commander-in-chief with his general reserve.

The column in a flank attack or turning movement must



be connected also by said lines if there is to be coöperation between the columns. The same applies to envelopments.

When the attack is once launched little control can be had by superior commanders over the troops making the attack, but the lines of information are still of value for quick reports as to the success attained. Therefore the lines of information, while not advancing in the actual final infantry assault, should be pushed up under cover as far as possible in order to see and report the result to the commanding general as quickly as possible. Then again, lines of information should be used to notify the artillery when to cease firing, which should fire, however, until the infantry has advanced to its range. A quick order is needed here. Field service regulations should settle who is to give the order. The Japanese sent artillery officers with telephones on the firing line to accomplish this.

In all the cases quoted the chief signal officer should be among the first, if not the first officer, after the chief of staff, to know what the commander intends to do. In every case the chief signal officer should be promptly furnished copies of the field orders. The rapid transmission of orders and information depends largely upon his foresight into the plan to be carried out and the conditions with which he must cope.

### RECOMMENDATIONS.

In conclusion, it is safe to say that a fair trial has never been given the complete system of rapid communications described here. One or more of the four essentials—organization, equipment, training of the signal corps to lay the lines, or knowledge as to their use, have always been defective.

Therefore, upon the organization and equipment being provided, it is recommended that the field companies of the signal corps serve in the new brigade posts with the line troops; that they be required to take part in all post field problems and to maintain communication from post headquarters with the troops on their practice marches required by General Orders No. 44, War Department, series 1906; that the use of tactical lines of information be studied in connection with each tactical problem, and that to insure this the details of their use be inserted in

Field Service Regulations, Orders, Griepenkerl, and all other War Department publications bearing on field operations.

Then, at the maneuver camps, have a few special signal corps umpires whose duty will be to report not only on the efficiency of the signal corps troops to furnish tactical lines of information, but also to report on the commanders for their failure to use the lines and use them correctly.

Now to secure at once these four things enumerated is acknowledged to be impractical, though ultimately they will be obtained.

However, there are now two companies fairly well organized and equipped. Therefore, let the material on hand be used, and fit it to the occasion. Keep the companies intact and let them train for the maneuver with the most complete equipment that can be assembled. Don't take this equipment away and scatter it to a dozen camps at the last moment. Send a company to one camp, even if no pretense of field lines is attempted as in the past at the other camps, and insure its use only in the solution of tactical problems.

The practical object lesson will be invaluable. The eyes of the army will be opened, and signal corps troops such as these will be demanded in the future by every maneuver camp commander as necessary for the proper efficiency and instruction of his mixed command.

## CONCLUSIONS.

Finally, it has been shown that the duties of the signal corps in maneuvers are divided into camp duties and field duties; that the field duties consist solely in establishing and operating tactical lines of information, which as nerves of the maneuvering forces must be mobile; and therefore that to perform this duty satisfactorily the field companies of the signal corps must be uniformly organized, fully equipped and carefully trained for this work and this work alone. Furthermore, it has been pointed out that the commanding officers of troops must have a keen knowledge of the use of tactical lines of information, which comes only from the study of their power and limitation and their practical application to the problems in hand.



Again, and lastly, it has been pointed out that there should be no waiting for ideal conditions to materialize, but immediate and well directed use should be made of the men and material at hand to improve and develop practical lines of information and to prove to the entire army their immense tactical value in maneuvers and in actual warfare.

# DESERTIONS AND THE ENLISTMENT OATH.

By First Lieutenant W. KRUEGER, Twenty-Third Infantry.

DESERTIONS from our army have reached an enormous figure in the last few years despite strenuous efforts to stop the evil. Exhaustive inquiries have been made into the causes leading to desertion, remedies have been suggested and some carried into practice, yet the evil has not diminished.

No doubt many causes contribute to desertion, but in this paper we will discuss only the oath of enlistment as a factor contributing to desertion.

It is well known, no doubt, that the eye is the organ through which the mind of every human being is reached most easily, no matter what his language, grade of intelligence or nationality. The Swede, the Frenchman, the German, and the Englishman, may all look at a horse, each calling it "horse" in his own tongue, which is of course unintelligible to the others, and yet all mean the same thing, the horse; all see the same animal, the horse. The early religions recognized this fact; they recognized that the multitude could be reached through the sense of sight better than though any other agency, and their worship was adapted accordingly. The creeds, in which argument was substituted for outward forms, appealed to the highly intelligent, to the intellectual classes, while those retaining all outward forms, pomp and ceremony, the symbolisms of early religions, appeal to the masses and also to a great many of the more intelligent. The power of ritual and ceremony cannot be over-estimated. The strength of the New Testament to-day rests on the great truths imparted in the form of parables, its greatest ethical principles are conveyed in the form of powerful comparisons, and they strike home, not through argument and persuasion, but through the eye to the heart.

The great secret societies which have existed for centuries have retained and jealously guarded their symbolisms and ritual,



and where would their power be to-day if all these were discarded. That ritual is not entirely empty form, and if it were it would be an enormously powerful form. The symbolisms of Masonry, for instance, are intelligible to any member of the order, no matter what his nationality, no matter what his language; his mind is reached through the eye, and the principles or truths to be conveyed to him are much more forcefully brought home to him than could be done through argument or persuasion. Before receiving a novice, the lodge members initiate him with impressive ceremony, with great solemnity, and are these ceremonies and that solemnity unnecessary and empty form? No, far from it; they are powerful factors, each ceremony being another stone in the great structure, adding to its strength, to its solidity and to its power.

The army is also a band or society—neither a secret order nor a congregation—but something equally noble, a band associated together to serve the country, to fight for the country, and to die for the country if need be. Can a nobler society be named? And yet how are its members, the blocks that make up the structure, obtained? Is the method of obtaining and *initiating* them analogous to that of obtaining and initiating members of a secret order? No, and if anything, it is the reverse. Should not the man who at any moment might have to lay down his life for his country be initiated, be sworn in with due solemnity, with proper ceremony? Would not the solemnity attending such initiation (enlistment) cause the oath to stand out more clearly in all its sacredness, and would not the oath be regarded with more reverence than is now the case where it is an oath in many instances simply because a penalty is provided for its violation? Surely it would.

And how are our soldiers enlisted now? They enter the recruiting office, the interior of which is usually as cheerless and unprepossessing as the exterior, and, after the preliminary matters, the physical examination, etc., are settled, the oath is administered without ceremony, without due solemnity, and in a perfunctory manner.

The trouble with us to-day is that we have gone so far on the road to materialism that we think ceremony and solemnity amount to little and are immaterial, but that is far from the

truth. To the great masses they appeal through the eye to the heart. The oath of enlistment to many men who enlist is an oath simply because of the penalty provided for its violation. To a great many others its perfunctory administration robs it of all significance, and many do not realize that they are being sworn. This is certainly deplorable. We talk of patriotism, we try to inculcate it into the minds of our children, and yet when we convert one of our citizens into a soldier, when we enroll him into that noblest of professions, we do it in a cold-blooded matter-of-fact way. With us it is a pure business matter: "I'll pay you thirteen dollars per month, and you'll serve three years."

Under these circumstances, how can we expect the enlisted man to regard the profession of arms as a noble one, how can we expect him to regard the oath of enlistment as a sacred pledge, and his service to his country as a sacred duty? If all the thousands whom we enlist could be impressed with the solemnity of their oath of enlistment by the addition of a few ceremonies, causing them to regard the oath in a new light, as a sacred pledge which they dare not violate, not because of the penalty provided, but because of the pledge itself, the evil of desertion would be materially reduced.

The oath of enlistment as now administered by recruiting officers is meaningless to a great many of the men enlisted, by reason of the absence of all those features appealing to the mind of the man through his eye, features which go a long way toward making some of our secret orders powerful, features which are vital, self-evident, and yet persistently neglected in the army. Is it a wonder if an enlisted man quits the army, *i. e.,* deserts because he is dissatisfied with his job, his employer, or his work generally, just as he would quit his job in civil life?

Why could not the recruits be taken on probation, and sent to the nearest military post in squads for enlistment?

Upon arrival of a squad of probationary recruits the troops should be paraded, formed in square, the colors, chaplain and recruits in the center, and the oath of enlistment administered by the chaplain with impressive and solemn ceremony, the recruits placing their hands on the flag during the oath, and the ceremony concluding with the blessing and the national anthem.



Would not this ceremony make every man taking the oath feel that he was actually joining something; would not his innermost being feel a thrill when he places his hand on the folds of the glorious emblem of our country and swears to defend that flag even unto death? How different such a system would be from our present one, where all the details of enlistment down to taking finger prints are attended to with the greatest care, but where the actual enlistment, *the oath,* is simply gone through in a perfunctory manner.

It may be objected that a great many recruits would simply enlist on probation to take the trip to the military post designated for the swearing in of recruits, absconding upon arrival there, but if a few men would so decamp, no great loss would accrue to the government, at least not such an enormous loss as is now the result of desertions.* And the cost of desertions is not the only thing to be considered, for while the present number of desertions is extremely expensive for the government, it must be remembered that every deserter caught, tried, convicted, and dishonorably discharged is thereafter debarred from serving in the army. At the present rate of desertion, this would give us in five years some 25,000 men, partially trained soldiers, who would be so disqualified.

Something must be done to stop desertions, and the plan suggested in this paper is feasible, easy of accomplishment, and last, but not least, would not entail additional expense. It might, and in my humble opinion would, accomplish good results, and at any rate it is better than our present "perfunctory oath and *you're it* system."

*The War Department has had under consideration the action it was possible to take in the case of a man who was accepted for enlistment by a recruiting officer in an Eastern city, and who was furnished with transportation to a general recruiting depot and who did not present himself at the latter place. It was considered that the man should be prosecuted. He could, of course, be sued in the civil courts for the amount of the expense to which he has put the government. It is considered doubtful, however, if a recruit could be prosecuted for not enlisting should he change his mind prior to his formal enlistment. Under the present system, recruits are not enlisted until they reach the depot to which they are assigned by the recruiting officers at the various recruiting stations.—*Army and Navy Register, May* 25, 1907.

# IS THE GARRISON RATION SUFFICIENT FOR A GOOD MESS?

By First Lieutenant SHERRARD COLEMAN, Ninth Cavalry.

IN the numerous articles published recently on the causes of desertion in the army there seems to be a general complaint of the poor quality of the company mess; particularly is this the case when the article has been written or inspired by the enlisted man.

I have been asked to write an article on the mess,* or to explain for the benefit of the readers of the JOURNAL, how I can maintain a good mess on the garrison ration.

Some months ago my troop commander, on an inspection of his troop mess, remarked, "You have an excellent mess, but Lieutenant —— —— ran the mess of Troop —— entirely on the ration, and I think that remarkable." As my troop had a large troop fund, and had had the reputation for several years of having the best mess of any organization in the post, it had never occurred to me to try and keep within the ration. But it struck me that if Lieutenant ——— could do it, why, I felt sure I could, and so went to work.

The following bill of fare, which I believe is a fair sample —covering a period of three months—is taken from the "kitchen

*Lieutenant Coleman has gaind such a local reputation from his handling the mess of Troop G, Ninth Calvary, that THE JOURNAL requested him to write a short article and show what he had done. As a further illustration of what this troop can do in cooking, the following is given: For four days during the last month this troop ran three messes—one in the post for twenty-five men, one in the field for fifty men, and one in the field for eighty officers. The majority of officers of that officers' mess spoke in highly commendatory style of the mess, and many pronounced it the best field mess they had ever seen. Lieutenant Coleman assures us this work would have been impossible except for the *system* that was inaugurated as shown in his article, and he believes such work can be done by any troop under proper management on the part of the troop mess officer.



book" of Troop G, Ninth Cavalry, for the week commencing the 11th day of March, 1907:

**MONDAY.**

**Breakfast.**

Steamed Rice with Sugar and Cream.
Stewed Prunes. Irish Stew.
Toast. Coffee. Bread.

**Dinner.**

Cream of Tomato Soup.
Roast Ribs of Beef. Brown Gravy.
Mashed Potatoes. Lima Beans.
Steam Pudding. Lemon Sauce.
Pickles. Onions.
Bread.

**Supper.**

Chili Stew.
Butter. Hot Rolls. Syrup.
Baked Potatoes.
Apple Sauce.
Tea.

**TUESDAY.**

**Breakfast.**

Hominy Grits with Sugar and Cream.
Stewed Peaches.
Fried Liver and Bacon.
German Fried Potatoes.
Toast. Coffee. Bread.

**Dinner.**

Bean Soup.
Boiled Beef with Dumplings.
Boiled Sauer Kraut. Steamed Potatoes.
Hot Corn Bread
Peach Roll. Cream Sauce.
Bread.

**Supper.**

Fried Fresh Tripe.
German Fried Potatoes.
Stewed Prunes. Hot Biscuits.
Butter. Tea. Syrup.

## WEDNESDAY.

**Breakfast.**

Oatmeal with Cream and Sugar.
Stewed Prunes.
Beefsteak and Onions.
French Fried Potatoes.
Toast. Coffee. Bread.

**Dinner.**

Cream of Potato Soup.
Beef Pot Pie.
Boiled Kidney Beans. Steamed Rice.
Pickles. Bread.
Apple Pie.

**Supper.**

Hot Rice Cakes. Baked Potatoes.
Butter. Syrup. Apple Pie.
Bread. Tea.

## THURSDAY.

**Breakfast.**

Hot Milk Toast.
Baked Beef Hash. Stewed Potatoes.
Bread. Coffee.

**Dinner.**

Macaroni Soup.
Boiled Vienna Sausage with Sauer Kraut.
Macaroni with Cheese.
Hot Corn Bread.
Sponge Cake. Vanilla Sauce.
Pickles. Onions.
Bread.

**Supper.**

Broiled Oxhearts. Baked Potatoes.
Prune Feche. Hot Rolls.
Butter. Tea. Syrup.

## FRIDAY.

**Breakfast.**

Hominy Grits with Sugar and Cream.
Hamburg Steak. Fried Onions.
Potato Cakes.
Stewed Peaches.
Toast. Coffee. Bread.



**Dinner.**

Rice and Tapioca Soup.
Broiled Halibut Steak. Creamed Potatoes.
Stewed Tomatoes. Pickles.
Apple Dumplings. Lemon Sauce.
Bread.

**Supper.**

Hot Pan Cakes.
Rice Pudding. Vanilla Sauce.
Butter. Syrup. Tea.

## SATURDAY.

**Breakfast.**

Oatmeal with Sugar and Cream.
Pork (Link) Sausage. Saratoga Chips.
Stewed Prunes.
Toast. Coffee. Bread.

**Dinner.**

Cream of Tomato Soup.
Roast Sirloin of Beef. Brown Gravy.
Lima Beans. Bread Dressing. Mashed Potatoes.
Potato (Sweet) Custard.
Pickles. Bread.

**Supper.**

Mutton Stew.
Butter. Hot Rolls. Syrup.
Apple Sauce. Tea.

## SUNDAY.

**Breakfast.**

Hominy Grits with Sugar and Cream.
Stewed Peaches.
Porterhouse Steak, Smothered in Onions.
French Fried Potatoes.
Hot Biscuits.
Butter. Coffee. Toast.

**Dinner.**

Vegetable Soup.
Fried (Spring) Chicken, with Cream Gravy.
Boiled Kidney Beans. Creamed Potatoes.
Sweet Potatoes. Hot Corn Muffins.
Lemon Ice.
Chocolate Cake. Jelly Cake.
Pickles. Bread.

**Supper.**

Milk Toast.
Butter. Stewed Prunes. Syrup.
Creamed Potatoes.
Bread. Iced Tea.

Every article of the above, other than the ration, was purchased from savings made on the ration, except a portion of the milk or cream used in the coffee or breakfast cereal, which was furnished from two cows owned by the troop. The ration return for March shows 2,681 rations to have been issued or a daily ration strength of 86.5. Commissary savings for the month were made as follows:

| | | |
|---|---|---|
| 547 lbs. | Bacon. . . . . | $ 71.06 |
| 242 lbs. | Beans. . . . . | 6.63 |
| 209 lbs. | Coffee. . . . . | 21.42 |
| 533 lbs. | Sugar. . . . . | 23.99 |
| 20 gals. | Vinegar. . . . . | 1.85 |
| 3 lbs. | Pepper. . . . . | .61 |
| 18 lbs. | Soap. . . . . | .76 |
| | | $126.32 |
| | Commissary stores purchased. . . . . | 76.74 |
| | Cash saving on the ration. . . . . | $ 49.58 |

In addition, the troop sold potatoes to the value of about $15.00.
The bread rations for the month of March were. . . . . 2190 rations.
Drawn from the bakery. . . . . 840 rations.
Saving on bread. . . . . 1350 rations.
which made the bakery savings amount to about $30.00 for the month.

An agreement is made with the meat contractor to apply the money value of any savings which may be made on the beef ration in payment of other stores purchased; thus, the troop owed the butcher for extra meats purchased during March $16.40 in excess of the money value of rations credited.

It will be seen that after paying for the extra meats there was a cash balance of about $80.00 for the month, which was available for the purchase of other stores from the post exchange—or wherever they might be bought cheapest.

It will be noticed that the troop saved all of its sugar—that is, the issue sugar is not drawn, but granulated sugar purchased instead, to the amount of 900 to 1,000 pounds per month, or nearly double the amount of the ration allowance.



If an officer will give his close personal attention to every detail until his kitchen is thoroughly organized, there is no investment in the army that will give a better return. The men of my troop never know what they are to have for the next meal, but they do know that it will be a good one, well cooked and well served. Every one may have all he can eat, but nothing is allowed to be wasted. I found men in the habit of wasting bread—of taking two or three slices, putting it in gravy or the like and leaving it on their plates—to be emptied in the scrap barrel. I detailed a noncommissioned officer to attend every meal, and when a man leaves bread on his plate like this his attention is called to it but once—the plate is saved for the next meal just as it is, and the man is made to eat what he left before he can have any more. It didn't take long to break them of this wasteful habit. The noncommissioned officer, however, is still doing duty at meal times in the dining room.

It has been my constant aim to get the very best and to give plenty of variety, or in other words, to keep on trying to make the mess a little better each week.

For breakfast, there is always a cereal—a different kind each day—with plenty of sugar and cream; fruit of some kind, depending on the season; some kind of meat or eggs with bacon—a different kind for each morning through the week. I have the cooks to save all the tenderloin (the beef is issued by the quarter, alternating fore and hind), until there is enough for a good mess, which is usually about once a week. Tenderloin is better appreciated when broiled as a steak than boiled or made into a stew. There is always one vegetable for breakfast—potatoes or tomatoes. The potatoes are cooked in a variety of ways, no two mornings alike. There are usually two kinds of bread for breakfast, toast and the bakery bread, and once or twice a week hot biscuits. Whenever we have hot bread, butter or fresh oleomargarine is served. The oleo is bought in small lots daily, in order that we may get it fresh. It is very palatable if kept cool and firm until used, and has the advantage of being pure from a hygienic point of view. It costs less than half of

creamery butter. Hot coffee with cream or milk is served for breakfast only.

For dinner, there is a different soup for each day of the week. The bones are cut from the beef and put in the stock pot. Nothing taken from the table is allowed to go into this pot —only that which is clean and sightly. The stock is renovated every day in warm weather and every other day if the weather is cool. The men never tire of good soup and generally clean it up at each meal. The meat for dinner is varied, so that as a rule there will be a different dish for each day of the week. Chicken or some other fowl is generally had for Sunday dinner. Sauer kraut or cabbage is given once a week with wienerwurst or corned beef and hot corn bread. Fresh fish once a week—a different kind for each week. There are always two good vegetables for dinner—a little better prepared than you will find in the best hotels—such as spaghetti, corn pudding, kidney beans, spinach and the like. On Sunday there is usually a salad of some sort. The desserts are excellent, and no two alike for the same week. There is always ice cream or some kind of a sherbet with cake on Sundays.

For supper, there is usually some kind of a fried meat or a stew, with one vegetable. Hot rolls or pan cakes, with butter and syrup. Something sweet—a fruit sauce or some kind of pie. In cold weather hot tea, and when the weather is warm it is iced.

All of this and a great deal more can be done on the "government straight," even where, as at this season of the year, everything has to be bought. During the garden season money should be saved for the fund—to be spent during the winter months. There are a thousand and one ways to augment the fund. Troop G last fall put up some two hundred and fifty bushels of apples. Every apple was wrapped in paper, packed and stored in barrels and boxes. During the winter—until late in February—the men had free access to apples. It was a good investment. These apples cost the troop from fifteen to thirty cents a bushel. I merely mention this as an item.

That organization is fortunate that has a good steady cook. There is no such a thing as the finished product in the army.



They all can learn. I found my cooks preferred to make baking powder biscuits than rolls. There would continually be some excuse for not making yeast bread—simply because it required a little more work and attention. I found I could save about fifteen dollars a month by having yeast bread instead of biscuits for supper. Lard and baking powder cost lots of money. You can buy a pound (which is sufficient for a week) of compressed yeast from the post exchange for forty-five cents. Besides, yeast bread is healthier and the men like it better. Great care is taken in the cooking of potatoes. They are prepared in a number of ways. The potatoes are seldom, and rice is never, boiled, but are steamed in a vessel made especially for that purpose. It makes all the difference in the world. Formerly the men would hardly touch rice, while now, the steamed rice is eaten with great relish.

Tea is made in a twenty gallon crock. The leaves are never allowed to stand in the vessel on account of the bitterness produced by steeping. The tea leaves should be scalded twice—the first water being poured off; the second is the tea, ready to serve, sweet and aromatic, and really doesn't need any sugar. The men grow very fond of tea when it is properly made, and there is a big saving made in coffee.

Many company cooks will cook things ahead of time. This should not be allowed. How often do you go into the kitchen and find the boiled potatoes sitting off to one side, waiting for the dinner hour? Cold potatoes are not fit to eat, and few are good that have been warmed over. I insist that the meals in my mess shall be served hot. This is one of the hardest things to get carried out, but it is absolutely essential to a good mess, and requires constant attention.

The week's bill of fare is made out on Sunday morning. I never let any work interfere with this duty. I, myself, write in ink every item for each meal in the "kitchen hook." I do not allow the cooks to change or substitute any article without my permission. It is a good deal easier to boil potatoes than "french" fry them.

I am constantly looking out for new dishes—figuring on the cost and taste. This adds interest in the kitchen as well as zest

in the dining room. After completing the "menu" for the week, I make out the week's orders to the meat market and post exchange on a printed form I had made for the purpose. This order requests that certain articles will be delivered to the troop on certain days. It also serves to give the markets plenty of notice in making their purchases for future delivery, as well as to warn them that no article will be paid for unless requested on this form and signed by one of the troop officers. This regulates the purchases, and does away with promiscuous and irresponsible ordering by the cooks.

The week's fare presented in this article does not contain the usual variety of dishes. I have tried to pick out a week with as little variety as was possible, but one which contained good wholesome dishes which would come entirely within the ration. In order to give the matter a thorough test, I selected three months, the most costly quarter of the year, so far as the markets are concerned. Then, too, it was necessary to figure on a full quarter to get the best results from the bread saving. The savings for the quarter covered the cost of every article purchased for the mess. The records of the troop fund will show this.

It is not sufficient for a good mess that a number of dishes be had for one meal, but on the contrary, a few well cooked dishes are much better. Get the very best out of each article, and have different dishes for every meal if you can afford it. Let everything be absolutely clean and sightly. The eye has a great deal to do with the appetite. Officers should know something about cooking. Let them teach the cooks. There is too little attention given to the mess by the average officer. It is too general a practice to turn over the mess to the quartermaster sergeant and take his word for everything.

While I do not believe many soldiers desert the service on account of poor food, still it is the cause of great dissatisfaction, and offers a good excuse. There is no question but that the ration is liberal, and if properly handled a good mess can be sustained on the present allowance.

I have endeavored to show what is practicable—what has been done. While the work itself is not difficult, it does require



regularity, interest and constant attention. As I have said before, I know of no one thing in the army, which, if properly looked after, that will give a better result for soldiers in garrison. Feed your men well, keep them busy, and you will have fewer desertions in the army.

# THE PENNSYLVANIA CONSTABULARY.

By First Lieutenant DAVID H. BIDDLE, Sixth Cavalry.

THE Pennsylvania Constabulary has now been organized and doing active service for over one year. During this time it has had an opportunity to demonstrate its usefulness and efficiency. As the organization is largely patterned after the United States cavalry, and over ninety per cent. of the force have at one time and another seen service in the regular establishment, it is thought that the following reports and remarks will be of interest to the army:

## AUTHORITY FOR ORGANIZATION.

No. 227. An Act creating the Department of State Police; providing for the appointment of a Superintendent thereof, together with the officers and men who shall constitute the force; defining their powers and duties and making an appropriation for the expenses connected therewith.

Section 1. *Be it enacted, etc.*, That there is hereby created and established the Department of State Police, the head of which shall be the Superintendent of State Police, to be appointed by the Governor, by and with the advice and consent of the Senate, to serve for a term of four years from the date of his appointment, and who shall receive a salary of $3,000 per annum, to be paid quarterly upon warrant of the Auditor General, drawn on the State Treasurer.

Sec. 2. The Superintendent of State Police shall be provided by the Board of Public Grounds and Buildings with suitable offices at the Capitol, in Harrisburg, and shall give a bond to the commonwealth in the sum of $20,000 for the faithful performance of his duties. He is authorized to appoint a deputy, at a salary of $2,000 per annum; one clerk, who shall be a competent bookkeeper, at a salary of $1,400 per annum, and a competent stenographer, at a salary of $1,200 per annum.

Sec. 3. He is authorized to appoint the state police force, which shall consist of four companies, or platoons, each consisting of a captain, at a salary of $1,500 per annum; a lieutenant, at a salary of $1,200 per annum; five sergeants, at a salary of $1,000 per annum, and fifty men, at a salary of $720 per annum. No applicant shall be appointed to the state police until he has satisfactorily passed a physical and mental examination, based upon the standard provided by the rules and regulations of the police force of the cities of the first class, in addition to which each applicant must be a citizen of the United States, of sound constitution, able to ride, of good moral character, and between the ages of twenty-one and forty years.



Sec. 4. It shall be the duty of the Superintendent of State Police to provide for the members of the police force suitable uniforms, arms, equipments, and, where it is deemed necessary, horses; and to make such rules and regulations, subject to the approval of the Governor, as are deemed necessary for the control and regulation of the police force. It shall also be the duty of the superintendent to establish local headquarters in various places. For that purpose he is hereby authorized to do so, by lease or otherwise, so as best to distribute the force throughout the various sections of the commonwealth, where they will be most efficient in carrying out the purposes of this act to preserve the peace and to prevent crime.

Sec. 5. The various members of the police force are hereby authorized and empowered to make arrests, without warrant, for all violations of the law which they may witness, and to serve and execute warrants issued by the proper local authorities. They are also authorized and empowered to act as forest, fire, game and fish wardens; and, in general, to have the powers and prerogatives conferred by law upon members of the police force of cities of the first class, or upon constables of the commonwealth; and are intended, as far as possible, to take the place of the police now appointed at the request of the various corporations. The state police force shall, wherever possible, coöperate with the local authorities in detecting crime, and apprehending criminals, and preserving the law and order throughout the State.

* * * * * * *

SEC. 7. All acts or parts of acts inconsistent herewith be and they are hereby repealed.

Approved the 2d day of May, A. D. 1905.

SAML. W. PENNYPACKER.

The foregoing is a true and correct copy of the act of the General Assembly No. 227.

FRANK M. FULLER,
*Secretary of the Commonwealth.*

EXTRACTS from the annual report of John C. Groome, Superintendent State Police:

* * * * * * *

"The first applications for positions on the force were received early in July, 1905, and by the middle of August over one thousand applications had been received for 228 positions. In accordance with the act creating this force applicants were required to pass a physical examination, and each was examined by Dr. Francis D. Patterson of Philadelphia, during the months of September and October, they having been previously notified to assemble at various towns throughout the State. Of the 1,000 applicants 250 passed a satisfactory physical examination, and these were then notified to assemble at Harrisburg, Philadelphia, and Pittsburg on Saturday, November 4, 1905, for the mental examination. About two hundred men passed a satisfactory mental examination, and the army discharges, references, etc., of these men were then examined to ascertain their moral fitness for the force. From this number I selected eight (8) officers and one hundred eighty-five (185) reliable men of good character. These men came from nineteen different States, and ninety per cent. had seen service in the United States army.

"The applicants who had passed satisfactory examinations were, according to the act, divided into four (4) troops, each consisting of one (1) captain, one (1) lieutenant, five (5) sergeants, and fifty (50) privates, and on December 15, 1905, were enlisted in the Force for two (2) years.

"While the examinations were being held, I visited many different parts of the State so as to be able to select the best



locality for establishing the four troops, and after careful consideration decided upon Greensburg, Westmoreland County; Punxsutawney, Jefferson County; Wyoming, Luzerne County, and Reading, Berks County.

"Finding it was impossible to secure a building in the vicinity of these towns large enough to accommodate an entire troop, I was compelled to rent buildings as nearly as possible suitable for the purpose, and then make the necessary additions and alterations. As extensive alterations and repairs had to be made in nearly every instance, all the barracks and stables were not completed until early in the spring.

"In the meantime the officers and men had been assigned to their respective troops, the specifications for uniforms were drawn up and the contract awarded; the men were all measured, the arms, equipment and horse equipment ordered, and the 230 horses, selected in accordance with the United States cavalry specifications, were received and distributed among the four troops.

"March 1, 1906, the uniforms, arms, and equipment having been received, the Force went on active duty.

"Since that time the Force has been daily doing mounted patrol duty in the vicinity of the barracks and the adjoining counties, and in addition has been called upon to suppress rioting, and assist in maintaining law and order during labor disturbances in the following counties: Westmoreland, Somerset, Jefferson, Armstrong, Clarion, Indiana, Luzerne, Carbon, Lackawanna, Lebanon, Northumberland and Lehigh, and in every instance, sometimes with the assistance of the local authorities and sometimes without it, the men of this Force, though few in numbers and always largely outnumbered by the lawless element, have by their coolness, bravery, and good discipline, been able to prevent serious trouble and maintain the peace of the commonwealth.

"The Force has patrolled over 65,000 miles in twenty counties and made 808 arrests for forty-five different crimes or misdemeanors, securing 583 convictions.

"The fines collected by the different counties from the above convictions amounted to $6,066.61.

"I would respectfully call your attention to the following reports, selected from the troop daily reports, to show the character of the work done by the Force:

"On the night of September 8th a detail of one sergeant and fourteen privates was sent from Troop A to Wireton, a suburb of Monessen, Westmoreland County, to break up a colored settlement of gambling houses and speak-easies. The detail surrounded seven houses and arrested sixteen colored men, ten colored women and four white men, and seized three wagon

UNIFORMS OF THE PENNSYLVANIA CONSTABULARY.

loads of beer. Some of the men resisted arrest and one of them shot Private Hershey through the left leg and left wrist. The citizens of Monessen report everything quiet and orderly in Wireton since the raid.

"On the night of August 19th, Troop B received a call from Hughestown for assistance in quelling a drunken riot. Privates Garland, Adelson and Butler were immediately sent, dismounted, and while walking along a dark street, were fired upon from



ambush. Garland fell, shot in the breast, and Adelson fell, shot in the stomach. Butler was not wounded, and, rushing into a crowd that appeared from the side of the street, succeeded in arresting one of the offenders, whom he turned over to a local policeman, and telephoned to the barracks for assistance. A sergeant and ten privates were sent to his assistance, and after searching the Italian quarters, where the shooting occurred, arrested seven men. They were tried and sentenced to from one to three years in jail.

"April 29th, at the earnest solicitation of the sheriff of Northumberland County, a detail of twenty-two police, mounted, from Troop C, under command of Lieutenant Smith, was sent to Mt. Carmel, to quell a riot. The detail arrived early on the morning of the 30th, picketed and fed their horses, and went to the Commercial Hotel, about a mile away, for breakfast. When the police came out from breakfast they were met by a howling mob that had collected while they were in the hotel, and as they started up the street they were immediately surrounded by about one thousand men, howling and cursing at them, and throwing bricks and rocks. Privates Miller and Koch were both struck on the head and knocked down. The detail charged the mob with clubs and arrested several of the ringleaders and took them before Burgess Penman. When the police left Burgess's office they were again attacked and Privates Snyder and Crossland were knocked down with rocks. With four injured policemen to care for, the remaining men fought the mob with clubs for eight blocks, when someone in the mob commenced firing, which immediately became general, and several of the mob were seen to use shot-guns and pistols from behind trees and from windows and housetops. The lieutenant commanding then gave the police the order to fire and clear the way back to the horses. Several of the mob were wounded, but none seriously. The following morning the balance of Troop C arrived and a detail under Captain Page from Troop B. Regular patrols through the town were established and maintained day and night for several days, but after the first day there was not a sign of disorder. Private Crossland, who had his skull fractured by a rock, has not yet been able to return to duty. In

the Mt. Carmel disturbance the sheriff of the county called on the department for assistance, and upon the arrival of the troop, left the town and refused to return, and had it not been for the presence of the State Police there would undoubtedly have been serious rioting and bloodshed.

"September 2d, about 4 P. M., when Sergeant Logan of Troop D, alone, was attempting to arrest two Italians, charged with murder, at New Florence, Jefferson County, he was shot at five times, and telephoning for assistance, five men were sent him. His assailants, having taken refuge in a nearby house belonging to one of their number, upon the approach of the detail, opened fire from the second story window, instantly killing Private J. W. Henry and seriously wounding Private Mullen. The other members of the detail assisted Mullen to a place of safety. Private Homer Chambers, who, in the face of a steady fire of bullets from the house, went back to secure Henry's body, was shot eight times, three shots in the lungs, one in the eye, one in the stomach and three in the head. A second detail having been sent from the barracks, it was decided to rush the house, and as Private Francis A. Zehringer entered the building, at the head of the detail, he was shot and instantly killed. The balance of the men withdrew and surrounded the house until morning. Many shots were fired during the night, and at daylight, the inmates refusing to come out, the house was dynamited. Jim Laborie, an Italian who had been seen doing the shooting of Henry, and two other Italians, were found dead in the ruins.

"While all the members of these details showed the greatest coolness and self-restraint, too much praise cannot be given to Private Homer Chambers, who was so seriously wounded in endeavoring to rescue his comrade in the face of almost certain death.

"Illegal fishing and hunting has been almost stopped in the counties in which the Force has operated, and the men have assisted in extinguishing numerous forest fires, in some instances only after hours' of hard and dangerous work. They have also several times assisted the local health officers, notably at Rossiter, Indiana County, where for ten days during the month of November a detachment of the Force maintained a quarantine during the small-pox epidemic.



"The number of disreputable characters in the district in which the Force has operated, if not entirely eliminated, has been greatly reduced, and there has never before been greater respect for the law, especially among the foreign born element, than there is at the present time in the sections of this State in which the State Police Force is located.

"Since its organization there has been enlisted in the Force a total of 278 men, of which number two have been killed, twenty-six resigned, thirty-five discharged and seven deserted, and at the present time have 208 men on the Force, and over one hundred applications for the few vacancies that now exist. Ten men have been seriously wounded, two of whom have not yet recovered.

"The horses have done remarkably well, and during the open weather average about thirty miles each every other day; 224 of them are in excellent condition, and all should be serviceable for some years. Arms, uniforms and equipment, barracks and stables, are all in excellent condition."

While on leave of absence in February, 1907, Superintendent John C. Groome invited me to inspect Troop C, stationed at Reading, Pa. I understand that this troop is a representative one; it was selected because it was stationed near Philadelphia, where I was staying. In company with Mr. Cheston Morris, assistant superintendent, we were met at the depot by Captain Smith. His automobile soon brought us to the barracks, which was situated a short distance out of town. The building is an old colonial mansion, fairly well suited to its purpose. Captain Smith soon had his troop formed for inspection. This formation, as all their drill, is from the United States Cavalry Drill Regulations. The troop presented a handsome, soldierly appearance. After a general inspection mounted, I proceeded to make a careful inspection of each trooper dismounted. The horses are broncos from Texas; they were in good condition and bore evidence of good grooming. They were well shod along the lines as we are taught. Equipments are of black leather and were in fine order. Some of the saddles were McClellans and some

Whitmans; the former have given universal satisfaction; the latter are made by the Mehlbach Company on the Whitman tree with the exception that the cantle and pommel are high like the McClellan. These saddles were very unsatisfactory, for the reason that the side-boards are nearly horizontal, which leaves an open space under the center of the side-board and the blanket sufficiently large to insert the hand. The result is that all the weight is borne on the extreme ends of the side-boards.

TROOP C, PENNSYLVANIA CONSTABULARY.

The bridles and bitting are approximately the same as now used in our service. Blankets the same as in our service.

Their weapons consist of the mace, pistol and carbine. The pistol is of .38 cal. Colts. It has not given satisfactory results owing to the small caliber. I understand that out of some thirty-five people who were hit in a riot at Mt. Carmel, there were no fatalities. The Springfield single loader carbine, caliber .45, is carried only when the situation and conditions necessitate it.



The overcoat is patterned after that worn by the Irish Constabulary. It is a fine, roomy and heavy coat, made for a cavalryman. The material is of dark Oxford melton, lined with blue flannel. This coat is made by a Philadelphia contractor for $15.00. It is a splendid coat and well worth the money.

The blouse and breeches are of dark Oxford whipcord, of excellent quality, cut on good lines. This uniform looks and wears well. They were neat and clean.

The helmet is worn on duty. It was adopted primarily for the protection it gives. Experience has demonstrated its usefulness in this line; many men having been hit on the head by bricks and lumps of coal, would otherwise have been seriously injured.

The cap is patterned after our blue cap "without the bell top."

Black puttee leggins are worn with black leather shoes. There is no "regulation" shoe.

The stables, picket line, corral and blacksmith shop are patterned after our service; all were in good order. Three horses that had been injured by being kicked by rough shod horses were receiving intelligent and careful treatment.

The kitchen was presided over by a colored cook, who was employed by the troop (there being no enlisted cook). Everything was neat and clean, the food well cooked and plentiful.

As I passed through the barracks, inspecting the squad rooms, every mark of military ceremony and courtesy was carefully adhered to. The rooms were clean and, considering their crowded condition, very neat.

A constable upon his enlistment is issued at the expense of the State one overcoat, one blouse, one pair breeches, one helmet, one cap and one pair puttee leggins. Shoes and underclothing are not supplied. He is expected to mess himself, which will average about $14.00 per month. He pays his own doctor bills. No provision is made for retired or disability pay, nor is there any increase for reënlistment or length of service.

Disciplinary measures are provided for in the act creating the Constabulary. An institution similar to our summary court has been established; punishments as a rule are in the nature of fines.

During the present session of the State Legislature, a determined effort has been made by certain members who represent the mining districts, to have the act creating the Constabulary repealed. This effort has been defeated and a bill introduced looking to a large increase of the force, together with an increase of pay. It is thought that a considerable increase in both will be granted.

The superintendent, Captain John C. Groome, has for over twenty-five years been an active member of the First Troop, Philadelphia City Cavalry, and its captain for the past ten years. Many officers and men will remember having seen him in Porto Rico during the Spanish War, where he served with the First City Troop as its captain. To his energy, executive ability and general qualifications as a soldier are largely due the organization and equipment of the splendid body of men who constitute the Pennsylvania Constabulary.

It might be apropos to state here that I am of the opinion that most of these men would now be serving with the United States army if the pay was sufficient.*

*We have received requests from old soldiers for recommendations for this duty during the past few months, so Lieutenant Biddle is quite correct in his statement. However there is this feature about the matter, these men will probably be available in war and should make excellent material for getting new men into shape.—EDITOR.

# RIDING TO HOUNDS WITH CAVALRY OFFICERS IN GERMANY.

BY FIRST LIEUTENANT GORDON JOHNSTON, THIRD CAVALRY.

## INTRODUCTION.

A MERE description of an actual hunt would hardly convey the full significance of the combined duty and pleasure which brings German cavalry officers to the meets here in Hannover. It may sound strange to us, but if anything, the emphasis is laid on the duty. Surely one of us would receive an awful shock if an orderly should hand him, some bright fall morning, instead of a detail as O. D., an order to report on his best mount at a certain rendezvous for a glorious gallop behind a pack of fox hounds!

When you meet at this rendezvous, or on the way, about one hundred and twenty-five of your brother officers from every mounted regiment in the service, each keen to tell you what his horse has done and will do, and you feel the smooth glide of a good horse under yourself—but my pen "takes the bit" and is off too soon. Before the hounds are laid on I must make an effort to bring the environment to the reader, as he unfortunately cannot get to it, and make such explanations as will give him a real insight into this military game. Truly a game in one sense, but played seriously, as the list of casualties will attest, and for a serious purpose.

At Hannover is situated the riding institute for German cavalry officers, to which one officer from each regiment of cavalry and artillery is detailed for two years. It is not my intention here to go into a minute description of this institution from a technical standpoint. It must be said, however, that here the horse is truly king, and rules in thoughts and conversations; to him the larger part of each day's work is devoted. In the big

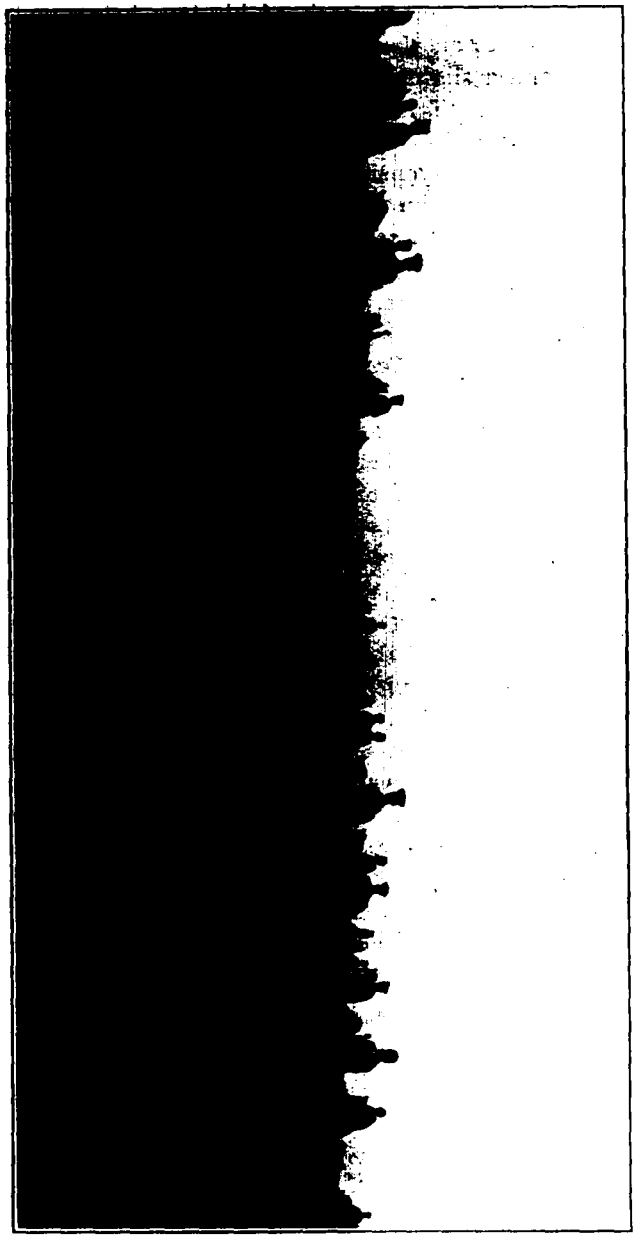
square covered by the buildings of the institution are innumerable longeing circles, open air riding tracks, runways with every sort of jump, a big open square with water jumps, post and rails, big logs, brush hurdles, fence and ditch, etc., all surrounded by some seven brick riding halls. Breedy looking officers' mounts are being led here and there continuously, while long strings of service horses disappear into the various halls or exercise squares at all times of the day.

Is it a wonder that a wandering cavalry officer drove his picket pin in right here, put all his Baedekers safely away, and lost all desire for further sightseeing?

When a courteous hussar officer informed me that if I had a pink coat along he could get me an invitation to hunt with the officers of the riding school, where a pack of hounds is maintained as one of the principal parts of the institution, you may be sure that the coat was soon on hand. Then, riding out to my first hunt, the second of the season, I began to observe the riding of the various officers—cuirassiers, dragoons, hussars, uhlans and lancers—who were also on the way to the meet. They were so beautifully mounted that I have rarely seen as many horses of such class together. As for their riding, I must confess that I have swung all the way from amusement at their seat and slight esteem for its virtues, to a serious and respectful regard. And why? The answer as it has come honestly to me should satisfy anyone. I have ridden with them at full speed over the worst country I have ever seen—fearfully deep, rough, full of holes, innumerable overgrown ditches, stiff fences with deep, slippery take-offs and landings, with ditches on one or both sides—and I have seen them go straight and hard behind the hounds. That is a final test. Furthermore, in over twenty hunts I have been down hard four times with my horse, and of these falls only one happened with a horse trained according to their system, while for at least fifteen of the hunts I was on school horses.

Again, I have ridden one of their service horses in the riding hall, and must confess that I have never felt such perfect obedience to the aids, or such flexibility or agility. The horse went straight forward in full trot, curved around first one of my





PART OF THE FIELD.

legs and then the other, each of his legs being under perfect control, came to an abrupt halt from a gallop by a pressure on the girth and a slight shifting of the weight, with a bare twist of the wrist. So light and ready was the response to the aids that in the gallop I was nearly unseated several times by the swiftness of the responsive action.

Naturally such experiences lead one to feel that the system which makes such horses and enables riders to get over the worst imaginable country in full speed, is worthy of the closest study and consideration. Such an opportunity has come to me, and so interesting have I found it that it seemed only natural to suppose that other cavalry officers might find it equally so —and therefore these articles.

In the one following this I shall attempt to describe a boar hunt such as we have here three days in the week, only taking incidents and actual occurrences from several to make that one a good average, which some photographs taken in the field itself will probably make more real. In the third, it will be my effort to describe the German seat in a more technical way, comparing it with our own, giving its *raison d'etre,* which more or less involves a discussion of their riding system, and offering my own actual observations as to how completely it fulfills the demands of military riding.

Nothing could give a better insight into the spirit and attitude of the German cavalry officers toward riding than the following extracts from "Riding Recollections and Reflections," by Graf Alfred zu Dohua, Oberst and Flugel, Adjutant Leiner Majestat des Kaisers und Königs, a most interesting and delightful book. I regret exceedingly that much must be lost in translation. The gutteral roll of the German words sounds like the thud of hoofs on good hard turf.

* * * * * * *

Whyte Melville, the most delightful writer of sporting stories, sketches one of his friends as follows: "He sat his horse with long reins and a light seat, as one who often rode to hounds" —short and fittingly drawn in; one sees the man riding.

The hunter must be sparing of the strength of his horse, for uncertain are the demands which must be made upon it. No



one knows when the hounds are "laid on" whether the hunt will be long or short, or over what sort of country the flying quarry will lead man and horse. Every means to ease his horse will the rider use, every unnecessary effort will he avoid; therefore the long rein and the light seat. In steeple chasing the horse must gallop on to his jumps as fast as possible; when the take-off is good the rider only sits lightly and closely. At the hunt, however, over natural country, less haste and more judgment is demanded. We see, therefore, the hunter give up from necessity even the light seat on the thighs, and take up, on occasion, the "saving" seat; that is, he lightens the load on the forehand on landing after a jump or in broken ground, sitting well back and giving plenty of rein to his horse.

The hunter must make the same demands on the obedience of his horse as the campaign rider; with regard to responsiveness to the aids, ability to turn readily, or balance, less may be demanded, as he has both hands free and therefore can ride with parted reins. We see, also, orderly officers who have to ride long stretches across country take up prudently the hunter's seat. This seat, however, cannot be allowed or taught to the man who rides in the ranks, for he must ride the military seat in order to keep the accurate pace, to hold his exact place, to use his arms, and direct his horse with one hand. The hunter bears no arms, very much to the comfort of himself and his horse. The flat saddle allows him deeper guidance, while the packed service saddle demands a higher.

It is a real pleasure to recognize the fact that every industry and every sport serves the Fatherland. Trade and manufactures have their share, in that they furnish the wherewithal for the defense of the ideal wealth of the nation. Agriculture is the foundation of the state and provides the great majority of the necessary soldiers. Racing encourages the raising of horses, and well indeed does riding to hounds particularly serve the cavalry.

Riding to hounds advances the young rider more than any other cavalry exercise, and preserves the older from a premature decadence. The cavalry officer who cannot, in the swiftest gallop, consider and make decisions or formulate orders should

undeniably send in his resignation, for long ago Xenophon said in his "Hipparchus": "To ride more slowly than these riding teachers would not befit a colonel." So one may safely recommend all cavalry officers to keep themselves in riding condition, and to avail themselves zealously of every opportunity to hunt.

The old Duke of Wellington is reported to have said that he had found his cavalry leaders were without exception among those whom he was accustomed to see in the first rank behind the hounds. Knowledge of horses and of the care of horses is also promoted by experience in riding to hounds. Many a young officer has first learned how good an animal his once slightly esteemed charger* was after a long hunt in deep going.

The German officer has really only one sort of horse—a maid of all work—while one hears that the English cavalry officer has a private charger and, according to his tastes, steeple chasers for racing purposes, hunters to follow the hounds, hacks for park riding, ponies for polo, etc., etc. The German officer rides all of his horses in the service, even his race horses. The late riding master, Von Heyden-Linden, won a race with "Orcadian" on Sunday, rode the same horse with his squadron on Tuesday, and won a race with him again in Hannover on Thursday. So our Prussian charger must perform all his duties —he must go well on the drill grounds before the platoon; he must show the greatest endurance on patrols in maneuvers; in the fall he must follow the hounds and run in the regimental races, if necessary pull a dog cart homeward, and of course dance like a high school horse in the riding hall instruction, also go safely under ladies, etc., etc. A good sample will answer to all these demands.

In one of the innumerable amusing books by Gyp, the story is told of a horse trader who had claimed for his animal all the good qualities and virtues he could think of, and wound up with the remark that "It is a pity he doesn't know anything about cooking." This story may well be applied to our chargers.

*Charger is the government horse which is supplied each cavalry officer free, which becomes his personal property after it has been used four years in the service. He then gets another, and may sell or do what he wishes with the old one.



In Germany we are too poor to have a special horse for every purpose; we have, on the other hand, the golden virtue of poverty—industry. The rich man who buys a riding horse which does not go well, throws it away or puts it in a wagon; the impecunious lieutenant, however, must stick to it, bend or break.

We cannot allow the idea of distinction that one in any particular sort of ground needs a special horse for it. The Prussian horse hunts in the bottomless meadows of its birthplace, is not frightened at the chasms of Lissa, slips like an eel through the close woods of Grunewald, in Neubrandenburg, hurls itself over the stone walls without hesitation, is perfectly at home among the ditches and fences of Hannover, and even as far away as Senne and Lilienhof, where Graf August Bismarck, in the shadow of the snow-crowned Alps, leads his pack. Wherever in Germany hounds are to be followed, the Prussian horse is the fellow for the business.

After this *amende honorable* for our homeland remount, may I offer a few words about the thoroughbred, as I have a sincere respect for this class?

Whoever has been on friendly terms with horses which have received their education in racing stables, and has learned to know their winning manners, will be sad to be separated from them. I ascribe their agreeable, I may say fascinating, manner of going, first to their blood, and second to the fact that they have been educated in the training school since they were yearlings. The feeling that one has on the horse is not always a good measure of its quality. It sometimes happens that a horse feels so splendidly under one that he believes he could conquer the world—and is soon defeated; another feels the opposite and gives excellent performances. A horse with free action and long stride is always fascinating, while a horse with pony action both tires and bores the rider. Horses that are too large are not suitable for heavy country, as they naturally cannot gather themselves in the last stride before a jump as cleverly as small horses which are in general more agile. A small horse with big strides is the ideal, particularly if it has had a racing education.

Whyte Melville, who so often occurs to me in this study, says: "When only one horse is in at the death after a very long

run through heavy ground and over big jumps, it is always a small horse, an aged horse (*i. e.*, not under six years old), and a thoroughbred." This experienced rider has drawn the ideal hunters, according to my way of thinking. I can corroborate this in my own experiences.

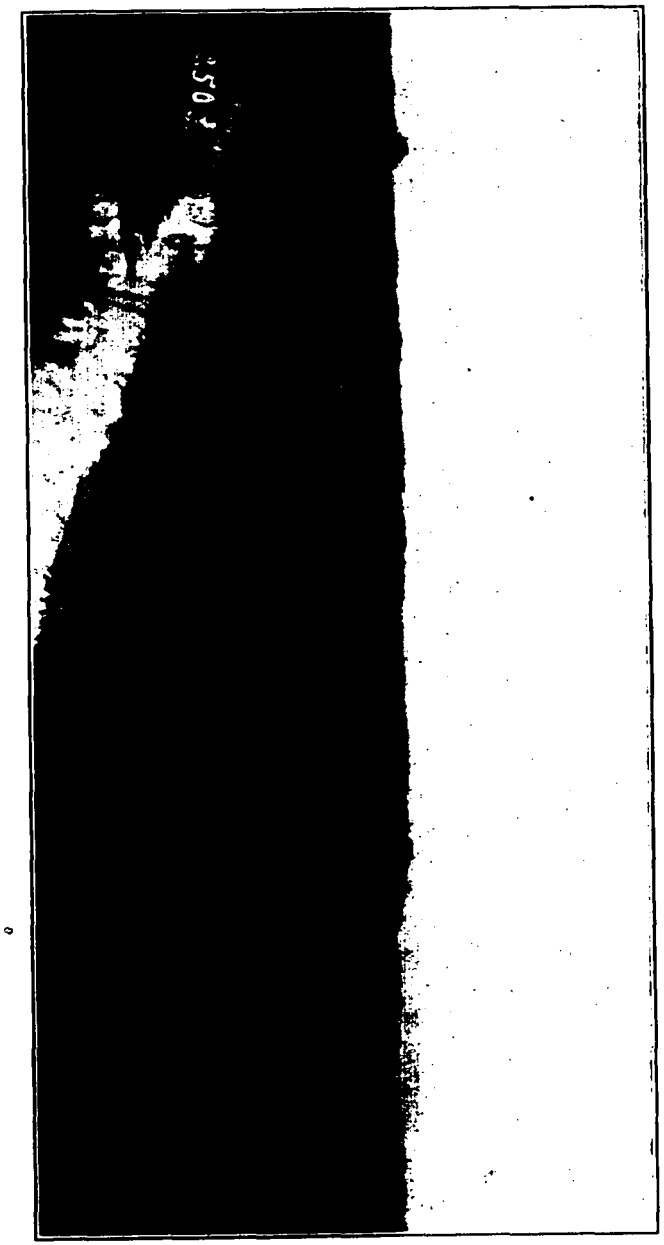
To properly appreciate the value of a thoroughbred, one must not forget that for hunting and riding purposes only the outcast of the thoroughbred is available—the best go to the stud, the next in the steeple chases, and the worst for sale as riding horses. So the thoroughbred has a difficult position as opposed to the Prussian half-bred, though the former is highly appreciated and sought after, even to its weakest representative, the outcast "selling plater." Every one can think of some particular spider-like thoroughbred with bad shoulders, who goes so close to the ground in walk and trot that he stumbles every hundred strides, with long back, thin and often bent legs, and thin, ugly neck. On account of these corporal faults and from the bad experiences resulting from them, he has acquired a hard mouth and an ugly disposition; but all is forgiven when he begins to gallop, and runs as long as he can—yes, longer—when many a half-bred has quit and must be driven, while he still has many a mile left in him.

I reckon those horses as thoroughbreds which are in reality just a fraction less, and have been "made" in that academy for race horses; for example the victor in the long distance run from Vienna to Berlin, "Athos." He had scarcely a drop of cold blood in him, and ran in both flat races and steeple chases. The sweeping gallop, the manner of extending the neck and feeling the bit, the leap from a standing start into full gallop, and the noble calmness on all occasions, are all invaluable virtues.

When one is older and the nerves are getting bad, how easily one comes to maltreating a high spirited, self-willed Prussian horse, and how fascinating seem the manners of an old race horse in a troop. One feels that such a one would say "Heavens, what are you all getting excited about? I had something to think about when I fought with the French youngsters at Baden Baden, years ago!"

What is it that brings happiness in this short earthly life? It is success. How happy are huntsmen and riders who achieve





FULL CRY.

a visible success with relatively slight effort, and in addition have refreshing, healthy exercise! Therefore the merry excited features of the hunters, when after a sharp run "Halali"* is sounded. The blood rushes through the veins, one feels rejuvenated and uplifted. In a race only one is victor; at the hunt all who are in at the death have the feeling that they have won, especially when the going was far and fast, and many have not finished. The young rider who has come smoothly over the course, has managed his horse well, and has not over-ridden the master, is both proud and happy. The old huntsman breathes with delight the invigorating autumn air and thanks God in his heart for every good run and every new season he is allowed to enjoy. I envy my old friend and erstwhile master of hounds, who earnestly believes that on the other side he will again ride "Nightcap" and "Cromwell" behind the hounds. Who knows? In the end he may be right.

In this life here below, at least in Germany, one must make a great effort to get much hunting, for there are only a few packs, and these can hunt only from October until Christmas. The great fault in the German meets is that wherever there are cavalry garrisons drag hunts must be resorted to. The late Riding Master Von Kendall, a knight *'sans peur et sans reproche,"* has given us, in his posthumous work, an appendix to Whyte Melville's book (which he translated), a model manual on the installation of a pack of drag hounds. Drag hunts are unquestionably preferable to paper chases, for there is a peculiar sensation in following hounds to which nothing can be compared, although drag hunts follow a chosen course and the rider is not allowed to choose his own way, as in a real hunt; still the hounds regulate the pace, and that is the real advantage over paper chases. You can hardly imagine how quickly horses learn to watch the hounds on a hunt, and passionately gallop and jump after them. The writer of these lines has often had the honorable post of lanceur with the Royal Meet, and rode a brown gelding named "Bohemian," who quickly caught on to the game. This horse followed the hounds passionately as an old hunter through the thick Grunewald forest even when I had lost

*A call blown on the horns at the death.



them myself; otherwise he was a sluggard and had to be driven.

Paper chases are the very last to be recommended. If there are no drag hounds it is far better to send on a good rider to act as fox, with the trophy of the day attached to his left shoulder, two others equally well mounted following as hounds, or the field itself coming next. The latter is not allowed to overrun the master until in the course of the run he gives the "Tallyho," whereupon the field is free and every man for himself. As the field is well spread out, the "fox" at the Tallyho must ride straight ahead and do his best; he cannot swerve from the straight line. Whoever snatches the trophy from the near side, wins it. For a change, and to test the field, a fresh rider as a "fox" may appear on the scene when the first is tiring. The fox can also go to cover, *i. e.*, throw the trophy down, and then whoever first dismounts and picks it up wins.*

Riding to hounds gives horses a passion for jumping, and therefore under proved riders is an excellent school for young horses. Inferior riders must have trained horses so as not to disturb their companions, or else must keep far behind.

The art of teaching horses to jump has been brought into a system by the Rosenberg† school—a system which remains uncontested to this day, while in my lieutenantcy the ideas ever among good riders were very abstruse. When the horse breaks out to the left he must be brought back with the right "schenkel weichen," when he breaks out to the right, with the left "schenkel weichen," or if he refuses, remaining straight, he must be driven backward by proper aids for some distance and then (in all three cases) energetically driven forward.‡ Moreover an absolutely passive seat is the unquestioned rule. It is always dangerous for the rider to attempt to mark the moment for his

*This sport is practiced in many of the German cavalry posts, and seems to be very heartily enjoyed. One can readily see the good results which may be derived from it.

†A celebrated cavalry officer of the Prussian hussars.

‡The "schenkel weichen" is a training movement used in the riding halls very often, by which the fore and hind legs on the side ordered are so controlled and moved that they must be lifted, well bent, then carried across and beyond the opposite leg. The idea, I suppose, being to distract the horse's attention by this exercise, from the jump, and recall him to discipline and the will of the rider. I have tried it and found it good.

horse to take off. Sometimes, when one is teaching a young horse and it appears that he will make one more short gallop stride than necessary, and so come in too close, the "aids" may be given for a quicker take off; but this requires a most experienced rider, and even then it is a question whether it is not better to let the horse try it out for himself. It is precarious, just as well, in the opposite case, when the horse seems inclined to take off one stride too soon. The aids may be quite sufficient to disturb his momentum, and so throw him. Against ditches one can scarcely ride fast enough; before high jumps, if there is time, it is better to pull up a bit.

The riders who fall the least, and are the least hurt when they do, are those who can sit so absolutely still that the horse is unconscious of them when the take off is good—and who, when it is not, have the nerve to sit just as still, only lightening the forehand a little by leaning back and then paying out the full arm.

Anyone who thinks that by his bodily strength he can hold a horse or prevent him from falling, is like the man who would draw himself out of a swamp by his own hair. In riding it is a matter of mutual understanding and discipline if you want to prescribe for the horse the way he shall go, and his speed.

Mr. W. H. Moore, of the many gentleman jockeys I have seen, pleased me the most in those times when he rode for Mr. Oehlschlaeger in the races of the Steeplechase Club on the popular hills near Charlottenburg. He was long and slender then, light as a feather, and as strong and wiry as a steel spring. He rode relatively short stirrups—people with long legs must naturally ride sort stirrups to get in touch with the horse through calf and spurs. With very long reins and hands carried low he held the most notorious puller; he rarely fell, although he never declined to ride a race. I often watched his method with delight —the horse's head well in hand, lower leg fast on the girth at the take off; giving, in the air, the full arm and releasing the grip of the lower leg; acting, at landing, in perfect harmony with his horse, by the elastic play of hand and leg.

To return to the previous subject, the length of stirrup is a matter of individual taste; as one may note among jockeys, who



naturally are the best riders (that being their profession) that they ride very different stirrup lengths. The best rider on earth, as long as the sun shines, Jockey Archer, rode long stirrups; other celebrities quite short ones. The shortest stirrups are ridden by the modern jockeys of the American school, who have lately conquered the world. There is no doubt but that for the development of the greatest possible speed, the American seat is the most favorable; for hunting, and most of all for campaign riding, it is out of the question.

# RIFLE PRACTICE IN COMPETITION WORK FOR THE CAVALRY.

By First Lieutenant WM. H. CLOPTON, Jr., Thirteenth Cavalry.

WITH the innovation of the new magazine rifle and its issue to the cavalry a new era has been opened, and this branch of the service is placed on more equal terms for comparison with other arms.

Heretofore comparisons of the marksmanship of the two arms, cavalry and infantry, have been made with but little satisfaction, due to the wide difference in possibilities of the rifle and carbine as target arms, and arguments have always closed without either disputant being convinced, cavalrymen contending that the carbine was not essentially a target arm to be placed in competition with the rifle, infantrymen adding that the handicap allowed placed the relative efficiency of the two arms in proper comparison. What then was to decide this friendly argument between the two? But one solution is found, which is to have the two meet on mutual ground and shoot it out. Fortunately for the sake of argument this opportunity exists, and hereafter the relative efficiency will be annually decided in a friendly competition of one of the first and most essential qualifications for a soldier.

As a matter of interest the following arrangement of results of the army and division competitions held in the United States last year, where all arms competed under similar conditions and circumstances, has been prepared from the reports published in General Orders from the War Department.



| | | Cav'y. | Inf'y. | Engrs. | Porto Rico | Artil'y. | Total |
|---|---|---|---|---|---|---|---|
| Army | Officers | 2 | 2 | ..... | ..... | ..... | 4 |
| | Enlisted | 2 | 10 | ..... | ..... | ..... | 12 |
| Atlantic Division | Officers | 2 | 3 | 1 | 1 | ..... | 7 |
| | Enlisted | 6 | 13 | ..... | 1 | ..... | 20 |
| Northern Division | Officers | 4 | 7 | 1 | ..... | ..... | 12 |
| | Enlisted | 12 | 17 | 1 | ..... | ..... | 30 |
| Pacific Division | Officers | 1 | 5 | 1 | ..... | 1 | 8 |
| | Enlisted | 2 | 9 | 3 | ..... | ..... | 14 |
| Southwestern Division | Officers | 5 | 3 | ..... | ..... | ..... | 8 |
| | Enlisted | 3 | 10 | ..... | ..... | ..... | 13 |
| Total | Officers | 14 | 20 | 3 | 1 | 1 | 39 |
| | Enlisted | 25 | 59 | 4 | 1 | ..... | 89 |
| Percentage | Officers | 35.8 | 51.2 | 7.7 | 2.6 | ..... | ..... |
| | Enlisted | 28.1 | 66.2 | 4.5 | 1.2 | ..... | ..... |

In arranging the above list no information was at hand to show the proportionate number of competitors sent to competition by the several arms, so the percentage of places won may be in proportion to representation. A perusal of the above table, however, is of interest, from the fact that it shows a slight failure on the part of the cavalry to place their percentage of one to two on the division and army teams, with the one exception of the Northern Division, where the percentage is in our favor; at all other competitions we fell below what should be considered a normal quota.

To account for this in the first series of competitive tests, where all arms competed under equal conditions, we may advance as an excuse, without being severely criticised, the fact that little if any knowledge was general throughout the cavalry in the use of the gun sling, which enters so largely into results on the target range, but the excuse cannot be carried over into the next season of competitions to advantage.

Let us then look at the situation fairly and squarely, and recognize the fact that we are now to meet the other branches of the service on equal ground, bearing it in mind throughout the coming target practice, and, without transgressing the spirit of regulations, endeavor to encourage and develop good competition shots for our representation. This it is believed can be done without sacrifice to any one or injury to the general scope of instruction contemplated by regulations.

Skill on the target range is now encouraged officially in the form of increased pay to all men who qualify as expert riflemen, sharpshooters or marksmen; those failing in this, the few indifferent ones and the ones to whom target firing is distasteful, evade the subsequent season by qualifying as first or second classmen; why not then encourage the reliable and enthusiastic shots at the opening of target season with the prospect of division competition? To do this, troop commanders could devise their own methods, make the men familiar at the outset with the progressive scheme of rifle practice from the troop through army competition, announce the policy to be followed in selecting the troop's representative, and let the men feel they all have a chance to try for the privilege.

This would prevent the two classes of men so frequently found at competitions who are a detriment rather than an aid; one the "chronic competition shot," and the other the man hurriedly chosen and reported at the last moment to represent the troop. These two classes should be guarded against if it is desired to send the best men.

The first or the "chronic competition shot" is generally some man who has won a place at competition, is returned the next year and then succeeding years on his reputation, without again being successful, while the troop may have superior shots present better able to represent it and who would probably be more enthusiastic than the familiar figure mentioned, who soon gets so he looks upon competition as a respite from duty without endeavoring, or, what is more likely, being incapable of winning another medal. These men are an evil; they accomplish nothing, and stand in the way of more deserving men.

The latter, or those chosen at the last moment, are usually selected because they have stood highest in the marksman course, and may or may not be the troop's best shot; they should be recommended cautiously unless at the outset this policy of selecting the competitor has been announced.

A little thought then on the part of the troop commanders, followed by conscientious practice on the part of the men themselves, would place our best shots in competition, and the service would profit accordingly. In making the selection for competitor,



an alternate could be chosen, and these men given every opportunity to train for competition. They should be selected, not because of one or two brilliant scores, but rather for a consistent average of good scores, as this class ordinarily makes the shots to be depended upon. A good competition shot should be an enthusiast of fair physical attainments, and one who depends upon his knowledge and judgment of conditions, rather than the natural shot, whose success as such can be attributed to favorable conditions instead of his ability to combat unfavorable ones. To illustrate this, range firing might be divided into two features; the first embracing the physical qualifications necessary to hold the piece securely and retain the alignment of sights while the tigger is pulled, the second, the thorough knowledge of the piece, good judgment of weather conditions and the ability to apply it with a reasonable degree of accuracy to meet the varying conditions found on target ranges. With these two qualities combined, the fundamentals have been gained, and subsequent development depends upon conscientious practice.

It is not desired in this article to enter into the technical side of rifle shooting, of which the writer has but small knowledge, but rather to lend a word in encouragement of interest in competition work, with a belief that it will be received in the spirit with which it is written—a desire to see the cavalry excel in competition with other arms. There are several handbooks which have been written and published covering the technique of rifle firing to which the reader is referred for complete detail, and are so comprehensive that a study of them is well worth taking up.

The writer was fortunate enough, through the generous withdrawal of a brother officer, to be associated with and accompany the cavalry team which competed for the national trophy at Sea Girt last year. From his experience with the team he is of the opinion that there are many, especially amongst the younger officers of cavalry, who are as unfamiliar with the numerous details connected with rifle firing, as employed by experts, as he was prior to his last year's experience, and he feels justified in mentioning them in connection with this article.

The ordinary range shot found in the service takes the rifle as issued, proceeds to the range, fires the prescribed course, and if

he makes marksman, sharpshooter or expert rifleman is satisfied according to his ambition with the results obtained, and gives little or no further thought to the subject until the next season. With the experts of the National Guard and some few of the service the opposite is found. Amongst them, attention to the smallest details, observation of all conditions which might tend to develop the best results, and an accurate record of their work at all times on the range are practiced to the greatest exent, which the layman at first is inclined to ridicule, but if carefully pursued these will be found of inestimable value in acquiring a high degree of efficiency.

At the last meeting of the national board for the promotion of rifle practice most all of the appendages and devices in use were barred from the national competition to be held next year, as not being essentially military or considered proper adjuncts for military competitions. A recital, however, of some of these devices and their uses, and the customs employed last year, is not deemed out of place, as a matter of interest or tending to show that expertness depends largely upon attention to detail and practice, more than upon luck, on the target range.

At Sea Girt, the majority of shots were found to use one or more of the applicances in vogue, though there were many who appeared on the range with only their rifle and cartridge belt; and it is to the former that the writer shall refer in this article.

These competitors were mostly equipped with small hand satchels or grips, commonly called "dope bags," in which were carried everything from the rifle screw driver to an anemometer. Some of the bags being especially designed for this purpose, contained compartments into which each article was fitted. In these bags were carried the cartridges to be used by the firer, so that they might be kept of an even temperature and away from the influence of the sun; a barometer; a hygrometer; a thermometer; a telescope and stand for same; a gun rest; a rear sight elevator, for use in making small adjustments of the rear sight or setting the elevation; a box of camphor or a candle for blackening the sights, and a score book, the latter tabulated to show a complete record of each shot, its exact location with reference to the target, the elevation used, the windage taken,



the strength and direction of the wind, the condition of the light and mirage, and a place for any remarks the individual might desire. All of these were used by the firer during his score, at the completion of which he could tell you the history of each shot and have a plausible excuse for all that failed to hit the bulls-eye. By this close attention to details he made himself more familiar with the work he had in hand and made subsequent scores more readily controlled.

The target range itself was thoroughly equipped with aids to the firer, and by a system of spotters, he was immediately informed of the exact location of his last hit on the target. This was accomplished by means of small card board discs, white on one side, black on the other, two to four inches in diameter, depending upon the range for which used, and each equipped with a stiff wire staple running through its center, so that one leg of the staple could be placed in the shot hole and left there until the next shot was fired on that target, when the spotter would be removed, placed in the new hole and the old one pasted up. In this manner and by use of the telescope the firer could tell just where each of his shots that hit had penetrated the target, and could so record them in his score book, together with the conditions mentioned above, which he obtained from the instruments at hand; these conditions he would then study before his next shot, to determine whether any changes had occurred, making the necessary corrections if needed without having to fire in the nature of experiment, but with the assurance that he had anticipated any change required. This is only a brief outline of the methods employed by the expert shots, without an attempt to go into an explanation of the reasons therefor, and is mentioned in this article to show the degree of care and study which may be devoted to rifle firing, and the class of shots our men find themselves in competition with at the national matches.

Of the appliances and paraphernalia mentioned above, many are not within reach of our men, and many would not ordinarily be allowed on the range, but, there are some of them whose adoption in training competition shots would assist greatly towards a higher average of efficiency and could, without injury, be introduced generally throughout the service, in target practice.

The theory that men on the target range should simulate actual conditions should not be construed too literally, and target practice should not have as its only object a desire to break men from being gun shy and to develop a nominal knowledge of range work only, but should be so conducted as to make men thoroughly familiar not only with the nomenclature of the piece, but with the results that can be obtained by a careful manipulation of its sights, and give them a good general insight to the reasons therefor. Any appliance, then, which will mechanically aid in teaching the soldier the value of the slightest change of elevation or windage, or impress him with the exact amount of change required for any desired change at the target, should be considered good, for it establishes, sooner or later, a familiarity between the soldier and his piece that would probably take him years to acquire if left to work it out for himself.

Of the devices mentioned above the cavalry team found many not only to be practical, but of the greatest aid to them in their training and in their subsequent work at Sea Girt. Of these can be mentioned the score book, rear sight elevator, telescope or field glass, the anemometer, thermometer and the system of spotters, and in addition to those already mentioned, the gun sling. Had the climate of Fort Keogh, where the larger part of their practice was held, been suitable for a thorough trial of the hygrometer, a knowledge of its use would have been a great aid later at Sea Girt.

The score book most all are familiar with, and if consistently used becomes a volume of the greatest value to a rifle shot as a book of reference in firing subsequent scores.

The rear sight elevator, not generally found in the service, is an instrument arranged with a micrometer screw and head to read minutes, in which each minute has a relative value for each range, and was found not only of immense value in slow fire but was found more accurate and rapid in adjusting the sights for skirmish than fixing them by hand. With but two exceptions the members of the cavalry team used the sight elevators constantly, and quoted their elevations in terms of minutes instead of yards. The rear sight elevator is so made that by setting the screw to read the desired number of minutes, placing the instrument under the rear sight leaf and the slide on or in the seat of the elevator, depending upon the pattern used, the exact elevation required is obtained, the slide made fast and the instrument removed, leaving the sight free for use. For short ranges the elevator is not of much material benefit, but for mid and long range shooting it is of the greatest value, as it is at these ranges where the finer adjustments of the sight are required, and the mechanical work of raising or lowering the slide is accomplished accurately with this device, where if the hand is used there is always the danger of making too great a change where only a small one was desired.



A telescope or a good field glass was used in connection with the system of spotters in determining the exact location of hits, but its greatest value was in determining the changes in wind velocity, as indicated by the mirage. It was found superior for this purpose to the wind flags, unless the velocity approached twelve or more miles per hour, when the flags or anemometer had to be depended upon. By adjusting a telescope or good field glass on a stand and bringing the target into focus, the mirage or heat waves, if present, appear very distinct, and on days when the winds are light, puffy or fish tail, the mirage will indicate the change instantly when the usual range streamers may be found hanging limp or have as yet not responded to the change. With a little practice and close observation the ability to note the effect and become familiar with the value of mirage as an aid in determining wind velocity, up to about twelve miles, is easily acquired, and stronger winds than these can be determined by those who have made a careful study of mirage. The limit of accuracy has been placed arbitrarily at twelve miles, for at that rate or over the heat waves appear to remain constant through any increase in velocity, unless the observer is extremely expert.

The anemometer is always a beneficial adjunct to a target range, and where this instrument is used in connection with the streamers, soon familiarizes the men with the appearance of the latter for all velocities of wind in which firing is likely to be held. Its description and use are commonly known.

The thermometer may also be classed amongst the useful articles in rifle firing, though as an intimate feature it could hardly

be held so, as most of our firing is held in months where the temperature is more or less uniform. It was noticed in practice, however, that where wide changes in temperature occurred, corresponding changes had to be made for elevation, *i. e.*, the higher the temperature the lower the elevation required and conversely.

The use of the gun sling was universal, and found to be the most important aid at all times, except possibly at offhand firing. The writer has not had any experience with the present sling, however, and cannot say anything about its value; by trying to use it in the manner of the long sling it does not seem to be suited for this purpose.

The foregoing and the partial description of their uses are very incomplete, and have been dealt with as briefly as possible, though it is thought sufficiently, to demonstrate their value at all times on the target range, and especially to the prospective competitor. The opinions expressed are not those solely of the writer, though many may not agree with him, but generally represent the opinions of our best shots and those of the National Guard, who have taken up rifle firing as a study and use some if not more appliances than those mentioned above.

The object of this article has assumed a twofold purpose: First, a desire to lend a feeble voice towards keener interest in competition work and training of competitors, and second, to briefly set forth some of the conditions as found at national matches and the methods used by the experts found there, trusting that it might in some way be of benefit to those who as yet have not been fortunate enough to attend a national competition, but may at some early date.

If either of these objects are partially obtained, the writer is content, as he does not care to appear in print as an authority on rifle shooting. He also desires to take advantage of this opportunity to express his gratitude to all the members of last year's cavalry team for the instruction received and knowledge gained by him, through his association with them, and to invite attention to their splendid work last fall at Sea Girt, which was only made possible through the zeal displayed by each individual, the harmony of the team, and their conscientious devotion to practice during the period allotted.

# IS THE RIFLE A CAVALRY ARM?

By Captain JAMES N. MUNRO, Third Cavalry.

FOR some years past, the readers of the JOURNAL have been entertained with discussion after discussion with regard to the relative values of the pistol and the saber as cavalry arms. Through these, and other contributions to our excellent magazine, runs the rumble of that burning question, "How should cavalry fight," and this branches into those other queries, "Are we spending too much time on the target range?" and, "Is the rifle causing our cavalryman to lose confidence in his value as a mounted soldier?"

Now I am not going to try to settle any one of the above questions. We all have our own opinions and always will have. But it seems strange to me that, with all the discussion referred to above, not even a single little foot note has seriously touched the subject of the rifle as a cavalry arm. It seems to be considered as settled, that, in order to use his rifle effectively, the cavalryman must, temporarily, become a foot soldier. This question was earnestly discussed among several troop commanders of my regiment, myself among others, and it was decided to experiment. Let us see what happened.

Captain C. H. Conrad, Jr., was the first of us to try it. With no previous practice, and practically no preparation of any kind, his troop was taken to the target range and the experiment made, under conditions and with results which, I understand, he will make public through the columns of the JOURNAL.

I observed Captain Conrad's practice and was so astonished at the result, that I took the first opportunity to make the experiment with my own troop.

The target used was the collective fire target with the following exceptions: The rear row consisted of ten figures of the mounted man (Target M) instead of sixteen figures of the man

standing (Target K), and the row of prone figures contained but fifteen, there being no more available. These figures were all pasted and placed in position under my own supervision. The troop was formed in rear of the six hundred yard firing point, and the manner of firing mounted thoroughly explained and illustrated. The available men were then divided into four squads, two consisting of seven men each and two of six men each.

The first squad was formed and deployed as skirmishers toward the six hundred yard firing point, where it was halted, magazines having been previously filled. The squad was instructed to set sights with the leaf down, slide shoved up to the shoulder (making the elevation about 520 yards), and three points windage to the left, the arm used being the Krag carbine. The commands, "At that target," "At 600 yards," "Magazine fire," "Commence firing," were then given. The men turned their horses well to the right, slipped the bridle rein, properly adjusted, over the left arm, and fired at will. The firing being completed they faced the front and were marched by a flank to the rear of the troop, when the next squad took its place. Each squad fired twice, and two extra shots were fired by error. In all 262 shots were fired. The first squad to fire made many very low hits. The succeeding squads were directed to hold at a line showing between the heads of the kneeling figures and the belly of the horses of the mounted figures. Due to the nature of the ground, very little of the effect of the shots could be seen, entire squads firing without raising a particle of dust.

When the firing was completed the troop was marched to the target and I made the count of the hits myself. The result was as follows:

| | |
|---|---|
| Hits on prone figures (Targets E) | 14 |
| Hits on kneeling figures (Targets K) | 43 |
| Hits on mounted figures (Targets M) | 47 |
| Total hits | 104 |
| Total number of shots fired | 262 |
| Per cent. of hits to shots fired | 39.7 |

As I had no idea of making any report of this experiment at the time, I did not take all the data I otherwise would have. I am not able to state, therefore, the exact proportion of ricochet



hits to direct hits, but it was certainly less than twenty per cent., and probably not over fifteen per cent. The time consumed by each squad in delivering the five shots per man varied from less than one minute to as much as three minutes. Anything over a minute was time taken up by one or two restless horses.

This firing was done with no previous practice, and only twice before had any of the men fired blanks with the carbine, mounted. The men tried their best, and yet I know that they expected the result to be practically nil and, although I heard no expression of opinion while the firing was going on, I have every reason to believe that they regarded the whole performance as merely one of their rifle crazy "Old Man's" schemes to keep them busy. When they saw the target, however, it was different, and after the hits had been counted I heard many soldier's "pipes" as to what they could do with a little practice. While not quite so optimistic as were my men, I thoroughly believe that, what now would be considered as wonderful results, might easily be realized by a little consistent practice.

It is well known that horses constantly used to firearms, as are our cavalry horses, will, after having had a little of the garrison freshness taken out of them by field work, stand perfectly still while being fired from, and that the average horse has apparently little or no sense of danger under fire.

I believe that a certain proficiency and skill in the use of the rifle mounted would prove invaluable for scouts, patrols and troops acting alone. The number of situations when it would be extremely desirable instantly suggest themselves to anyone who has been in the field with mounted troops.

I have been told time and time again, by those who had no reason to know, that a cavalry soldier's rifle was of no use to him till he dismounted, and I had no figures to refute the statement.

My experience may be valuable or it may not. Such as it is, I present it.

# A PROPOSED NEW CAVALRY PACK.

By Captain R. C. WILLIAMS, Thirteenth Cavalry.

IN view of the present wretchedly one-sided arrangement of our cavalry pack, which has been brought home to some of us at Fort Riley rather forcibly by numerous cases of sore backs, and by unfavorable comments thereon from the Inspector General during the maneuvers of last summer, I wish to propose, for the consideration of the cavalry service, a new adjustment of certain articles of our equipment, which at least obviates the necessity of the trooper's riding on one stirrup if he wishes to avoid causing a sit fast.

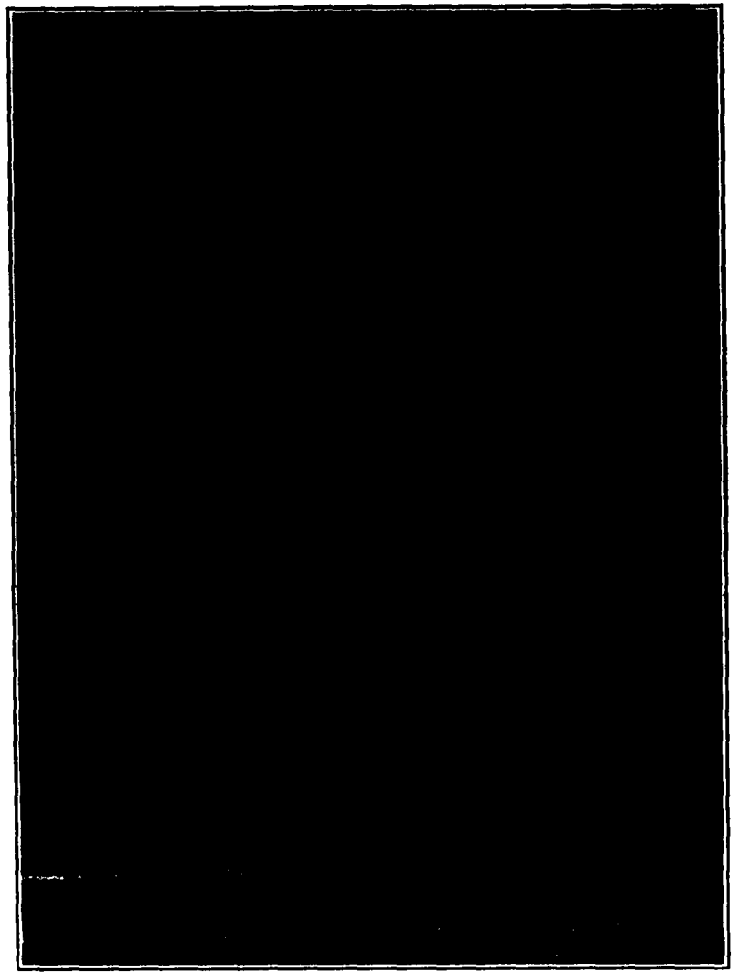
It is more than a year since we first began experimenting in my troop on these lines, but, having been detailed on recruiting service last June, I was unable to work out any scheme, at all satisfactory, until recently. Meanwhile Captain Charles A. Romeyn, Second Cavalry, has, working entirely independently, but with the same general idea so far as the rifle is concerned, namely, that of an adaptation of the English scabbard, devised a method of attachment of same which may prove superior to the one I have to offer. Photographs of both scabbards are here submitted, and as we are only desirous of improving things, it makes no difference which finds favor, or if something better than either is devised by someone else.

So far as the attachments of the scabbard submitted by me are concerned, they are largely the result of numerous experiments by a noncommissioned officer of my troop, Quartermaster Sergeant Frank A. Leshiere, and the troop saddler and blacksmith. The whole pack is tentative, and the alterations in equipment necessary could, of course, have been more neatly executed by skilled workmen.

When we were supplied with the present rifle, it became



evident to many of us that our difficulties were largely increased by its weight, and especially by its length, and several articles on various proposed adjustments of the pack appeared in the



1. Wallets of English pattern.
2. Extemporized pommel pockets.
3. Captain Romeyn's scabbard.
4. Scabbard submitted by author.

Cavalry Journal. Some officers have urged that the trooper carry the rifle on his back, as is done in most foreign armies. About ten years ago I wrote an essay to the same effect, but

since then, after experimenting a few times with the new rifle so carried at a trot and gallop, have most decidedly changed my mind, and believe no method could be more fatiguing to the trooper, and worse, if it is necessary to gallop and trot several miles over rough ground and dismount and double time a mile or so more into action. The fact that Russian or Japanese troopers carry their carbines in this manner does not seem to warrant our doing so, for the peasants of both these countries are inured to burdens from their youth, and no great mobility appears to have been displayed by the cavalry of either in their recent war.

The adjustment of the full pack devised by me and herewith submitted, with articles carried and weights, is as follows:*

| | | |
|---|---|---|
| Curb and watering bridle, approximately | 4 | lbs. |
| (Watering bridle has small strap for headstall under curb bridle; this device commonly in use by troops at Fort Riley.) | | |
| Halter and strap | 2.6 | lbs. |
| Saddle, complete | 17.3 | lbs. |
| Saddle blanket | 4.3 | lbs. |
| Surcingle | .75 | lb. |
| Overcoat | 8 | lbs. |
| Bed blanket | 5 | lbs. |
| Summer underclothing | 1.25 | lbs. |
| Shelter half | 3.125 | lbs. |
| Small pommel pockets (cut down in this instance from an old pair of saddle bags) | 2.438 | lbs. |
| | 48.763 | lbs. |

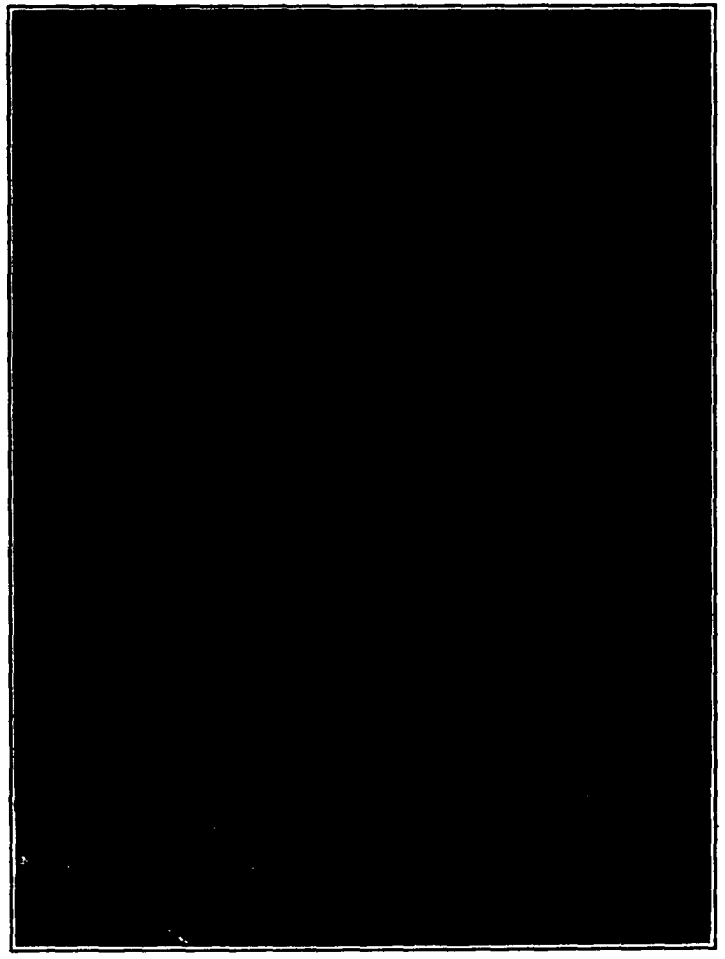
| NEAR SIDE. | | | OFF SIDE. | | |
|---|---|---|---|---|---|
| Haversack | 1.469 | lbs. | Rifle | 9.09 | lbs. |
| Canteen, empty | 1 | lb. | Rifle scabbard | 3.313 | lbs. |
| Lariat and pin | 3.3 | lbs. | Curry comb | .65 | lb. |
| Nosebag | 1.375 | lbs. | Horse brush | .625 | lb. |
| Shelter tent poles | 1 | lb. | Horseshoes | 1.5 | lbs. |
| Saber and knot | 3.95 | lbs. | | | |
| Tin cup | .56 | lb. | | | |
| Meat can | .95 | lb. | | | |
| Knife, fork and spoon | .38 | lb. | | | |
| | 13.984 | lbs. | | 15.178 | lbs. |

| | | |
|---|---|---|
| Near side | 13.984 | lbs. |
| Off side | 15.178 | lbs. |
| Evenly distributed | 48.763 | lbs. |
| Total weight of horse equipments | 77.925 | lbs. |

*Weights are taken where possible from article by Captain C. D. Rhodes, in CAVALRY JOURNAL of April, 1906.



The haversack contains the tin cup, meat can, knife, fork and spoon; it is attached in this instance by passing one end of the

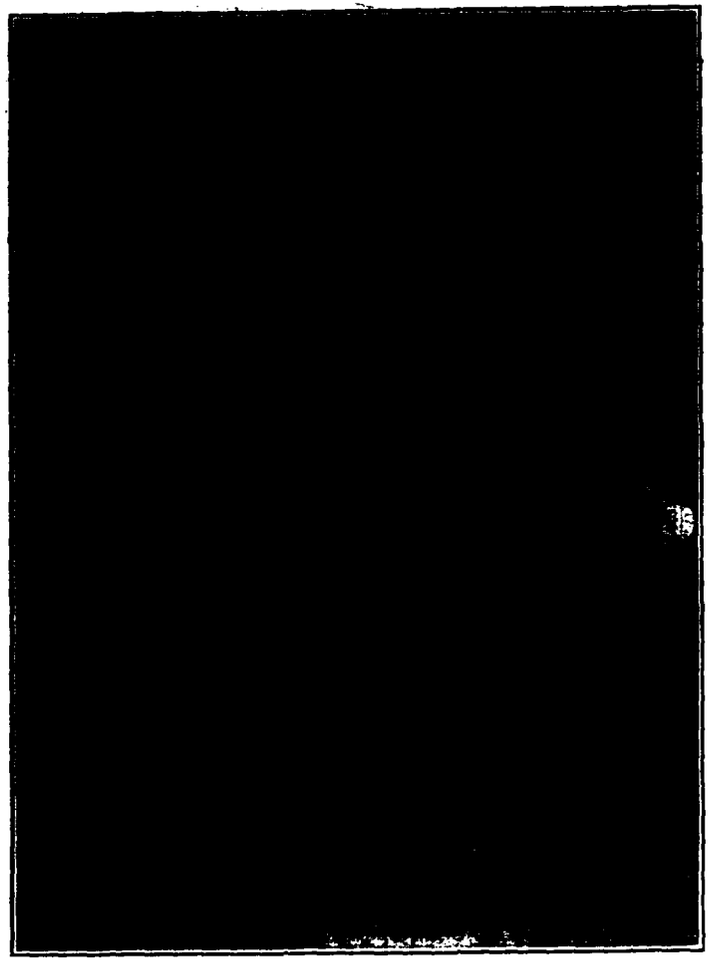


1. Wallet of English Pattern. Side view to show capacity. 2. Captain Romeyn's scabbard. 3. Extemporized pommel pockets. 4. Scabbard submitted by author.

regulation infantry strap between the cantle and cantle roll, crossing it over the cantle roll and the other end of the strap and snapping it into the haversack ring.

The shelter tent poles and lariat pin are placed in the nose bag (point of lariat pin up), and secured by near cantle strap.

The rifle scabbard submitted by me has a leather covered

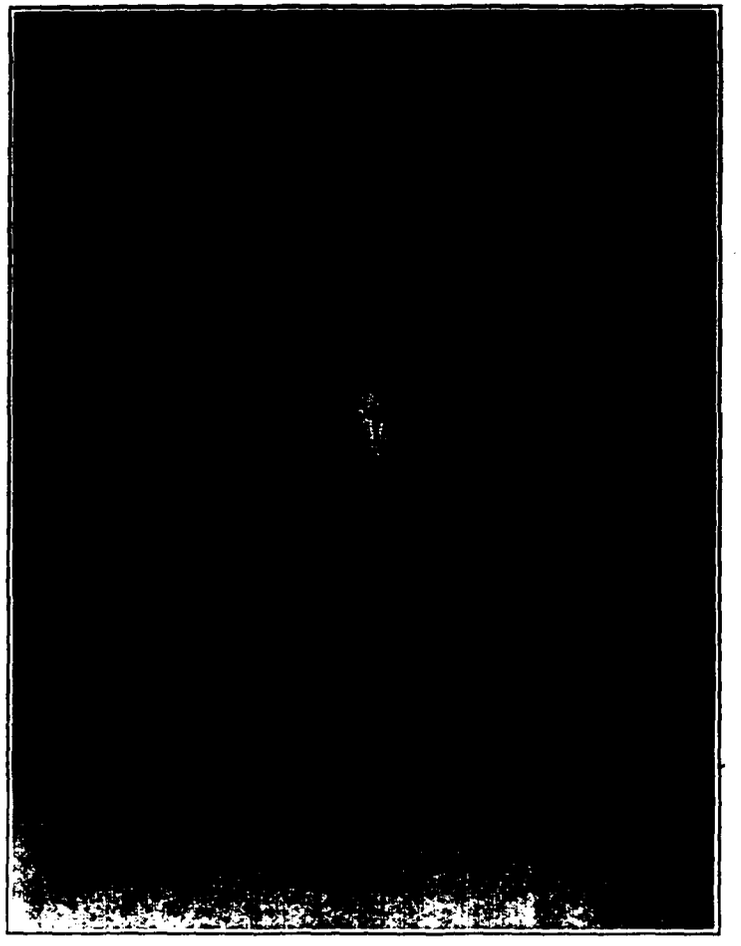


OFF SIDE, WITHOUT TROOPER.

*H* shaped flat bar of spring steel attached to it, the longer upright of this steel bar being sewed into the scabbard on its inner side, the shorter terminating in a strap and buckle fastening



around the spider ring. The scabbard is suspended from the cantle by two straps sewed to its upper part and together, one of which passes on under the cantle roll and snaps into the off



OFF SIDE, WITH TROOPER.

cantle staple. It is adjustable as to length. A small strap is buckled to the supporting strap and attached to the scabbard to adjust it to a vertical position.

Captain Romeyn's scabbard is suspended from the saddle bag stud by a strap which is attached to the inside of the scabbard, has a small strap which passes around the upper part of the scabbard and under the rear quarter strap, and another strap terminating in a snap hook attached lower down the scabbard, which passes under the horse's belly and snaps into the opposite spider ring. Its position is similar to that of the one shown in the photographs.

The attachments of both scabbards can be constructed so that the rifle can be carried on whichever side is deemed better, but Captain Romeyn's is at present arranged for the left side and mine for the right.

Personally, the off side seems better, for the trooper can then easily get at his rifle when mounted, and it is hard for a short man to throw his leg over the stock when it is on the near side, but of course, there are literally two sides to the question.

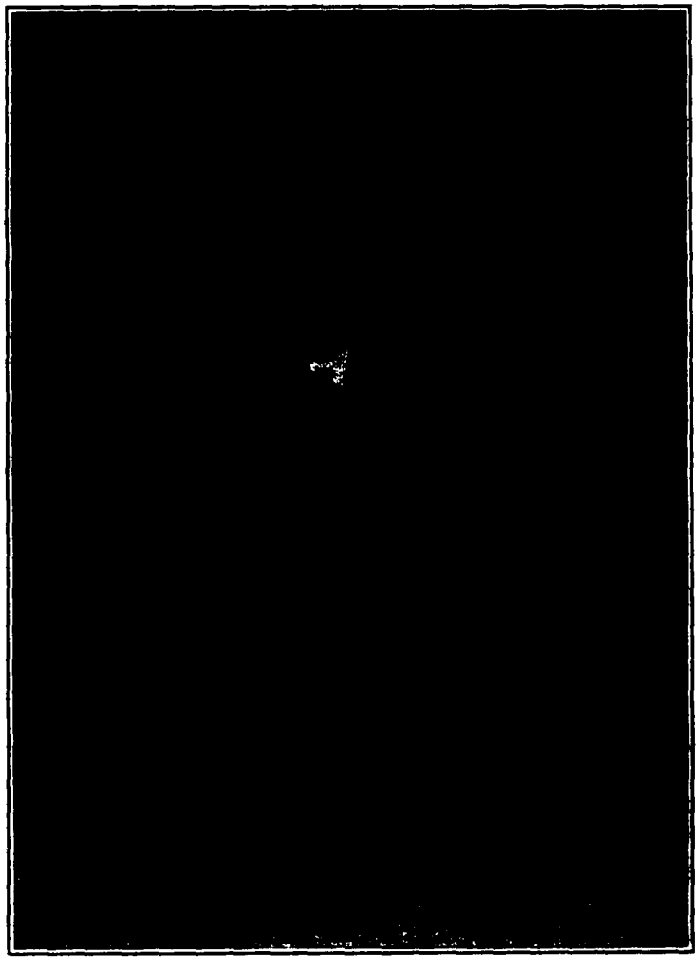
The photographs show two views of the pack on the off side, one with the trooper mounted, and one of the horse and packed saddle only, one view of the pack on the near side with the trooper in the saddle, and two views of (in the order named from left to right) (1) A pair of pommel wallets of English pattern;* (2) A pair of extemporized pommel pockets cut down from an old pair of regulation saddle bags. (3) Captain Romeyn's rifle scabbard, and (4) My rifle scabbard.

It must be borne in mind that this pack is only an attempt with small facilities to solve our present difficulties, and it is hoped that it can be improved upon. The object in photographing the English wallets beside our makeshift affair, is to contrast it favorably with our rather clumsy and home-made pockets, and to show what a gain in neatness could be made by skilled workmen. The rifle scabbard submitted by me (the one appearing in all the photographs of the full pack) could be much improved; the points of attachment of the suspending straps are too low, causing the rifle barrel to have a tendency to swing under the horse and get between his legs. This is overcome by a small strap buckled to the larger suspending one and attached

*Made by Mark Cross and part of equipment submitted by First Lieutenant Dexter Sturges, Thirteenth Cavalry, to the Cavalry Board, Fort Riley, Kansas.



to the top of the scabbard, but which would be unnecessary if the latter were properly hung. The steel H shaped bar could be much improved by skilled workmen; its main object being to



NEAR SIDE, WITH TROOPER.

hold the rifle back and close to the horse's side, it could be made shorter and the projection caused by its longer upright on the side of the scabbard next the horse, could be obviated in several ways.

The pommel pockets are fastened to two regulation saddle bag studs on either side of the pommel; this could also be improved. The distribution of weights is, I believe, much better than in the old pack. It will be noted that one pocket, in this case the near one, is empty; the meat can, knife, fork and spoon can be placed in it if so desired, or it can be used for extra ammunition, toilet articles, etc. The weight on the horse can be easily balanced if more articles are carried; for instance, the haversack and canteen are empty in the pack under discussion; if filled, the canteen weighs about 3.75 lbs. We then have

| NEAR SIDE. | | | OFF SIDE. | | |
|---|---|---|---|---|---|
| Haversack, empty | 1.469 | lbs. | Rifle | 9.09 | lbs. |
| Canteen | 3.75 | lbs. | Rifle scabbard | 3.313 | lbs. |
| Lariat and pin | 3.3 | lbs. | Currycomb | .65 | lbs. |
| Nosebag | 1.375 | lbs. | Horse brush | .625 | lbs. |
| Shelter tent poles | 1 | lb. | Horseshoes | 1.5 | lbs. |
| Saber and knot | 3.95 | lbs. | | | |
| Tin cup, meat can knife, fork and spoon | 1.89 | lbs. | | | |
| | 16.734 | lbs. | | 15.178 | lbs. |

or, if the haversack contains two days rations, adding approximately 8 lbs. to the weight of the near side, the load can be nearly balanced by putting the nose bag with the shelter tent poles and the lariat pin on the off side. We then have

16.734 lbs. + 8 lbs. − 3 875 lbs. = 20.859 lbs., near side, and
15.178 lbs. + 3 875 lbs. = 19.053 lbs., off side.

or a preponderance of only 1.806 lbs. for the near side.

With regard to the distribution of weights between pommel and cantle, the pack suggested is, I confess, not entirely beyond criticism; the shape of the saber is such that it is very hard to adjust except as it is carried at present; any attempt to place it in rear of the left hip in the English fashion would result in its getting between the horse's legs and being struck by him at the gallop; and besides it could not be readily drawn. The preponderance of weight is taken from the pommel, where it is by present regulation, and transferred to the cantle; whether this is better, I am unable to state, but believe, by insisting on not placing the saddle too far forward, and possibly lengthening the



bearing surface of the side bars at the rear, any tendency to sore backs would be largely removed.

In conclusion, I wish to say for the pack here submitted that it is almost noiseless, that changes of articles necessary to balance the weight are easily made, and that the advantages of the small pommel pockets (about seven inches wide) over the old flapping saddle bags, in which the poorer class of cavalry soldier can, and does, stuff anything from a bottle of whiskey to a pair of shoes, regardless of his horse, seem obvious.

The articles of equipment used in it, other than those that are regulation, were made by the troop saddler and blacksmith, and could of course be much improved.

There is an increase in the total weight carried by 1.469 lbs. for the haversack and .503 lbs. for the scabbard, less 1.762 lbs. gained by decreasing the size of the saddle pockets, or .210 lbs. Captain Romeyn's scabbard weighs .125 lbs. less than the present regulation one.

It is hoped that other officers will make experiments and make the results known through the CAVALRY JOURNAL, and that finally a pack may be devised that will fill all requirements. In the meantime, the above adjustment of the equipment of a cavalry soldier, and especially the two rival rifle scabbards, is submitted for consideration and criticism.

# THE ISSUE OF CLOTHING.

By Captain R. D. WALSH, Ninth Cavalry.

THE new orders governing the issue of clothing make the issue complicated, and it is hoped that they will be modified. Even after all the soldiers in a company have been measured, it is difficult to tell the size which will give the best fit, and a captain must also know what clothing is on hand in order to be able to substitute for missing sizes. Then again, another organization draws clothing and certain sizes are exhausted which had been reported as on hand. A storehouse where the full supply is kept is the place for issue of clothing, not an orderly room. I can see no objection to a soldier being permitted to buy clothing for cash. He can buy commissaries. Why not clothing? He can also, individually, buy commissaries on credit. Why not clothing?

In many organizations, clothing is drawn, one, two or three times each quarter. It requires considerable time to prepare a schedule, and then the clothing is often of the wrong size. If a soldier could readily secure clothing when needed, it would not be necessary for him to wait two weeks for a pair of shoes. If he needed socks, he would not purchase them at an outside store. If his trousers were torn, he would not have to wait until a third of the company had torn trousers before securing another pair.

I suggest the following plan for supplying a company with clothing. A soldier submits, in duplicate, to his captain a list of the clothing he wants. If approved he takes it to the clothing storehouse, where it is issued, the soldier signing for the actual items received. One copy of the list is retained by the quartermaster, the other by the company commander. The quartermaster has an account with each company, and at the end of the quarter the account is settled, the captain receipting to the quartermaster for the clothing drawn. The captain enters on the



descriptive lists or on a separate roll the amount drawn by the soldier, and after the latter signs the roll the clothing slips are returned to the soldier or destroyed in his presence.

When a citizen wants a suit of clothes he goes to a tailor or ready-made clothing store and is measured or fitted for his clothes. Until about 1892 unmade clothing was issued to the army. Why it is not still issued that way I do not know. Some say that at certain posts the trousers were made wide, at others narrow. At some yellow thread was used in sewing on the reinforce, at others blue, etc., etc. This was true, but the troops at each post were fitted in the same way and their uniforms made after the same pattern. They looked well, and far better dressed than troops at the present day. This, notwithstanding the uniform has been improved. When unmade clothing was issued, soldiers generally drew one suit of the made clothing, and that was their recruit suit. Sometimes circumstances forced a soldier to draw a second suit; but in ranks the difference was so marked that he lost no time in getting a tailor made uniform.

One of the late letters to quartermasters regarding clothing is as follows:

"With the large assortment of sizes, hereafter to be provided, there should be no difficulty in properly fitting the men, without the recourse to the evil of alterations by company tailors, so much in vogue. * * * The only possible alterations required or that should be permitted in the breeches, will be a slight alterations *from the knee down,* provision for which has been made by leaving an outlet in the out seam."

The large assortment of sizes referred to above is thirty-two. The human body is fearfully and wonderfully made, but at the same time it is variable. The letter condemns company tailors and then admits their necessity, for the alterations from the knee down cannot ordinarily be made by an artificer or farrier. There are parts of the human body which are more variable than the calf of the leg.

A citizen buying clothing tries on each suit, and soldiers should be allowed to do the same. The clothing room of the quartermaster's storehouse is the place where this should be done.

The quality of the clothing issued is generally good. I have noticed that the sloping visor of the cap tends to make men keep their eyes on the ground. This tends towards hollow chests and rounded shoulders. There is a general complaint about the dress coat. The body and sleeves are fitted for a man, while the collar is boy's size.

There is no system of checking the issue or allowance of clothing, to provide against carelessness or dishonesty. This is unique in the service, and as far as I know it is the only case *where a check is not provided*. If on entering the service a sum was allowed a soldier for purchase of his first clothing, and thereafter the allowance was a certain sum per day, not varying with year of enlistment, it would be practicable to enter the clothing account semi-annually on muster rolls, and if the total issue of a company corresponded with the money value as reported issued by the quartermaster, the accounts would be correct.

* * *

I heartily agree with Captain Walsh regarding the present clothing issue regulations. His remarks are very clear, and indicate that a further change is immediately necessary. Existing regulations cause considerable and, I believe, much unnecessary trouble; the number of alterations in requisitions, after they have gone to the quartermaster, is great.

Possibly a modified form of post exchange credit system might profitably be introduced. For exchange stores each soldier signs a credit slip and promises thereon to pay its face value next pay day. When that day arrives, his company commander collects what is due and turns it over to the exchange officer, thus closing the account.

If each soldier were to sign a credit slip for necessary clothing (this to be closely investigated by the company commander), that slip could be taken (by the soldier) to the quartermaster storehouse, after approval in the company office; the soldier would be issued what the slip called for, and be thus always supplied with sufficient serviceable clothes. At the end of each quarter the company commander could certify a consolidated clothing list to the quartermaster (duplicates of all credit slips having been retained in the company office), thus enabling him to drop the articles issued from his return. I believe that system would prove very satisfactory and very simple, and that it would greatly reduce paper work for company commander and quartermaster alike. Moreover, the former would then have a means at hand to exercise closer supervision over all clothing drawn, for the reason that but a few men would require it at any one time.



The dress coat collars are, in general, too small; it is difficult, practically impossible, to enlarge them when once attached to the coats. The coats themselves, generally too loose at the hips, nearly always require considerable alteration. The trousers are not provided in sizes large enough to fit all men properly; I have two men in my company who cannot be fitted at all.

The dress caps, for men with low foreheads, are uncomfortable; this because, in such cases, the men cannot keep their "eyes straight to the front" when in ranks, unless they gaze into the back of the visors. When snow is on the ground, the reflection from the patent leather lining, inside the visors, is so strong that men are forced to drop their eyes. The main trouble seems to be that the visors slope too much and that the patent leather edging inside them should be omitted, or covered with other material.

RAYMOND SHELDON,
*Captain Eighteenth Infantry.*

* * *

In my opinion, the most recent orders concerning the issue of clothing to enlisted men provide the worst system yet devised. In the first place, all the assistance given this department comes from the companies themselves; all extra and special duty men are taken from the companies, and the very best men in the company are taken to fill these positions. After obtaining the best men under the pretense of returning service to the companies, the drudgery of the work is thrown back upon the companies.

The proper place to issue the clothing to the men is *in the quartermaster storerooms,* and the proper method of issuing is *by the employees of the department direct to the individual men for whose use they are issued.*

The only possible interest the company commander can have is to see that the men of his command are supplied with the proper articles.

I would suggest the following method of issue:

The clothing accounts of the men to be kept by the company commander as at present; issues to begin at 1 o'clock P. M. Monday of each week, each company to have an hour allotted at which its issue is to begin, and to be for the exclusive use of that company if it is to draw any articles, otherwise its hour may be used by the next company in the regular order of succession. Men may draw clothing on their own volition or by direction of their company commander, who will usually give instructions at Saturday inspections. Those men who are to draw clothing on the following week will notify the first sergeant before noon Saturday; the first sergeant will notify the quartermaster sergeant before 8 o'clock Monday morning of the number of men who are to draw clothing, or in case no men are to draw clothing for that week, he will notify him of that fact. At the assigned hour, the company clerk will appear at the storeroom with the company clothing accounts, and the men who are to draw clothing. One of the company officers will be present to witness the issue, or an officer may be detailed from post headquarters for the whole command, or for each battalion, for this purpose. Each man may draw clothing not to exceed in value the balance of his clothing account at the end of the current month plus one-fifth of his pay for that month, any excess over his balance to be charged on the pay-rolls at the end of the month; the articles drawn to be fitted in the presence of the witnessing officer, to be entered in the account of the man before he leaves the room, the account to be signed by the man and witnessed by the officer; the company clerk and the quartermaster sergeant to abstract each issue independently at the time for the individual issues, the abstracts to be compared at the completion of the issue; these abstracts to be retained by the quartermaster and consolidated at



the end of six months on duplicate receipts signed by the company commander, which then become the final vouchers for dropping the clothing from his returns, the returns of clothing and equipage to be rendered every six months instead of quarterly as at present.

It is believed that frequent issues with monthly settlements as suggested will induce men to take greater care of their clothing, keep the men better equipped, and reduce the amount of work and bother for both company and the quartermaster, as well as simplifying the records and returns of both. In case of a change of company commanders or of stations, receipts would of course be given for what had been drawn up to the time of relief or change.

CLINT C. HEARN,
*Captain, Coast Artillery.*

# HORSE FLESH AS TELEGRAPH WIRE.

By First Lieutenant A. C. KNOWLES, Thirteenth Infantry.

THE photographs below show a combined telegraph and telephone line in which the horses are part of the electrical circuit. The riders are equipped with breast reels and cavalry buzzers.

Heretofore, when a mounted operator, so equipped, wished to communicate with the base station from which he was sent out, it was necessary for him to dismount and establish his own station by connecting his buzzer to wire which he was reeling out and to complete the circuit by driving a metallic pin into the ground.

It is therefore seen that although the rider can communicate at pleasure with the base at any time by dismounting and cutting in as explained above, yet on the other hand, the base has no means of notifying the rider that communication is desired with him until the latter chooses to cut in.

A system which would permit inter-communication between the base and mounted operator or between two mounted operators at all times whether at a halt or in movement, without the necessity of dismounting and establishing station, suggested to the writer the possibility of devising some such scheme which would accomplish the desired result.

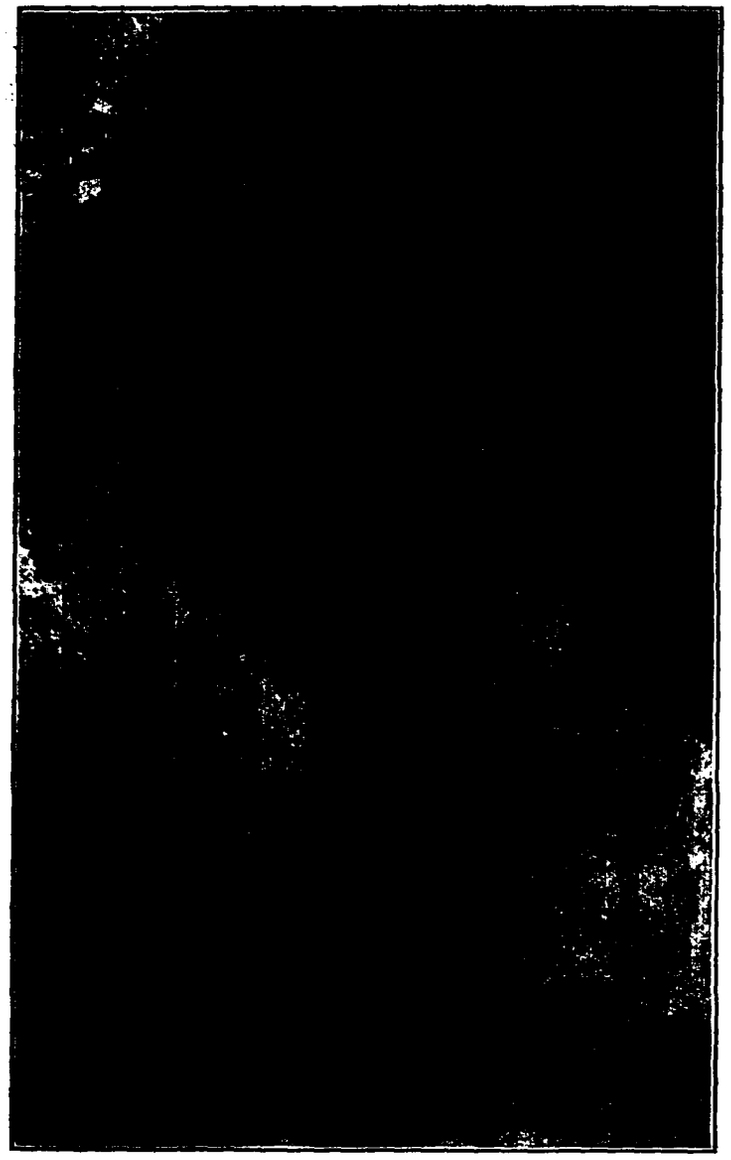
Experiments with this object in view have demonstrated not only the possibility but the practicability of such a system, which is briefly outlined below.

By making some slight alterations in, and additions to, the present breast reel, and simple wire connections, tests were made in telegraph and telephone communication between rider and station, or between two riders, with results entirely satisfactory.

In short, when a mounted operator is sent out from a column



TELEPHONING ON THE MARCH.
These two men are separated by five miles of wire. They are talking to each other while moving. Lieut. KNOWLES has succeeded in doing away with the necessity of their dismounting to make connections.



Commander of the Cavalry Screen receiving messages from his advance while the advance is on the move. Also represents a Brigade Commander receiving messages from different parts of his advance guard. Each man on the circuit hears what the other is sending.



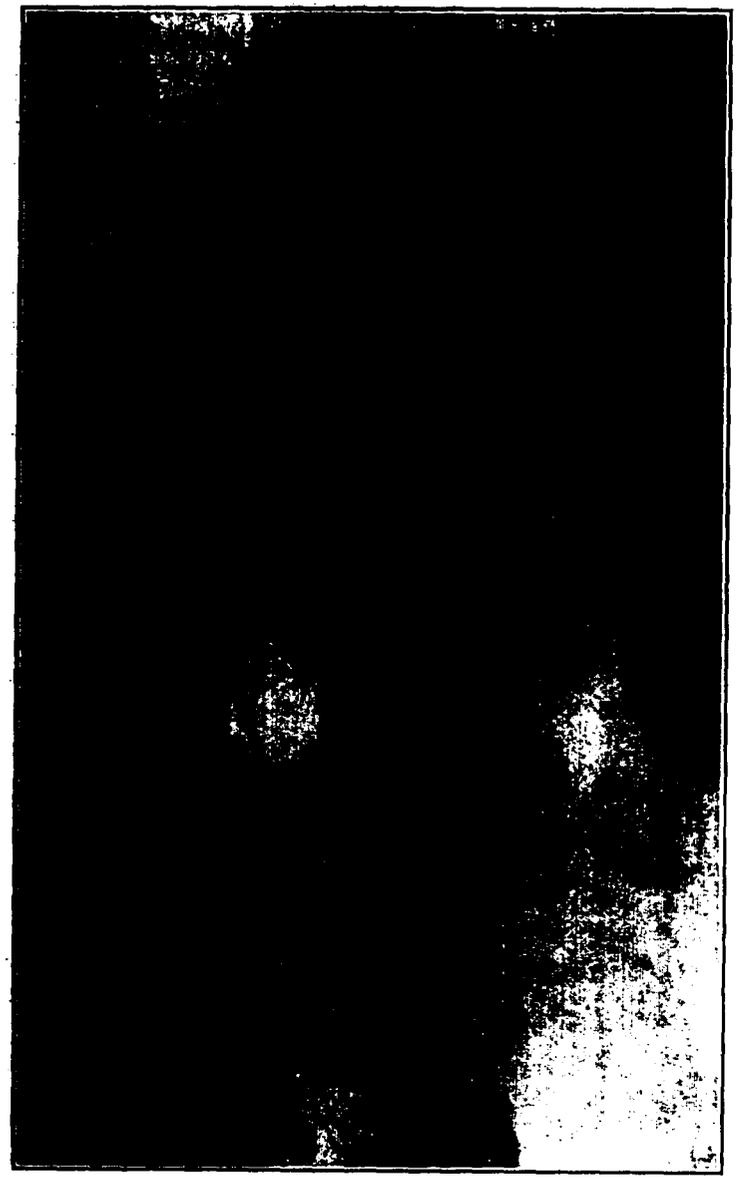
for the purpose of accompanying a reconnoitering patrol, a flanking detachment, or any body of troops whose duty will take them far enough from the column to make electrical communication both practical and desirable, constant electrical connection may be had with him. It is no longer necessary for him to dismount and cut in his instrument. He may be called at any time, even while moving. He is ready to transmit messages to base whenever necessary, and he doesn't have to stop to do it. The commanding officer of the body to which the operator is attached may ride along side of his moving telegraph office and receive the message word by word as the operator receives it; or he may dictate his own message to the base in a similar manner. Should he desire to communicate by telephone, the operator hands him the combined receiver and transmitter, and without dismounting he may talk with the base.

The only way to accomplish what is described above was to ground through the horse. This is done by placing a small piece of copper (properly connected to the instrument) against the animal's body, and as the horse always has one or more feet on the ground while moving at any gait, except possibly the gallop, which would seldom be resorted to, it is seen that the ground connection is completed through one or more hoofs. Of the several horses used in these experiments, only a few showed any discomfiture, and those that were affected by the current were soon quieted. They appeared to exhibit surprise rather than pain at something unusual, to which they quickly became accustomed.

These tests were made over all kinds of ground—very wet, muddy, moist, perfectly dry and dusty roads and fields, with results of practical value.

With two mounted operators similarly equipped, and separated by five miles of wire, conversation was carried on without difficulty, the horses standing in grass. The buzzer was loud enough to be heard several feet from the instrument.

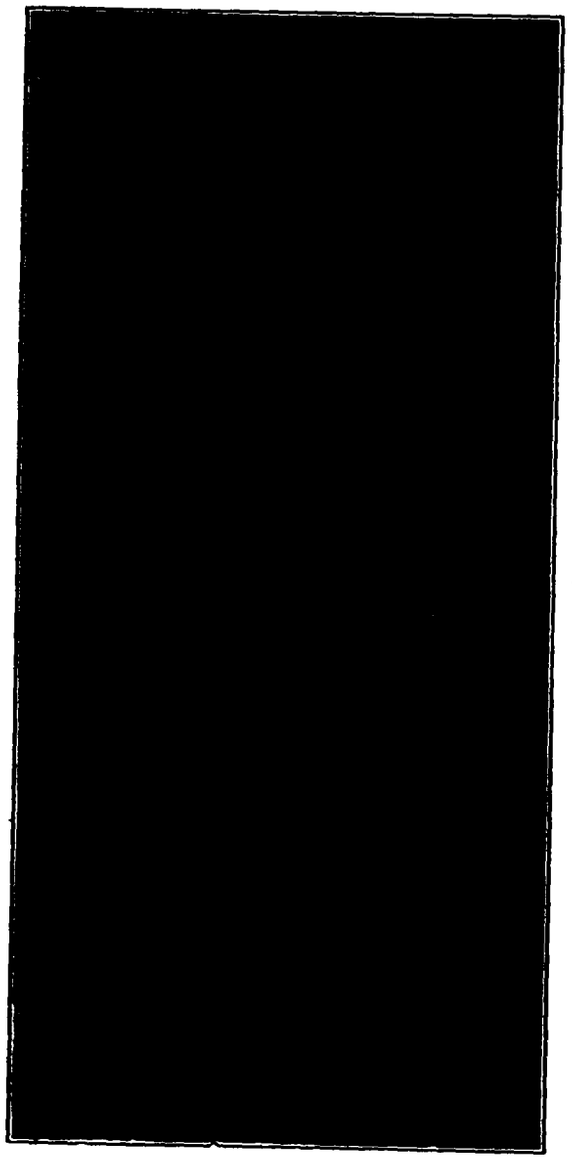
After various tests it is safely asserted that this arrangement will not only work as efficiently as that at present in use, but with a great saving of time, and doing away entirely with all the present preliminaries incident to station establishment before conversation is possible.



OFFICERS TAKING THE RECEIVER FROM MOUNTED SOLDIERS.



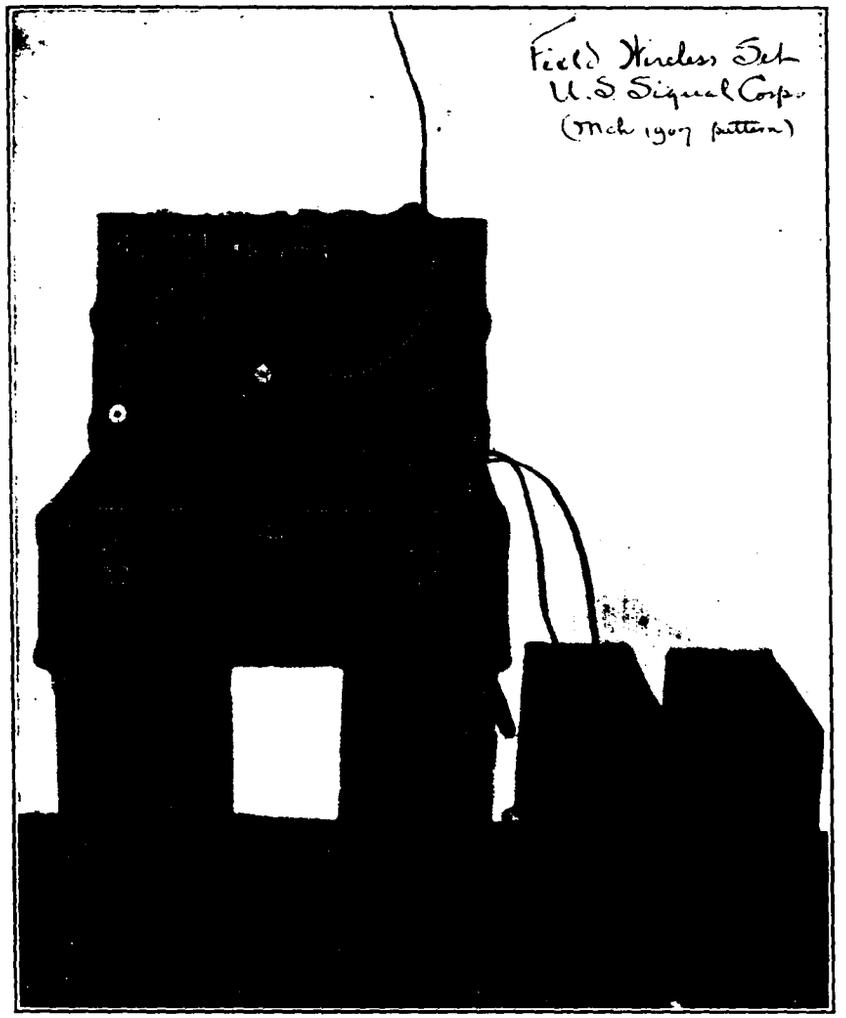
THE CAVALRY BUZZER.



CAVALRY BUZZER AND BERAST REEL.

## FIELD WIRELESS OUTFIT.

THE following photographs illustrate the new field wireless outfit. It will be noticed that only three mules are required for the entire outfit.






Field Wireless Set
U.S. Signal Corps.
(5 Cargo Batteries)


Field Wireless Set.
U.S. Signal Corps.
(Operating Chest)




Field Wireless Set.
U.S. Signal Corps.
(Field Mast Group) Antennae

## Reprints and Translations.

# WHAT LESSONS CAN THE CAVALRY DRAW FROM THE RUSSO-JAPANESE WAR?

[Translated for THE JOURNAL, from the *Militar-Wochenblatt* of December 25, 1906, by First Lieutenant Walter Kruger, Twenty-third Infantry.]

DURING the last few weeks a spirited controversy has taken place in the French press on account of the proposed disbanding of the thirteen cuirassier regiments, the intention being to utilize the surplus men and means thus gained to increase the number of guns in the field batteries from four to six, in order to decrease the numerical inferiority of the French artillery as compared with the German. The question is discussed with a great deal of animation. The leading authorities, Négrier, Bonnal, and Donop, participate in this clash of opinion, pro and contra.

The fact is, that the proposed change was based on the experiences gained in the war in the Far East, inasmuch as it was believed that from its lessons the conclusion of the decreased importance of the mounted arm could be drawn. It is remarkable that in other armies diametrically opposite conclusions were reached. In Japan itself all energies are bent toward increasing their cavalry in time of peace, especially toward the formation of cavalry divisions, and the necessity is emphasized for obtaining a good breed of serviceable cavalry horses, which the Japanese cavalry so sadly lacked in the last campaign, through the creation of remount depots. It may be well to invite attention to the fact that in the German army constant efforts are



made to increase the cavalry gradually in accordance with the view that it must keep abreast of the increase of the rest of the army and not get out of proportion with reference to the other arms. If this conviction is—we say happily—retained in high quarters, on the other hand there is no lack of voices who never grow weary of asserting that the modern strategical and tactical use of cavalry is very much restricted, and that the day has long since passed in which it was called upon to play a decisive rôle.

If we bear these contrasting opinions in mind, it will be profitable to review the experiences of the late war, to ascertain what lessons may be drawn for the cavalry in a great modern war.

There is no doubt that in the Russo-Japanese War the cavalry was the arm which accomplished least, and which, if we only examine the events of that war superficially, remained far behind the other arms in achievements. But it would be premature to draw one-sided conclusions from this fact, and assert that the wars of the future would bring like conditions. Based on this condition, it has frequently been asserted that on account of the difficult terrain in Manchuria—the mountains devoid of roads in the east, the plain at the Shaho and near Mukden densely covered with villages and vegetation, the thoroughly softened ground during the summer and fall rains, the snow and ice during the winter campaign, the fortified positions in which the opponents remained for months,—the mobility and activity of the cavalry were impaired. Insurmountable obstacles hardly to be duplicated in a European war were found in these conditions. All these considerations are certainly justified, but only because the cavalry of both belligerents was able to do justice to its problem in a restricted measure despite all of these unfavorable circumstances.

The Russian cavalry on the theater of war in East Asia was numerous, but consisted, with exception of a few European dragoon regiments, exclusively of Cossacks. It is remarkable how the value of this class of Russian cavalry has been overestimated, even by those who were supposed to be thoroughly conversant with Russian army conditions. On the other hand, it was already pointed out in view of the experiences in the

Russo-Turkish War, 1877-1878; that the Cossacks did not retain the importance which formerly attached to them as cavalry. The mounted tribes which grew up with their horses and military service have changed to an agricultural and even an industrial people, to whom the old characteristics have become a lost art. The Cossacks of the steppes of East Russia, Siberia, and East Asia, as yet hardly touched by the march of civilization, stand so low in regard to mental development as to make them incapable to meet the demand made to-day on the training and intelligence of cavalry. The conditions of their service make a strict military training difficult. The Cossack is still considered an irregular mounted man with special privileges, although conditions have changed entirely. For this reason the Cossack cavalry fell behind in its development; the breed of their horses has also gradually deteriorated, regular training as cavalry was not provided for, and their use in reconnaissance proved impracticable, as neither officers nor men possessed the requisite training or capacity. We grant that the Cossack regiments in the cavalry divisions stationed in Poland and western Russia stand on a higher plane and will render better service than their comrades in the Far East, who unquestionably represent a thoroughly incompetent cavalry. Even capable cavalry leaders like Rennenkampf were unable to accomplish anything with such material. When it appeared that, besides, most of the higher Cossack leaders were unequal to their task, it was no wonder that the Cossack cavalry was found wanting and that the commanding general was frequently brought into difficult situations thereby.

Matters stood very different with the Japanese. The Japanese are an island people, who have only few and not especially serviceable mounts available. Each infantry division of their army had three squadrons assigned. Besides, there were two independent cavalry brigades which were united into one cavalry division of twenty-four squadrons about the time of the fights around Mukden. The reserve divisions had only one squadron each. The total strength of the Japanese cavalry probably did not exceed seventy squadrons, an insufficient number if the strength of the field army is assumed as 300,000 men. The



Russian cavalry was at least twice as strong; at Mukden it consisted of 150 squadrons (sotnias) in round figures. The weak Japanese cavalry, particularly at a disadvantage as regards mounts, was, however, carefully trained, for their General Staff had set itself the problem of attaining by tireless energy what nature appeared to have denied their cavalry.

The Japanese has for ages been a pedestrian, not a horseman. His island realm, covered with rugged mountains, could not produce a good breed of horses; freight had always been carried by coasting vessels or by human beasts of burden. The highest classes traveled in sedan chairs until the railroad revolutionized transportation. The Japanese peasant is short-legged and not built for a horseman. The Japanese horses are mere ponies, raw-boned, short-necked, and refractory. As early as the war against China, 1894-1895, the Japanese cavalry was found to possess little ability in comparison with the other arms. Since 1895 the powers that be in Japan have recognized this and have made strenuous efforts to increase the efficiency of that arm. What the Japanese attained in 1904 and 1905, even if it did not meet the expectations of European critics, must, nevertheless, command our attention. Through the restless energy which characterized the Japanese methods, and through the devotion of the troops themselves, as early as the Chinese campaign the cavalry rode their awkward mounts with recklessness over the most difficult terrain—through rice fields, over ditches and dikes—an accomplishment which is only explainable by the special characteristics of a warlike people. To quote eye witnesses, an English officer, speaking of the Japanese cavalry in the fight at Peitsang on August 5, 1900, says:

"The grandest spectacle was the splendid attack made by the Fifth Japanese cavalry regiment against a Chinese battery which poured an effective fire on the advance troops of the allies on a narrow dike. Upon receipt of the order for the attack the Japanese regimental commander led his three squadrons through the tall millet, over ditches and hedges at top speed, straight toward the Chinese. Before the latter recovered from their astonishment the Japanese were in their midst, cut down the gun crews and took the pieces. The entire enterprise looked like a parade attack, and delighted the onlookers."

In 1903, or just before the outbreak of the late war, Captain Rhodes of the American army attended the Japanese maneuvers and expressed his observations as follows:

"The horses are small, weak, and of irregular sizes. Beside the Japanese home product Australian horses were observed, which were purchased by the Japanese from the Germans at the close of the Chinese expedition. The men had, generally speaking, a good seat. All movements were executed at a trot, even in cases where, according to our ideas, the gallop should have been employed. The squadrons took hurdles of medium height. No riders were unseated, but it was nevertheless evident that many of them only retained their seats with difficulty. The Japanese is, generally speaking, not a natural horseman. The cavalry will unquestionably in a war be behind the infantry and artillery, which arms meet all demands made by our modern conditions."

If we now examine what the Japanese cavalry, which prior to the war elicited such comments, has actually accomplished during the war, the final result of our investigation cannot be unfavorable. It was opposed, as already mentioned, by an inferior enemy. Cavalry combats such as the days of Königgratz in 1866 and Vionville in 1870 furnished did not take place, only smaller accidental encounters. Likewise the cavalry advanced only at times and on a small scale against infantry or artillery. Pure cavalry battles did not occur at all. The Cossacks failed to search for and find the opportunity; the Japanese cavalry felt that it did not possess the ability and numerical strength to cope with such problems successfully, although it could have found splendid opportunities during the very demoralized retreat of the defeated Russian army after the battle of Mukden, carrying confusion into the ranks of the routed enemy by determined action, even in the difficult terrain of Manchuria, in accordance with the spirit of our handling of cavalry during a pursuit.

On the other hand, the Japanese cavalry was successful on two other fields, proving at least equal, and sometimes considerably superior to the opponent in reconnaissance duty and in dismounted action. In reconnaissance duty the high intelligence of officers and men was clearly apparent, as well as enterprise and courage, without which no cavalry action is thinkable.



The dismounted action was employed partly in reconnaissance, partly in operations made directly in coöperation with the other arms. Mobility, a keen perception of the tactical situation, activity, and training for this purpose, are conditions precedent to successful dismounted action of cavalry. The Japanese cavalry stood the test and achieved good results. That the powers that be in Japan, despite their recognition of these excellent achievements, demand more, is apparent from the fact that after the war the increase in cavalry, its more thorough training, better equipment with more serviceable mounts, was immediately taken in hand.

"*Here saber—here carbine,*"—that is the watchword in the light of which we must examine the question of the use of cavalry in the Russo-Japanese War. We at once encounter a condition similar to that in the Boer War. From the first impressions produced by that war, the conviction was frequently formed, especially in the English army itself, that the rôle of cavalry had degenerated into that of a mounted infantry, and that dismounted action would be the vital duty of the cavalry of the future. But the later events of the South African War, after the keen eye of Field Marshal Lord Roberts had discerned the true problems of the cavalry, and a cavalry division had been formed and fully equipped—the division of General French—demonstrated that every army dispenses with the mounted arm only at the *expense of success.* But that arm must be fully equal to the many-sided duties devolving upon it. The war in the Far East has emphasized this fact and has, moreover, demonstrated that a modern war necessitates a strong and an excellent cavalry.

General Kuropatkin issued a number of "instructions" to his cavalry during the course of the war, which unquestionably contain many valuable suggestions. But here also, as so often happens in war, the sad experience was made that such instructions do not accomplish results, and only create confusion if the leaders do not possess ability to adapt themselves to any and all conditions and the troops have not already gained in their peace training the characteristic of tearing themselves away from all fixed schemes and deep rooted conservatisms, and act in accord-

ance with the dictates of the moment. As the Russian cavalry in the Far East was totally devoid of these features, Kuropatkin's instructions were lost upon them. The Russian cavalry leaders lacked intelligence and enterprise and the troops were devoid of thorough training. Thus neither proved equal to their problem. Prior to the battles on April 15, 1904, around Liaoyang, the Russian commander-in-chief voiced the following opinions as to the use of cavalry:

"There are many cavalry leaders who know how to lead their commands to the attack and how to re-form them after the encounter; but this is useless if the use the cavalry is put to is not in harmony with the rest of the operations. Therefore, cavalry commanders must clearly understand that their duty is first and foremost that of supporting the other arms, and never an entirely independent one. It is important to furnish the army, corps, and other commanders with accurate information, which enables them to form decisions and to act."

Kuropatkin further states that frequently after strategical reconnaissance no time remains, or at the most only too little time is left, for tactical reconnaissance. He avers that strategical reconnaissance is useless if on the battlefield itself the main arm, the infantry, gropes blindly in the dark. The gist of these instructions is, however, contained in the following remark:

"We must utilize our superiority in cavalry skillfully. It will, above all, be important to annihilate the Japanese cavalry or to reduce it to inactivity. Then it will be the duty of our cavalry to ascertain the movements of the hostile main forces accurately, to follow their intentions and measures step by step, until the moment of the tactical encounter, when the cavalry will take up the duty of tactical reconnaissance, the duty of reconnoitering the immediate vicinity, moving to the flanks and in rear of the hostile flanks, keeping close touch of all hostile movements. Cavalry skillfully led will still have an opportunity to throw its whole weight into the scales by attacking in decisive moments of the battle, at any rate, however, in the pursuit."

It is rather interesting to note the bitterness and disappointment in Kuropatkin's subsequent decrees to the cavalry, in which he complains of the inefficiency of that arm. He even goes so



far as to ascribe the defeats of his army to the errors of omission of the cavalry—and that unjustly—for the inefficiency of the cavalry was but a part of the whole cause leading to defeat. The second decree of August 15, 1904, issued under the depressing influence of the battles on the Yalu, Kinchou and Wafangkou, states among other things:

"Although we have a strong cavalry force available, we have so far never been informed of the strength or intentions of the enemy. If our cavalry is commanded by a skillful leader it will accomplish excellent results. But up to the present it has never been able to obtain the information which I am obliged to have."

The Commander-in-chief further criticises the subordinate commanders for always using mixed detachments for reconnaissance work, while the cavalry sticks to the infantry or perhaps attempts to find safety in rear of that arm. He is unable to find an excuse for the cavalry in difficulties of the terrain, in the Japanese spy system, in the extraordinary cleverness of the Japanese service of security. And justly so.

"Our reconnoitering detachments, always consisting of at least a sotnia with sharpshooter detachment of the infantry, have frequently been driven back by very weak Japanese posts, often consisting of only eight to ten infantrymen."

In this Kuropatkin is mistaken, inasmuch as not Japanese infantry, but in most cases dismounted cavalry opposed these reconnoitering forces. "In such cases," he continues very correctly, "our reconnoitering forces should have dismounted at once to pour a heavy fire on the enemy and to defeat him. If the spirit of the Cossacks were better," he continues, "they would advance on the enemy with cold steel."

If we follow the events of the first period of the campaign we will unquestionably agree with Kuropatkin. The brigade of Mitshenko did, it is true, not without success, delay the advance of Kuroki's army from Andschou toward the Yalu for a few days during the latter part of April, 1904, and accomplished its mission from a strategical standpoint not unskillfully. But when the Japanese enveloped the Russian left flank in the Yalu position on April 30th, Mitshenko's tactical reconnaissance failed so completely that the Russians were actually surprised

and only narrowly escaped a total envelopment. The movement of Stakelberg's column from Kinchou to Wafangkou, ordered by Kuropatkin, owing to his entire misconception of the real situation, was made because the Russians were very much in the dark as to the landings made by the Japanese at Takushan and Pitsewo, although at that time two Cossack divisions were available for strategical reconnaissance. If the two Japanese armies had been more energetically pushed forward, Stakelberg could not have escaped the annihilation to which he exposed himself by his isolated advance.

In the battles at Liaoyang and on the Shaho the Russian cavalry divisions, reinforced by detachments of sharpshooters, were posted on the flanks of the army. The slow enveloping movements of the Japanese were ascertained in time. It is to be especially noticed that the dragoon brigade of the Seventeenth Army Corps succeeded in obtaining early information of Kuroki's march to the right and his crossing of the Taitse-Ho above Liaoyang. It is hardly an accident that in this case regular Russian cavalry did what the Cossacks failed to accomplish during the entire war.

Considerable controversy in regard to the use of cavalry in the Russo-Japanese War was caused by the grand cavalry movement under Mitshenko in January, 1905, around the Japanese left flank, for the purpose of interrupting the enemy's communications, after the manner of a raid. The idea on which this expedition was based is unquestionably sound; it breathes initiative and enterprise, characteristics the fostering of which in the Russian cavalry were of vital importance after the earlier experience of the war. But the season of the year chosen for the movement was exceedingly unfavorable, for the biting cold, the poor, slippery, ice covered roads, the encumbrance of the cavalry with a tremendous train of vehicles, the taking along of which was considered necessary, impaired mobility, the first requisite of success. General Mitshenko had a strong force—66 sotnias (or squadrons), four troops mounted infantry, five and two-third batteries (thirty-four guns), four machine gun companies, a total of 8,000 men—available. Had he made an attempt to gain the vicinity of Daschitsao-Kinchou, a fairly open terrain,



well suited for cavalry operations, and remained there breaking the railroad and obstructing roads used for transporting supplies, without engaging in enterprises of secondary importance, he would have been able to seriously interrupt the hostile communications, or at least score a great moral success, which the Russians so imperatively needed after all their defeats. But the Russian cavalry commander confined himself to sending a few officers' patrols against the railroad, where they effected very unimportant demolitions, and turned with the bulk of his cavalry force toward Inkou for the purpose of capturing a few magazines at this at the time (*i. e.*, in the depth of winter) valueless harbor. The weak Japanese infantry garrison offered sufficient resistance to delay the dismounted attack of the cavalry until the arrival of several battalions with artillery and machine guns from Haitchou, which moved against the line of retreat of the Russians. This turn of events caused the retreat of the cavalry corps which, encumbered with wounded, led horses, vehicles, and harrassed by Japanese detachments, several times got into very critical situations, was glad to reach the shelter of the infantry without too heavy losses. The whole expedition was a total failure, caused by faulty equipment of the cavalry corps, by timid leadership, by misconception of the object, and by the inability of the troops to attain success in dismounted action.

While the expedition against Inkou glaringly illuminated the weakness and inefficiency of the Russian cavalry without endangering the rest of the operations, those defects were fatal in the decisive action at Mukden. Kuropatkin feared an envelopment of both of his flanks and had divided the cavalry of his army equally between them. Rennenkampf, unquestionably his best cavalry commander, was posted on the eastern flank where the snow-covered mountains made the use of cavalry on a large scale impossible. The strategical flank was unquestionably the open plain in the west. Here the Ural-Trans-Baikal Cossack Division and the Caucasian Cavalry Brigade (in all, thirty-six sotnias, eight machine guns, and twelve guns) were posted, while the Fourth Don Cossack Division (twenty-four sotnias and twelve guns) was far removed from the theatre of the battle, guarding the railroad north of Mukden, being thus of

no strategical use whatever. If there ever was a case in which a profitable, decisively important problem confronted a cavalry force it was here in the combats introductory to the battle of Mukden from February 25th to March 1st, 1905. It was important for the Russian commander-in-chief to obtain timely information of the intentions of the enemy, which flank he proposed to assail or envelop. This problem could only be solved by the advance, *by the most determined advance of the entire concentrated cavalry force,* whose duty it would have been to break through the Japanese cavalry screen, maintain close touch with the hostile columns making the great turning movement. Instead the Russian cavalry was so split up as to be too weak at all points, and nothing remained for it but to retreat before the, on the whole, weaker but nevertheless, through proper concentration, superior Japanese cavalry, to withdraw behind the infantry, and finally to suffer itself to be pushed toward the north entirely from the confines of the battlefield. To be sure the Caucasian cavalry had observed hostile infantry in motion from the southwest on February 26th, but touch with the enemy had been immediately lost again and the information sent of this hostile movement to headqarters was so indefinite that the commander-in-chief did not believe in the threatened danger. Only very late did he become aware of the exceedingly critical situation, the details of which were, however, not obtained by the reconnaissance work of cavalry, but by special reconnoitering detachments of the army corps—mixed detachments of all arms. If Kuropatkin was, nevertheless, continually able to throw fresh reserves against the enveloping movement threatening from the west and northwest despite his tardy appreciation of the existing situation, this is explainable not through the fact that he received timely information, but through the Japanese method of wheeling against the Russian flank prematurely, which caused the envelopment to be made by a slow and easily perceptible extension of their line instead of by a far reaching wide march around the flank to be turned. The work of the Russian cavalry shows the same defects at Mukden which characterized its work all through the war. It was unable to cut loose from defects which impaired its efficiency, in consequence of insufficient peace training.



The Japanese cavalry did not distinguish itself by brilliant achievements; for this it lacked numbers as we have seen. It was thereby led to be cautious and hesitating. But in all parts of its manifold problems it achieved good results and filled its place decidedly well. It possessed, above all else, the very important capacity to adapt itself with great dexterity to the peculiar conditions created by the war. The intelligence of the Japanese cavalry officers, the cleverness of the men, the fiery emulation which completely swayed all, created the best preliminary condition for success in reconnaissance work. The Japanese cavalry, always independent of the infantry, remained constantly in touch with the enemy and had its way almost everywhere, as, in contrast to the Russian cavalry, it kept its forces concentrated, and, as it was so concentrated it was always stronger at the decisive point than its opponent. It employed spies drawn from the Manchurian population very cleverly, and very skillfully utilized every available means to keep constantly informed of everything pertaining to the enemy. The principal method of fighting of the Japanese cavalry was dismounted action. At Wafangkou a Japanese cavalry brigade, supported by a battery and a machine gun company, delayed the advance of the Russian right wing by fire action until the arrival of infantry, thus contributing materially to the success of that day's fight. The Russians were entirely in ignorance of the fact that they were opposed by dismounted cavalry. The Japanese cavalry division took a hand dismounted very skillfully in the battle of Mukden on several occasions, and even made successful attacks against hostile infantry when it was necessary to clear the way for further reconnaissance.

The comparison between the numerous Russian Cossack cavalry and the weak Japanese cavalry leads to the conclusion that intelligence, enterprise, and courage are the primary requisites for cavalry achievements. The spirit which exists in the arm, which enlivens its leadership, is sure to result in success. That numbers play an important rôle also is illustrated by the fact that the efficient Japanese cavalry was in the end too weak to take a hand tactically in the pursuit.

Our brief discussion has proven that the Russo-Japanese War has not at all negatived the usefulness of cavalry. On the contrary, the experience of the war shows clearly that deficiencies or defects of the cavalry made themselves felt to the detriment of the whole army; it also shows, however, that a modern war cannot be waged without cavalry. The demands made on all arms have been tremendously increased on account of improvements in matériel, arms, and munitions, demands on the cavalry not being last or least in this respect. The long range of the modern rifle, its accurate and rapid fire, compel the cavalryman to remain at a distance during reconnaissance and to make use of the terrain in the most painstaking manner. The proper use of terrain by the hostile infantry and smokeless powder will tend to increase the difficulties of observation materially. All these considerations demand an increased amount of training in the cavalry. It needs mounted action to sweep aside hostile cavalry, to open the way for reconnoitering the enemy's situation, position, location; it needs also dismounted action to enable it to meet demands made upon it in special circumstances. It cannot be denied that dismounted action is very uncomfortable for cavalry. The guarding of the led horses, the small amount of ammunition carried, the difficulty of replenishing ammunition, in some armies also the not always adequate clothing and equipment; all these tend to make dismounted action more difficult for cavalry. And yet it cannot dispense with this action; it will be compelled to use it far more frequently in future wars than was necessary in those of the past. It is probably not going too far to say that a cavalry force cannot make a charge—a death-ride—without weakening its fighting power for weeks, even months, while it may quite often take to dismounted action without danger of too great a loss in its ranks. Therefore it must master dismounted action so thoroughly as to ensure success. This necessitates training and practice. The new small-arms firing regulations of the German army provide methods of training and embody well known principles of infantry fire. Skillful use of terrain, fire direction, fire discipline, good marksmanship at effective and not too distant ranges, are the conditions of success. In order to give the cavalry sufficient fire power an ample equipment of machine guns cannot be dispensed with, at least one, better still two companies, for each division. Extreme mobility is the first requisite of these machine gun companies. Mounted machine gun companies might perhaps be created, *i. e.*, guns and ammunition to be transported on animals, the men to be mounted.



The strategical and tactical reconnaissance is the first duty of cavalry. That the late war teaches and affirms with emphatic clearness. In this duty cavalry uses all the ways and means at its disposal: mounted and dismounted action, transmission of information by telegraph or visual signaling, crossing of obstacles, especially watercourses by swimming or by utilizing available bridge material, destruction of railroads, etc. It is thus unnecessary to give special reasons for the assertion that no other arm needs a more comprehensive preparation and training for war than the cavalry, and above all else it must maintain and foster the true cavalry spirit which makes it capable to ride down the hostile cavalry in a powerful charge. This spirit brings it shoulder to shoulder with the sister arms onto the battlefield where it will not hesitate to throw itself against hostile infantry or artillery if the situation should demand it, which perhaps to-day would be necessary only in exceptional cases. Whether such attacks can be made on a large scale, or whether attacks by numerous smaller bodies would ensure better results, depends on the situation and cannot be made the subject of a general rule. One thing, however, is certain: the sense of responsibility, the spirit of enterprise of the leaders must be fostered just as much as the spirit of devotion and self-sacrifice of the men. That is cavalry *esprit*. Let us be thankful, let us be proud of the fact that in our cavalry such *esprit* is fostered by those in high places. The war in the Far East has not negatived all these principles, but has emphasized them. The war has not demonstrated the uselessness of cavalry, but, on the contrary, the value, the indispensability, the importance of the cavalry in modern war, but only of such cavalry which is capable of doing justice to all its important and difficult tasks in equal measure.

# THE LONG-DISTANCE RIDE OF THE JAPANESE FIRST CAVALRY BRIGADE.*

From *The British Cavalry Journal.*

## REGULATIONS FOR THE RIDE, DISTANCE, NATURE OF COUNTRY.

THE regulations issued by the headquarters of the First Cavalry Brigade in the middle of August were mainly, as follows:—

The Guards, Thirteenth and Fourteenth Cavalry Regiments, will each send two scouting parties.

Each party will consist of one officer and nine N.C.O.s and men.

No Australian horses will be ridden.

*Course.*—Those starting east will leave Tokyo or Narashino, going by Mito, Shirakawa, Utsunomiya, Takasaki, and home. Those starting west will go the reverse way.

In every twenty-four hours over six hours' continuous rest will be taken.

At Mito, Shirakawa, Utsunomiya, and Takasaki, examining posts will be established to examine the condition of men and horses. Two hours' halt will be made at each of these places.

November 5th is appointed for the start.

The distance as measured by the brigade headquarters is 608 kilomètres, or 152 ri (371 miles). Between Tokyo and Mito the country is undulating, with a ferry-crossing over the Tonegawa; between Mito and Shirakawa there is a hill over 4 ri (10 miles) in length (including ascent and descent); between Shirakawa and Utsunomiya, in the plain of Nasunogahara, the country is undulating; from Utsunomiya through Takasaki to Tokyo the course is practically level, and there is nothing to affect the rate of travel.

One subject for investigation was, therefore, to ascertain whether it was more advantageous to have the more arduous portion at the outset or the end of the ride.

*A lecture given at the Military Club, Tokyo, December 21, 1906, by Lieutenant Iida, commander of one of the competing squads. Translated from the February number of the 'Kaikosha Kiji' (Officers' Club Journal) by Captain E. F. Calthrop, R.F.A. An interesting description of a test of endurance for men and horses, carried out by patrols of Japanese cavalry. The distance of 371 miles was covered in 108 hours (average); that is, the average distance per diem was 78 miles, the average rate 5.15 miles an hour.



## CHOICE OF MOUNTS.

*Age.*—Three horses, 8, 9, and 10 years old respectively, were comparatively most knocked up, both during and after the ride. Three horses from 11 to 12 showed the most staying power, and quickly recovered from their fatigue. Four horses from 13 to 14, with one special exception gave no trouble. From this it appears that, between the ages of 8 and 14, 11 and 12 year olds possess the most staying power.

*Build.*—A horse with a heavy head was done up after about 30 ri (73 miles), and, in spite of watchfulness on the part of the rider, came down twice, and finally had to be left behinds on account of laminitis and exhaustion.

*Flesh and Condition.*—As time and other reasons prevented the horses from eating their proper feed during the ride, it was necessary to select horses that were naturally good feeders and had plenty of flesh.

## PREPARATORY TRAINING.

The object of preparatory training was to test the staying power of the horses and the amount that they could be ridden; to increase their speed and power of endurance; and to accustom the riders to their mounts.

*Number of Days.*—The longest period hitherto devoted to preparatory training was sixty days; the shortest, over three weeks. As the result of an experience while with the Ninth Regiment, immediately the regimental field exercises at Narashino were over, for the remaining fifteen days the party was trained by itself, not, however, without interruptions. Eight horses that were selected proved satisfactory, but of four that were changed during this time, one had

to be left at Kumagai on account of laminitis, while another developed heart trouble, from which it has not yet recovered.

It is of great importance that not only well built and daily exercised troop horses should be taken, but, for a fast ride of 150 ri (366 miles), it is necessary to have at least two weeks' preliminary training.

### PLAN OF THE TRAINING.

During the three weeks' field exercises at Narashino, although the pace was not fixed, at any rate the horses were being ridden over four hours a day. From the commencement of the preliminary training—fifteen days before the start—the time in the saddle was gradually increased from three hours a day up to the ninth day before the start, when half the party rode 15 ri (36 miles) a day, and 20 ri (48 miles) the following day. From thenceforward the time and pace was gradually diminished until the day before the start, when there was an hour's walking exercise with riders up. On the day of the start all were in an excellent condition.

To make the riders hard, for about a week before the ride they practiced running at night; and three days before the start they doubled for forty-five minutes without stopping.

### FORAGE RATION.

For about three weeks before the ride the daily feeds were: Barley, 3 sho * (about 6½ lbs.); oats, 3 sho (about 6 lbs.); hay, 1 kwamme ‡; salt, 5 mommé.† Two weeks before three carrots were added to each feed.

At that time the troop ration was 6 sho (about 12 lbs.) of oats; but as it was thought that there would be a difficulty in getting oats on the road, a half-ration of barley was given in order to accustom the horses to this diet.

### SHOEING.

One horse that had been shod a week before the start required reshoeing at Utsunomiya, as the shoes had worn

*1 sho = 1 quart 1.17 pint.
‡1 kwamme = 8.2673 lbs. †1 mommé = 2.1164 drams.



down. Another horse that was shod the day before the ride went lame, as too much had been taken off the foot, and another horse had to take its place at a moment's notice. Timely shoeing, not too early and not too late (the latter leading to unforseen breakdowns at the start) is of importance. Also, shortly before the ride, when the horses are being rested, the feet should be carefully shod by thoroughly experienced shoeing-smiths. The report on long-distance rides at home and abroad, entitled "Endurance and Speed," issued to the Ninth Cavalry Regiment by the Cavalry School, was consulted.

The only maps used were the General Survey, scale 1:200,000.

The pace to be gentle at first, gradually increasing.

### THE RIDE.

*Equipment and Saddlery.*—Each rider carried the arms of his rank: carbine, revolver, and sword. On the horse, saddle-bag, wallets, picketing halter, and cloak, also stable-bag (for cleaning materials).

To prevent saddle-galls I had two saddle-blankets, folded in four. I carried no big bit or picketing halter, only using a bridoon bit.

*Stores Carried.*—Veterinary medicines: Tincture of camphor, creolin, tincture of iodine, boric powder; bandages, flannel, brandy, and some "kombu" (a sort of seaweed). For the use of the men, "seishintan" pills (a patent medicine) and "katsuobushi" (dried fish steaks, used for flavoring). Owing to the weight of the cloak when wet, I provided myself with oil-paper, which I only used once, on the day of our arrival.

Three "Odawara" lanterns (made of paper) and one portable electric lamp were also carried.

### WEIGHT ON THE HORSES.

According to measurement taken the day before, the average weight of a rider, fully equipped, was 18 kwan 800 mommé (about * 70 kilos); the total weight of the saddlery

* 11 stone = 154.28 lbs.

averaged 8 kwan (* 30 kilos). The average weight carried by each horse was, therefore, 26 kwan 800 mommé (about † 100 kilos). If we compare this weight with the average weight of the horses ridden, 102 kwan 900 mommé, the proportion is 3.84:1, or over ¼; the highest average being 3.5:1.

### ORDER OF MARCH.

Although called scouting parties, they had nothing to fear from an enemy, and, in the order adopted, convenience of marching, speed and supervision were the only considerations. The party marched in single file, with the fastest and strongest horse in front. The party leader was either in the center or rear, except at night or over intricate country, when he took the lead.

Bodies of troops require over ten minutes' halt for watering; but with small scouting parties this is merely an unnecessary waste of time. I usually led the horses at a walk for five minutes before watering, watered, and after three or four minutes' march broke into a trot.

I watered in small quantities at intervals of from one hour to two and a half hours, and, when it could be obtained; there was nothing better than "rice water" (the water in which rice is washed before boiling).

### LEADING HORSES.

The total time during which the horses were led was fifteen hours, or for over 86 kilomètres (53 miles). Leading relieved the horse of an 18-kwan burden, and not only, if continued, restores the horse's energies, but it is a rest for the rider after a long time in the saddle. But doubling the men in order to keep up the pace is, on the contrary, more exhausting, and does not tend to relieve the horse. We led only on special occasions, as when very cold or when crossing difficult country at night, etc.

*Horses' Condition.*—On the first day (start at noon) we were moving for only nine hours and thirty minutes. There

* 4 stone 10 lbs. = 66.12 lbs.

† 15 stone 10 lbs. = 220.4 lbs.



was no sign of exhaustion, and they fed well. On the second day, after passing Mito the horses began to show fatigue. That night some were somewhat off their feed, and the following morning, before starting, a good many horses did not drink on account of the cold.

The horses were led over the 4 ri (10 miles) mountain road and gained in energy; but on the new road, covered with small stones, before reaching Shiraga they began to sweat and blow heavily.

On the fourth day, after passing through Utsunomiya, owing to the forced pace and the long time we had been going, we had to use our spurs between Ashikaga and Isesaki in order to get the horses into a trot, and they barely responded.

That night we only had three hours and ten minutes' rest at Isesaki. In less than ten minutes after leaving, the horses again became distressed, and at Takasaki one horse was entirely off his feed, while another developed a strange gait; but we kept them going, intending to lead right into Tokyo. Owing to the pace, which was greater than was really necessary, the horse that was off his feed fell out at Kumagai, and the other damaged the valve of the heart, and has not yet recovered. When the remainder arrived they were pouring with sweat and rain, and the heavy breathing and bowed heads showed their distress

As a rule, at the start in the morning the horses were without spirits; but the latter rose with the sun, to decrease gradually during the day. The fastest pace could be got out of them in the morning and evening, as the horses responded more readily and did not perspire.

### CONDITION OF THE RIDERS.

The men all showed the greatest keenness, and the way in which they obeyed all orders, looked after their horses, spoke and acted, was most praiseworthy. But as their average night's rest was less than one and a half hour, they began to feel the want of sleep, and when walking at night most of them slept on their horses' backs. In spite of the loose seat that this entailed there were no saddle-galls.

Owing to lack of sleep, the glare of the sun, and the dust, the eyes of more than half were inflamed—a fact which shows the need for carrying colored glasses.

On the first and fourth nights we were practically in the open. Most of the horses were tied to trees, the saddle-blankets being thrown over their backs. On the second night a hastily constructed stable sufficed to keep off the dew. On the third night they were perfectly stabled in an inn.

### CARE OF THE HORSES.

Immediately on halting for the six hours' rest the horses were given a little water, legs washed in hot water and rubbed for about twenty minutes, saddles taken off, back and rest of the body groomed for about fifteen minutes, and blankets put on. Tincture of camphor was then rubbed on the legs, and in order to keep up circulation, and as a guard against rope-galls, fetlocks and hocks were bandaged with flannel. The following morning they were groomed for about thirty minutes, the legs especially being well rubbed.

*Special Treatment.*—In cases of inflammation of the foot (due to pressure of the heel of the shoe on the frog), as it was found that immersion in cold water for twenty or thirty minutes did more harm than good, camphor was applied on the road, and on reaching the halting place a waraji (straw sandal) was soaked in water and bound round the foot with oil-paper. On taking this off the following morning the fever had quite gone.

My own horse went lame for the first time six hours before reaching Utsunomiya. I frequently dismounted and led. After discovering that it was due to swelling of the near fetlock, at the next watering place I rubbed the joint with cold water and put on some camphor. One hour after passing through Utsunomiya it ceased to throw its weight on the right side, and the lameness disappeared.

As the study of the method of feeding is extremely imperfect, the horses all lost flesh. My methods of feeding were as follows: At the long halt, after the horses had been attended to, they were given 4 sho (8¾ lbs.) of barley and



1 sho (3.17 pints) of "fu" (a sort of bran), mixed with salt and carrots, and 1 kwamme (8¼ lbs.) of hay.

The following morning, about one hour before starting, the above feed had practically all gone, and another feed of 1 sho was given. After starting, the horses were led at a walk for at least thirty minutes, in order to allow them to digest their feed.

At each examining station 1 sho of barley or oats, 1 sho of bran, and hay were ordered by telegram to be ready immediately on arrival.

When leading, carrots, grass and water grown rice were frequently given. The horse that was left at Kumagai, as it was off its feed, was given, after we left Utsunomiya, two or three eggs in every feed.

The other scouting parties divided their forage into smaller quantities and fed more frequently, and if this does not take much more time, it is probably a better method.

### MISCELLANEOUS.

Watering-bags and cleaning gear only add to the weight, and there is no necessity to carry them.

*Lanterns.*—A larger one is required, as a small one easily catches light. The light of a portable electric lamp is too feeble to even read a map by. On the third night, in taking a short cut—3 ri—across the plain of Nasuno, there was no moon, no houses, no passengers, and only just enough light to read a compass. Our progress was a matter of some difficulty.

*Subsequent Condition.*—As a result of the examination of the nine horses that came in at 8:43 P. M. on November 9th, only one was not fit for ordinary duty. That night, after having been groomed by fatigue men for about 1½ hours, they were given 5 go * of oats, 1 sho of bran, salt, and 1 kwan 500 mommé (12¼ lbs.) of hay each, and the same feed the following morning. For exercise they were led quietly. For three or four days they usually lay down, except when feeding or at exercise. After the sixth day they were rid-

* 1 go = 1 sho = 3.17 pints.

den at exercise, and from the thirteenth day went into ordinary work.

The average weight lost on the ride was 11 kwan 700 mommé (96½ lbs.), the largest decrease being 17 kwan 200 mommé (142 lbs.). A week after the ride they had put on an average of 10 kwan (82½ lbs.), and three weeks later were only, on an average, 400 mommé (3½ lbs.) below their former weight. At this moment they appear to have quite regained it.

The cause of this large loss of weight was due to insufficient preliminary training, the necessity for a forced speed, and lack of food and water.

## CONCLUSION.

Since that cavalry enthusiast, the Prussian Emperor William the First, carried out a long-distance cavalry ride, in 1842, several thousands have taken place in different parts of the world; but this is the first occasion, that we have heard of, on which so long a distance as 608 kilos (371 miles) has actually been covered.

Further, the plan of having squads of ten men, instead of independent riders, may be said to be a step in advance.

The time I took to traverse this distance, from start to finish, was 104 hours 43 minutes (or 53 minutes longer than I planned). Deducting rests, long and short, time taken in crossing the ferry, etc., the time on the move was 71 hours 33 minutes (or 3 hours and 27 minutes longer than in the programme). The average distance covered per day was 32 ri (78 miles); the average rate per hour on the move was a little under 8 kilos 300 metres (5.15 miles). Although the programmes of the various parties show a difference of time of 30 hours, between the actual time taken by the fastest party (104 hours) and the slowest (112 hours) there is only a difference of 8 hours.

It may be taken, therefore, that the Japanese horse of today requires at least 4½ days to do 150 ri (346 miles), and it is a question how many days further this rate could be continued. Still, I think that if the horse that was left behind



had been regarded as hopeless earlier in the ride, the last day and a half would have been accomplished without difficulty.

Even should the scheme of creating a cavalry division in Japan take effect, the Japanese cavalry will not be comparable in numbers with possible antagonists. To make up for this lack of numbers every encouragement should be given to the improvement of the breed of horses and the holding of exercises of this kind. In so doing the study of questions of endurance and speed will be promoted, and, what is also so necessary, individual self-confidence will be acquired.

BELLONA, GODDESS OF WAR.
Life-size Statue in Tinted Ivory and Bronze, by GEROME.



APROPOS OF THE PEACE CONFERENCE.

---

# BELLONA.

By MEREDITH NICHOLSON.

What wanton bold, exultant in her shame,—
What monster art thou in this woman's guise?
Think'st thou with blatant shout the world to tame,
Or awe man with thy terrible great eyes?

Thou art Bellona, the fell scourge of earth,
Who set'st for man his false, ignoble goals;
Thou, the destroyer of love and stifler of mirth,
Thou, the relentless trafficker in souls.

Death's lure thou art, on his dark mischief bent,
In splendor clad his livery gray to hide;
His cry thou bellowest from the battlement;
On ruddy fields before him thou dost ride.

Art thou so glorious? Are thy deeds so great?
Canst thou awake earth's myriad slaughtered hosts?
Or summon from the sea's unpillared gate
Thy drowned armada-sepulchre of ghosts?

I cower not before the shining blade
Thou hold'st upraised and bloodily dost wield;
Nor fear the serpent that doth give thee aid,
Nor shrink before the radiance of thy shield.

Where thou destroyest I build; what thou dost blight
My hands restore; I thy lorn thralls release;
My pinions touch thy darkened world with light
And healing for its wounds: Lo, I am Peace!

## BELLONA'S ANSWER.

By MAJOR D. H. BOUGHTON.

Thou call'st me wanton, exultant in my shame,
A monster bold, yet clad in woman's guise.
Think'st thou with gentle arts alone the world to tame,
Or check its greed with the glory of thine eyes?

Lo, thou art Peace, the fairest form of earth,
Who set'st for man many great and noble goals;
But think'st thou there is naught on earth but mirth,
And that thou alone are the Savior of men's souls?

Lofty thy aims, and on thy noble purpose bent,
Much good thou doest, this I do not hide;
But I thy sister from the high battlement
Many evils see that with thee do ride.

Evils thou seest not, but many are they and great,
And work their will among the world's unnumbered hosts;
Pride, wealth, luxury, envy, and the blight of hate,
The greed of gain, shriveling men's souls to naught but ghosts.

Thou cowerest not before my shining blade,
And why shouldst thou when I for thee it wield?
To cure thy ills thou need'st to seek my aid,
The might of force, the protection of my shield.

When I destroy it is to bring thee light,
And purge the earth of evils thou shouldst abhor;
My duty done, my place to thee of right
I give, that thou may'st rule: Lo, I am War!

## PRIZE PROBLEM NO. 3.

*The Editor, Cavalry Journal.*

SIR:—The committee selected to examine the solutions of Prize Problem No. 3 reports that it finds the solution signed "Dragoon" worthy of the prize offered. In this solution, however, the committee is of the opinion that Captain A. issued his orders too far in advance. He should have conducted his whole troop to Prospect Hill and held it there concealed in readiness, while he himself observed the movements of the enemy. Should the battalion turn south he could observe its movements, keeping under cover of the ridge and woods. An engagement would probably not be necessary. Should it turn north there would be no need of a platoon in Hinesburg Woods. Again, in giving instructions to the sergeant commanding the point of the advance guard, Captain A. does not follow the sequence prescribed. In giving orders, whether verbally or in writing, the first item should be the "information in regard to the enemy."

D. H. BOUGHTON,
*Major, 11th Cavalry.*
CHAS. CRAWFORD,
*Captain, 20th Infantry.*
JOHN P. RYAN,
*Captain, 6th Cavalry.*

In accordance with the above, the prize for solution of Problem No. 3 is awarded to First Lieutenant S. R. Gleaves, First Cavalry.

The prize winners are as follows:

Problem No. 1—First Lieutenant A. J. Dougherty, Twenty-eighth Infantry.

Problem No. 2—First Lieutenant S. R. Gleaves, First Cavalry.

Problem No. 3—First Lieutenant S. R. Gleaves, First Cavalry.

## SOLUTION.

### FIRST REQUIREMENT.

THE orders, under which the troop commander is operating, direct him to reconnoiter through Charlotte, and check or delay any hostile advance on Fay's Bridge. In performing this duty he is left entirely to his own resources, and can hope for no support until the advance guard of the escort reaches Fay's Bridge, at about 1:30 P. M.

Properly to grasp the spirit as well as the letter of his orders, the troop commander, Captain A., must study the intentions and desires of the escort commander, in so far as they stand revealed. As the escort commander is taking special measures to prevent the enemy from securing Fay's Bridge, and as the escort will arrive there at a yet early hour of the afternoon, Captain A. thinks it more than likely that the convoy is to be passed over the bridge and continued in its march. At any rate, the security of the bridge is evidently of paramount importance to the convoy, and Captain A. therefore realizes that his troop must, at all hazards, prevent the enemy from gaining any position from which effective fire can be brought to bear upon the bridge. Captain A. further realizes that the convoy is, like all others, clumsy, slow, easily deranged in its movements, and more or less at a disadvantage when in the presence of the enemy. He feels, therefore, that its commander will be glad to avoid all hostile contact, however slight, and that his troop must be careful not to bring about an engagement, unless the bridge is actually menaced.

#### *Terrain.*

A study of the map shows Captain A. that the terrain between Fay's Bridge and Charlotte, through which his operations are to take place, lends ready assistance to defensive action. East of the Onion River the ground rises gently to the crest of a ridge which runs northeast and southwest, generally parallel to Onion River, and, at its nearest point, about 700 yards



distant therefrom. Prospect Hill, a prominent peak of this ridge, lies 725 yards southeast of Fay's Bridge, and 250 yards northeast of this height Gravel Hill appears. Birch Hill, higher than these two, lies in continuance of this crest, nearly 1600 yards south of Fay's Bridge. From Birch Hill the ridge turns toward the southeast and breaks into the ravine of Holton's Brook and Sucker Brook. To the east of the Gravel Hill-Birch Hill ridge, lies the open valley of Sucker Brook, without cover of any importance, and of a width which varies from about 500 yards near the head of the valley, at Youngtown, to a much greater width east and northeast of Prospect Hill. On the eastern slope of this valley, and nearly 1,300 yards southeast of Prospect Hill, the town of Charlotte appears. Several small towns and numerous farm houses, all of little military importance, are to be found. The Winston Woods lie 800 yards east of Gravel Hill, the Hinesburg Woods, 1,000 yards south of Fay's Bridge, and, southwest of the last mentioned wood, the Beekman Woods. The country is exceptionally clear and free from cover, aside from these woods; this is particularly so to the north, east, and south of Prespect Hill and Gravel Hill, although some wagon road cuts and railroad cuts are to be noted. The excellent field of fire toward Charlotte from Gravel Hill-Prospect Hill, is particularly to be noted.

The principal roads leading from Charlotte are: (1) The Charlotte-Booth's Mill-Addison road; (2) the Charlotte-Colchester road; (3) the Charlotte-Youngtown road to the cross road, 175 yards west of Sucker Brook bridge, thence north via Hinesburg to Fay's Bridge.

It is to be noted that the country, off the roads, seems to be generally practicable for all arms.

#### *Strength, Position, and Probable Intentions of the Enemy.*

1. Captain A.'s information of the enemy is as complete as could be expected, the hostile body having been reported accurately as to strength, composition, and location. Captain A. notes particularly that the battalion of Red infantry is apparently unsupported by other troops, and that no cavalry or artillery is present; extended hostile reconnaissance, and long range artillery fire on Fay's Bridge, items of great importance, are

therefore impossible to the enemy. The numerical superiority of the enemy is not so great that it cannot be counterbalanced, to a great extent, by the advantages of a skillfully selected defensive position.

2. The hostile battalion was one-half mile east of Charlotte at 12 noon, and may therefore be expected at Charlotte at about 12:12 P. M., assuming a rate of two and one-half miles per hour, including halts. Upon leaving the village his troops will be plainly visible from the Prospect Hill-Gravel Hill ridge, if he continues in the same general direction of march; all important dispositions of his force thereafter will be under easy observation.

3. The enemy's intentions can only be surmised at present. It seems unusual that a single battalion, apparently unsupported and unaccompanied by auxiliary troops, should be marching in the direction of the enemy unless it has been detached upon a special mission. Captain A. therefore believes it probable that the battalion has been detached from the Eastern force to operate against the convoy.

If this be the case, the hostile battalion will undoubtedly endeavor to occupy Prospect Hill and Gravel Hill as soon as possible, since from this position Fay's Bridge can be effectively commanded by rifle fire, at a range of less than 800 yards.

If the presence of Blue troops in the vicinity of Fay's Bridge is not suspected, the best, because the quickest, route to this position will be by road to Booth's Mill, thence across country. However, if the Reds, notwithstanding their lack of cavalry, have discovered the presence of the Blues, such a route, on account of its exposure, might possibly be deemed too dangerous, and a detour via Birch Hill and Hinesburg Woods considered preferable. It is to be noted, also, that by such a move the enemy might, from the Hinesburg Woods, bring Fay's Bridge under rifle fire at 1,000 yards range. By the first route the distance to Gravel Hill from Charlotte is only about 1,550 yards, and the time, therefore, only about twenty-one minutes; the last mentioned route is over twice as far, and much more difficult. The enemy will not seriously consider the route via Youngstown, across Sucker Brook, thence north by road through Hinesburg, since he would gain neither time nor shelter.



It is therefore most probable that the enemy, whose success depends upon his promptness in securing Fay's Bridge, will use the direct route via Booth's Mill, even though he may have to encounter the Blue cavalry.

*Strength, Position, and Intention of the Blues.*

1. At 12 noon, the Blue troop, 100 enlisted men and three officers, is entering Swanton. The nearest supporting force is the escort, which, though probably strong in view of the importance of the convoy, is yet so distant that assistance from it cannot be expected till 1:30 P. M. Captain A., nevertheless, believes his force sufficiently strong to resist frontal attack by the hostile battalion, and he trusts in the mobility of his force to check any turning movement in ample time.

2. The leading element of the troop, the point of the advance guard, is now in Swanton, 2,100 yards from the saddle between Prospect Hill and Birch Hill. By alternating the trot and gallop, this locality can then be gained in about seven minutes, five minutes before the enemy can come into view at Charlotte.

3. From this consideration of the terrain, and the probable intentions of the enemy, Captain A. decides that he will best perform his duty by immediately taking up a "position in readiness" along the Gravel Hill-Prospect Hill ridge. He decides, further, that he will take every precaution to conceal his troop from the enemy, not only from general reasons of military effectiveness, but because the hostile battalion may, for some unknown reason, be simply marching to Colchester, or to some other locality not concerning the Blue movement, with no knowledge of the Blue convoy and no hostile intentions. In such case, hardly to be hoped for, the enemy's attention must not be attracted. In this connection Captain A. notes that his reconnaissance can well be performed from the ridge and that patrols, always likely to be seen, need not be sent toward Charlotte. As the enemy has no cavalry, it is likely he is in ignorance of the presence of the Blue troop.

As the enemy can reach Gravel Hill, if undelayed, by 12:32 P. M., and the advance guard of the convoy cannot reach the

ridge until about 1:42 P. M., the Blue troop will have to hold the enemy for about one hour and ten minutes.

In considering his dispositions, Captain A., though particularly desirous of keeping his troop together until the enemy's plan develops, sees that the southeast corner of Hinesburg Woods had better be occupied from the start, in order that any hostile movement against that important flank may be reported and checked immediately. Prospect Hill will also, certainly, require a detachment. The remainder of the troop must be held together well in hand, unobserved from Charlotte, in such a position that the defensive line may be properly and promptly occupied as soon as the enemy's movements disclose his plan of action.

Such a position is Prospect Park, whence Gravel Hill and Prospect Hill can be readily occupied in force.

### SECOND REQUIREMENT.

Upon receiving the information of the enemy at noon, Captain A. realizes that he must act very promptly. Immediately after having received his orders from the escort commander, he had studied his map and formulated in his mind a general plan for reconnaissance and for the protection of the bridge. He therefore needed but a short time in which to survey the map again, and refresh his memory as to the terrain.

Captain A. promptly gives the following verbal instructions to the sergeant in charge of the point of the advance guard:

"Move rapidly on this road by way of Fay's Bridge and Fay's Corner to the railroad crossing, 400 yards southeast of the bridge, thence to Prospect Hill, which lies about 400 yards southeast of the crossing, just north of the road. Halt on the hill, under cover, and observe toward Charlotte, a village about 1,300 yards southeast of Prospect Hill; a hostile battalion is expected there in about ten minutes. The remainder of the first platoon will follow you in a few minutes. Any messages, during the next ten minutes, will find me on the main road. Keep carefully concealed, and do not fire unless you have to."

Captain A. then wrote the following message, and sent it to the rear by a reliable, well mounted man.



TROOP A, FIRST CAVALRY.
SWANTON,
1 Oct., '06, 12:04 P. M.

No. 1.

*To the Commanding Officer, Blue Convoy.*

A battalion of hostile infantry is approaching CHARLOTTE from the east, and at 12 noon was one-half mile distant therefrom. No supporting or auxiliary troops have been reported. I shall observe the enemy from the GRAVEL HILL–PROSPECT HILL RIDGE, and there delay his advance if necessary.

A.,
*Captain.*

The troop, less the point of the advance guard, has been rapidly assembled at Swanton. Captain A. now assembles the officers and noncommissioned officers and, at 12:07 P. M., issues a verbal order, which, reduced to written form, appears as follows:

TROOP A, FIRST CAVALRY.
SWANTON,
1 Oct, '06, 12:07 P. M.

FIELD ORDERS
No. 2.

1. A hostile battalion is moving west toward CHARLOTTE, and at 12 noon to-day was one-half mile east of that town.

The advance guard of the Blue escort will reach FAY'S BRIDGE at about 1:30 P. M. to-day.

2 The troop, keeping carefully concealed, will observe the enemy from the GRAVEL HILL–PROSPECT HILL–BIRCH HILL RIDGE and there resist his advance in case he moves against FAY'S BRIDGE.

3. (*a*) First Lieutenant B, with the first platoon (less Sergeant K's party) will move rapidly via FAY'S BRIDGE to PROSPECT HILL, where Sergeant K's party is now in observation; the entire platoon will there take up a defensive position, dismounted.

(*b*) Second Lieutenant C, with the second platoon, will follow the first platoon as far as the railroad crossing, and will thence move to the southeastern edge of the HINESBURG WOODS.

(*c*) The third and fourth platoons will move under my command to PROSPECT PARK and there be held together, under immediate command of First Sergeant M, subject to my orders.

4. I will be at PROSPECT HILL.

A.,
*Captain.*

Verbally to assembled officers and noncommissioned officers, copy later to the escort commander.

## PRIZE PROBLEM NO. 5.

### CAVALRY OF THE REAR GUARD.

*General Situation.*

A BLUE brigade was defeated near Easton (twelve miles west of Fort Leavenworth), and is retreating across the Missouri River. The Red force is in close pursuit.

*Special Situation—(Blue.)*

The main body of the Blues has just begun the passage of the river (10:00 A. M., June 20, 1907. The Blue rear guard consisting of one regiment infantry, one battery horse artillery, and one squadron cavalry, is disposed as follows: Battery in action on Atchison Hill, against hostile troops, approaching via Atchison Pike; infantry taking up position in orchard, south of Frenchman, and on western slope of Sentinel Hill; cavalry retiring by the Millwood road, closely pressed by superior force (two squadrons of hostile cavalry).

*Special Situation—(Blue Cavalry.)*

At 10:00 A. M., the Blue cavalry (First Squadron, Sixth Regiment, Major C. commanding), has three troops mounted at Taylor S. H. (near 17), Troop A near the Daniels House (19) in action, dismounted, with hostile cavarly toward Duffin.

Major A. has just received a message from the rear guard commander, as follows:

"The rear guard will make a stand behind Salt Creek, the cavalry will protect the crossings on the Millwood road and north to the Missouri."

A message from Captain A. (commanding Troop A) arrives at same time, stating that a mounted force is advancing rapidly to the east, over the road one-half mile north of Duffin (19), and asking that his right flank be covered as he retreats via the Millwood road.

Compiled from [illegible]

Under the direction of the

COMMANDANT

of the

INFANTRY AND CAVALRY SCHOOL, SIGNAL SCHOOL AND STAFF COLLEGE.

January 1907.

Scale

Contour interval 10 feet.

SOUR

Salt Cr. Hill

Reserve for Military Purposes (Govt. Control)

Reserve for Military Purposes (Garden [illegible])

Bell Point

Wagner's Point

West End Parade

U.S. NATIONAL CEMETERY

Engineer Hill

Cavalry Drill Ground

Sentinel Hill

Atchison Hill

Hancock Hill

Morris Hill

TARGET RANGE

ATCHISON

PIKE

FRENCH

BAKER

KASTEN

TAYLOR

OGDEN

SHARP

KLASINSKI

DICHARK

SCHNEIDER

HUNDLEY

McKERN

CARNEY

DARNELL

U.S. MIL. PRISON

COMMANDANT

of the

INFANTRY AND CAVALRY SCHOOL, SIGNAL SCHOOL AND

STAFF COLLEGE.

January 1907.

Scale.

Contour interval 10 feet.

SOUR

# MAP
of
# RT LEAVENWORTH, KAS.
and
# VICINITY

*ted from Surveys made by the Staff Classes of 1904-06, and 1905-06.*

Under the direction of the

COMMANDANT

of the

INFANTRY AND CAVALRY SCHOOL, SIGNAL SCHOOL AND

STAFF COLLEGE.

January 1907

Scale

100 0 500 1000 Yards.

Contour interval 10 feet.

1" 2" 3" 4" 5" 6" 7" 8" 9" 10"

MISSOURI

KANSAS

POLO GROUNDS

Reserve for Military Purposes (Drill Ground)

Reserve for Military Purposes (Garrison for Troops)

Reserve for Military Purposes (Cavalry)

MILITARY PRISON RESERVE

U.S. MIL. PRISON

West End Parade

U.S. NATIONAL CEMETERY

Engineer Hill

Cavalry Drill Ground

U.S. TIMBER RESERVE

Drill Ground

TARGET RANGE

XXIII

XXII

XXI

XIX

XX

XXIV

XXV

Long Ridge

Merrill Hill

Atchison Hill

Eleven Hundred foot Hill

Government Hill

Southwest Hill

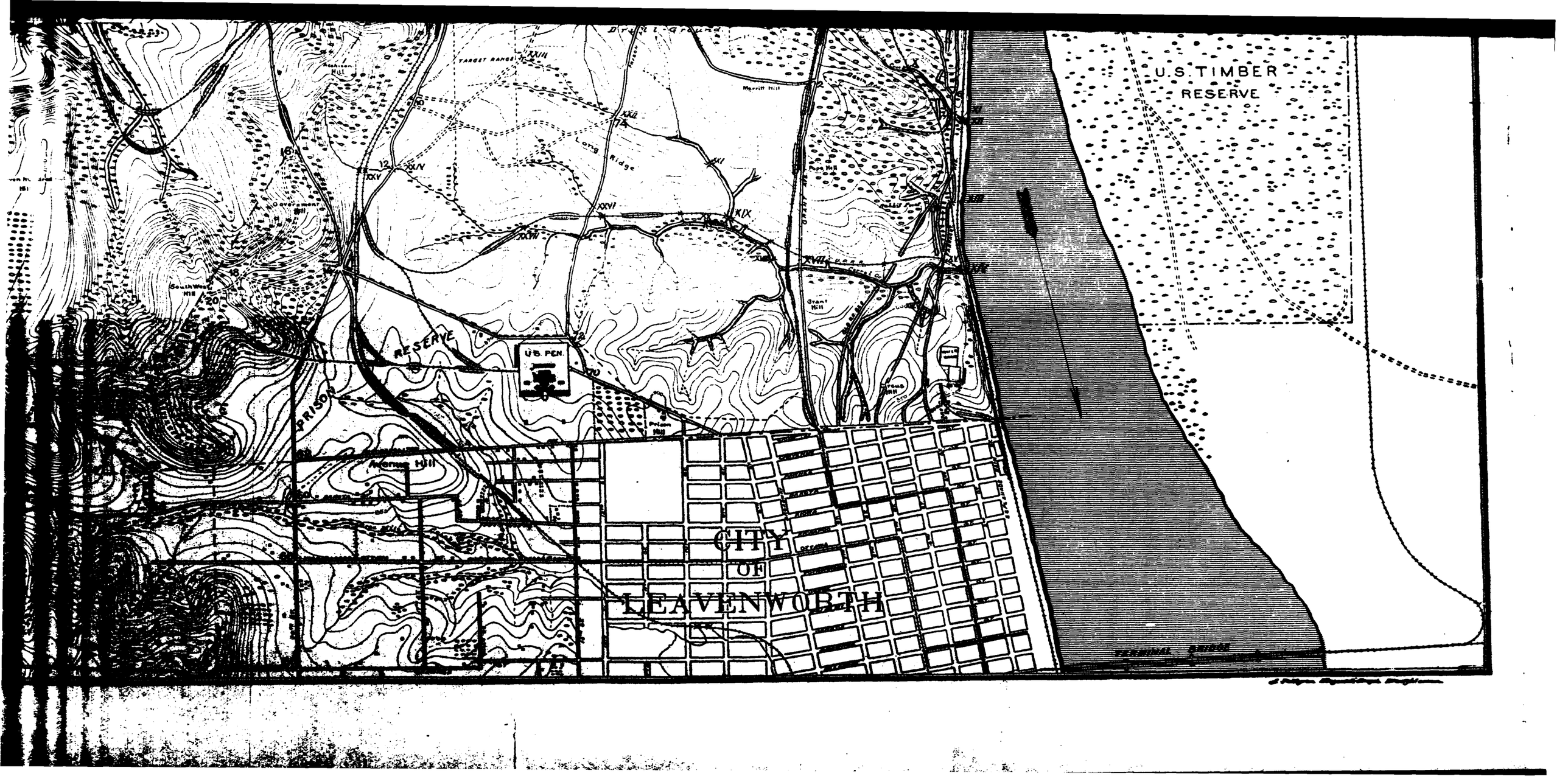
RESERVE

U.S. PEN.

PRISON

Avenue Hill

CITY OF LEAVENWORTH


U.S. TIMBER
RESERVE
RESERVE
PRISON
U.S. PEN.
CITY
OF
LEAVENWORTH
TERRIBLE DRIVE

*Required—*

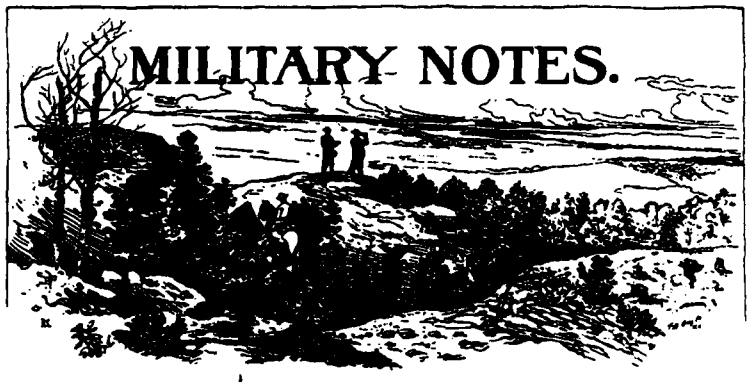
1. The dispositions Major C. will make, with reasons for same.

2. The orders that Major C. issues to give effect to his proposed measures.

Condition: Salt and Plum Creeks are from three to five feet deep, with steep banks fifteen to twenty feet high, and muddy bottoms, and can only be forded with great difficulty, by cavalry. The bridges over Salt and Plum Creeks are steel trusses. The railroad bridge on M. P. Road, north of Salt Creek, at I, is passable for cavalry.

The trees along the streams are about thirty feet high, road hedges three feet high, and fences of barbed wire.

Weather clear and warm.




## CHIEF OF CAVALRY.

NOT many years ago writers on military matters hardly dared suggest a General Staff for our army, because, in the minds of many, it was not only unnecessary in our service, but it was even anti-American. A wide spread sentiment seemed to indicate that we should neither study nor adopt foreign methods.

A young, triumphant nation is not unlike a vigorous presumptuous young man, who finds little to learn from others. With increased age and experience come poise and tolerance, and a desire to profit by the results of the past, wherever they be found.

Few of us, on arrival in Cuba, or the Philippines, found Spanish methods and results praiseworthy. But few of us, however, who have studied them, at short range, for several years, fail to properly appreciate, and highly value, the tremendous strides made by a country and people historically potent in war and commerce, and brilliant in bringing savage tribes out of the twilight of barbarism within the pale of civilization. We are continually learning to estimate, at its proper value, the great



debt we owe Spain for the progress she had made in our insular holdings.

Fortunately, with our participation in world wide measures, capable officers, previously too often limited by garrison horizons, were emancipated, and a study of the operations and military policies of other countries, especially of those that had, for long periods, suffered more years of war than they had enjoyed seasons of peace, was earnestly undertaken by the army.

In approaching the question of Chief of Cavalry I do so with a certain trepidation, because it is in a measure an innovation, but with confidence that the establishment of a highly efficient head with a limited skilled staff is a necessity for a difficult branch of the service that requires more attention than it now receives or can be given to it under existent methods.

During the most troublous period of our great war, when American cavalry was being developed along lines that have influenced all nations in the administration and use of this branch, it became necessary to establish a Bureau of Cavalry at the War Department and to appoint chiefs of cavalry of various large commands.*

*The Cavalry Bureau was established July 28, 1863, by G. O. No. 236, which gives a very clear idea of its duties and the purposes which it was intended to accomplish:

"A bureau will be attached to the War Department, to be designated the Cavalry Bureau. This bureau will have charge of the organization and equipment of the cavalry forces of the army, and of the provision for the mounts and remounts of the same.

"The purchases of all horses for the cavalry service will be made by officers of the Quartermaster's Department under the direction of the chief of the Cavalry Bureau. Inspections of horses offered for the cavalry service will be made by cavalry officers.

"Depots will be established for the reception, organization, and discipline of cavalry recruits and new regiments, and for the collection, care and training of cavalry horses. The depots will be under the general charge of the Cavalry Bureau.

"Copies of inspection reports of cavalry troops, and such returns as may be at any time called for, will be sent to the bureau established by this order."

General Stoneman was appointed chief of the bureau when first established and was followed by General Garrard and General Wilson. Depots for public animals were established at Giesboro, D. C., St. Louis, Mo., Greenville, La., Nashville, Tenn., Harrisburg, Pa., and Wilmington, Delaware. Many thousands of horses broken down by hard service in the

Is it not the part of wisdom and prudence to properly anticipate such a necessity by creating in time of peace a small bureau that will promote developments in the direction that war will inevitably demand?

Since that time we have, with the exception of Indian campaigns and the recent war wherein mounted troops could play only a minor rôle, enjoyed a peace in which cavalry inertia has imposed upon cavalry fitness and preparation.

It is revealing no secret to say that, by virtue of our geographical position and the extent of possible theatres of operations, no nation is under greater moral, political, and military obligation than the United States to see that its cavalry is in entire harmony as to organization, administration, and field fitness with the demands of modern warfare.

We are also under obligations to profit by what this country and other great states have learned in the stern school of war. Germany, France, Russia and Italy has each a special head for its cavalry.

Should we longer ignore this matter and leave well-enough alone, as we did for many years the creation of the General Staff and of the Chief of Artillery? From all sources it is learned that the work of this new corps in the recent Cuban expedition is convincing vindication of the wisdom of the law creating it. The army believes, and probably with right, that the *bureau* of the Chief of Artillery is largely responsible for the passage of the recent artillery bill giving the greater efficiency demanded by the best interests of the country and urgently needed by the field artillery as well as the coast defense.

A fallacious idea has been expressed in connection with this matter: that the cavalry had no better reasons for a chief than has the infantry.

In all countries infantry largely constitutes the army, while the other branches are its necessary accessories. That being true, the head of the army or the Chief of Staff, with all the administrative and executive machinery appertaining thereto, becomes and, in a certain sense, is the Chief of Infantry. In spite of this I believe that under our government the interests of the service and of the infantry would be best maintained by having at the War Department such an infantry chancellery as now exists for the artillery and as is advocated for the cavalry in this communication.

Owing to the complex and technical character of mounted service it would be more correct to say that the cavalry has similar reasons for a chief that the artillery and other corps have.

It is my sincere conviction that due to our above mentioned political and geographical conditions, and to precautions that should be taken to meet possible war events, the United States ought, above all countries, give special attention to its cavalry, and I know of no course that would better and more quickly effect this than to allot to it a skillful head.

The outlay involved would be small—inconsiderable in comparison with the importance of results. Major-General Halleck, Chief of Staff, reported that during the calendar year 1864 the cavalry branch alone cost $125.000.000, a sum that unquestionably could have been greatly lessened by timely and better administration.

There are questions that suggest themselves in connection with this subject that should be met in a judicial business way without bias towards any branch or department.

1. Is the government now getting the best possible results (horses, etc.) for the funds allotted for the purpose?

2. Is it the part of good policy to have cavalry horses purchased by officers outside of the cavalry service, and to have the accountability for the same vested in one of the departments?

3. Is our present regimental organization the most effective, and is it up to the modern requirements?

4. Is a participation by the government in any manner in horse breeding desirable?

5. Should cavalry inspections be made by officers unfamiliar with mounted service?

6. Is the cavalry equipment entirely suitable to its ends, and is it carried in the best manner?

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field were received in these depots, and after proper treatment and rest were returned to the armies at the front.

Immediate and permanent benefit resulted to the cavalry service from the operations of the Cavalry Bureau, which continued in existence until the end of the war.

7. In what regiments is the training of men and horses best carried out, and why is not the training more uniform?

8. Has the participation of cavalry in considerable numbers in our maneuver camps corresponded to the modern requirements of cavalry?

9. Have the necessary steps been taken towards the development of a plan for organizing and maintaining the large number of mounted troops that hostilities north or south of our boundaries would demand?

It is not sufficient to say that this or that board of the General Staff, of the school at Fort Riley, has charge of cavalry matters. In subjects of this sort it would be more logical to have the board work on data given them by the chiefs. Moreover, such a board is properly without authority to supervise or direct measures necessary to promote cavalry efficiency.

Wisely reached determinations should not be left too largely on paper, contingent upon war, but should be given as full application in peace as the limits of financial expediency will permit.

The Chief of Cavalry, subject to the limitations imposed by the Secretary of War and Chief of Staff, would be empowered to make inspections and immediately correct defects, or he would take action at once on reports of the Inspector General—acts incompatible with a board. There are places where board control finds successful application, but certainly not in the execution of measures relating to military affairs.

While the subject of Chief of Cavalry is of special interest to the cavalry, it is so far reaching in its scope that it becomes a matter of concern of all branches, and particularly is this true of commanders of mixed forces and of commanding generals.

With the exceptional advantages possessed generally by our country, and particularly in its richness in horses and in conditions favorable to producing mounts of the highest class; in the character of a great portion of the population and in the valuable personnel available for cavalry purposes, we should have in peace and in war a mounted service superior to that of any government.

Q.



## *Who Would Be Our Chief of Cavalry?*

Not long since a colonel of cavalry remarked to me that no officer could, as a rule, be efficient as such (a colonel) who did not attain that grade before he was sixty years of age.

It is believed that a Chief of Cavalry should, as a rule, also be under that age before he assumes that position for the first time.

Without going too much into detail as to the qualifications necessary for an efficient Chief of Cavalry, there are certain indispensable qualifications which he should possess.

He should be primarily a cavalryman by instinct, by inclination and by experience.

He should possess a physique which would enable him to carry out his inclinations.

He should be a good horseman.

He should be considerate, well balanced and tactful.

He should be a student of his profession, be progressive in his ideas and possess initiative.

He should have a good general knowledge, acquired either by actual contact with or by close study of the capabilities of the cavalry of the leading armies of the world.

It is not to be expected that we shall find all the necessary qualifications combined in one man, but the more nearly he does combine them the more efficient a Chief of Cavalry we shall have.

Most of our cavalry officers of field rank and above, have a fairly good estimate in their own minds of the capabilities of the other officers with whom they have come in contact during a thirty years' service, and a careful study and retrospection will cause surprise at the scarcity of timber for a Chief of Cavalry.

But no one will question the fact that we have got the timber, and that it can be produced when the time comes to use it. Once show the necessity for a Chief of Cavalry, and get such a position authorized by law, the man will be produced to fill it.

R.

### *Why All This Talk About a Chief of Cavalry?*

Why does the cavalry want a chief? It does not mean faster promotion, nor does it mean an increase in pay. A steady flow of promotion and greater pay in all grades of the service are no doubt matters of vital interest to the army and are earnestly hoped for by the entire service, but the demand for a Chief of Cavalry that is fast taking concrete form is wholly disassociated from either of these, and the great amount of thought that is being given this matter by the cavalry does not find its incentive in the hope of pecuniary gain.

The cavalry is seeking a leader. It is just awakening to the fact that for years it has been drifting, and with the realization of its plight and seeing breakers ahead unless something is done, it is crying out in its despair for a strong hand at the helm. A fifteen horse team will not pull as a unit without an experienced hand holds the reins. For years we have been see-sawing and working at cross purposes, expending our energies to little avail. What progress we have made has been by the grace of God rather than because of intelligent guidance.

With a capable chief we expect to see these conditions changed. How often we hear the complaint that the mounts furnished us are not up to the standard. It is true, and if true how can we remedy it? That is the business of the Chief of Cavalry. A lot of officers think our equipment might be greatly improved, and suggest various ways of doing so. It is perfectly practicable to determine the merit of these suggestions, but we don't do it, except in rare instances. A Chief of Cavalry would. The Russian cavalry carried the bayonet all through the Manchurian War, and made good use of it; occasionally an officer suggests that we should do the same, but we have no chief to take up the suggestion, thresh it out and see what there is in it. An old experienced packer not long ago proposed a scheme for perpetuating the art of packing in the cavalry. Any reasonable scheme with this as its purpose is well worth trying, and a Chief of Cavalry would give it a test. I have heard it said many times recently that some systematic effort should be made to replace with trained scouts the natural scouts that our frontier once developed and who enlisted in great numbers in the cavalry.



A Chief of Cavalry could easily determine whether this idea is a good one. A few days ago I heard one of our observers with the Russian army say that the failure of the Russian cavalry was not due to inferior material and equipment or poor horses and men, but to faulty peace time instruction. Is our peace time training in general of the sort that fits us for war, and if not, how can it be modified so that it will be? Our Chief of Cavalry, with the assistance of every officer in the service, will answer this question for us, and on that answer depends in large measure the efficiency of our cavalry when the real test comes.

In asking for a chief and in attempting to show why he is needed the cavalry is prompted by a single motive—the efficiency of the service. There is no "nigger in the wood pile" in this movement. It is the frank and honest request of sensible and thinking men, wholly devoted to the cavalry, for what they think is for the best interest of the service. Personal ambitions and pecuniary gain are not being thought of. It is the determined expression of an opinion that is taking shape in the cavalry, that the standards of efficiency for the mounted service of fifteen years ago are not suited to the conditions of to-day; that we are not keeping pace in improvement with the cavalry of other nations; that we are growing unworthy of the cherished tradition that we lead the cavalry of the world; that *esprit* is a thing much talked of, but not a real live quantity; that the cavalry needs to be wakened up, faced about, started towards the front, and kept going in the right direction; and that the way to do this is to give us a chief and make him responsible for just one thing—the efficiency of the cavalry service. That is all there is to it. There is nothing else behind the movement. It has no ulterior motive. For once the cavalry is uniting in an effort that has no item of individual personal interest in it. It is uniting for the improvement of its arm of the service, without talk of increased pay or increased rank for a single man, unless possibly the chief himself; and the very fact that the movement is so disinterested cannot help but add weight to it. The cavalry may well be willing to have such a request judged on its merits.

X.

# REORGANIZE THE CAVALRY.

By Major D. H. BOUGHTON, Eleventh Cavalry.

UNDER present conditions it can hardly be expected that Congress will make any substantial increase in the army. Increments will be made from time to time, but just now the infantry seems to have the first claim. Foreign service is bearing especially hard on that arm, and to lighten the burden a few more regiments should be added.

It is understood, though I am unable to say on what authority, that there is a movement to add six. Should this be successful, and I hope it will, what are we of the cavalry to do where promotion is already lagging so far behind the other branches of the service? Provision might be made for the transfer of an equitable number of officers to the infantry, but that would be unsatisfactory, as it would secure to neither branch the promotion which officers of our age should possess.

Congress will not regard favorably an increase of the enlisted strength of the cavalry, but it would authorize a reorganization of that arm if the necessity therefor could be made apparent, and that should not be difficult. This necessity may be based on the following grounds:

1. To secure a much needed promotion for cavalry officers.
2. To secure an organization more in accord with modern tactical requirements.

Arguments for the first should not be necessary. An examination of the *Army Register* will be sufficient. Cavalry officers are now rapidly falling behind all other branches of the service. and under present conditions there is no hope for relief. The best men will naturally seek that arm holding out the best prospect of promotion, and unless conditions are changed we may expect at no distant day to see the cavalry filled with officers who are there because they could find no place elsewhere. The cavalry spirit will be dead.

Nor is argument necessary under the second of the above assignments. It has long been recognized that our cavalry regiments and squadrons at war strength are too large. In the field they are unwieldy and beyond the power of one man to handle with precision and skill. Let us remedy this evil and at the same time secure promotion for our officers by reorganizing as follows:



Cut off one troop from each of our 45 squadrons and create from these 45 troops 5 new regiments. We will then have 20 regiments of 3 squadrons each—the squadron being composed of three instead of four trops. Add a Chief of Cavalry, and cut off the 45 second lieutenants now supposed to fill the positions of squadron quartermaster and commissary.

This change will disturb existing conditions but little, and the five new regiments will be efficient from the start. Moreover, we will have secured what was sought, viz., a modest promotion for our officers and a more modern tactical organization for the cavalry. Without counting the Chief of Cavalry, this scheme will add to the cavalry strength 5 colonels, 5 lieutenant colonels, 15 majors, 15 captains and 15 first lieutenants, and bands, and enlisted staff of the five new regiments; the number of second lieutenants will be reduced by 45. The following promotions would result:

1 colonel to Chief,
6 lieutenant colonels to colonels,
11 majors to lieutenant colonels,
26 captains to majors,
41 first lieutenants to captains,
56 second lieutenants to first, leaving vacancies for 11 second lieutenants to be filled by original appointment. The annual increase in the cost of the cavalry arm will be about $100,000. It can readily be seen that the subsequent flow of promotion will be better than it is to-day.

Argument has been advanced for a more radical change, the organization of European cavalry, where we find squadrons of two troops, being taken as the guide. While we are always ready to accept from Europe any lesson that may add to our efficiency, yet it should be borne in mind that European cavalry organization has grown out of the idea that cavalry should always be mounted, while we have trained our cavalry to fight

on foot as well as mounted. Our idea necessitates (for horse-holders) larger organizations, and if I am not mistaken we shall see Europeans at no distant day enlarge the size of their cavalry units. Economy as well as tactics will render this desirable.

A regiment of three squadrons of three troops gives an exceedingly pliable organization, the tactical idea being to have an organization that will permit two equal fractions of any unit to be placed on the firing or charging line, the third being held in support or reserve. Our experience at these schools in developing the capabilities of the signal corps proves that a regiment of three squadrons of three troops is not too large. The cavalry buzzer now makes it possible for lines of information to be maintained more easily between the colonel and his three squadrons than could be done in the case of two squadrons without that valuable instrument. It may be surprising to know that a cavalryman can be sent away at a trot, unreeling the buzzer wire as he goes, and telegraph or telephone back without dismounting from his horse. The signal corps will revolutionize the handling of troops in the field.

It has been said that the army never proposes a scheme of reorganization that does not involve as its most prominent feature the promotion of officers. Without commenting upon the allegation, we frankly admit that such, in part, is the object of the above proposition; but at the same time we claim that, with but little increase in cost, it will produce a more efficient cavalry, because (1) the organization will be better, and (2) because it will then be possible for officers to attain the rank of major before they have grown so old that they are afraid of horses.



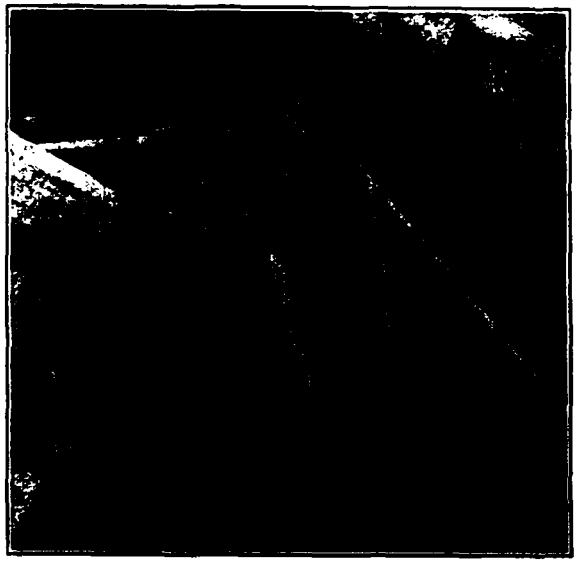
## NOTES ON CAVALRY EQUIPMENT.

*The Editor, U. S. Cavalry Journal.*

TO the interesting discussion started by Captain Rhodes, I beg to add a few brief notes.

We seem to be constantly adding to the weight carried by the horses, but rarely subtract anything from it.

The new rifle and its scabbard are several pounds heavier.



Good thing the new rifle, too, and well worth the extra weight, but our horses are no stronger nor more enduring than they were before they were given this additional load, and may we not cast about us and see what we can, without much loss, drop from our equipment.

We carried the side lines for years after they had ceased to be worth their transportation, and I fear we are doing the same with one or two other articles.

*Shelter Tent Pole.*—Thirty years ago we used the shelter tent as much as we do now, but managed somehow to get along without poles. In very many cases we could still do as we did then—cut poles from the nearest patch of brush or timber.

In my own squadron I have had all the shelter tent poles called in and stacked away in the store rooms, available in case an inspector comes around who thinks we should have them; but in practice we pitch our tents by making poles of our sabers in scabbards. The saber is drawn out about five inches and propped up in that position by a bit of wood about six inches long and of about the same cross-section as the blade, the lower end being whittled to a blunt point and inserted in the opening of the scabbard alongside the blade, holding the latter in its new position. This peg can be made in a few minutes from a shelter tent pin.

This gives us a shelter tent pole of exactly the same length as the regulation article. The front and rear peaks of the tent are secured to the saber hilt by the canvas straps which accompany the shelter half, or a stout bit of cord will answer for this purpose, being run through the one-half inch brass eyelets intended for the upper end of the shelter pole.

Lest someone may criticise this method, as open to the objection that moisture may find its way into the scabbard in rainy weather, I would say that the saber and scabbard may be reversed, but then there would be no means of securing the top of our improvised pole to the peak of the shelter tent unless the Ordnance Department should drill a hole for us one-fifth of an inch in diameter through the solid heel plate or tip at the lower end of the scabbard, through which a stout cord could be run and tied to the brass eyelets, as described for the canvas strap of the shelter half. I can see no objection, however, to the method originally proposed above.

The shelter tent pole is probably the most inconvenient to carry of all the trooper's articles of equipment. We can get along without it; therefore why not drop it.

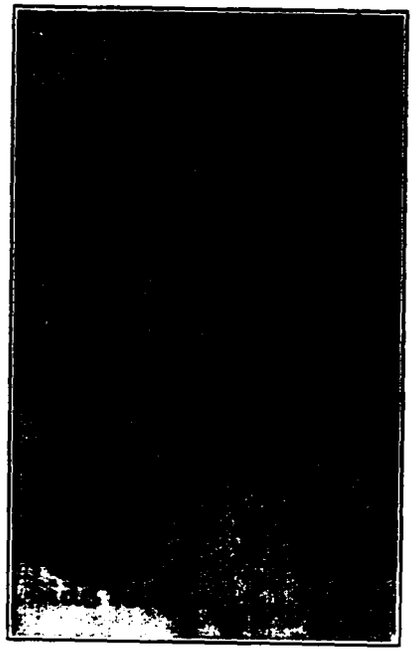
*Picket Pin.*—Unquestionably the picket pin occasionally is very convenient to have at hand, but it weighs about one and one-half pounds, and usually wooden stakes can be procured or



trees or bushes found which will answer the purpose when it is necessary to have horses grazed on the lariat.

It seems doubtful whether we get sufficient return from the picket pin, in the way of usefulness and actual service, to justify its retention and transportation on the horse for hundreds of miles, for use upon those rare occasions when a picket pin, and that only, will answer the requirements.

Has not the time arrived when it may well follow the side lines and be dropped?



*Link.*—Why not drop the link from the trooper's extensive list of equipment?

It is only about half a dozen times, or less, in a lifetime that horses must be linked together in action so quickly that the link would effect material saving of time. The reins afford a much stronger means of attachment, and require but a few seconds longer in securing the horses.

The link hanging down loosely alongside the cheek piece of the bridle, detracts from the neat appearance of the horse's headgear and gives a constant, though slight, jerking on the bit.

The links in my squadron were taken off and deposited in the troop storerooms over a year ago, and I think we are decidedly the gainers by the operation, being better off without than with them.

*Cup.*—The Ordnance Department some time ago sent about 5,000 aluminum cups to the Philippines, which are quite satisfactory, but which could be improved by being buffed or polished on the inside and blackened or lacquered on the outside, as is done by the Germans with their aluminum pot or cooking utensil carried by the infantry.

*Canteen.*—For twelve years past the writer has carried, whenever in the field, an aluminum canteen of the German pattern, "spun," and without a single joint or seam.

It is concave on the side which rests against the horse or saddle bag, and does not roll or wobble about as is the case with the regulation canteen, besides being more cleanly and durable. Mine has lasted for twelve years, and is still perfectly serviceable.

W. C. BROWN,
*Major Third Cavalry.*

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## THE CAVALRY BUZZER.

BY MAJOR C. MCK. SALTZMAN, SIGNAL CORPS, U. S. A.

IN the recent Russo-Japanese War, constant use was made of the buzzer on the battlefield. The fighting lines covered extended fronts, the game of war was played fast, and commanding generals found they could no longer make use of mounted aides or orderlies to deliver their orders and keep them in touch with the large units of their commands. It is reported that General Nogi's Third Army, which formed the Japanese left at Mukden, laid and used during that battle alone over 155 miles of field wire. The use of these field lines was satisfactory, and contributed in no small way toward the complete control exercised by Japanese generals over their long fighting lines.



The buzzer was in existence for many years as a crude military telegraph instrument, but it remained for General James Allen, now Chief Signal Officer of the Army, to perfect the instrument in form and manner of working, so as to make it an indispensable adjunct of any army operating on hostile soil. The instrument is a combination of the telegraph and telephone, and is especially valuable due to its ability to maintain communication over hastily built, poorly insulated lines, over which the ordinary Morse telegraph or the commercial telephone set would fail.

Signal Corps Manual No. 7 announces as an article of issue a new form of the instrument known as the "cavalry buzzer."* This new set is compactly packed in two small leather cases attached to one strap, by which it can be conveniently carried over the shoulder like a field glass. One of the leather cases contains all the buzzer apparatus, dry batteries, etc., while the smaller case contains all the telephone. The telephone transmitter and receiver are mounted on an adjustable frame, so that they can be carried in the smallest possible space, and both used with one hand. The telephone is connected to the buzzer by the insertion of a plug in the latter through a hole in the leather case. A switch in the adjustable frame must be pressed when it is desired to use the telephone set for conversation. To open communication, using either the buzzer telegraph or ordinary telephone conversation, one binding post is connected to the line wire and the other to a picket pin or other iron bar driven into the earth.

The buzzer wire issued with this instrument, consisting of three small wires twisted together and covered by a partial insulation, is wound on spools containing one-half-mile length, weighing five pounds. These spools fit into a handle conveniently carried by a mounted man, and which permit the wire to be paid out on the ground as the man moves along. Breast reels are also provided.

* See page 115, *ante.*

This instrument is not only valuable to signal organizations but also to line troops, although few of the latter have ever tried to use it. For outpost duty it is invaluable. If a company of infantry or troop of cavalry is sent to form an outpost two miles distant from the main command, one man can pay out the buzzer wire as the company moves along, and on arriving at the outpost position will find itself in direct communication with the main body. If no soldier present understands the Morse telegraph code, the telephone can be used. Without this electrical means of communication, any information gained must be sent to the main body by a messenger. The messenger will require valuable time to deliver the information and to bring back a reply or orders. With the buzzer-telephone, the outpost commander is in constant direct communication with headquarters. Other similar uses of this valuable instrument suggest themselves.

At present the Army Regulations prescribe that two enlisted men of each company, troop, and battery shall be instructed and made proficient in visual signaling. The regulation is not obeyed, and is of doubtful value. It is believed that much better results would be obtained if these two men were issued cavalry buzzers and a supply of buzzer wire, and instructed in the use of a modern means of communication.

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## SALUTES BY GUARD WHILE MARCHING.

*First Lieutenant John W. Hall, Massachusetts Volunteer Militia, South Armory, Irvington Street, Boston, Mass.*

SIR:—In reply to your request of April 10th, for information as to how the carbine should be carried by the guard in passing the officer of the day in review at the ceremony of guard mounting, dismounted, I have the honor to reply as follows:

The Cavalry Drill Regulations, 1896, paragraph 1079, when considered in connection with paragraphs 1065, 1077 and 1082, evidently contemplated that the carbine should remain at the right shoulder.



Circular No. 56, A. G. O., December 2, 1902, reads as follows:

"*Salutes by Guard While Marching.*—Regarding the question how guards should salute while marching, under paragraph 83 of the Manual of Guard Duty, and paragraph 1082, Cavalry Drill Regulations, 1896, it is held that the Manual of Guard Duty, being the latest publication, should govern."

The Cavalry Drill Regulations of 1902 change paragraph 1082 to conform to the ruling of circular 56 above mentioned, and require the guard to come to port arms when passing the old guard at the guard house. It will be observed, however, that paragraph 1079 remains the same.

It, therefore, appears that it was not the intention of the War Department to change paragraph 1079, and as the salute by port arms is not prescribed in the Cavalry Drill Regulations, it is to be supposed that the guard marches past the officer of the day at the right shoulder.

The Infantry Drill Regulations of 1904, paragraph 589, direct infantry guards to carry the rifle at the right shoulder when passing the officer of the day. Paragraph 519, Infantry Drill Regulations, 1904, states:

"When dismounted cavalry and infantry are united for guard mounting, the cavalry details form as prescribed for infantry."

Circular No. 22, paragraph 2, War Department, 1905, states in substance that the cavalry drill, dismounted, with the new rifle, will be made to conform to the infantry drill. G. O. No. 70, War Department, 1906, changes the Cavalry Drill Regulations to conform to the Infantry Drill Regulations in all matters pertaining to the manual of arms, loading, firing, etc., and it is believed that it is the intention for cavalry dismounted, when armed with the new rifle (which is identical with the infantry rifle), to execute all movements as prescribed for infantry, although this has not been specifically stated.

Upon inquiry, I learn that some regular regiments while armed with the carbine, came to port arms when passing the

officer of the day in review, while in others the carbine was carried at the right shoulder. When the cavalry has followed the practice of coming to port arms, I believe it has been due entirely to a desire to conform to the old infantry drill.

All regular regiments of cavalry are now armed with the rifle and will, therefore, for the reasons above stated, probably make their dismounted work conform to the infantry drill, but where cavalry organizations are armed with the carbine, I think the Cavalry Drill Regulations of 1902 govern in cavalry drill and ceremonies.

The Cavalry Drill Regulations or orders, so far as I am able to discover, do not direct the port arms when armed with carbines, in passing the officer of the day in review at guard mounting, dismounted, and consequently I am of the opinion that cavalry should carry the carbine at the right shoulder.

Very respectfully.

E. E. BOOTH,
*Captain, Seventh Cavalry.*

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## PARAGRAPH 988.

THE JOURNAL has had occasion heretofore to call attention to a neglected paragraph of the Cavalry Drill Regulations, and it again mentions this seemingly forgotten paragraph. This paragraph was quoted in the October, 1905, issue, and we again quote it here:

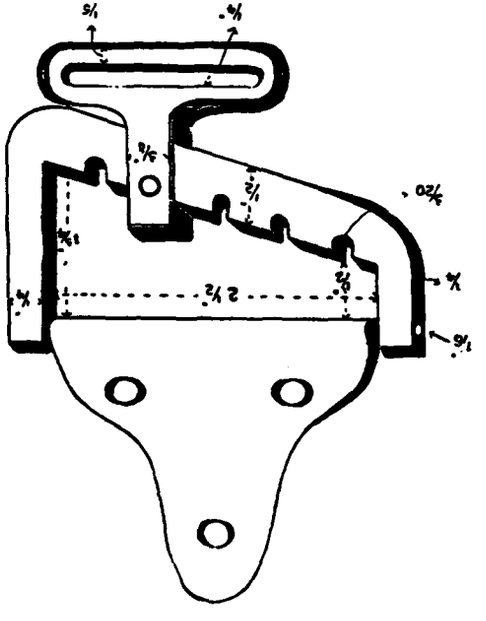
"Many cavalry officers are now disposed to favor rising at the trot as a relief from the close seat, and a desirable change to men and horses; with proper instruction, this practice may occasionally be found advantageous in long marches."

If a fair minded person will but notice his watch, carried in the blouse pocket, while he is trying to keep the flat seat at the trot, and compare its actions at this time with its actions when he is rising to the trot, he will get some



idea of the difference of the two seats and of their effects upon his internal organism. At the flat seat he will find the watch bounding about in his pocket, only the flap preventing the watch from jolting out and being lost alongside the road. But he will find that while rising to the same gait the watch will never leave its lowermost corner of the pocket, but will remain quietly there as though its position were regulated by a gyroscope. What is going on in the blouse pocket just outside the rider's breast, is going on inside the rider's breast with his heart, lungs, stomach, and all other chest and abdominal organs.

A careful note of the above should convince almost any person of the advisability of rising to the trot, or at least of conforming to the spirit of paragraph 988. In order to meet the objections put forth by some that the stirrup leathers are not attached to the McClellan saddle in such manner that one can easily rise to the trot, Captain George Vidmer of the Eleventh Cavalry, has designed the following adjuster:



The cut explains the adjuster. If the rider wishes to rise to the trot, all he has to do is to reach down and shove the stirrup some places to the front and the stirrups are also shortened at the same time. This adjustment can be made by a troop blacksmith and put on a saddle with very litle work. We then have the McClellan saddle ready for either flat riding or otherwise, and that without any trouble of dismounting.

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## THE CURRENT ARMY REGISTER.

### "POET LARIAT"*

A Register was sent to me from Washington to-day,
It opened to the old Fifth Horse in a familiar way,
And were it not for the two names which woke a tender chord,
I should have sworn that roster false and proved it by my sword.
These two—an eagle and a leaf—I'm very glad to see
Are higher than when 'Skimensin made peace through "Mickey Free.'
They're higher up than in the days when Superstition Mount,
Slim Buttes and Tonto Basin made a file on which to count.
And as I scanned this Register, outgrown in shape and size,
A kind of hazy atmosphere 'peared settling 'fore my eyes.
I felt I was upon the plains beside the treacherous Platte,
And scouting on the Yellowstone, led on by Little Batt;
Again I seemed to jog along the way we used to go
Across the Bad Lands with such guides as Cody and old Joe;
And o'er the Arizona trails through cañons deep and grand,
With Noseless Cooley leading on that Aravipa band.
It is not strange when thoughts like these absorbed me, I should turn
To this new roster of the Fifth in doubt and with concern;
Nor that I should go on this way as if the walls had ears,
To listen to my questioning evolved of doubts and fears:

"Where's Em'ry? Duncan? Crittenden? Where's 'Billy' Royall, where?
Where's Mason? 'Gassy' Brown? 'Jim' Burns? You daren't say they're not there.
Where's 'Pretzel' Adams? 'Sinbad' Price? Where's 'Monty' of the Greys?
Where's Rodgers? Hollow-legged Alf? Where's Kellogg with his bays?
Where's Charlie Rockwell? Where is Bache? Where's Hamilton and Payne?
And where is 'Baldy Forbique'?—brave knights without a stain.

Where's Almy? Volkmar? Michler? Ward? Where's 'Bobby' London? say,
You know 'twas he whom Charlie King gave to the world in 'Ray."
But here a voice both strange and strong broke in and hoarsely said:
"Go get some grog, Old Lariat, those fellows all are dead."

A cold chill crept along my spine, a numbness like a chain—
The same old feeling we all knew on Laramie's broad plain,
When learning of the fatal fight on Little Big Horn's side,
Where Custer and the Seventh's flower most nobly fought and died.
I thought I'd never heard the voice; I knew I was alone;
The tidings sad did penetrate each vein, each nerve, each bone;
And shaking off as well I could the pall that 'veloped me,
I got my legal J. A. voice and answered properly:

"'Tis many moons since I have sipped the bracing stirrup cup,
But I will take the tankard down and bravely fill it up,
And drink to those old comrades true who've crossed the Great Divide,
And may I strike their final camp and pitch my tent beside."

*E. L. Keyes, formerly second lieutenant Fifth Cavalry.

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## WINDAGE CHART

FOR .30 SPRINGFIELD RIFLE, WITH MODEL 1903 REAR SIGHT AND AMMUNITION, GIVING 2200 FEET INITIAL VELOCITY (STAMPED 2160).

BY FIRST LIEUTENANT GEORGE C. LEWIS, EIGHTEENTH INFANTRY.

THIS chart is calculated from experimental data and tables published by the U. S. Ordnance Department. This Chart gives the vertical and horizontal variation in feet on the target and the sight correction necessary therefor in points of windage, yards of elevation on rear sight or minutes of arc on micrometer adjuster for a wind from any direction, at any practice range, for any velocity of wind below 30 miles per hour.

By interpolating between the guide lines as great a degree of accuracy as desired can be had in reading scales. If instruments are available for determining accurately the velocity and direction of wind, the correction for any range can be read off at once. If a windvane only is available, the velocity of the wind may be found with fair accuracy by reversing the operation of the chart and following the guide

line from the variation on the range scale, found by trial shots, to the wind direction line, indicated by the vane.

Variations in windage, due to change of direction in the wind, its velocity being constant, can then be read from the chart. The great alteration in windage due to shifting direction of 5, 7, 11 and 1 o'clock winds of fairly constant force, can be read from the chart at once. The change of windage in constant weather conditions, due to change of range, amounting to 400 per cent. from 1000 yards to 200 yards, can be read off for any other range, once it has been found at one range, by simply following the guide line through the determined correction on the range scale to the desired range scale. The rate of change of windage for skirmish runs is well shown for any initial windage.

## Directions for Use.

The blue figures show the velocity of wind and the clock face numerals the direction it comes from. Arrows on clock show motion of clock hand for half-hour direction lines.

The red straight lines are guide lines. The red scales and figures are the variations of the bullet in feet on the target.

The black scales and figures show the number of points of windage required to correct for the horizontal variation or yards of elevation for the vertical variation. The small circles show number of minutes of arc on micrometer adjuster required for vertical corrections.

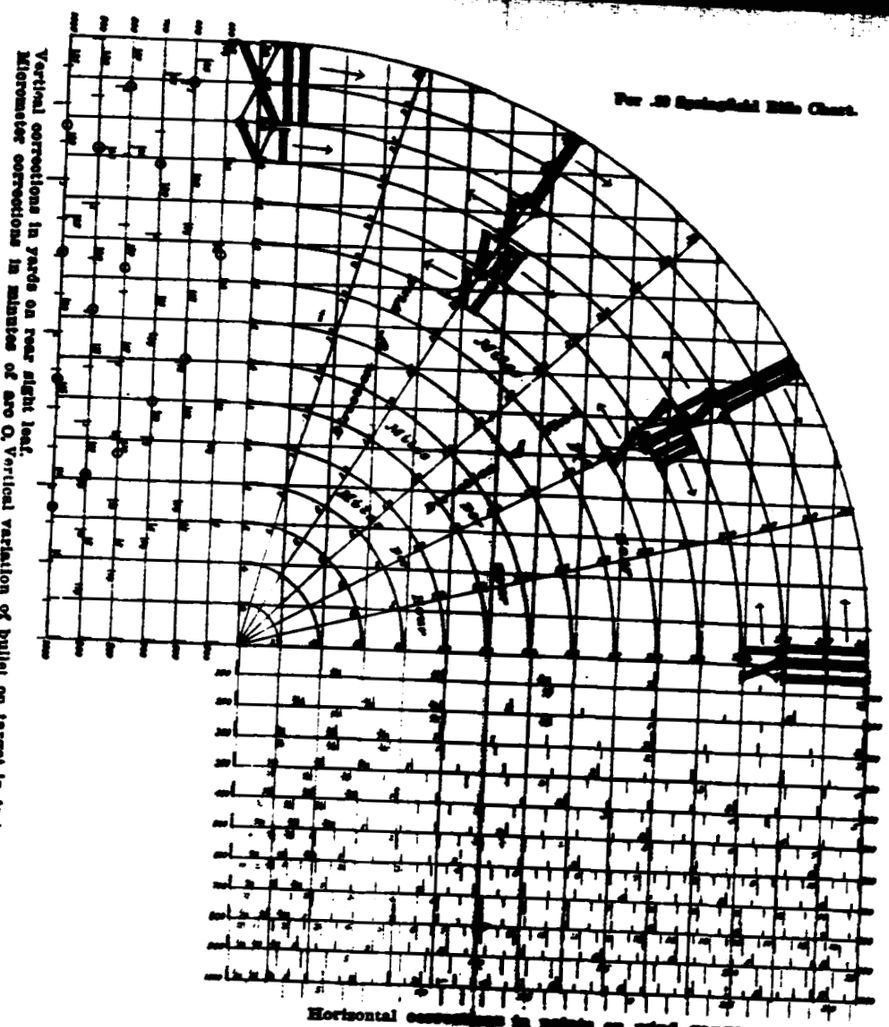
Rule 1.—Follow the blue wind direction line to point of intersection with quadrant giving the required velocity of wind. Follow the nearest red guide line down to the proper scale for the required range, and read the number of feet variation in red below the scale line and the necessary sight correction above the scale line, in points. Follow red guide line to left from point on wind direction line and read vertical variation and correction.

Rule 2.—Move the rear sight toward the direction the wind comes from—to right for a 3 o'clock wind, up for a 12 o'clock wind, and both down and left for a 7:30 o'clock wind.

Rule 3.—Make indicated correction from zero of gun as found for calm weather, and not from zero, as marked on sight.

TABLE

| Range Yds. | Points Windage Inches | 25 Yds. Elevation Inches | Drift Inches Left | Drift Inches Right | 1 Min. of Arc Inches |
|---|---|---|---|---|---|
| 100 | 4 | 1.0 | .4 | | 1 |
| 200 | 8 | 2.4 | .6 | | 2 |
| 300 | 12 | 4.1 | .6 | | 3 |
| 350 | 14 | 5.1 | .4 | | 3 5 |
| 400 | 16 | 6.2 | .3 | | 4 |
| 500 | 20 | 9.0 | | 0.4 | 5 |
| 600 | 24 | 12.5 | | 1 3 | 6 |
| 700 | 28 | 16.7 | | 3.1 | 7 |
| 800 | 32 | 21.4 | | 5 3 | 8 |
| 900 | 36 | 26.9 | | 8.2 | 9 |
| 1000 | 40 | 32.8 | | 11.9 | 10 |



# Editor's Table.

## THE PISTOL VOTE.

The following table indicates clearly what the army wants as to pistol equipment. As explained in our last issue, in order to obtain the ideas of the service upon the subject of the pistol, the JOURNAL, early in the year, sent return postals to every officer on the active list in the cavalry. The following were the questions submitted:

Do you advocate the retention of the present pistol?
Do you advocate the adoption of a larger caliber?
If so, which caliber do you desire, .45 or .50?
Do you advocate the adoption of an automatic pistol? If so, what caliber?

The result of the vote is as follows:

| Rank | Number Voting | Favoring Retention | For the .45 | For the .50 | AUTOMATIC | | |
|---|---|---|---|---|---|---|---|
| | | | | | For | Against | Undecided |
| Colonels | 11 | 1 | 7 | 3 | 5 | 6 | ..... |
| Lieut.-Cols. | 9 | ..... | 6 | 3 | 3 | 6 | ..... |
| Majors | 40 | 1 | 31 | 8 | 17 | 23 | ..... |
| Captains | 181 | 4 | 155 | 22 | 59 | 115 | 7 |
| First Lieuts. | 151 | 1 | 134 | 16 | 27 | 117 | 7 |
| Second Lieuts. | 138 | 4 | 120 | 14 | 23 | 112 | 3 |
| Total | 530 | 11 | 453 | 66 | 134 | 379 | 17 |

There are in the cavalry 758 officers. There are 530 voting. As stated in the last JOURNAL, of the officers not voting, some possibly never received the postals. Others are too indifferent to the advancement of their profession, or are too negligent to answer. In either case their opinions are not worth considering.

We have from this table an absolutely true index of what the cavalry wishes on the question of the pistol caliber, and a

known proportion of the wishes for and against the adoption of an automatic.

We call attention to the vote for a larger caliber and a comparison with the vote for retention. It stands 519 to 11, a percentage of .98, for a larger caliber. We scarcely had expected as many votes as eleven for the .38. Comparing the .45 and .50, we find 453, or eighty-seven per cent., are for the .45, and 66, or thirteen per cent., are for the .50.

The vote on the automatic is twenty-five per cent. for, seventy-two per cent. against, and three per cent. undetermined. The Island vote, that is the return postals from the Philippines, which were not received in time for tabulation in last issue, has not changed the percentage one bit. This shows that the above table is an absolute indication of the wishes of the cavalry.

We have received several short letters in connection with the vote, but the vote itself is so decisive that nothing further need be said.

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## THE ARAB IN AMERICA.

It seems likely that the contemplated ride of Lieutenant McCabe, of the Sixth Cavalry, across the continent on the Arab stallion of Mr. Homer Davenport will not materialize. It seems from newspaper reports that the horse has unfortunately gone on sick report.

There was also another feature of the matter that may have had something to do with the indefinite postponement of the cross-continent ride. It seemed that this was a good business matter of advertisement, so most of the horse breeders in the country thought it wise to get on list and had a horse to offer, requesting in some cases that a young lieutenant ride the horse, and that the same conditions apply as were to govern the Davenport effort. We have it from the Topeka *Capital* that General Castleman, president of the American Saddle Horse Association, had entered his thoroughbred show horse "Clifford" to compete with Davenport's "Najdsan." This, of course, is as it should be, for the more competitors, with the more variety



of breeds, the more valuable will be the contest to the army. The benefit the army would derive from a contest of these two horses alone, as compared with the present cavalry animal, would not be immediate. The two horses mentioned above have probably never in their lives been subjected to service conditions, and probably would not know a side line or a picket pin from a treatise on Christian Science as a veterinary cure. So we are really glad to see the interest displayed by dealers throughout the country, that really are in earnest in their efforts to improve the cavalry mounts of their nation, and are not actuated by a mere desire of advertisement.

We have little doubt that had the Arab been in good condition he would have beaten the army horse across, and personally we are satisfied that Castleman's thoroughbred would have beaten both. But we already know that the pure thoroughbred is not the ideal horse for hard cavalry service. And we are satisfied that the winning of the Arab would have meant nothing as to the advisability of having pure Arabs for the service. For, while most of us are willing to admit that we would prefer pure Arabs for our cavalry, the tax payer has rights to consideration in the matter, so had "Najdsan" left the army horse at the Continental Divide it would not have resulted in getting Arabs into the service.

Of course that was not the idea. It was to demonstrate the need of Arab infusion into our mounts. But if Mr. Davenport and General Castleman really wish to demonstrate that our mounts can be improved by the infusion of the blood of their favorite breeds, and where is the cavalryman that seriously doubts it, why not let them furnish their horses for a test of service conditions. It might be thought that a three thousand mile ride would be a sufficient test to suit any one of decent brain power, but possibly it might not. We are ready to admit the gameness of the thoroughbred, but we are not so ready to admit that this gameness is sufficient to carry him through conditions such as might be met by a more cold-blooded beast. With proper care, which of course any horse should always receive in the service, and with sufficient forage, we believe the thoroughbred will outlast any horse alive. We realize we are not unani-

mous in this opinion, but it is one we have formed after several years' experience and association with cavalrymen. But the question of forage is not always an easy one, and when the ration is short and the mount has to rustle we very much fear, in fact, we have not any doubt, but that the thoroughbred would succumb, while the colder blood would stagger through. On Lieutenant McCabe's ride the question of forage would not enter. The horses would be provided with all that they could possibly require. So, to our mind, the most important test of cavalry endurance would be missing. Let us take "Clifford" and "Najdsan" and put them into the mountains of Arizona and Montana, rough through the hot summers and cold winters, then in a few years send them to the Philippines to end their days, drinking brakish water as often as any other, and then make up our comparisons.

The result would be what most cavalry officers contend for now—that an infusion of Arab or thoroughbred blood would help us immeasurably. It would be a demonstration of an axiom as far as horsemen are concerned. But the ride, nevertheless, will be of value. It will be a demonstration for the country at large who are not up on horse breeding, and will thus be an educational factor that will help us immensely. The JOURNAL had made arrangement with Lieutenant McCabe for an article on his ride that would have been of value to the army, and we are very sorry to see that it may never take place.

In the matter of breeders offering their animals for the contest, we wish to call attention to one breeder in particular, and while his offer is full of humor, yet, possibly, the matter is not so humorous as it appears. We should always remember that without our despised mule the army could not exist, and we recall the remark of General Hennissee, when we served under him in the days of his lieutenant-colonelcy: "The American mule—change the geography of the world, change the geography of the world."



## CAVALRY OF THE FUTURE.

WASHINGTON, May 6.—The War Department has refused the request of a Michigan stockfarm owner to enter a mule in the speed and endurance contest from Portland to New York, in which Homer Davenport, the cartoonist, has asked permission to enter one of his finest Arabian horses.

R. E. Bullock, proprietor of a stockfarm in Michigan, read in a newspaper a notice that the War Department was about to make an experiment with horses, to determine if possible upon the breed best suited for the use of the United States cavalry. He also came across the proposition of Mr. Davenport, and being a public spirited American citizen, offered the services of the ever-faithful American mule. His suggestion, however, met with no favor at the department, and his offer was refused. Bullock's letter to the Quartermaster General of the army read:

"I see by some Yankee paper what Arabia is to do. I have a little mule named 'McKinley,' 6 years old, weight 600 to 700 pounds, thirteen to fourteen hands high, which I will let the United States have to beat 'Great is Allah' in making the distance from Portland to New York. He will save half the food and sing 'America' in New York long before the fine Arabian steed ever reaches there."

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## BOOKS ON THE RUSSO-JAPANESE WAR.

General Ian Hamilton has continued his interesting work, "A Staff Officer's Scrap Book," and the second volume can now be obtained from the publishers. This volume is possibly of more interest and value to military students than the first one. The author continues with the Japanese First Army (Kuroki's), and bothers himself little about any other.

After a chapter given to "Reflections by the Way," which, by the way, contains many valuable lessons and hints, the author continues with his personal observations upon Japanese tactics during the battles of Liao Yang and the Sha Ho. He has told

only what he himself saw, or what was told him by some kind hearted officer of Kuroki's staff, with that general's permission. The book is almost entirely given to the description of these two battles, and the maps accompanying the text render the volume one worth study by staff officers.

The remarks on the "Fall of Port Arthur" are condensed in one small chapter of few pages; and the same as to the battle of Telissu. As to the description of this last battle, at the first reading we were inclined to believe that the General's prejudice against cavalry had prevented him from playing fair. He has nothing to say about the action of the Japanese cavalry on the Russian left, though he shows the march of this body on his map. However, as he developed his idea of the battle months after it was fought from the Japanese grave diggers of the field, and inasmuch as the main turning movement of the Japanese in this battle was around the Russian right, we forgive him. He intends to be honest and give his exact idea, as can readily be seen from his whole work.

Taking Hamilton's book, the *Militar Wochenblatt's* "Battle on the Scha Ho," the reports of our own military attachés, and the somewhat extended review of Kuropatkin's book in the *Broad Arrow*, we see such an agreement as to maps and actions (not as to names, however), as to lead us to believe we are now getting accounts of this war that are reliable. And comparing Hamilton's account with other ones we believe to be reliable, we are convinced, as stated above, that the General has faithfully reported the war as he saw it. His report covers nothing except what he saw himself or what was gathered while "the fog o' fightin'" was heavy. This has not served to befog the General's narrative, which for terseness, interesting manner of handling, and even humor, is seldom equalled. It is a book one will read through without one weary moment. It is so fraught with valuable military lessons that we have not space even to call attention to them. These lessons are set forth by one who has had extended military experience over a wide field, and a careful study of the text and the maps will render one a more valuable officer.



We cannot, however, close this review of Hamilton's book without mentioning one lesson we have learned from the book. Of course a lieutenant-general in the British army is but a lieutenant-general in the British army, but Hamilton was quite a personage, considering the Anglo-Jap alliance and his association with the higher Japanese officers, and his descriptions of their bearing and manner under action has led us to believe there is nothing at all unusual about the Japanese. And the idea that they never took chances is forever refuted by the quotation given below, describing a moment during the battle of Liao Yang, and we cite it for the benefit of those who have heretofore thought otherwise:

"One minute after Nishi's alarming message (asking for reinforcements for the Second Division), that is to say, at 8:26, an orderly arrived from the Imperial Guards saying that the situation on that wing was becoming very serious. The Guards, he reported, could make no sort of progress either by asserting their artillery superiority or by advancing their infantry. On the contrary, the enemy to their front was rapidly increasing, and was threatening to envelop and force back their left brigade, under Asada, which had, it seems, crossed the upper waters of the Tangho and got somewhat isolated. Now faces grew grave, and after a very brief deliberation, orders were given to the whole of the Army Reserve to march from Tiensuitien to the assistance of the Guards. The Army Reserve had, an hour previously, come in from Antung, having marched the whole distance in forty-eight hours, up to date the record march made by any unit of the First Army. (In a note the General states he is staggered when he finds his diary makes this distance eighty-five miles.)

"So long as it remained at Tiensuitien, this reserve was in rear of the center of the Japanese line of battle, but once it was sent to the extreme left, it would cease to be available for the reinforcement of center or right.

"Kuroki knew very little about the course of events on his right, except that the Twelfth Division had taken half of the position they had been told off to attack, and that they were still fighting; he had just heard that a serious attack was about to be launched against his center, which was only three or four miles to his own immediate front, and he could plainly hear and see for himself that the Russians in this part of the field were numerous and full of fight. In giving such an order, then, I

think that he had come to what one of the staff described as *une decision un peu audacieuse.* In fact, it was an action demanding an uncommon amount of nerve to part with the reserve at a moment so critical.

"Few generals I have ever met would have had the hardihood to deprive themselves with this seasoned, unfaltering completeness of every single man of their reserves at a moment when the ever-increasing fury of the musketry, and the pale, breathless messengers from the firing line all forboded the approach of a crisis in that part of the fight which was raging under their very eyes.

"There is no bottling-up-the-Old-Guard tendency about Kuroki. His method of handling his reserves is the very acme of boldness. Never will Kuroki merit the reproach which Napoleon leveled at Joseph after Talavera, when he told him the plain truth and said that a general who retreats before he has used all his reserves deserves to be shot forthwith. But Napoleon himself did not always act up to his own principles, and although he was an acknowledged master in the art of using his reserves, yet it has been plausibly contended that at Borodino he hesitated and was lost.

"If, however, I admire the commander of the dashing First Army for accepting a crushing responsibility, not only without a tremor, but with a smile, I admire the General Staff just as much, though in quite another way, for the eager and positive loyalty which they labor untiringly to impress all outsiders with the idea that Kuroki thinks of everything for himself, whilst his assistants are merely the blind and passive instruments of his authority. What a contrast to some of us, who, without wielding one tithe of the power of the Japanese General Staff, are quite ready to encourage the inferences of our admiring friends that the general was the puppet, whilst we were the true originators of any success which for once in a way the poor man may chance to have achieved. If ever I get back safe to England and people ask me, 'What are the lessons of the Manchurian War?' I ought, if I have the pluck of a mouse, most certainly to reply, 'To change our characters, my dear friend, so that you and I may become less jealous and egotistical, and more loyal and disinterested towards our own brother officers. This is the greatest lesson of the war.'"

* * *

In the July, 1906, issue of THE JOURNAL, we reviewed a book that had just appeared from the press of Hugh Rees, London, namely, the "Battle of Mukden." It was an authorized translation from the *Militar Wochenblatt,* by Karl von Donat.



We now have a similar work on "The Battle on the Scha Ho." This gives a clear and simple idea of the main outlines of the two forces, without descending to details of actions or minor tactical movements. There are nine excellent maps (cleverly arranged in a pocket), which enables one to intelligently follow the action step by step. The absence of comment, nothing being given except the bare outlines, the maps being so printed that the positions at any time can easily be seen, gives the book a peculiar value to military students. Reading the work and following on the maps is like watching two good men at kriegspiel, and the student is allowed ample thought as to what he would have done at that particular stage of the battle.

As in the "Battle of Mukden," two large charts give the war organization of the Russian and Japanese armies. Appendix 1 gives Kuropatkin's order that set in motion the Russian forces. The maps are on the scale of 1-100,000. Hamilton's maps accompanying his work are on the scale of 1-75,000, while those of our War Department accompanying the reports of our attachés are 1-84,000. Hamilton's maps are of course the clearest, but are of less value to the military student than the others, as they are not contoured. General Hamilton has a happy faculty of naming places, or rather spelling the names of places, so that in reading his descriptions of a battle one is not fuming as over a lesson in Xenophon with no previous study of the Greek language. We feel that much is yet to be desired from the cartographers of the Manchurian War.

The maps accompanying the "Battle on the Scha Ho" have a small, red line under every name that appears in the descriptive print, which is a most thoughtful idea. The maps agree quite well with those furnished by our War Department, except as to names, and many places can be recognized as the same on the two different sets only by similarity of position, and not at all by similarity of orthography. The maps accompanying the translation were compiled from both Russian and

Japanese maps, and are spelled phonetically from the Russian, and frequently a second name is given in brackets, this name being taken from the Japanese sketches. Hamilton also follows this scheme somewhat in his maps.

Ninety-two pages are given to the outline of the positions, and that really completes the book. However, Appendix 1, Kuropatkin's order, fills nine pages, and attention is directed to this order and comparison invited with our present system.

As in the "Battle of Mukden," a most interesting addition to the text is an essay by Lieutenant General von Caemmerer, filling some twenty pages. The German general's criticism and observations are characterized by clear military insight, and are quite interesting to the military student. We are inclined to think this accomplished officer much happier in his criticisms of the "Battle on the Sha Ho" than he was in those on the "Battle of Mukden." After an extended discussion of what might have been done (always so easy to do when time has supplied the maps of the country fought over, and history has given the organization of the opposing forces) Von Caemmerer says:

"And therefore we must not find too much fault with Kuropatkin for having resolved to try envelopment when starting from the places of concentration, and for having cherished the hope that not every misfortune would befall him that might possibly happen. He chose from various evils the one which seemed to him the least obnoxious, and this, in war, will frequently be true wisdom. But the one thing necessary in such a case is to be thoroughly aware that particular energy and boldness are wanted for bringing such a difficult enterprise to a successful issue."

This particular enterprise and energy was found to be missing, evidently in one man, Rennenkampf, all the time and in Stackelberg at this particular time. It seems that Stackelberg at the battle of the Shaho entered a sort of a trance, as did Stonewall Jackson during the Seven Days' battle, and this at a time when never was watchfulness and action more to be desired.

For ourselves it has always seemed that Kuropatkin played *his* part well. If Stackelberg with six divisions could not push back one and one-half Japanese divisions; if Bilderling not only refused to obey orders, but persisted in doing exactly what was not desired by his chief, what hope could there be for success? Sorrowfully we must admit the truthfulness of the adjective now being fastened upon Kuropatkin by history, in calling him an unfortunate general; but we consider the adjective as meaning a general unfortunate in his lieutenants, and not in any of his own shortcomings.



* * *

## KUROPATKIN'S OWN BOOK.

Kuropatkin's book has been deemed a boomerang. By "One Who Served Under Him," writing in the London *Standard*, it is considered not only an "apology for failure," but as a "confession of personal incompetence." Kuropatkin lays the blame on the "incapacity of his subordinates," coupled with "the lack of numbers and morale in the army." The writer in the *Standard*, above mentioned, while admitting that Sassulich, Bilderling, Rennenkampf, Kaulbars, and others were broken reeds on which no commander could rely for support, declares that the rank and file of the army are very unfairly treated by Kuropatkin in his book. And after an extended review, this critic sums up the matter in a most scathing denunciation:

"When every allowance has been made for Kuropatkin, it is impossible not to hold him a man in whom undoubted military skill and sound strategical conceptions failed to compensate for a fatal lack of character. He was, one may say, a very *Hamlet* among generals, his native resolution sicklied o'er by the pale cast of thought. Practically, Kuropatkin admits the truth of this conclusion when he blames himself, in his summing up of the battle of Mukden, because 'he did not insist sufficiently before the battle began, on the assembly of as large a strategic reserve as possible.' A commander-in-chief who sees the necessity of a thing, and does not insist on its being done, is evidently out of place at the head of an army. Nor is it possible to hold a high opinion of Kuropatkin's resolution when we know that he permitted General Orloff to be reinstated in his command after his ludicrous and disastrous fiasco at Liao Yang, which is detailed in his history of the war."

It is to be regretted that we have not as yet an English translation of Kuropatkin's work. As stated in our last issue, we were not willing to believe that the book was being suppressed by the Russian government, and we are congratulating ourselves somewhat on the political acumen of THE JOURNAL. For in spite of the fact that it was reported in the European press of February as being suppressed, and consequently was being published by a Helsingfors firm, where the Imperial government was unable to interfere with the autonomous rights of Finland, yet we find later (see the *Broad Arrow*, March 23, 1907) the following, which can be taken as quite authentic:

"The official *Russki Invalid* gives an unqualified denial to the report, published in certain foreign papers, to the effect that Kuropatkin's book was suppressed by order of the Russian government. It points out that the first three parts of the work, Liao Yang, Shaho, and Mukden, were published at the cost of the state with money placed at General Kuropatkin's disposition for that purpose, and that official documents were made use of in their compilation. Thus these parts of the book constitute a historical study of the highest interest, although, as the General did not possess all the necessary information, they cannot be termed complete. Copies have been sent to the principal military authorities, who have been asked to tabulate their observations or any corrections they may have to make, and to send the same in to the Headquarters Staff, General Staff Building, St. Petersburg. The fourth part of the book treats of the causes of Russian defeat and the measures which might have been taken to avoid them. It must be considered to a certain extent as confidential. Only a small number of copies of this part have been printed, which have been issued to certain high military and civil officials."

It is our understanding that one volume was given to each of the battles mentioned above, the fourth volume being the one just described.

We are indebted to the *Broad Arrow* for a lengthy and masterful review of the entire work, and from it we quote as follows, as particularly bearing upon the battle of the Shaho, with which battle the book review of the present issue of THE JOURNAL largely deals:

"We were much blamed all over the world for not providing ourselves with good maps of South Africa at the beginning of the war. The Russians seem to have imitated us in Manchuria. Thus General Stackelberg, in asknowledging the receipt of orders, remarks: 'On my maps the district through which I am to advance is represented by a white spot, with but one road marked on it. There is no indication of elevations, though the country we have to advance through is extremely mountainous, and it is difficult to think that it will allow of the use of field artillery. The absence of any roads on the map prevents me from even indicating the route to be followed by the various columns. If there are any maps of the district in possession of the General Staff, I would be glad to receive them.' In describing the battle of Lautkalaza Hill, when the Russians fired on their own attacking infantry with such vigor that they were forced to retire, the same writer gives a further example of the muddle caused by the failure of the commanding officers of different units to grasp the plan of operations. There was no cohesion. The battle on the 29th of September on the west flank was fought by individual regiments, sometimes by individual companies. Many stories are told of gallant attacks on the Japanese positions by a handful of men, led by a captain. Successes, if achieved, were never supported. Kuropatkin writes: 'General Bilderling kept his troops too long in their outpost positions, which have now become rear-guard posts. He was warned as to the turning movement against his right flank, but he allowed himself to be enveloped completely. Much courage, but little skill was displayed. Finally, the Ninth and Tenth Regiments were abandoned and forgotten on the left bank of the Shaho. Always isolated efforts without system. Actions, not with army corps, but with separate regiments.' A ray of light here breaks in. 'But if all had behaved like General Zastshuk, who refused to leave, though wounded, we would more easily bear off the victory.'

"The commander-in-chief then brings to notice cases of disregard of his orders. Commenting on the general action of the corps, he says: 'The operations are very instructive for the future. It is sad to read the reports as to the lack of harmony between the different sections. On this occasion the obstinacy of General Zastshuk ended in the disorganization of the army. It is a pity that my orders as to the retreat on the main position were not carried out. If they had been the Tenth Corps would not have been forced to retire behind the Shaho.' An examination of the various orders issued by Kuropatkin and Bilderling on the 29th of September shows that the most complete confusion reigned in the Russian headquarters. General Bilderling refused to obey the orders issued by Kuropatkin. He informed

General Ribiankine that in spite of the order of the commander-in-chief, he had decided to remain in his advanced positions. Whilst general Kuropatkin ordered General Sluchevsky to 'defend in the most stubborn manner the position entrusted to the troops of his detachment,' General Bilderling commanded him 'to retire during the night on the position of the Shaho.' Sluchevsky disobeyed Kuropatkin and retired on the Shaho as ordered by General Bilderling. Commenting on this, Kuropatkin writes: 'That is to say, he obeyed the most timid order.' Not only General Bilderling flouted the orders and disregarded the wishes of the commander-in-chief on the east flank as well as the west, the commanders carried out their own ideas in preference to those of Kuropatkin. A note by the latter on the operations of the Third Siberian Corps and General Rennenkampf's detachment says: 'In other words, Ivanoff and Rennenkampf have refused to execute the offensive movement entrusted to them, and have assumed the defensive. Owing to the inaction of the First Siberian Corps on the 29th of September, of the eighty-three battalions of the Eastern detachment only ten at most took part in the battle. All this makes a painful impression. The terrain had not been studied. Several different aims were pursued at the same time. The advance was made in small bodies. Having taken Lautkalaza Mountain we allowed it to be retaken much too easily. Often the troops fought well, but in general they retired too soon everywhere. The battle was regarded as lost when all the troops had not even been engaged. There was no general supervision of the fight (Colenso over again! Paardeberg repeated!). The tactics of General Rennenkampf are altogether regrettable. I find in them neither skill nor firmness. As to the forces of the enemy they were evidently not strong. I see no personal initiative on the part of General Rennenkampf to snatch victory from the hands of the enemy. The forces were split up. The infantry straggled.' The next day's fighting (30th of September) reveals even more the disastrous dissensions prevalent among the Russian generals, and their proneness to disregard orders. General Kuropatkin, commenting on this day's operations, says: 'It is inexplicable that the commander of the Fourth Siberian Corps did not carry out the orders of the commander-in-chief of the army to take up a position for a desperate resistance and to enter into arrangements with General Rennenkampf, for the fight. As will be seen later the troops of the Fourth Corps, instead of doing this, retired to rest themselves and took no part in the fight of the 1st of October. This allowed the Japanese, who attacked the troops of the Fourth Corps on the 30th of September, to fall on the left of



the First Army Corps on the 1st of October, and force it to retire behind the Shaho. If the troops of the Eastern detachment had arrived in time, success would have been complete. The advance guard let itself be led too far forward; the operations of General Maff are incomprehensible. Why did not General Novikoff execute the order given to him to intrench himself in the position north of Khamytan? I cannot see that the Japanese were stronger than the Fourth Siberian Corps.'

"The story of the conduct of the other corps reveals the same tale. Disorganization, disobedience of orders, independent against concerted action, neglect of precautions against a bold and resourceful enemy, led in Manchuria as elsewhere, to defeat and disaster. The indictment against General Maff is particularly strong. We read that this general's division remained with arms folded whilst under its eyes the fate of the Russian army was being decided, and how it retreated, vacating important positions without firing a shot in their defense, and that its chief never even informed his superior of that retreat. To describe this as 'not a mistake but a crime' is not to use too strong language. One asks oneself why General Maff was not deprived of his command at once? Orders given to brigades to attack positions were handed on to three or four hundred men for execution, while certain officers retired from the firing-line to the rear on the flimsiest excuses. The vacillation and hesitation of commanders to obey orders may be perhaps understood when it is pointed out that from 5 P. M. on the 30th of September until 6 P. M. on the 1st of October the troops of the Second Siberian Army Corps received no fewer than seven conflicting orders. Nevertheless the history of these sad days for Russia, when her army was disorganized, her case apparently hopeless, supplies lacking, and 'confusion worst confounded' reigned at headquarters, is not unrelieved by brighter pages. The young officers (the company leaders, who obtain so little kudos in most armies, yet on whose shoulders fall all the heat and burden of the day) behaved with heroic bravery. As difficulties and misery increased, so did their cheerful conduct increase also. Their example and energy held the men together in spite of the faults of their chiefs. The only general whose conduct is not characterized as stupid or criminal is Mitshenko, whose raids have been described at length in *The Broad Arrow*. He alone appears to have come to the rescue of comrades in distress, to have intelligently interpreted orders, and equally intelligently to have ignored them when it was necessary for him to act on his own initiative. As the extent of the Russian failure became more and more apparent, Kuropatkin

became correspondingly severe towards his corps commanders. After the disaster at Sandepu he went so far as to threaten to court-martial the whole of them in the event of any further disobedience to his orders. The plain lesson is that in future, as in the past, success will lie with those commanders (1) who permeate themselves with their chief's idea and try to carry it out; (2) who intelligently interpret and obey orders, yet do not fear to take the initiative when circumstances have altered the bearing of the same; (3) who support each other and keep up communication between units; and (4) who remember that men are men and not machines, and who by proper treatment get the most out of them without taxing their powers beyond endurance."

And now why was all this permitted? Let us simply recall the remarks of General Hamilton, already alluded to in JOURNAL for October, 1906: "Why did Kuropatkin do so and so? If in private life a sober, quiet individual upsets all previous estimates of his character by marrying his cook, it is not necessary to say *cherchez la femme,* because she stands there as big as life. Where a gross and palpable blunder in elementary strategy is made by a general of repute it should be equally unnecessary nowadays to seek for the statesman who is usually quite apparent. It is difficult, no doubt, for a ruler of any sort to restrain himself from interference with his instruments. Thus, in the old days, theologians having the power, used it for the purpose of routing the ungodly, as at Dunbar and many other places, where the result was good for the ungodly. Still the church could at least sometimes inspire the soldiery with individual fanaticism, which might compensate for much bad direction. Per contra, the statesman has nothing in his gift but disaster as soon as he leaves his own business of creating or of obviating wars, and endeavors to conduct them. The American war, for instance, was a war where the feebly timorous civilian strategy of the Federals was a perpetual and never failing standby to its weaker adversary, whilst the greatest victory the North ever scored was when Jefferson Davis took a leaf out of Lincoln's book, and had the inaptitude to replace that competent, sagacious, careful commander, Joseph E. Johnston, by a mere thrusting divisional general, infinitely his inferior in all the higher attributes of generalship."



It certainly should not take any great amount of thought on the part of American soldiers to understand Kuropatkin's handicaps. To the most of us they appear clear as day, and had the Manchurian trouble lasted as long as did our Civil War possibly near the close of the struggle the General might not have been interfered with, but might have been left to conduct his campaigns in his own way. The view in front of the American general who hopes to have large command in the next American war is not at all a pleasant one. And many of them will have cause to remember Kuropatkin. and compare the Russian system with our own, and find out how very similar the two are.

There can be no doubt that Kuropatkin was not loyally supported at home. Kaulbars, we believe, married into the family of Grand Dukes; the War Minister that succeeded Kuropatkin when the latter took active command was a personal enemy of the General; a ruler, vacillating under defeat, seemed not to know what he did want; and so, handicapped by not being able to discipline his generals in cases of disobedience, the soldierly Kuropatkin saw defeat after defeat cast upon him. Yet, even though confronted by an enemy the equal if not superior in numbers, far superior in morale and intelligence and initiative, in the ability to gain information, in short, superior in all the military virtues except courage and endurance, he never met with a disastrous defeat, and he turned over to his successor an army more ready for war than any Russia had seen since the days of Plevna. And what is most remarkable of all, accepted without a murmur or complaint a subordinate position under one of his own generals. Fortunately Linevitch was a soldier of experience, and not a court favorite. That such a man can possess a character such as painted by the writer in the *Standard,* quoted above, we are not ready to believe. And that Kuropatkin has at last seen fit to put his observations into print, it should be remembered that this is only done after the war has ceased, when the lessons to be learned from his writings should be of the greatest help to the future Russian general. In fact, we are not satisfied that Kuropatkin has not performed a patriotic duty in his work, unpleasant it must be to him. And it will take a careful translation, by a master of both languages, to compel us to believe that Ku-

ropatkin was not actuated by a desire to aid Russia in pointing out her faults. There is an old saying something to the effect that true friends point out faults, false ones never do. We should bear this in mind when thinking of the unfortunate general.

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The JOURNAL's list of books on the Russo-Japanese War, recommended to American officers for purchase, now stands as follows:

On the causes:

The Russo-Japanese Conflict. (Asakawa.)

On the war:

From the Yalu to Port Arthur. (Wood.)

The War in the Far East. (Military Correspondent of *The Times*.)

A Staff Officer's Scrap Book. Two volumes. (Hamilton.)

Lessons on the Russo-Japanese War. (De Négrier.)

The Battle on the Scha Ho. (Translated from the German of the *Militar Wochenblatt*.)

The Battle of Mukden. (Same as the Battle on the Scha Ho.)

Port Arthur, The Siege and Capitulation. (Ashmead-Bartlett.)

For Comparison:

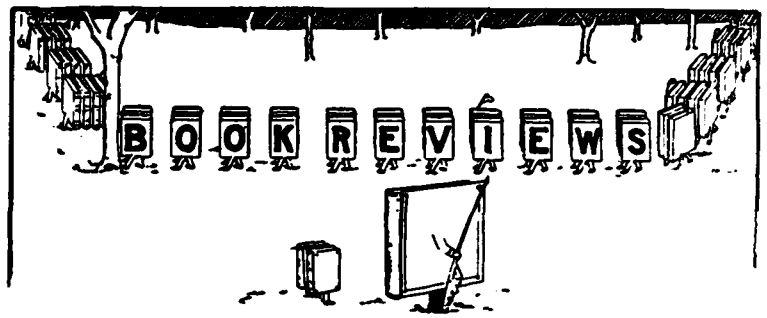
The Chinese-Japanese War. (Vladimir.)

All of the above have been carefully reviewed in THE JOURNAL. We have heretofore recommended the articles by Kennan in *The Outlook*, but as they are not in any convenient form we drop them from our list. Ashmead-Bartlett's work covers much of the ground described by Kennan.

Asakawa's book can be purchased from Houghton, Mifflin & Co. for $2.00; Wood's and Vladimir's from the Hudson Press, Kansas City, Mo., for $1.50 each; The War in the Far East, from E. P. Dutton & Co., $5.00; Hamilton's, from Longman, Green & Co., New York, $4.50 per volume; De Négrier's, from



Hugh Rees, Lmtd., London, 62½c; The Battle of Mukden, Rees, $1.50; The Battle on the Scha Ho, Rees, $1.87½; Bartlett's Port Arthur, William Blackwood & Sons, London and Edinburgh, can be purchased through the Secretary of the Infantry and Cavalry School at Fort Leavenworth, Kansas, for $5.45.




**Military Memoirs of a Confederate.***

We have some hesitancy about publishing the following sentence, not because we do not believe it is true, but because it is so startling and so liable to be questioned by those who have not read General Alexander's book: The greatest of all books dealing with the Civil War has but now appeared. Considering the volumes that have been written upon the war, considering that many of the authors were among the chief figures in that struggle, the above sentence does seem strong.

But a little reflection will lead one to think that after all now really is the time for the great book of the war to appear. And if one will read General Alexander's book we have no fear but that he will agree that the JOURNAL'S statement is certainly far from wrong.

General Alexander graduated at West Point in 1857, and was assigned to the Engineer Corps. For three years after graduation he served as assistant instructor in engineering at the Academy. The outbreak of the war found him a second lieutenant of engineers at Steilacoom, Washington Territory. He resigned his commission and joined the Confederacy, where immediately

*"MILITARY MEMOIRS OF A CONFEDERATE." E. P. Alexander. Chas. Scribner & Sons, New York City. Price, $4.00.



on reaching Richmond he was made a captain of engineers in the Confederate army. He was most intimately associated with the Army of Virginia, and his book deals with this army entirely, with the exception that we accompany him with Longstreet to Chickamauga and Knoxville, when Lee was seeking to take advantage of the interior lines, that strategy or rather position placed within the reach of the Confederate armies at all times.

Regarding the statement of the JOURNAL above as to the relative value of this work when compared with all others, we call attention to the following: In the first place, General Alexander is as scholarly a man as has ever taken up the subject of the Civil War. His graduation in the Engineer Corps, and his retention in that branch for duty as instructor at the Academy when he had but graduated, assures us that we are listening to one who has mastered the preliminary instruction of a soldier.

In the second place, very few have enjoyed the opportunities that Alexander did, for while not being one of the very main figures, he nevertheless was present with them and in a position to judge more clearly of their actions than the principal actors themselves.

In the third place, there are none that have spent thirty years of painstaking and laborious study upon the Civil War. There are none that have waited till the great captains have had their say, and then have carefully examined their stories in the light of all that thirty years has been able to bring in the shape of personal narrative, anecdote, and story, and the compilations of the War Records.

We have the work here of a military man, one of high intelligence and great experience, and we have this man writing upon a subject upon which he has spent years of careful study in addition to passing through the trying times himself. And we have this study after the bitterness of the civil strife has passed away, when the blue and the gray have once more united, when Wheeler has fought by the side of Merritt and Fitz Hugh Lee by the side of Miles. So there is no partisanship, no bias in the work. It is free from rancour, free from personalities, free from partialities. A calm judicial mind, trained in the world's greatest military school and filled with experience of actual war, sits in cool

and calculated judgment upon the leaders of the Civil War and weighs them with unerring genius and finds them wanting in every point of weakness.

We were forced again and again as we read the pages to exclaim, "Here, here is history!" No better illustration of this can be given than by referring to his denunciation of Stonewall Jackson for his inaction in the Seven Days' Campaign. It is almost heresy to even mention in low breath that the great Stonewall ever made a mistake. But illusions fall when viewed in the cold, calm reason and logic of the precise mind of General Alexander.

We quote relative to the Seven Days' Campaign:

"On Tuesday morning, June 24th, Jackson's infantry was at Beaver Dam Station, on the Virginia Central Road, about eighteen miles from Ashland, where they were expected to encamp that night, and about twenty-five miles from the Virginia Central R. R., near the Stark Church, whence order No. 75 required Jackson to march at 3 A. M., Thursday, June 26th.

"We now enter upon the story of performances. The orders governing the beginning of the action were simple and explicit. Every officer must have realized the supreme importance of time, even without the hint given by Lee in his order fixing the hour of Jackson's march at 3 A. M.

"It is, therefore, a great surprise to see that instead of crossing the Virginia Central R. R. at 3 A. M. on the 26th, they do not begin to cross it until 10 A. M. on that date. That is practically a whole day late, because, with the distance still to be traveled, it will be too late to commence the great battle intended, in time to win it and gather the fruits of victory.

"Had Jackson pushed his march to Ashland on the night of the 24th, about eighteen miles from Beaver Dam, as Lee's orders contemplated, he would have had only six miles to march on the 25th, and his men would have been in excellent condition to set out at 3 A. M. on the 26th, with less than ten miles to go to reach the enemy. The result of crossing the Central R. R. at 10 A. M. was to fight the battle a day late and at Gaines' Mill, three miles nearer McClellan's main army, thus losing the opportunity to cut off Porter's corps at Beaver Dam. This opportunity, the cream of the whole campaign, was lost by Jackson's not demanding of his troops better marching on the 24th and 25th.



"His biographers have found many excuses for him, but, however good or bad these excuses may be, they will not be dwelt upon here for two reasons:

"*First.* The object of the narrative is neither praise nor blame, but only that military students may realize more fully than they could without such an example, infinite value of hours when a battle is on foot, and how easily hours may be lost.

"*Second.* The excuses of the biographers will best be given after finishing the whole story; for, unfortunately, this loss of the first day is not the only, nor is it the worst, failure of Jackson during these Seven Days, to come to time as was expected of him. He now here, even distantly, approached his record as a soldier won in his every other battle, either before or afterward. As one reads of his weak and dilatory performance day after day, and recalls what he had always been before, and always was afterward, one feels that during these Seven Days he was really not Jackson. He was a different individual. He was under a spell! Nothing that he had to do was done with the vigor which marked all the rest of his career.

"Crossing the Central R. R. at 10 A. M. on the 26th, he marched but eight miles farther that day, going into bivouac about 5 o'clock, at Hundley's Corner. He was here in easy reach of Porter's rear and in full hearing of the heavy cannonading and musketry going on at Mechanicsville, which will be told of presently."

This book is one primarily for military men. From the preface of a book we can quite frequently determine the object of the work; how well this object has been accomplished can only be determined from the work itself. We quote a follows from the preface:

"The *raison d'etre* of the following pages is not at all to set forth the valor of Confederate arms nor the skill of Confederate generals. These are as they may be, and must here take their chances in an unpartisan narrative, written with an entirely different object. That object is the criticism of each campaign as one would criticise a game of chess, only to point out the good and bad plays on each side, and the moves which have influenced the result. It is far from being a grateful task, and the writer is, moreover, painfully conscious of his limitations in his effort to perform it adequately.

"But it is of great importance that it should be attempted, even approximately, not only for the benefit of general history, but more particularly for that of military students and staff officers.

These will find much of value and interest in the details, pointing out how and why the scale of battle was turned upon each occasion. It is only of recent years—since the publication by the War Department of the full Official Reports of both armies, in 135 large volumes—that it has become possible to write this story, even approximately. History, meanwhile, has been following the incomplete reports of the earlier days which, sometimes, as at Seven Pines (or Fair Oaks), have deliberately concealed the facts, and has always felt the need of the personal accounts covering the incidents of every march, skirmish, and battle.

"Only among these can be traced the beginnings, often obscure and accidental, of the most important events; and these must ever form an inexhaustible mine for the study by the staff officer of the practical working and details in every department of an army."

How well the General has performed this task he has placed upon himself, that of writing a book that will be of value to the future staff officer, no one can fully understand without a careful study of the book. We should always remember that no one but a student was ever a great soldier, and everyone in our army today who pursues with eagerness the phantom of hope that some day the stars may fall, can employ his time to no better advantage than by a careful preparation against the time to come by reading and studying this work of Alexander's. Here is a military critique of the Civil War. No one can now be considered as well read upon that period unless he is familiar with Alexander's work. No one who ever reads it can ever fail to appreciate the value of time, now as ever the essential of all movements of coöperation. This is one of the reasons of its particular value to staff officers.

General Alexander, three years ago, delivered three lectures to the student officers of the Infantry and Cavalry School and Staff College upon the battle of Gettysburg. Those who heard those lectures have waited with impatience for the General's work upon the war. And officers who have met the General, and also those who wish to read the best upon the Civil War, will rapidly avail themselves of the opportunity to get this most valuable work.



**Law Books at the Military Academy.***

Colonel Edgar S. Dudley, Judge Advocate General's Department, has revised the course at the Military Academy by introducing two new text books. One of these, "Military Law and The Procedure of Courts-Martial," is by the Colonel himself, and the other, a text-book on Constitutional Law, is by one of his assistants, Captain Edwin G. Davis, Artillery Corps. To say that the course has benefited by this change, speaks but feebly. We can remember that in our day at the Academy we knew about as much law after we had finished our year's work in that subject as we did theology. In those days there was no attempt at any preliminary instruction, but after an academical course in international law, which never teaches any law, we were plunged into Cooley's "Constitutional Law" and made to speck it blind. This we accomplished fairly well, considering the practice we had had in that method of gaining information. But as for getting any benefit from such work, it has always been considered doubtful in our minds if any good ever did come of it. In fact, our ignorance was so great we could not even appreciate Cooley, and we recall old Scotch McSweep asking the instructor, "Who was this man Cooley, anyhow?" The instructor replied, "Judge Cooley was one of the greatest of Americans. He probably possessed a mind superior to almost any other American in any walk of life." "Well," said McSweep, "He must have been getting over it when he wrote this book."

It seems almost incredible that such a system could have produced any results, and we were not surprised, a few short years later on returning to the Academy for duty as instructor in the law department, that this had been changed. Some effort was then being made to give students a small appreciation of the field of law, some idea of what the whole thing meant, and a few lessons were devoted to elementary law. Then it was found that the cadets could not handle Cooley, and so Flander's little

*"Military Law and the Procedure of Courts-Martial." By Colonel E. S. Dudley, Judge Advocate, U. S. Army. John Wiley & Sons, New York City. Price, $2.50.

"A Text-Book of Constitutional Law." By Captain Edwin G. Davis, Coast Artillery. Franklin Hudson Publishing Company, Kansas City, Mo. Price, $1.50.

"Manual of the Constitution" was substituted, with the result that the cadets knew some little things about the Constitution, which was saying more than when they had finished Cooley in our time. But Flander's Manual was not a suitable work for cadets, and it remained for Captain Davis to prepare a text-book on constitutional law that would be satisfactory for the cadets, considering the time that the curriculum allows for that subject. Captain Davis has not attempted a treatise, even with late decisions, Cooley and Pomeroy still suffice, but he has given a text which gives a thorough knowledge of what the Constitution is, how it originated and the subject with which it deals. He also attempts, successfully, to give a practical knowledge of the questions that have arisen under the Constitution and how they have been decided. He has accomplished a good work, and not only the Military Academy will be benefited by his labors, but his work is ample for much that the ordinary practicing State lawyer will require.

Colonel Dudley has succeeded in presenting the army with the most concise text-book on military law. It is not so extended a work as that of General Davis, and so will not supplant that work, but it certainly is better adapted to its purpose, the instruction of cadets. We congratulate the author on its style and manner of presentation, and bespeak for it a career of usefulness in the work with cadets. It easily fills the place of that abortion that was thrust upon us when we were cadets, an Abridgment of Winthrop. It is hard to conceive how such an excellent treatise as Winthrop's great work could have been garbled into such an awful worthless mess as is the abridgment. It is advised that all officers that possess the abridgment throw it away, or rather, keep it until their next trip to the Philippines, and then hoist it over into the Pacific when half way across, so that it may never by any possibility come back.

Of course the great work of Winthrop needs revision, and some legal man of our army could do no better service than to carefully revise the large text of Winthrop. For, after all, Winthrop is our military Blackstone. His English is pure and almost perfect, and at the time he wrote his ideas and conclusions were correct. With the many changes that have lately occurred in the way that we are hereafter to look at military law, all law books need revision. Colonel Dudley is fortunate that this can be easily done, and we will await with pleasure the new edition, and we dare say, that one of our legal writers, who first accommodates himself to late decisions, will come nearly placing his work as the army authority.



It need hardly be said that the result of the Grafton decision is to force upon officers more and more a knowledge of law. As long as our jurisdiction is in many cases hereafter to be no longer concurrent, it behooves us to make no mistakes in trying men for crimes. A knowledge of how our people in general look at certain crimes, the methods that, after years, they have adopted for the trial of those crimes, and the punishment which they consider to be effective in restraining further breaches, is necessary now to our officers if we wish to retain the good will of our people. And if we do not retain it we will find forced upon us their views in no uncertain manner and in a way that will be most unpleasant. The surest way of retaining the people's good will is to comport ourselves in consonance with their enlightenment and intelligence, and we can no better prepare ourselves in keeping touch with that enlightenment and intelligence than by a knowledge of our civil institutions, gained by some study of the laws of our country.

We are indebted to our legal writers that save us much of the delving and laboring that otherwise would be necessary before we could consider ourselves well and properly equipped officers.

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**A Short History of the American Navy.***

This work is published under the auspices of the Navy League of the United States. The Navy League is an important body of influential men, headquarters at 78 Broad Street, New York City. We were somewhat surprised at the long list of names of influential men, and at first wondered if the main object of this League was not in the end to obtain some sort of a ship subsidy bill, but we hardly think so, for the need of a strong

*"A SHORT HISTORY OF THE AMERICAN NAVY." By John R. Spears. Published by Chas. Scribner's Sons. Price, $1.50.

navy stands by itself regardless of the question of a merchant marine. As the author of this short work points out, when we have had a strong navy we have had peace, when otherwise war has frequently occurred.

The League of course have secured the best talent alive today in the person of Mr. John R. Spears. If course we all know that Mr. Spears is the author of the standard history of the American Navy, four volumes. But this little work is one of 134 pages, large type, and consequently little more than a popular description of the work of our navy from the earliest time. The work is exceedingly well done, and the author has produced a most readable book, and both the League and the author are to be congratulated on producing a book that will be of such popular interest. It is a book that should be in every home where boys and girls are growing to manhood and womanhood, for the recital of the deeds of our gallant sailors can have no other effect than to inculcate the most ardent fires of patriotism.

Moreover, there is much of interest, and there is much that is new and astonishing. We find under the story of "Sea Fights and Fighters of the Revolution," the following remarkable statements:

"And yet, as Edward Everett Hale has pointed out, more men fought for the freedom of the United States on the sea than on land, with the land militia counted in. The explanation of this is found in the fact that while the navy of the nation contained but forty-seven vessels all told, there were hundreds of State cruisers and privateers in commission. Thus Salem alone, in the course of the war, owned 150 privateers. Those owned in Boston numbered 365. It is supposed that Massachusetts sent out at least 600 privateers, and that 60,000 citizens of that State went to sea in them. No other State had as many sailors afloat as Massachusetts, but there were hundreds from the other States. Then there were the State cruisers—armed ships owned and fitted out by the States, and sent to sea to cruise against the enemy. Massachusetts had 34. Although the United States had but 3,000,000 inhabitants "fighting for the holy cause of Liberty," there were more men fighting on the seas for that cause than were to be found in the whole British navy, including those stationed in the East Indias, or more than 87,000 men, that is to say. The British force on the coast of the United States during the war numbered but 26,000 men."



The works contain thirteen short chapters, titled as follows:

1. Sea Fights and Fighters of the Revolution.
2. Building a New Navy.
3. The War of 1812. Its Origin.
4. Learning the Art of Naval Warfare.
5. Important Sea Battles of the War of 1812.
6. Ships That Were Lost.
7. Squadron Battles of the War of 1812.
8. Development of Ships and Guns in the Old Navy.
9. The Naval Work of the Civil War.
10. Building the White Squadron.
11. The War with Spain.
12. Our Navy as It Is.
13. Organization of the Navy.

We quote as follows from the introduction:

"The purposes of the Navy League of the United States are 'to acquire and spread before the citizens of the country information as to the condition of its naval forces and ships, and to awaken public interest and activity in all matters tending to aid, improve, and develop the efficiency of the navy.' There can be no better method of arousing and maintaining interest in the navy than by reciting, however briefly, the principal facts in its splendid history. The stories of the brave men who have fought for our country on the sea cannot be told too often. All Americans should know them by heart, and every naturalized alien, as well as each boy and girl who will eventually participate in the duties and privileges of citizenship, should have ready access to them. In compiling a bibliography of the United States navy, it became apparent to the officers of the Navy League that there was no brief history of the navy, and they selected Mr. John R. Spears to prepare one. The present volume is the result."

Army men should, of course, be more familiar with the navy than those whose only knowledge is based on this book. It is hard to conceive a war in which we can become engaged where the navy will not be a most important strategical feature. And the proper combination of our land and naval forces must be understood by those officers who hope to gain much success in the war. The history of our navy should be second only to the history of our army among army officers. And the doings

and effects of our navy in the past must be understood by army men. For this reason army men should be familiar with Mr. Spears' larger work, but the shorter one will be a good book to have handy and, moreover, as stated above, for the growing boys and girls, it cannot be beaten.

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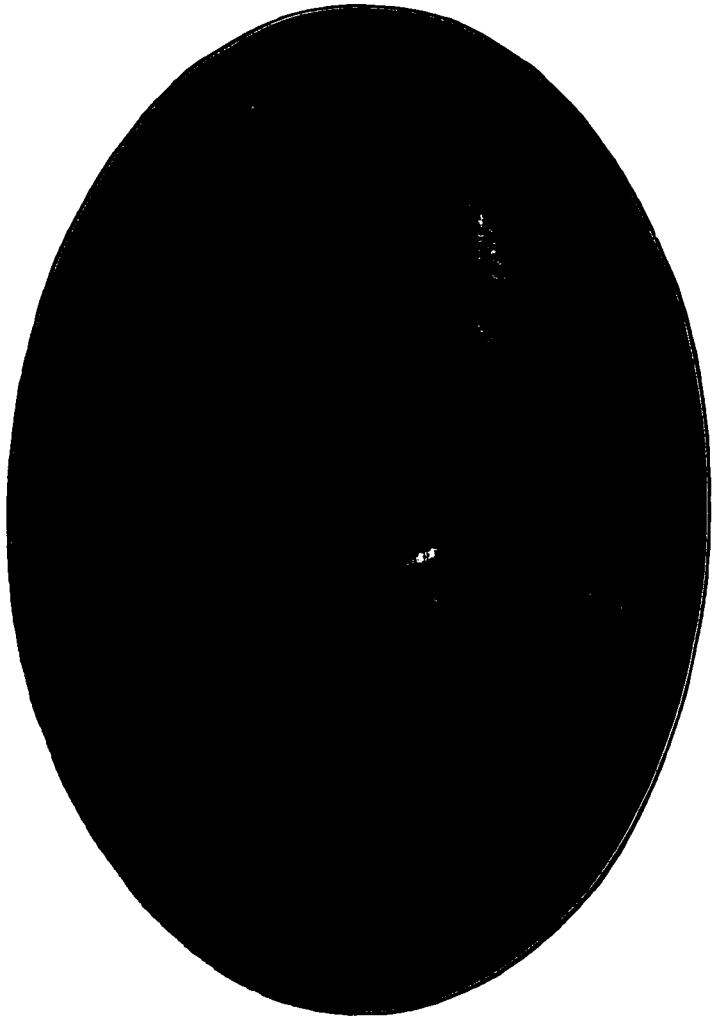
**Military Panorama Drawings.***

This we believe is not worth what its author claims. In the first place we are satisfied that none other than artists could make use of the scheme, and even then its value as compared with the contour system is little. One needs only to study General Hamilton's panoramas of the Manchurian hills to see of what little use such drawings are to the military man. We believe we will still hang to the contours.

*"MILITARY PANORAMA DRAWINGS." By Captain R. F. Pearson, of the "Buffs." By Gale & Polden, Lmtd., Aldershot.

RECEIVED FOR REVIEW.

The Law of Riot Duty. (Bargar.)



BRIGADIER GENERAL EARL D. THOMAS.
UNITED STATES ARMY.

# JOURNAL
OF THE
# United States Cavalry Association.

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## A SONG OF THE CAVALRY.

BY FRANCIS BAR[illegible]

BRIGADIER [illegible] OMAS


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# United States Cavalry Association.

VOL. XVIII. OCTOBER, 1907. No. 66.


## A SONG OF THE CAVALRY.

BY FRANCES BARTLETT.

(Courtesy of the *Boston Transcript*.)

Up and to horse, as the kiss of the morn
Reddens the cheek of the sky,
And her sweet breath blows through the aisles of the corn,
And the pulse of youth beats high!
Up and away in the cool clear air,
Life worth living, and all things fair,—
Clickity-click-click — clickity-click —
And its oh for the cavalry!

The ring of hoofs on a leafy road,
The charge down a village street,
The halt to parley — to fire and load,—
The rush of retreating feet!
On and on in the winey air,
Welcoming danger anywhere,—
Clickity-click-click — clickity-click —
And its oh for the cavalry!

The gleam of banners to victory borne,
Clashing of steel 'gainst steel,
A thought for the dead — but no time to mourn,
Then hurrah — the foemen reel!
Forward — forward — to do and dare,
With Sheridan spurring everywhere,—
Clickity-click-click — clickity-click —
And its oh for the cavalry!

A stirrup cup at some wayside rill.
A bed on the warm bare ground,
The plaint of a lonely whip-poor-will,
From the cypress trees around.
Off to sleep, without fear or care,
The sleep of youth in the open air —
Clickity-click-click — clickity-click —
And its oh for the Cavalry!

The years have come and the years have gone,
And many a dream proved true;
But I sometimes long for youth's cool o' the morn,
And the faces that it knew.
The ideals under the clustering hair,
When for all life's plans was time and to spare,
Clickity-click-click — clickity-click —
And its oh for the cavalry!

For time has deadened the cries of pain
That tortured our ears of yore;
The heat — the dust — and the chilling rain
Forgotten forevermore!
Hallowed the hardships we had to bear,
The toil — the suffering — the meager fare,—
Clickety-click-click — clickety-click —
And its oh for the cavalry!

Ah me, for the thrill of the bugle call!
And fain would I see once more,
The fires of the bivouacs rise and fall
On the Rappahannock's shore.
Hear the whinney of my roan mare,
And ride—and ride—through the sunrise air.
Clickity-click-click — clickity-click —
Ah me, for the cavalry!

Boston.

# THE SECOND CAVALRY DIVISION, ARMY OF THE POTOMAC, IN THE GETTYSBURG CAMPAIGN.*

By Major General DAVID McM. GREGG.

THE cavalry of an amy are its eyes and ears. In the Gettysburg campaign the cavalry corps so well used its sight and hearing that the commander of the Union army was kept well informed of the movements of the enemy. But not only did the cavalry look and hear, but with its tried sabers and trusty carbines, it did its full share in winning the great victory that crowned our arms in the Gettysburg campaign.

In preparing for war, resulting from the firing upon Fort Sumter in April, 1861, the Lieutenant General commanding the armies of the United States not only discouraged, but, indeed, was firmly opposed to having a proper proportion of cavalry in the force about to be raised for the national defense. This opposition was for threefold reasons: First, because the war would be of such short duration that it would be ended before cavalry could be properly organized, equipped, and drilled; second, that the expense attending its organization and maintenance would not justify its employment; lastly, that the character of the country in which war would be waged was such that mounted troops could not be successfully employed.

The disaster at Bull Run convinced our governing au-

* Brevet Major General David McM. Gregg, the distinguished commander of the Second Cavalry Division of the Army of the Potomac, graduated from the U. S. Military Academy in the class of 1855. He was assigned to the Second Dragoons as brevet second lieutenant; second lieutenant First Dragoons September 4, 1855; first lieutenant March 21, 1861; captain Third Cavalry May 14, 1861; resigned February 3, 1865. He was appointed colonel Eighth Pennsylvania Cavalry January 17, 1862; brigadier general volunteers November 29, 1862, and brevetted major general volunteers August 1, 1864.

thorities that the war was not to be ended in sixty days. It was determined to raise a great army in which the different branches would be represented in proper proportions. Cavalry regiments of young, ardent patriots, well mounted, well equipped and drilled, were put in the field, and were ready for the performance of the proper duties of that arm. But another hindrance arose, and one that long continued, and that was its misuse, which resulted mainly from the lack of proper corps organization.

In the first and second years of the war there would be found here and there temporary brigades, but too often regiments were attached to army corps and broken up to serve at division and brigade headquarters. Instead of conserving its strength, it was wasted on useless details for duty that might well have been omitted, or have been performed by another arm of the service. This policy differed from that pursued by the enemy. Its cavalry, composed of the best class of the young manhood of the South, who were accustomed to the saddle and the use of firearms, under the leadership of such able soldiers as Stuart, Hampton and Lee, was kept well in hand for large undertakings, and rode about very much at will, inflicting much damage upon our lines of communication and capturing or destroying material and supplies.

Notwithstanding the disadvantage mentioned, in the Peninsular campaign and in other fields occupied by the Army of the Potomac in 1862, its cavalry did creditable and in many instances distinguished service. In 1863 it entered upon a career of distinction that placed it abreast with the other arms of the service. In February of that year the cavalry corps was organized under the command of Brigadier General George Stoneman. The corps was composed of three divisions, the regular reserve brigade and artillery. The Regular Brigade was commanded by Brigadier General John Buford; the First Division by Brigadier General Alfred Pleasonton; the Second Division by Brigadier General William W. Averell; the Third Division by Brigadier General David McM. Gregg. This last division consisted of two brigades, the first commanded by Colonel Judson Kilpatrick, with these regiments: First Maine, Colonel Calvin S. Douty;



Second New York, Lieutenant Colonel H. E. Davies, Jr.; Tenth New York, Lieutenant Colonel William Irvine. The Second Brigade, Colonel Percy Wyndham commanding: Twelfth Illinois, Lieutenant Colonel Hasbrouch Davis; First Maryland, Lieutenant Colonel James M. Deems; First New Jersey, Lieutenant Colonel Virgil Broderick; First Pennsylvania, Colonel John P. Taylor. These regiments of the Third Division had constituted a brigade commanded by Brigadier General George D. Bayard, that splendid young cavalry leader who fell in the battle of Fredericksburg in the preceding December, and whom I succeeded on the field. They were well drilled and disciplined, and had done excellent service under their late and much lamented leader.

In the early part of June, 1863, the Confederate cavalry corps was assembled about Brandy Station and in front of that point on the Rappahannock. The final grand review of this corps by General Lee was made on June 8th, its effective strength being estimated at above nine thousand five hundred men. General Hooker, commanding the Army of the Potomac, from reports received, was satisfied that General Lee was withdrawing his army from Fredericksburg, and was anxious to ascertain the direction of the movement contemplated. In furtherance of his desire, he ordered General Pleasonton, then commanding the cavalry corps, to make a reconnaissance in force towards Culpeper. The order of the corps commander, issued on June 8th, directed that General Buford, with the First Division and the Regular Brigade, supported by 1,500 infantry under General Ames, would cross the Rappahannock at Beverly Ford on the morning of the 9th, and that I, in command of the Second and Third Divisions, with their batteries and 1,500 infantry, would cross at Kelly's Ford, six miles below, at daylight. These two commands were expected to unite at Brandy Station, distant from the river about six miles, and from there move together upon Culpeper.

Preparing for an early movement across the river on the morrow, General Stuart, ignorant of the concentration of our troops on the opposite side, had assembled his in the vicinity of Beverly Ford, his horse artillery bivouacked close to it.

The attack of General Buford, commenced at a very early hour on the 9th, was a complete surprise to the enemy. But for the prompt withdrawal of Stuart's batteries they would have been captured. His grand guard was able to oppose sufficient resistance to Buford's determined advance to accomplish the formation of a new line with his assembled brigades near St. James' Church, and here an obstinate contest was maintained for more than two hours without any decided advantage to either party. The Second and Third Divisions, under my command, bivouacked on the night of the 8th in rear of Kelly's Ford; the Second some distance behind the Third. No fires were allowed. Colonel Duffié, commanding the Second Division, was ordered to be at the crossing at daylight and to proceed directly upon Stevensburg. His unnecessary delay in reaching the ford seriously interfered with the movement. His division across, the Third promptly followed. Whilst crossing, the heavy firing of artillery heard from above, indicated that Buford was engaged, and our column was pushed forward as rapidly as possible. Felled trees and other obstructions in the road interfered with the march. The Second Division proceeded directly to Stevensburg, but the Third, under my immediate command, when directly south of Brandy Station, turned to the right and followed a road leading to that point. As the head of the column emerged from the woods on the open plain in front of the station, it was greeted with shots from a gun placed there. The leading brigade, under Colonel Wyndham, was promptly formed, the fire from Fleetwood Hill was replied to by a section with the brigade, and the latter moved forward with drawn sabers to charge the force at the hill.

General Stuart, on learning that a force had appeared in his rear at Brandy Station, hurried hither with Hampton's and Jones' brigades and artillery. The charge of Wyndham's brigade was gallantly made and was successful, but before it could be re-formed, a brigade of the enemy charged it in turn and it was driven back. Kilpatrick's brigade was then ordered forward, and in a determined charge drove the enemy back and occupied the coveted hill. Hampton's brigade now



appeared coming from the right, well aligned, at rapid gait. At first sight I thought it a part of General Buford's command coming to join me, but I was soon undeceived, as it was quickly plunged into the battle raging about the hill.

Kilpatrick's brigade had been ordered forward to the support of Wyndham, and now the fight became general. The scene presented on the hill and on the wide plain in front was inspiring and wildly exciting. Charges and countercharges, guns captured and recaptured, the roar of sound made by the hurrahs and shouts of the contestants, the clanking of sabers and the rattle of pistol firing, all contributed to an excitement not heretofore experienced. The distinguishing colors of blue and gray were effaced by the fearful dust that settled upon all alike, making it difficult to distinguish friend from foe in the general mixup.

On the opening of the battle I sent an order to Colonel Duffié to at once bring his division from Stevensburg, about five miles distant, to join me at Brandy Station. This was not done for the reason, as was given by him, that his command became engaged with two of the enemy's regiments, which he successfully defeated. The contest of the Third Division at Brandy Station was maintained with great fury for an hour and a half, when it was reported to me that cars laden with infantry from Culpeper were approaching. Without any support, for General Russell's infantry was not seen during the day, largely outnumbered by the enemy's force, the division was withdrawn and re-formed on the edge of the plain about a mile south of the station, the enemy not following.

Learning that General Russell's infantry had joined General Buford's left, the Third Division was marched towards the Rappahannock, reported to General Pleasonton, and at about sunset crossed the river at Rappahannock Station ford. The object of the reconnaissance had been fully accomplished. General Stuart did not start on a raid on the morrow. Longstreet's corps was known to be at Culpeper. The total strength of the Third Division in this action was 2,400. The loss in killed, wounded and missing 376. It captured eight commissioned officers and 107 enlisted men and two battle

flags. A section of Captain J. W. Martin's Sixth New York Battery, serving with Wyndham's brigade, and around and over which the fiercest of the contest settled, was finally held by the enemy, one piece being disabled.

In the camp of the Third Division, after a day of intense excitement, there prevailed a feeling of great satisfaction. The enemy had been met on a fair field with the odds in his favor, and yet we had maintained our own against him, and, conscious of our strength, were eager for further trials with him. Major H. B. McClellan, Assistant Adjutant General to General Stuart, who first learned of the movement of the Third Division and gave the information to his chief, in a published account says: "The fight at Brandy Station, or 'the battle of Fleetwood,' as Stuart called it, was one of the most splendid passages at arms which the war furnished;" and again he says: "One result of incalculable importance certainly did follow this battle, it made the Federal cavalry."

On June 11th the cavalry corps was reorganized and formed in two divisions, the First to be commanded by Brigadier General John Buford; the Second, formed of the then Second and Third Divisions and to consist of three brigades, to be commanded by Brigadier General D. McM. Gregg. Its brigades formed as follows: First, Colonel J. B. McIntosh commanding; First New Jersey, First Pennsylvania, Third Pennsylvania, First Maryland, First Massachusetts. Second Brigade, Colonel Judson Kilpatrick commanding; Second New York, Fourth New York, Eighth Pennsylvania, Sixth Ohio. Third Brigade, Colonel J. Irvin Gregg commanding; First Maine, Tenth New York, Fourth Pennsylvania, Sixteenth Pennsylvania.

In the movement northward of the two opposing armies the Confederate cavalry was employed to screen and protect the right flank of General Lee's army, whilst the Union cavalry was employed on the left and rear of its main army for observation and defense. On June 15th General Pleasonton with his corps began his march.

On the 17th, when some nine miles from Aldie, the corps commander ordered me to send forward my leading brigade (General Kilpatrick's) to pass through that village, and thence



towards Front Royal, and later to join its division at Nolan's Ferry. Within less than a mile of Aldie the advance guard of the enemy was met, and it was soon ascertained that it was no mere scouting party, but that a large force had been met. Proper dispositions were made and the attack began, and soon involved the entire brigade. The First and Third brigades having arrived, were formed in support, and the necessity of reinforcing Kilpatrick being apparent, I sent forward the First Maine. This regiment gallantly charged at a critical moment and not without severe loss in killed and wounded (among the former its brave Colonel Douty, who led the charge). The action was very severe, but it resulted in the rout of the enemy, General Fitz Lee's brigade.

On the morning of the 19th Colonel Irvin Gregg's Third Brigade advanced upon Middleburg, which was occupied by the enemy (Lee's and Robertson's brigades), and then ensued a desperate struggle, which resulted in the withdrawal of the enemy, leaving his dead and wounded on the field. A large number of prisoners fell into our hands. On the morning of the 21st, Major General Pleasonton, commanding the corps, determined to attack. I was directed to make a feint with the Second Division on the turnpike leading to Upperville, General Buford's division moving to the right to attack on the flank. General Kilpatrick's brigade with a line of skirmishers moved forward and drew the fire of the enemy's artillery, the skirmishers of the opposing forces engaged, and an hour later an advance was ordered. So rapid was this, that the enemy was compelled to abandon a gun and caisson which had been disabled. Driven from one position to another, the enemy made a determined stand at Goose Creek, but the appearance of the skirmishers of Vincent's infantry brigade and a charge of two mounted regiments across the bridge compelled an abandonment of their strong position and a rapid retreat to Upperville, where the enemy's forces were massed. Here Kilpatrick determinedly charged with his brigade, but was repulsed. The Regular Brigade having joined our column at Goose Creek, now joined with Kilpatrick and a united charge resulted in the enemy being driven through and beyond the town and his final retreat to Ashby's

Gap. Hampton's and Robertson's brigades were those opposed to us on the turnpike, whilst Jones' and W. H. F. Lee's were met by General Buford's command on a parallel road to the right.

The limits of this paper do not admit of proper description of these three encounters with the enemy. In no instance was the force engaged on our part less than a brigade. In all the troops behaved with the greatest gallantry. Our losses in killed and wounded were very severe, the enemy's equally great. The engagement at Upperville presented a very inspiring, spectacular effect. On two parallel roads, in view of each other, were two columns of our troops engaged in battle and both successfully, and then the final converging of the columns and the retreat of the enemy before them as the sun was sinking behind the nearby mountain, made a glorious ending to a day filled with the incident and excitement of battle.

And now for a time the Second Division is to part with an enemy with whom it has had some trials of strength, whose prowess it does not underestimate, and whom it is destined to meet on many fields in the ensuing years of war. The division crossed the Potomac at Edwards' Ferry just before nightfall on the 27th inst., marched all night and on the 28th reached Frederick, Maryland. A third division was now added to the cavalry corps by the joining of Stahl's cavalry, and General Kilpatrick was placed in command. Passing through New Market, Liberty, Westminster and Manchester, the Second Division reached Hanover Junction on July 1st at about noon. The Second Brigade was sent back to Westminster to guard the wagon train of the army. The uncertainty of the enemy's whereabouts and intentions with reference to the line of the Susquehanna, led to the receipt by me of orders at Hanover Junction in rather quick succession. First, to move towards Baltimore; having marched far enough to get the column well on the road, another came from corps headquarters to proceed to York; counter-marching and passing the junction, a third order was received to move at once to Gettysburg. Leaving the junction for the last time, the division reached Hanover about one o'clock on the morning



of the 2d, and after a brief rest, the march was resumed and continued towards Gettysburg until halted at about noon by striking a line of the enemy's skirmishers at Brinkerhoff's Ridge, about two miles east of Gettysburg, where a brisk skirmish ensued, in which the fire of the carbines of our regiments engaged compelled the withdrawal of the enemy's skirmishers to a position of safety.

Having reported the arrival of the division, an order was received from the corps commander to remain in position, to see that our right and rear were not turned without giving timely information. At about 10 P. M. the two brigades moved to the Baltimore turnpike at the White Run crossing and near the park of the reserve artillery and ammunition trains, to secure rations and forage. A few hours' rest were greatly enjoyed by the tired horses and men. Early on the morning of July 3d, an aid-de-camp of Major General Pleasonton arrived at my headquarters with directions that I should accompany him to a position on the turnpike between that I occupied and Cemetery Hill. Reaching there, I was informed that in the event of any contemplated change in the position of the troops in the front, I would be notified to occupy the field pointed out, and pending this I should hold my command in its present position. I then requested the aid-de-camp to return to General Pleasonton and to state to him that I regarded the situation on the right of our army as exceedingly perilous; that I was familiar with the character of the country east of Brinkerhoff's Ridge, that it was open, and that there were two roads leading from the Hanover Road to the Baltimore Turnpike; that if these were not covered by a sufficient force of cavalry it would be to invite an attack upon our rear with possibly disastrous results. This aid-de-camp soon returned with an order authorizing me to send one of General Kilpatrick's brigades to take position on our right. Two of the brigades had left their camp to take position on the left, but General Custer's, the strongest, was still at its bivouac, which it had reached just before dawn. By my order, it proceeded to the right of our line and occupied an admirable position between the Hanover and Low Dutch roads, about three miles east of Gettysburg, and where it

rendered such magnificent service in the engagement of the afternoon. Afterwards, an order was received directing me to push some force into the woods on the right of our infantry, but no results of importance followed this movement.

At 12 o'clock I received from corps headquarters a copy of a dispatch sent by General Howard, commanding the Eleventh Corps, to General Meade, informing him that large columns of the enemy's cavalry were moving towards the right of our line. In transmitting this, General Pleasonton directed me to proceed to the right with my two brigades, and upon my arrival to relieve General Custer, and direct him to report to his division on the extreme left. Reaching his position, General McIntosh's brigade was sent forward to relieve General Custer. It was soon discovered that the enemy occupied a position in front in great force. General Custer expressed the opinion that I would soon have a big fight on my hands. In reply, I stated that if such was his opinion, I would like to have the assistance of his brigade. To this he answered, "If you will give me an order to remain I will only be too happy to do it." The order was given and soon the fight was on.

General Stuart's command consisted of four brigades and three batteries. The main body was massed in an opening just over the crest of a ridge known as Cress', lying between the York Pike and the Hanover Road, and was screened from view by a skirting of timber. From the foot of this, the country to and beyond the Hanover Road was gradually sloping and embraced cleared fields with occasional fences. A fair field for mounted cavalry operations on which were arrayed for combat two forces: Of the Confederates, four brigades and three batteries. Of the Union, three brigades and two batteries. Of the latter Colonel J. Irvin Gregg's was held in reserve, and from it a strong line of pickets extended to the right of our infantry, and the remainder was not engaged in the fight for reasons hereafter given. Of Colonel McIntosh's brigade there were present but three regiments, and one of these, the First Maryland, was placed by me at the intersection of the Low Dutch and Hanover Roads to guard that flank. But six Union regiments participated, not exceeding 3,000 men. The enemy had the advantage in



position, occupying the higher grounds and concealed from our view by the screen of woods. A pressing forward of the skirmishers of the First New Jersey compelled a reinforcement of the Confederate line and an opening of fire by a battery, and soon the First New Jersey, Third Pennsylvania, Fifth and Sixth Michigan became hotly engaged.

It is not my intention to give in detail all the phases of contention in that part of the field. The enemy was forced to employ one brigade after another until all were engaged. His batteries were replied to by Randol's and Pennington's with great accuracy and effect. A charge of the First Virginia was met by the Seventh Michigan, but a stone fence prevented their striking, and the halt exposed the former to a withering fire from the flanks as well as from the front. Soon there appeared emerging from the woods a large force advancing in fine style. It was evident that a grand charge was intended. It was about the hour when Pickett was advancing against the center of our line of battle. The roar of the artillery fire preceding his desperate movement had ceased; the supreme moment was at hand. On came the column in squadrons well aligned, with drawn sabers glistening in the sunlight. On they came with increasing gait, exposed to the fire of our batteries, but no wavering. Exposed to attack in flank, they still press on. The First Michigan being in reserve, was ordered by me to charge the head of the advancing column. General Custer, placing himself at the side of Colonel Town, led the charge. The Confederate column changed direction slightly with the view of taking Randol's battery, but the rapid discharge of canister from his guns compelled hesitation at the very moment the First Michigan struck the head of the column. Then ensued a most exciting combat amid yells and cheers. Then came together two mighty forces, one of which had to yield, and it was not that directed by Custer and Town. The defeated column turned in retreat and was again assailed in flank, as it had been in its advance, by the Third Pennsylvania, First New Jersey, and the Fifth and Sixth Michigan regiments. The pursuit was kept up to Rummel's barn, and as night was fast approaching, the engagement terminated in a desul-

tory firing on the picket lines, ours holding the advanced position.

Of the troops engaged on the field the preponderance in numbers was largely in favor of the Confederates. Our total loss in killed, wounded and missing was 254, the bulk of this loss falling on the Michigan brigade. When official reports were made, the victory in the engagement was claimed by both commanders. To whom does it fairly belong? Let General Stuart's report decide the question. I quote from this: "I moved the command (Jenkins' brigade) and W. H. F. Lee's secretly through the woods to a position, and hoped to effect a surprise upon the enemy's rear;" and again, "My plan was to employ the enemy in front with sharpshooters and move a command of cavalry upon the left flank from the position held by me;" again, "Notwithstanding the favorable results attained, I would have preferred a different method of attack as already indicated, but I soon saw that entanglement by the force of circumstances narrated was unavoidable, and determined to make the best fight possible."

General Stuart had in view the accomplishment of certain purposes; his plans were disarranged by being compelled to enter into a fierce encounter with a smaller force of Union troops. His was to do, ours to prevent. Could he have reached the rear of our army with his force of perhaps 6,000 bold and tried troopers, disastrous consequences might have resulted. It was in anticipation of a possible attempt of the enemy to force his way to our rear, between our position and the right of our infantry, that Colonel J. Irvin Gregg's brigade was held in reserve to meet such a movement. In this engagement all of the regiments, those of the Second Division and Custer's brigade, behaved with great gallantry and were ably handled by their own and their brigade commanders. Never were batteries more effectively served than were Randol's and Pennington's. The battle of Gettysburg was ended, and for some ten days thereafter the three brigades of the Second Division were separated in the pursuit of the enemy.

On the 14th, in obedience to orders, I proceeded with two brigades to Harper's Ferry, where a ponton bridge would



be laid across the Potomac. After crossing this, my orders were to get among the enemy's wagon trains, these being unprotected, as his army was still north of the Potomac. At Harper's Ferry I received notice from the corps commander that Lee's army had crossed into Virginia, and I was required to ascertain what direction it had taken and to harass it as much as possible. At Shepardstown, on the 16th, my two brigades were confronted by Fitz Lee's brigade, supported by that of Chambliss, and later by that of Jenkins. Severe fighting followed and was maintained with heavy loss to both sides until dark. The enemy expected to renew the attack next morning. Colonel Huey arrived with his brigade some time after dark by a road along the river, the only one not strongly held by the enemy. At about 11 o'clock the division moved by this road to Harper's Ferry unmolested by the enemy. The loss in killed and wounded was severe, and fell about equally on the forces engaged.

This ended the Gettysburg campaign. The regiments of the Second Division participated in its opening at Brandy Station, followed it through Aldie, Middleburg and Upperville, the main battle at Gettysburg, and ended it at Shepardstown.

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READING, PA., April 25, 1907.

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NOTE.— The foregoing paper was read before the Pennsylvania Commandery of the Loyal Legion, and is republished by the kind permission of the Recorder of that Commandery.

# MESS OUTFIT FOR PACK TRANSPORTATION.

By Captain G. E. STOCKLE, Eighth Cavalry.

THE Stockle-Smith mess outfit, as designed by Captain G. E. Stockle, Eighth Cavalry, and Mora Smith, chief packer Philippine Division, is calculated to provide cooking facilities for a troop of one hundred men, but may be subdivided for detachments of lesser strength. It, with two ration boxes, is carried on two mules or conveniently packed in wagons. It consists of two mess boxes and two ration boxes, described as follows:

Each mess box (see Figure 1) is made of ¾-inch clear white pine, or other suitable wood, of the dimensions shown in cut, has an iron projection or stud at each corner ½ inch square and ¼ inch high, weighs twenty pounds, and contains the following utensils: One boiler and lid, weight 13.25 pounds; two bake pans, weight 11.6 pounds; two buckets with rope bails, weight 10.5 pounds; two kettles, weight 10.5 pounds; grate with removable legs, weight 9.33 pounds; dippers, grate legs, towels, etc., weight 10.5 pounds; and the various handles, three Stonebridge automatic folding lanterns, can openers and candles, weight 6.75 pounds; total weight, 92.4 pounds.

The boiler is of $\frac{1}{32}$-inch sheet iron, riveted as shown in Figure 2, has the top edge reënforced with $\frac{1}{10}$-inch rod, has a flat cover with a removable handle and a corrugation around the outer edge, as shown in the section of the lid, to fit over the edge of the boiler. One bake pan is of the shape and dimensions shown in Figure 3, is made of $\frac{1}{32}$-inch sheet steel, and has attached handles which fold under. The other bake pan which nests in the first is of the same design and material, but has its dimensions ¼ inch less in all directions. The two buckets, as shown in Figure 4, are made of sheet



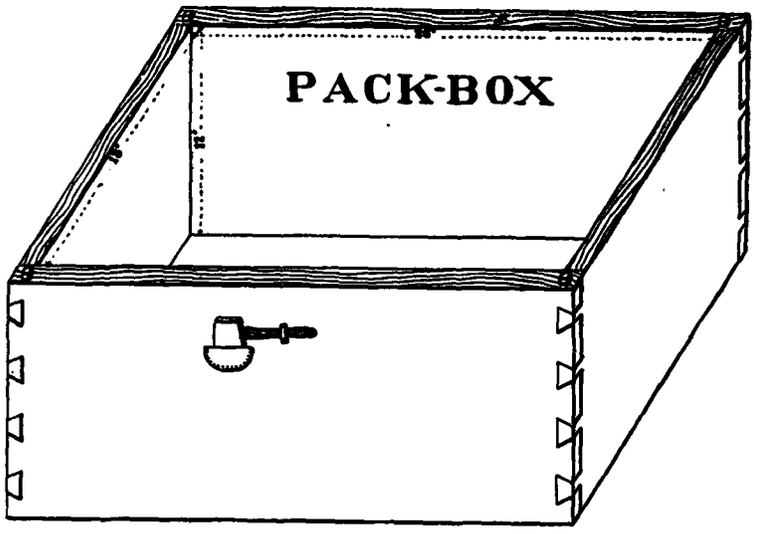
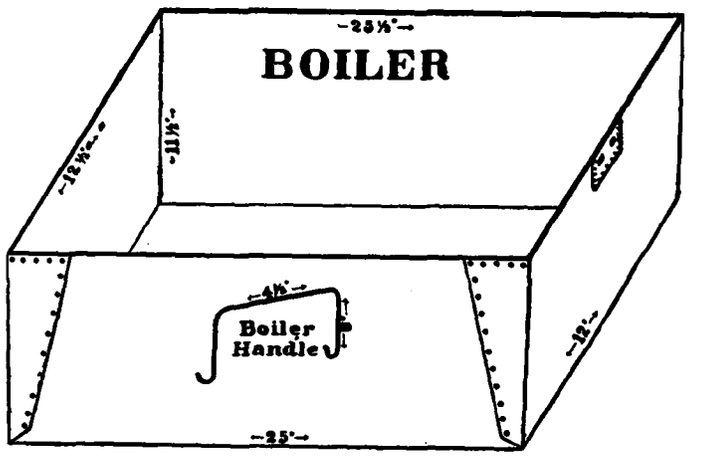



Figure 1.




Cross Section of Lid 25⅞ X 12⅞

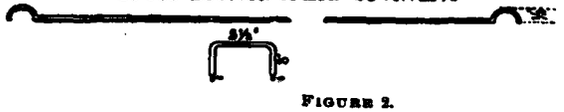


Figure 2.

iron with a removable bail and the rim reënforced similar to the boiler, the holes for the bails also being reënforced. The two kettles are of the same shape as the bucket and

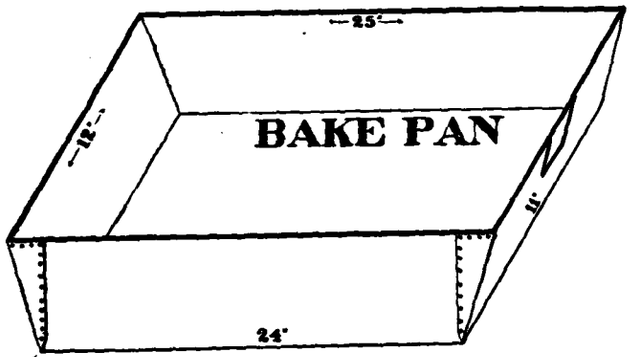



FIGURE 3.

differ from them only in size, they being ¼ inch smaller in all dimensions, the handles and reënforcement being the same as for the boiler.

The grate is made of wrought iron (see Figure 5), the rim being 1 inch by ¼ inch and the cross bars ½ inch by ⅛ inch. There are six legs 8 inches long, with mortises at the top ½ inch square and ¼ inch high that fit in corresponding sockets in the grate. The legs are 1 inch in diameter at the top and taper to ½ inch at the bottom. The six legs when removed from the grate fit in loops in a canvas roll, which is 15 inches long and 12 inches wide. Another canvas roll, 18 inches by 12 inches, has loops for a basting spoon, meat fork, two butcher knives and a steel.

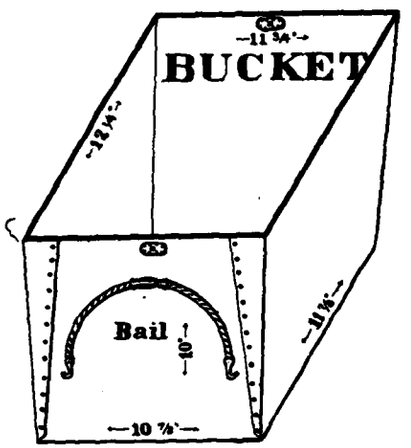
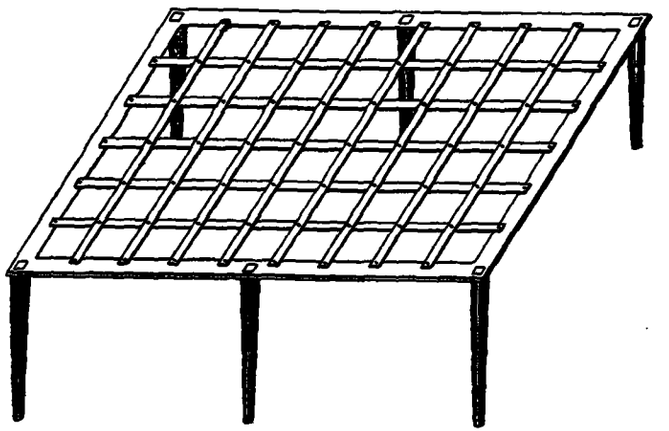



FIGURE 4.



To pack a mess box, remove the handle from the boiler lid and place the lid in the bottom of the box, place the boiler in the box on the lid, nest the bake pans and place them in the boiler, remove the bails from the buckets and nest a kettle in each bucket and place the buckets, side by side, in the bake pans. The spoon, fork, knives and steel are inserted in proper loops in the canvas roll, the roll made up and buckled and placed diagonally across the bottom of one



GRATE

FIGURE 5.

of the kettles. The grate legs are similarly fitted into their loops, the large and small ends alternating, the roll made up and placed in the kettle alongside of the first roll. The dish towels are put in a light canvas bag and placed in the kettle on the other side of the first roll. Two dippers, fifteen inches long, are placed in this kettle, and it is then filled with dry hay, straw, grass or leaves to prevent rattling and for use in starting a fire at the next camp if it should be wet. The three lanterns are folded and placed in the second kettle, and the boiler lid handle, boiler handles and bucket bails, after being put in a light canvas bag, are put in this second kettle, as are also the can openers, which are in another canvas bag.

This kettle is then filled with hay, straw or grass. The grate is then fitted on top of the mess box, the mortises on the corners of the box fitting into the corresponding sockets in the corners of the grate frame. Manta up.

The head of a pick is knocked from the handle, and these, with an axe and spade are mantaed for a top pack, their weight being nineteen pounds, the total weight on the mess mule being 294 pounds.

## RATION BOX

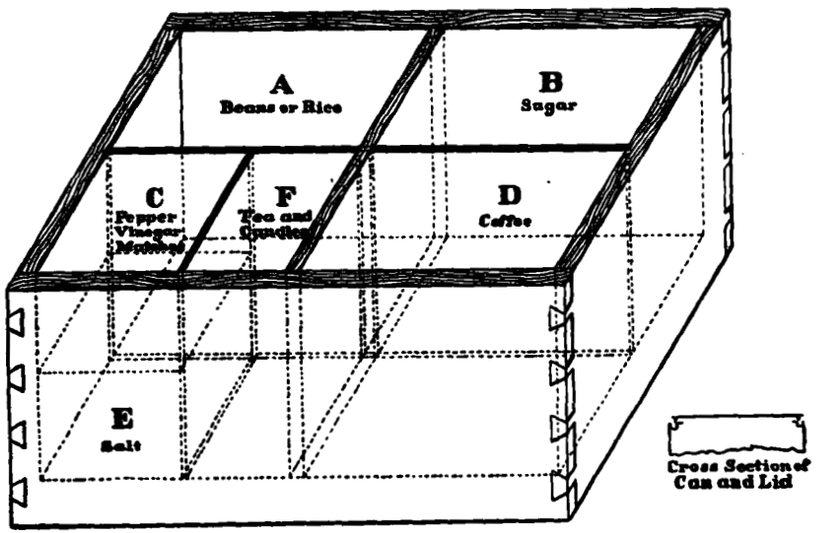



FIGURE 6.

Use of the mess utensils: The boiler for sterilizing drinking water and for boiling vegetables or meat; the bake pans for frying or, by using two—one inverted over the other—for baking or roasting meats, baking bread, beans, macaroni, etc; the kettles are used for boiling water, making coffee or tea, or cooking rice, stew, etc. The buckets may be used as kettles. The use of the other utensils is obvious.

Each ration box is made of the same material and of the same dimensions as the mess box, but has partitions as follows and as shown in Figure 6: There is an inch partition across the middle of the box, and another ½-inch partition lengthwise, thus dividing the box into four equal compartments. One of these is divided by a ½-inch partition into two equal smaller compartments. Thus there will be three of the larger compartments, each being 12½ inches by 6¼ inches by 12 inches deep, and the two smaller compartments each being 6¼ inches by 6 inches by 6 inches deep.



FIGURE 7.

Each of the larger compartments and one of the smaller contains a can with a tight fitting cover, and the cans "A," "B," "E" and "D" also being lined with a bag lining. The can "C" rests on the can "E." Each of the ration boxes when filled holds 150 rations of beans or rice, sugar, coffee, salt, tea and pepper. It also holds two quarts of vinegar, one package—twelve boxes—of safety matches and a pound of candles. The matches are in a tight tin box and the vinegar in two screw top, wicker covered flasks. The bags are used in the cans so that they may be easily removed and cleaned. The ration boxes are intended to carry only the loose rations, and would never be of the maximum weight

except the first day out and when replenished from the packs or trains. They keep the rations dry and clean and are convenient for the cooks. The weight of each ration box, cans and contents is 120.75 pounds.

On top of each box, before mantaing up, is placed a Mora Smith water bag. This adds twelve pounds to the ration mule's load, making it 253.75 pounds the first day out, which, however, is being continually reduced as rations are used.

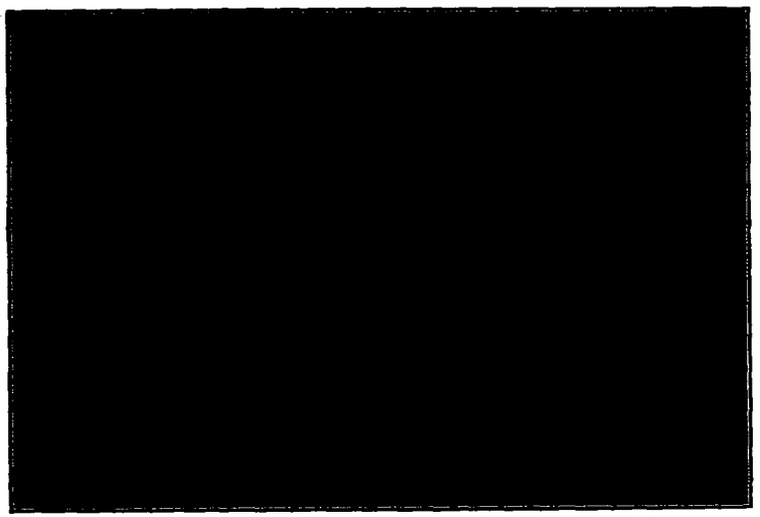


FIGURE 8.

The water bag, shown in Figure 7, is made of 12-ounce canvas, water proofed, the saddle portion being 21 inches long and 8 inches wide on either side, and the bags are 28 inches deep, with round bottoms, and the opening is closed with a flap to be rolled and held down by the lashings when on the mule.

A modification of the flap, on one made for me at the Cavite Navy Yard, has a canvas funnel in the opening which, when the bag is filled, is drawn out and rolled, which entirely prevents slopping.

This bag has been tested in service in Jolo, and proves



to have many advantages. Its capacity is twenty gallons; it has portability and less danger of rupture than has the ordinary galvanized can, and ten of these water bags can be carried to one G. I. can. It is easily handled and is convenient at the cook fire, as it will stand braced by a stick until empty. (See Figure 8.) It can be used on a bareback horse and would be invaluable in bringing water to the firing line or to the dressing stations.

The drawings were made by Sergeant Bertus G. Havens, Troop H, Eighth Cavalry.

# CIRCULATING LIBRARY FOR CAVALRY AND INFANTRY OFFICERS.

By Captain WILLIAM T. LITTEBRANT, Twelfth Cavalry.

If, therefore, theoretical science alone will never lead us to victory, we must not altogether neglect it. General Von Willisen rightly said: "There is always one step from knowing to doing, but it is a step from knowing and not one from not knowing."—*Von Caemmerer.*

A CASUAL scrutiny of the list of officers of every branch of the service will convince one that with the exception of the few physically disabled, all are energetic and anxious to accomplish something. An examination of their work on the drill ground exhibits the same devotion to duty, but the results often do not bespeak the use of talents properly cultivated for the particular work in hand. Every command varies according to the individuals in the command or according to the commanding officer. Individuals in a command vary naturally according to their own personal equation. An officer's success on the drill or maneuver field is determined by his cultivated intelligence and judgment. It admits of no argument that an officer who has no college education is handicapped. He may possess native ability that counter-balances this deficiency, but how much better officer would he be had his natural intelligence been cultivated by a preliminary college training? A man's judgment is a gift, subject to cultivation. That one is an officer in the cavalry does not argue that he was intended by nature's God to be a cavalry officer and nothing else. The cavalry, just as other professions in life, contains its due proportion of officers, no doubt, who, so far as the results attained by the cav-



alry indicate, would better adorn some other profession or calling. These deficiencies are physical, moral and mental.

Physical and moral: Some cavalry officers, very few I am glad to say, cannot ride with the confidence and pleasure that one on top of a horse—the right kind of a horse—should experience. This discordant note must have its effect upon every thought conceived and every utterance made while the lack of sympathy exists. Some, also, very, very few, have not, and therefore never exhibit any love for the noble steed. The former trait can be improved by practice; the latter, never; the former evil can be corrected in a measure by a commanding officer; the latter can be corrected by no one. But just as these traits exist, by just that much is a cavalry command deficient.

The mental deficiencies are those, however, that are subject to correction, and the means of accomplishing this laudable object is the purpose of these lines.

Military officers without a knowledge of the development and application of the art or science of warfare acquired either by study or observation are truly ignorant. One whose knowledge is limited through lack of study or limited capabilities either for retention of information through study or for seeking opportunities for observing practical illustrations of warfare and appropriating their lessons is doubly unfortunate, and in this era must inevitably fall behind. It must be recognized as a fact that an officer must progress lest he fall behind. Anything that exercises the mental faculties is beneficial and improves the judgment, which is the corner-stone of an officer's success.

General Order 145, War Department, August 16, 1906, specifies that one officer from each cavalry and infantry regiment will be detailed to take the course annually at the Infantry and Cavalry School. There are details at other schools for cavalry and infantry, such as the school at Fort Riley; the Signal School and the Torpedo School; but however large they be, the fact remains that the increment to the army is not taken care of, and ninety-five per cent. of the officers below the rank of major have no hope of ever passing through any

service school. The question arises as to the best means of enabling all who are not of the elect to obtain the highest professional standard through other means than those now so sparingly provided.

The Medical Department keeps members of that corps supplied with technical works pertaining to their profession and, further, conducts a circulating library of current medical literature to keep its members abreast of the times.

The thought has occurred to me that it would be a wise scheme to have a circulating library for the line. To be sure there is a fine military library in Washington to which all officers have access, but we all know two things: (1) That no one can tell anything about the merits of a book from its title; (2) that officers as a class will not take the trouble to send for books of the merit of which they are ignorant. The books must be placed in their hands!

Therefore it is suggested that a circulating library association be organized. 1st. That cavalry or cavalry and infantry officers contribute $1.00 monthly for eighteen months. The contribution for the first six months, $6.00, paid as a first contribution, en bloc; 2d. That officers be grouped into circles of such number as experience determines to be most advantageous — say eleven. This will then produce a fund of $60.00 for that circle immediately, allowing $6.00 for shipment of books. With $60.00 can be purchased twenty $3.00 professional books or from fifteen to thirty professional books of varying prices — surely enough literature to keep the contributors supplied with the best for full six months.

If two circles of officers be organized, a different series of books may be purchased with the contributions for each circle, so a third series for a third circle. Members of each circle will be in one post. If a post be large there may be two or more circles organized there. A book will be transmitted from member to member in the circle until all will have read each book or passed it. Records of receipt and delivery to be made on a slip pasted on inside of cover.

There should be a time limit set on the use of each book, depending on the number of pages in the volume and its quality; for instance, a book like Hamley's "Operations of War" would require twice as much time to digest as the same number of pages of Napier's "Peninsular War."



It may be necessary to duplicate some of the lists or books. This depends on the knowledge of the purchasing committee, though it is thought that a sufficient number of good military works may be selected to avoid such necessity.

As far as possible there should be one circuit in each post. After one circle has completed a series of books, the secretary of that circle will bundle them up and ship them to the secretary of the association or transmit them to an adjacent circle, receipt being received and notification being sent to the association secretary. This policy is carried out continually, so that subscribers may always have books at hand.

Thus it will be observed that in a comparatively brief space of time the association will have a valuable series of books and its members will be kept abreast of current changes and theories.

Periodical publications will not answer the purpose.

Applicants for membership will advance as much as existing members will have advanced, so that all will have an equal claim. It is believed that with a large membership contributions will after the expiration of eighteen months cease.

After this time, whenever necessary to meet the expenses of purchase of new works, an assessment not in excess of $1.00 to be levied upon each member. There will be certain expenses attaching to rebinding of worn books; this will be deducted from the sum total of contributions.

The purchase of books should be limited to strictly professional books; by this is meant those that will improve the professional qualifications of officers; fiction strictly barred. Books of reference, such as encyclopedias and dictionaries, except French-English, German-English, Spanish-English dictionaries, likewise, because they would have only a local use to the library, whereas this is essentially for the use of officers who live at outlying stations, whose source of information must be condensed and in small volumes.

Classification suggested:

1st. Broadly speaking, books treating of tactics and strategy in their ramifications, such as minor tactics in its phases, campaigns and their plates, tactical studies and criticisms, strategical studies and criticisms. Under this head would be included works embracing in range and variety such works as Clausewitz, Baden-Powell and Wagner. Tactical and strategical discussions, such as, for example, set forth in the series published by Spooner of Leavenworth. The analyses of campaigns and battles as set forth, for example, by Wagner, Greene, Jomini, Napier, Hamley and Home. Handbooks such as Beach's, Woolsey's, engineering handbooks or aide-memoirs.

2d. Biographical and historical, including lives of history-makers, books that even enter into the political motives and results, lives of great soldiers such as Alexander, Cæsar, Frederick, Napoleon, Wellington, Washington, Grant, Lee, and others, maybe, of less fame, but the study of whose careers may produce valuable results. Plutarch's Lives, Motley's Dutch Republic, Thiers' France, Alison's History of Europe, Napier's Peninsular War, Gibbon's Rome, Josephus, etc.

3d. Veterinary science, hippology and materia medica The course of reading in hippology might be supplemented by the War Department supplying to headquarters of every post a complete set of cards of ample size upon which are pasted the various grasses used for forage, such as timothy; the various poisonous plants eaten by stock, such as "loco weed." This information is now copiously supplied in publications by the Agricultural Department, but this is not sufficient. When one actually sees a plant he will know it the next time he sees it; when he sees the picture, well, he will not know it when he sees it. The grains in their various qualities should likewise be supplied in small boxes about 4x4x4 inches. This for the instruction of officers, and to be kept in the adjutant's office or room used for the officers' assembly. In every post where there is a veterinary surgeon the post commander should construct a rude operating table



of some of the surplus lumber thereabouts and protect it from the sun and rain by a paulin on a properly constructed framework. Here the veterinary should hold clinics upon everything that dies. All cavalry lieutenants and captains of less than twenty years commissioned service should be required to attend, and eventually to handle the knife until they are qualified to pass a regular veterinary examination.

4th. Geographical; covering books upon all countries whose products, people, government or interests, on account of their similarity to those of our country or our outlying possessions, possess an interest for our officers.

5th. Law—international, military and civil, especially those pertaining to laws of evidence. Eventually under this heading might be kept a complete series of law books, or several series, so that members might pursue a complete course of law, although, in general, it is not contemplated that technical works other than those exclusively military be purchased.

Location, (1) Washington, (2) Fort Leavenworth.

1st. Advantages. The library of the Military Information Bureau, together with the libraries in the War College and various offices of the War Department, aside from the magnificent Congressional Library, will give the librarian in charge a magnificent field from which to draw his knowledge of books and contents, thereby running little risk of purchasing books without merit. This library should be an adjunct of the War Department, thereby enabling the subscribers to secure and send books under the official frank. This will be an item worth consideration.

2d. (*a*) The advantages of the location at Fort Leavenworth partake of those of the Washington location only in a minor degree, the school library being alone available as a model, but this advantage is limited, for in a comparatively short time the subscription library will surpass the school library in desirable books.

(*b*) The franking privilege of course cannot be availed of at Leavenworth.

There should be a Philippine branch, headquarters located in the Military Information Bureau at Headquarters Division, P. I. Books should be freely interchanged between the two headquarters or duplicated.

The Military Information Bureau in Manila is especially rich in books on the Eastern question. Captain Rivers while in charge acted upon Lord Curzon's suggestion concerning Eastern professional libraries and secured every book worth while. This policy was continued by Captain Michie, and is worthy of emulation.

# APPLIANCES FOR CROSSING STREAMS.

By Major W. C. BROWN, Third U. S. Cavalry.

THE history of the Philippine insurrection abounds in a distressingly large number of accidents by drowning. In the rainy season rivulets became rivers, a failure to cross which meant the failure of the "hike." At the recent division meet in Manila the writer saw made from the soldiers' kit two appliances that seem so useful for crossing streams that it seems a pity that the information should not be published to the army.

The first device might aptly be termed a life preserver pack, and would be used in forcing the crossing of a stream in the presence of the enemy, or when by any possibility he might be encountered on the further bank.

With it the rifle is at all times available, and if the pack be well made the soldier can, on a pinch, use his rifle while floating in an upright position in any depth of water. When ready to put on, the pack weighs about twenty pounds.

Loading and Firing in Ten Feet of Water.

Who originated the idea I am unable to say, but it, like the one of making the ponton described below from the soldier's kit, is too good to be lost. This must be my apology to the originators of these devices for writing them up for the Journal, as I claim no credit whatever in this connection—simply heartily appreciate good work which others have done.

The second device is an improvised boat or ponton, also made entirely with the soldier's kit. The one which the writer saw was devised in Lieutenant W. H. Johnson's company of the Eighth Infantry, and his ideas have been used in preparing a ponton from the cavalry kit. It would be used on practice marches, and under conditions where there was no possibility of an enemy being encountered, and has the advantage that practically everything can be ferried over dry, but the disadvantage that the rifles, for the time being, cannot be used.

Two or more of these pontons may be joined together with strips of bamboo and a raft made which can be used

FLOATING WITHOUT RIFLE.

not only for ferrying over all remaining equipments, rations, etc., but to help to ferry over sick and wounded, or men who cannot swim.

The instructions for making these appliances and photographs showing details of construction are given below.

* * *

## LIFE PRESERVER PACK.

Prepared by Sergeant Ross E. Ray, Troop K, Third Cavalry.

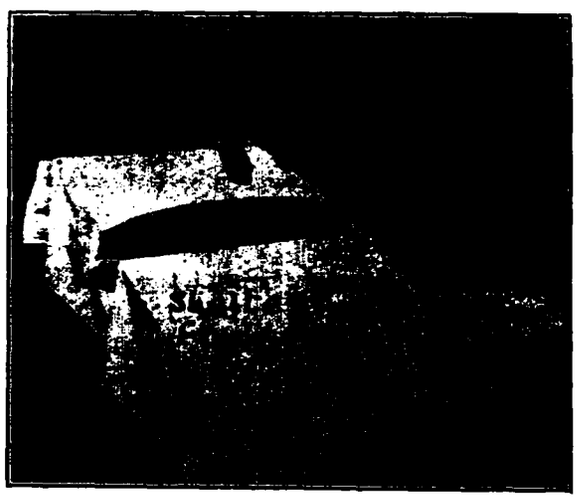
1. Fold the mosquito bar eighteen inches long, place within it the meat can, tin cup, knife, fork and spoon, suit of underclothes, suit of khaki, pair of socks and the emergency ration. Roll this as tightly as possible. (See Plate 1.)

2. Fold the bed blanket once crosswise, bringing the stripes together; place the rolled mosquito bar in the center of the blanket and roll all tightly together. (See Plate 1.)



3. Lay the shelter half on the ground and fold under about ten inches for pocket; now place the blanket at the op-

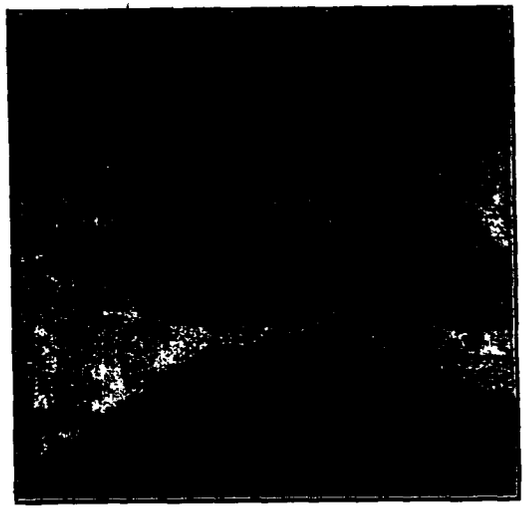
posite edge of the shelter tent, folding the shelter tent ends over the blanket roll, and this all into the pocket, *i. e.*, like rolling the cantle roll. (See Plate 2.)



4. Lay the poncho on the ground and turn under about ten inches on the long side, place the shelter tent roll on the

opposite edge, turn in the edges neatly and roll as tightly as can be. (Takes at least two men to accomplish this properly.)

5. Secure the roll when complete with the shelter tent straps. The two end straps as near to the end as they can be placed, in order to prevent water coming in at the ends. (See Plate 3.)



FINISHED ROLL, BEFORE BEING ATTACHED.

ROLL ATTACHED AND READY FOR USE.

6. Place the roll underneath the arms and around the body, both ends tied securely behind, the field belt with suspenders attached to be put on over the roll to hold it in place. (See Plate 4.)

7. Canteen to be snapped in front in the buckle of the belt to aid in flotation. (See Plate 4.)



## BOAT OR PONTON.

Description of boat or ponton, made from the kits of two soldiers; constructed after the general method shown by First Lieutenant Walter H. Johnson, Eighth Infantry, at the division meet. Prepared by Sergeant Edward E. Payne, Troop K, Third Cavalry.

Articles of which boat is made: One poncho; 2 rifles; 2 sabers and straps; 2 shelter tent poles; 2 shelter tent straps.

Articles contained in boat: Two blanket rolls; 2 saddle blankets; 2 saddle bags, pairs; 2 canteens; 2 field belts; 2 revolvers.

BOAT COMPLETED AND READY FOR LAUNCHING.

Method of making boat or ponton:

1. Fold the poncho once crosswise, bringing the two ends evenly together, the head slit coming in the center of the folded edge. Gather the ends up tightly together, beginning at the center of the folded ends and tie with shelter tent straps. The top edges of poncho to be drawn in tighter than the bottom in order to pull the ends up out of the water. In case the poncho is not wide enough when folded

double, allow one end to lap over so as to allow full width of boat. A folded blanket placed on the poncho forms the bottom of the boat, and on it rests the lower ends of the shelter tent poles hereafter mentioned.

2. Place one rifle in the bottom of the boat, "trigger guard up," to form the keel.

3. Fasten the two shelter tent poles together with saber, about six inches from the end. Place them in center of boat, across the rifle, putting the top end of one pole in head slit of poncho; the opposite to be tied with legging string to hold

BOAT LOADED WITH ALL ACCOUTREMENTS AND HORSE EQUIPMENTS OF TWO TROOPERS. WITH THE SADDLES, HOWEVER, THE BOAT IS TOPHEAVY.

it in place. The second rifle to be placed lengthwise in boat on top of crossed tent poles, "trigger guard down."

4. Place the two sabers in boat lengthwise, one hilt at either end, and the scabbards strapped together in center with saber straps, to act as brace to hold the ends well out.

5. Place the blanket rolls one on either side of boat, underneath the tent poles. The saddle blankets to be stuffed one in either end to fill them out. The other equipments, such as belts, revolvers, canteens and saddle bags to be distributed equally to fill up vacant spaces and to balance the boat.

This boat is improvised from articles by no means intended for boat construction, and is therefore peculiarly liable to accidents.



In order, therefore, to recover the arms, etc., in case of sinking of the boat, one end of each lariat will be made secure to arms, etc., by running through trigger guards and scabbard rings, or otherwise made fast to all articles which will not float; this constitutes practically the boat and all its contents. The remaining parts of lariats are then loosely coiled on the top of the load and the other end attached to

THE BOAT HAS SUFFICIENT BUOYANCY TO SUPPORT A MAN.

the empty canteens, corked, which are so disposed that in case the boat capsizes the canteens will float and act as buoys and enable all articles attached to the lariat to be recovered.

As will be seen by the photographs the boat has still, after all the above mentioned articles have been placed in it, sufficient flotation to support a man.

# AN AMERICAN ARMY RESERVE.

By Captain OLIVER L. SPAULDING, Jr., Fifth Field Artillery.

THE American military policy appears to be firmly settled, those writers to the contrary notwithstanding, who insist that there is no such thing. Its fundamental idea is a small standing army, to be reinforced in time of war by new regiments. Of the latter the State troops are to be the first line; there is no second. Whatever opinion one may have of this policy—and opinions differ widely—we must for the present accept it. The problem is to work out a system on this foundation.

As a first step to the solution of the problem, let us inquire what deficiencies can be discovered in the machinery for realizing this policy. The regular or standing army is intended to take the first shock of war, and gain time for other troops to be raised. Is it strong enough? If not, how can it be made so? The organized militia must reinforce the regular army at once. Is it so constituted that it can do this effectively? If not, what is lacking? There is no definite plan for organizing the reserve militia. What can be done to improve conditions in this respect?

Beyond a doubt, we must answer our first question in the negative. Our regular army is not strong enough for peace duty even; our infantry regiments are going on foreign service with only two years at home. Much less, then, is it sufficient for war.

The natural suggestion is, increase the regular army. Excellent, indeed; by all means increase it. But any increase that the most optimistic could hope for would only relieve the pressure on the peace establishment. Something more is



necessary; some plan by which we may take our peace army, of whatever size that may be, and put it on a war footing.

For we have no war footing. We have laws and regulations, authorizing certain war strengths for the smaller units, and defining how the larger ones are to be constituted; but where is the plan by which the men are to be found to fill the regiments to their paper strength; and where is the plan by which our brigades and divisions are to be organized?

Where is the plan which tells each militia regiment what it is to do and where it is to go? What machinery exists for getting the reserve militia on foot? All these plans must be made — more, they must be learned by the men who are to execute them — in time of peace; and machinery must exist by which these men may be able to execute them.

To sum up: We need, to begin with, a regular army ample for peace duty. Then we need definite arrangements for placing this regular army *promptly* on a war footing — a regular reserve; and every single private in this reserve must know what he has to do on mobilization, and how to do it. We need a system by which the best of the militia regiments may be *promptly* mobilized and incorporated in the larger units; and every militiaman must know all about it. We need a plan for *promptly* organizing the reserve militia; the blue prints, at least, of the necessary machinery must be in existence, and some one must have charge of them, understand the details of them, and be ready to proceed with the construction at a moment's notice.

This is a large order, but let us see what can be done to fill it. Congress is generally ready to help out, if it can once be convinced that a thing is really important.

For a regular reserve, the discharged soldiers must be kept available. This is not all; a disorganized mass of discharged soldiers, scattered about the country and belonging to nothing in particular, would not be promptly available. Every company in the service must have its own reserve list; the reservists must belong to the company, and must live near enough together to permit of their being concentrated and sent to the company in an orderly body. This reserve list must be large enough, not only to fill the company to war

strength, but to utilize to the utmost the expansive power of the company in forming new units.

It is, I think, safe to say that every company, if it had available enough old soldiers, of whom a few were fit to be commissioned lieutenants, could almost immediately expand itself into two companies, each one of which would be almost as efficient as the original company. This expansion, however, would probably approach the elastic limit of the company, and anything more would be dangerous.

Men must, then, be given an opportunity to enlist in the regular reserve on leaving the colors, and the reserve must be grouped on the territorial system. This requires localization of the regular regiments, so that the reservists may go to their regiments in bodies.

Localization of regiments has been talked of from time to time as an independent measure, and has its friends and opponents as such. Here, however, it is not proposed as an independent measure to stand or fall on its own merits, but as a necessity, forced upon us by other considerations.

But to digress a trifle; certain advantages would accrue from localization in itself. This localization would not—could not, with our requirements—mean the permanent stationing of a regiment in a given district. It would mean a local depot for recruits and reservists. This would stimulate local interest and pride in the local regiment, would facilitate recruiting, and would reduce desertion. How many men would desert if they could not go home? And how many deserters would go home if they knew that they would find somewhere thereabouts a lot of men who had served in the same regiment, perhaps in the same company, and who were still connected with the service as reservists?

Let us imagine a local regimental depot, and see what it could do.

To begin with, the whole country must be divided into infantry, cavalry, field artillery and coast artillery recruiting districts. Each regiment would have its territory assigned, probable number and quality of recruits being considered in apportioning it, but State lines being followed when possible; and each coast artillery district would include not only its



present permanent posts, but an appropriate section of country for recruiting. Each of these four series of districts would cover the whole territory of the country, so that a recruit from any given place could get his choice of arm, but would go to a specific regiment of that arm, in the absence of special authority for special enlistments.

Suppose now the First Infantry localized in a given district, say in Maine.

It would have at a convenient place in that district its regimental depot, commanded by a retired major or captain, who had served in the infantry, and if possible in the First Infantry. Under his orders would be, say, two lieutenants on the active list of the regiment, assigned for short tours, so as to give as many young officers as possible experience in the working of the depot; also two retired sergeants for each battalion, one in charge of the accounts and records of recruits, the other in charge of those of reservists.

All retired officers and non-commissioned officers on this duty should get active pay,

Now suppose Private Jones, Company A, First Infantry, completes his enlistment anywhere on earth; he does not desire to reënlist with the colors, but does desire to enlist in the reserve for a period of ten years. He is under thirty-five years of age, sound physically, and has discharge character at least "good." The system having been established for several years, he naturally is a resident of Maine, and wishes to return there.

On his discharge day, Private Jones is ordered to report at the regimental depot; he is furnished such transportation as may be necessary, and paid one-half the value of his final statements; his discharge, and final statements with payment endorsed, are sent by mail to the depot commander. The man reports, receives his discharge and balance due on his final statements, and is enlisted in the reserve. He then proceeds to his home.

He is required to report any change of address within the district; and every three months he is paid $10.00, sending vouchers to the depot. A complete service uniform and equipment is kept for him at the depot. Once a year he is

required to report in person and spend a week in a recruit company; during this time any necessary alteration in his service kit is made at government expense. The government also pays his railway fare to and from the depot; since his residence is within the district, this expense is small. He is allowed to select the time for his week's duty, subject to regulation by the depot commander, who will arrange that the number of reservists on duty with recruits at any one time shall never be so large as to overcrowd the barracks.

He is under obligation to report at the depot ready to join the regiment upon receipt of notice of a proclamation by the President calling out the reserves.

Non-commissioned officers should be permitted to enlist in the reserve in their own grades; their pay should be $20.00 per quarter.

The maximum strength of the reserve of each company should be such number in each grade as will fill the company to war strength and form a second war strength company.

Examinations, chiefly practical, should be held at the depot when necessary, to select lieutenants of reserve. Reserve non-commissioned officers should be eligible, and the number of reserve lieutenants should be as indicated in the mobilization scheme below. Reserve lieutenants should receive $30.00 per quarter.

All the above rates of pay are, of course, only rough estimates. The amount should be such as would induce enlistments.

If a reservist wished to change his residence outside of the district, a transfer to another regiment would be arranged by the depot commanders concerned, or the reservist discharged.

Leaving the district without reporting the fact to the depot commander, or failing to report for duty at the proper time, would constitute absence without leave or desertion, as the case might be, and be punishable accordingly.

With each regular infantry regiment should be linked a militia infantry regiment. This regiment should be selected every five years, after the annual militia inspection; one of the conditions of selection should be that a certain proportion, say fifty per cent., of its officers should have passed the examinations required by the War Department for volunteer officers of their respective grades. The United States should agree that these militia regiments should be the first to be called upon in case of war; full field equipment should be issued them for war strength, and they should be required to keep reserve lists to aid in filling to war strength. Offices, armory and store rooms at the depot should be furnished to these regiments at government expense.



These requirements may sound severe for militia regiments; but a militia regiment that could not satisfy them would be a poor thing to rely on in war. The competition for selection, and the privileges enjoyed by the regiment selected, should help in maintaining a healthy spirit in the militia.

Now let us see what would happen on mobilization. Each regular infantry regiment would at once become a brigade, each company organizing the corresponding company of a new regiment; that is, taking our present number of regiments for an illustration, the First Infantry Regiment would become the First Infantry Brigade, consisting of the First and Thirty-first Infantry Regiments; and so on. The colonel would become a brevet brigadier general; all other necessary promotions would be made by brevet, and the necessary number of reserve lieutenants would be commissioned brevet first or second lieutenants in the army. All brevet officers would receive the pay and allowances of their brevet rank when assigned to duty accordingly.

Thus, the First Infantry Regiment, peace strength, would have 1 colonel, 1 lieutenant colonel, 3 majors, 15 captains, 30 lieutenants — 50 officers in all. On mobilization, the First Infantry Brigade, not counting the militia regiment, would have 1 brigadier general with a staff of 3 captains and 2 lieutenants; 2 colonels, 2 lieutenant colonels, 6 majors, 30 captains, 60 lieutenants — 106 in all. That is, 56 officers, or 28 per regiment, would have to come from the reserve. If the regiment were fully officered at the outbreak of war, every mobilized company would be commanded by a regular officer, and the reserve would have only lieutenants to furnish.

Promotions after mobilization would be by seniority on the brevet list until the war was over; on returning to peace strength, enough reserve officers would be given an opportunity to remain in the service to fill vacancies, and extra lieutenants returned to the reserve.

The brigade would be completed by attaching to it the militia regiment.

The method of mobilization is self-evident. Reservists would report at the depots, be organized into convenient detachments under reserve officers, and sent to join their brigade. There they would join their companies, and the organization be completed under the direction of the brigade commander.

The regimental depot would become a brigade depot, and continue in active operation. A sub-depot would be created in it for each regular and militia regiment of the brigade, and handle the recruiting. Such number of retired officers and enlisted men as required would be assigned to duty there. Examining boards would be permanently constituted at each brigade depot, to keep up the supply of brevet second lieutenants, U. S. A., and second lieutenants, U. S. V., under the supervision of the War Department.

Still using the present establishment as a basis for estimate, our thirty infantry regiments would become thirty infantry brigades, each consisting of two regular and one militia regiments; this would provide the infantry for ten divisions, or five fair sized army corps; our present general officers would be available to command the higher units, being given proper brevet rank.

The same general principles would control in mobilizing cavalry and field artillery, the infantry strength of course determining the forces of these arms required. But the mobilized army would for a time have to get along with a short allowance, for even with the best system we could devise for reserve horses, we could hardly hope to get enough at once.

Our fifteen cavalry regiments would become thirty. Of these, ten would be required for the infantry divisions, leaving twenty. These would form ten cavalry brigades, as



many of them as possible being raised to a strength of three regiments each by attaching militia regiments. With these we could ultimately make up three cavalry divisions.

The latest available theories put the required proportion of guns to bayonets at 3.35 per thousand. That would require forty-eight guns, or two regiments, per infantry division. Allowing one regiment to each cavalry division, we get the requirement in field guns as ten brigades of two regiments each, and three separate regiments. Supposing a proper reserve of materiel to be kept at regimental depots, together with a horse reserve list, our regular regiments could furnish twelve of the twenty-three; for the rest, we should take what militia artillery we could get, and should have to be content, temporarily at least, to get along on short allowance.

While this first field force was getting into shape, we should begin work on our second line. For this the coast artillery would form the regular nucleus, and the remaining organized militia the first reinforcement.

Each coast artillery company would organize a new one from its reserve list, in the manner already indicated. The coast artillery district would take the place of the regiment or brigade as a mobilized unit. All the organized militia remaining in each coast artillery recruiting district would be concentrated somewhere in the neighborhood of the forts or their recruiting depot.

From these forces the manning details for the guns would be completed, and the necessary coast artillery supports and reserves organized.

It would be perceived from the very start that certain coast artillery companies could be spared from their districts, which ones would depend on circumstances. These companies would be organized into light, heavy or siege batteries, as required, and help to make up the deficiency in first line artillery.

In a war of magnitude, the aggregate of all these forces would be insufficient, and we should doubtless be compelled to make up entirely new units from the reserve militia.

Volunteers from this body could be called for, or, as a

last resort, a draft ordered. The total number of recruits called for would be apportioned among the various existing depots—brigade, regimental and coast artillery—in such manner as circumstances dictated. Such numbers of them as were required would be sent to the front to keep up the strength of existing units; from the rest new regiments would be formed, suitable numbers of regular or militia officers being given advanced rank for the purpose, and the whole available supply of men who had qualified, by examination in peace time, for volunteer commissions being used. In each depot a sub-depot would be created, as above described, for each regiment, retired officers and enlisted men and old volunteers being utilized when possible.

From these new regiments details would be made to relieve militia serving at the coast works. Whenever a particular coast work could be safely weakened, its garrison, regular and militia, would be sent into the field, coast artillery companies being organized into battalions and regiments and serving as artillery or infantry as required. From these sources new brigades, divisions, etc., would be made up, and join the field army.

The above sketch does not, evidently, solve all the problems involved in mobilization. In fact, it raises a new problem in every paragraph. It makes no pretense at being harmonious, complete and logical. If a new system were to be built up from the bottom, with no settled military policy to be reckoned with, it would be very different. But the mobilization scheme roughly outlined has the following merits:

1. It provides for the regular army a simple recruiting plan, for peace and war.

2. It provides a regular reserve, which can be made quickly available when needed.

3. It permits of doubling the regular army at the outbreak of war.

4. It provides for the automatic organization of brigades, and to that extent facilitates the putting together of the larger units.



5. It permits of utilizing at once, in organic connection with the regular army, the best of the organized militia.

6. It provides machinery for keeping this first line army recruited.

7. It furnishes a basis upon which to work, in commencing the serious task of organizing new regiments.

8. It affiliates regimental sub-depots for reserve militia with existing depots, and thus to some extent eliminates the competition for recruits which always takes place when different forces are being recruited at the same time.

As for expense, there would be little outside of the pay of the reservists. The reserves of materiel would have to be kept on hand somewhere in any event, and might as well be at regimental depots. Recruit depots must exist, and establishing them as indicated would cause little extra expense. Transportation charges would not be great, as the distances traveled by each man would be short.

The pay of the reservists can be roughly estimated without difficulty. A full reserve list for a company of infantry would cost about $8,000 per year. Call it $100,000 per regiment per annum, and the estimate should not be far out.

# SORE BACKS ON CAVALRY HORSES.

By WILLIAM P. HILL, Veterinarian Twelfth Cavalry.

IN my service of five years as a veterinarian in the United States cavalry, I think I can state without any reserve that the principal trouble I have had to contend with is "sore backs," especially those produced by the end of the saddle bar, causing a round abrasion two or three inches from either side of the backbone. This condition is very hard to remedy with medicines or operation, laying a horse up for months, and then to be rubbed and made as bad as ever on the first ride of five miles or more.

I doubt if there is a troop of cavalry in the fifteen regiments that has not from one to half dozen horses with backs that have been, off and on, sore for months, that will not stand steady riding, needing constant doctoring, and on sick report half their service, and finally to be condemned by the inspector—horses that are in every way fitted for the service except "that" sore spot on the back which makes him useless. I have tried all kinds of astringent drying powder combinations, also lotions, but all we get is a healing over with a thin crinkly scar tissue, hairless, and very easily rubbed off. This condition takes place very gradually after some weeks of constant medication, only to be made worse than ever by the first saddle pressure. Lately I have been removing the whole sore by an elliptical incision, then bringing the edges together with sutures. This has been successful in a very few cases as healing by direct union is very hard to obtain in the horse, the stitches not holding more than three or four days, and thorough asepsis being impossible. If we can stop this constant injury to horses' backs, what a saving



it would be to the government, a relief to the troop commander, and an end to that constant report of the farrier: "Nos. so-and-so have sore backs."

Last March I paid a visit to Edinborough, Scotland, and when there went to call on the veterinarian of the "Scott's Greys," Captain Rudd, who showed me the horses and equipment of his regiment. On looking over the regiment I was struck by the smoothness of their backs, it striking me very forcibly in comparison with ours. I then asked him how he treated the cantle sore, from which we had so much trouble in the American cavalry. He seemed surprised, and asked me what I meant. I explained the condition, and his answer was: "We never have them." I then examined the saddle used, which seemed to me the very thing to solve our problem, and to prevent the sore back at the end of the bar, as such a thing was unknown by the Captain, who had eleven years' service in India and at home.

The English saddle bars project well behind the cantle, and thus distributing the weight more evenly on the muscles of the back. The ending of the McClellan saddle bar is directly under the cantle where men, when tired from a long ride, throw most of their weight, thereby boring a hole at that point, and usually throwing the weight of the body more on one side than the other. This I claim is impossible in the English saddle, and this fact explains their immunity to cantle sore. Another great protection is a thick piece of soft felt which is attached to the under part of the saddle following the lower outline. This on top of a blanket reduces the chance of injuring the back to a minimum. I have also noticed on long practice marches that some men, unless constantly watched, will let their equipment at the cantle fall back on their horse's backbone and rub raw places. Now this prolongation of the saddle bars forms a table as it were for this part of the equipment and makes any rubbing impossible.

Surely we have had enough experience with the McClellan saddle to throw it out for this reason alone. Any saddle that will ruin ten per cent., or, to be within bounds, say five per cent., of the horses' backs should be dropped, and if it is

shown that another saddle causes no such trouble, why not experiment with it and later adopt it. I have not considered the different shapes of backs and their susceptibility of injury from defective conformation, etc., or taken into consideration the many bad riders that we get as recruits. But with good backs or bad backs, good riders or bad riders, the English saddle will check ninety per cent. of the cantle sores we have to deal with in our mounted service to-day.

## REMOUNTS.

By Captain R. D. WALSH, Ninth Cavalry.

TWENTY-FIVE years ago our cavalry was mounted on horses superior to our present mounts. Most of them were purchased in Missouri, but that State does not now breed the cavalry horse in great numbers. This is probably due to the greater demand for draught horses, but principally to the spread of the single-footer. Out of eighty-three horses transferred to my troop in 1904, more than sixty were single footers. These horses had been purchased and bred in Missouri and Kansas. To duplicate the horse of twenty-five years ago, the horses being purchased in the same section, would cost double our present high contract price. To get good horses we must still increase the contract price or do away with the contract system. To secure good mounts the contract system must be abolished. The contract for horses delivered at Chicago was secured by a firm, said to be the largest horse dealers in the world. Talking with the head of this firm I was surprised when he said: "This is no way to buy horses. If you want a horse that I have, why not say I will give $200 for that horse, or $140, or $160. That is a sensible way." I agreed with him, and also recognized that it was a business way. It is also noticeable that when horses are bought for a particular regiment by officers of that regiment, better horses are secured than when the purchases are for the general service. A board constituted, as formerly, of an officer, a veterinarian and civilian expert is better than where three officers constitute the board. In the former case the officer is alone responsible. In the latter case the responsibility is divided.

One great fault with the contract system, is that the time in which horses may be bought is limited. Generally they are advertised for near the close of the fiscal year. At that time horses are higher than at any other season. There should be no time limit, a good horse being purchased whenever possible until the required number is obtained.

A contractor will generally make from ten to twenty-five per cent. This, in two or three months' time. Contracts are awarded to the lowest bidder. Sometimes an experienced contractor and horseman is successful; sometimes a man who knows nothing about horses. I have had experience with both classes, and prefer the experienced horseman to a dealer in sewing machines.

In 1901, Western horses were classified by contractors into English, Philippine and standard. The price paid for standard horses varied some. Generally it did not exceed $60. I know of one case where the contract price was between $110 and $120. The price offered by the contractor was $60 for horses that were accepted. He was under no expense for culls or transportation. This is the contract system. Another contractor told me that, in two months, he had cleared $25,000 on Philippine horses.

The proposition has been advanced that the government establish breeding farms. This is impracticable as the expense would make it prohibitive. It has also been proposed that the government place stallions in certain localities and that it should have the right to purchase the colt when it had reached a certain age. This is certainly practicable so far as improving the type of horse required for the service. Most of the advocates of breeding farms have proposed Fort Riley as an ideal site.

High prices and other reasons restrict the region in which the cavalry horse may now be purchased to the States north of the Ohio and west of the Mississippi Rivers. In the eastern section of this region there are four great horse markets — Chicago, St. Louis, Indianapolis and Kansas City. The plateau region has not furnished many horses for the service, but the Northwestern States — Idaho, Oregon and Washington — have supplied a large number. The Kentucky horse is



no longer in the cavalry market, nor is the Eastern horse, while the South buys thousands of horses each year for its own use.

It has been announced and generally understood that when purchases are made by the government preference will be given to articles of domestic, or local production. In June, this year, four boards were convened to inspect public animals delivered by contractors; one at Walla Walla; one at Cheyenne; one at Chicago; one at St. Louis. Several carloads of horses, purchased in Missouri, were presented at Chicago and some of these horses were afterward shipped to Des Moines and Yellowstone. There were many Western horses presented to the board for inspection perhaps one-sixth of those presented had range brands.

A horse raised in a mountainous section is far superior, for cavalry service, to a horse of the plains. When first purchased, the mountain horse is rough in coat, unkempt, and does not present the showy appearance of his mollycoddle brother, but he responds quickly to grooming and regular treatment and his appearance improves from day to day.

I have paid more attention to the horses raised on the tributaries of the Columbia than to those from other sections. All tributaries of this river have a cold climate in winter. The horse ranges are situated in mountainous and hilly country, the hills rising abruptly one and two thousand feet from the bed of the streams. From the time he is a colt the horse climbs these hills, going to and from water and while grazing. This results in a development not found in the plains horse. The mountain horse is foaled on the range and passes both summer and winter there. The weaklings do not survive. Objection is often made to these horses on the ground that they are too small. They are all sizes. The days of the broncho have passed. In purchasing these horses care must be taken not to purchase horses weighing over 1100, and for young horses a better weight is 1000. They often put on 50 or 100 pounds in weight when fed the government allowance of forage.

The specifications for cavalry horses require that they shall be thoroughly broken to the saddle. This requirement is

the principal objection to the range horse. Horses presented for inspection have been ridden from ten days to two weeks, and ridden so hard that they are tired. Anything to keep them from bucking. The treatment they receive during this time is cruel and inhuman. As soon as the horse becomes rested his wildness returns and this causes trouble in his troop. The old soldier prefers his own horse and the new one falls to a recruit, who cannot ride a hobby horse without bearing on the reins. The recruit must have a curb bit to properly control this monster. The horse is continually in pain and does what he can to relieve his suffering; that is, he fights his rider and gets a bad name and finally an I. C.

No horse responds more quickly to kind treatment than the range horse. With all his admirable qualities he should be the first purchased, but care must be taken that he does not turn out to be a failure. I would suggest that horses of this class be first sent to Walla Walla or Boise. Drop the requirement that the horse shall be well broken to the saddle. It is sufficient that the horse is halter broke. Let the officer pay for each horse what he is worth, and let him visit each section at stated times, notifying the people that he will buy in the open market. It will not take the officer long to locate the best sections, and the citizens will soon become educated as to the class of horse desired. There are many horses in that section adapted to cavalry service and they can be bought at a comparatively low price.

After the horse is purchased he should be shipped to one of the posts named, or arrangements can often be made with the seller for the delivery of the horse at a post. In this case the horse is taken overland. These posts should be remount or training stations in the sense of receiving green horses and training them to be gentle and serviceable. The garrison should consist of reënlisted men, who have an aptitude for training horses. With such men range horses can be trained so that they will not buck when first mounted. I know this from actual experience.

Every section of our country can furnish a few good horses. This permits regiments to purchase their horses, and this method is an excellent one. It has many advantages, among which may be mentioned the practical education of the young officer. If troops need horses, young officers are apt to notice every horse they pass. When they see a good one they will ask the owner to present it before the purchasing board. At first they may fall down, but gradually they will become a good and a quick judge. Above all, this method places the responsibility for the purchase on those who are to use the horse. Its adoption would improve our mounts. A regiment should be authorized to purchase a certain number of horses at a given average price, but there should be a fixed superior limit to the price paid for a single animal. The new horses should not be turned over to troops until they have been trained. This may be done by a designated troop or by a selected detachment. There is no excuse for a regiment not having a training school for its new horses.



Several years ago a board of officers was convened at Walla Walla to inspect horses intended for the troops of the Fourth Cavalry, stationed at that post. Not many horses were to be purchased, perhaps twenty or thirty. The board adopted a rule that the captain of the troop for which the horse was to be purchased must be satisfied. If a sorrel horse was presented the captain of the sorrel troop was sent for and asked if he wanted the horse. He could ride him or try him in any way. If he said yes, the board proceeded with its inspection. Sometimes, although the captain was willing to accept a horse, the board rejected it, but they took none that the captain turned down. There were no complaints against the board and the horses purchased were good ones. This was a form of regimental buying. It could be improved upon by the board determining the price to be paid for each horse.

When the foregoing methods do not furnish enough horses for the service, an officer should be stationed at the principal horse market, St. Louis, Chicago, Kansas City and Indianapolis, to buy horses. He should be a good and quick judge of a horse. At these markets a horse is auctioned off every minute, sometimes two a minute. However, before a horse is put on the block there is plenty of time to examine

him for blemishes or defects, or a horse may be bought in the sales stables. Many good horses pass through these markets whose average price does not exceed that paid by the government. For such horses a remount depot should be established at one or two posts near those cities. Horses for the mounted police of the cities named are generally bought at the stock yards, a suitable horse being purchased, whenever possible, until the required number is secured.

There can be no objection to an officer buying for both field artillery and cavalry. A judge of a horse can tell a good draught horse as well as a good saddle animal.

There should be a superintendent of remounts. This officer to have charge of the purchase of cavalry and field artillery horses. To keep an army supplied with 16,000 horses is an important matter, and in our army has received but slight attention. An officer of high rank should be detailed for this purpose. In addition to supervising the purchase of horses he should have control of the remount depots. He should also make preparations for the extension of his department in time of war. This would necessitate a knowledge of the available horses in each district; also a report upon the qualifications and character of the veterinary surgeons in each section. This knowledge might tend to prevent the repetition of some mistakes that have been made heretofore in war times.

Specifications for cavalry and riding horses: The cavalry horse must be sound, well bred, of a superior class, and have quality; gentle and of a kind disposition; thoroughly broken to the saddle, with light and elastic mouth, easy gaits and free and prompt action at the walk, trot and gallop; free from vicious habits, without material blemish or defect, and conform to the following description:

Head small and well set on neck; with ears small, thin neat and erect; forehead broad and full; eyes large, prominent and mild, with well developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep, lips thin and firmly compressed; nostrils large and fine, and branches of underjaw wide apart adjoining neck. * * * How excellent and how absurd! Excellent in



that these specifications are perfect; absurd in that they are impracticable. There may be a few horses in the United States that will come up to the specifications in every respect. If so, their value is in the thousands, not in the hundreds.

We have lost much by not having training schools or depots for new horses. They should certainly be established in each regiment, and the young graduates of the Riley school can there have an opportunity to put in practice what they have learned. At least two training depots are necessary. The adoption of this plan will prolong by two years the average service of the cavalry horse.

* * *

## COMMENT.

I think that all cavalry officers of experience are disgusted with the contract system.

While a member of a purchasing board in 1895, with the contract price $115, I frequently met on the road, stockmen and civilians on active, good-looking mounts and asked them why they did not present their horses for inspection. The invariable reply was that the contractor would not pay over $60, while they valued their horses at $75 or $80.

I can endorse Captain Walsh's views on the endurance of the horse of the Northwest. My troop mount in the Northern campaign in Luzon was composed of Oregon greys, and on many occasions I had more horses for duty than my neighbors.

An objection to the Oregon horse (particularly noticeable in the greys) is that a Percheron strain often gives them feet too large for a saddle animal and a second (mentioned by Captain Walsh) is that they are prone to take on much flesh in the service.

I have had an excellent opportunity for comparison here at Fort Riley. The First Squadron, Fourth Cavalry, in September, 1901, received its mount from Walla Walla where the animals had been gradually collected by Captain Walsh

himself. The Third Squadron Eighth Cavalry, was supplied the following spring with Missouri horses. The latter made a showier appearance but the former outlasted them on every occasion, on the road and at maneuvers, and to-day, after six years' service, are sound, in good condition and represented by a much greater percentage of their original number.

It is to be noted that purchase (either under contract or in open market) of animals at a stock market is subject to the danger of procuring specially conditioned animals. The field artillery within the past year have received many sleek horses that fell off rapidly under ordinary work.

The suggestion of a superintendent of remounts will meet with approval, particularly as regards the tabulating of information concerning horses available in various parts of the country to be used in case of expansion in time of war.

The remount station would have an advantage that appears to me quite important. It would be possible to rid animals of disease contracted in stock yards and infected cars and to deliver them at posts free from "shipping fever."

I wish to invite the attention of your readers to an article in the September *Review of Reviews* on the "Breeding Farm at Fort Collins, Colorado," where, under government support and intelligent direction, excellent progress is being made in the effort to obtain an ideal American carriage horse. Is not such a breeding farm just what we want? "Every good cavalryman," as Long Jim used to say, has in mind an ideal cavalry horse, and those of experience I find well united in their opinions. The only drawback that I see is that the army officer, in thoroughly American fashion, wants results in a minute, while those in charge of the Fort Collins farm state that they expect to see the fruit of their scheme expanded throughout the United States in about two generations.

Is there any reason why the regular army cannot lay pipe now instead of waiting until a step is positively forced upon it.

GEO. H. CAMERON,
*Captain Fourth Cavalry.*



Since the foregoing article was written and the comments made thereon by Captain Cameron, the annual reports of General Carter, commanding the Department of the Lakes, and of General Aleshire, Quartermaster General, have appeared in the service papers. General Aleshire, who was first a cavalryman, and who for many years had been purchasing cavalry horses, treats this most important subject fully and well. There is nothing in all of his recommendations with which the cavalry service will not agree except the single one that the proposed remount service should be "a separate division of the Quartermaster General's office, designated 'remount division' and under charge of an officer of the Quartermaster's Department, etc."

It is believed that this proposed system of purchasing and training horses for the cavalry service should be under the supervision of a cavalry officer, and in fact this remount division should be one of the branches of the office of the Chief of Cavalry *when we get one.*

General Carter well puts the reasons for having a remount bureau and why it should not be a branch of the Quartermaster's Department as follows:

"So long as the saddle horse was the prevailing type on American farms the purchase of proper mounts for the army was merely an incident in the large business of the Quartermaster's Department. With the era of cheap buggies and interurban electric lines, conditions rapidly changed and it will be necessary in the future for the army to work in unison with the Department of Agriculture with the object of restoring the breed of saddle horses in certain favorable localities where the colts will be available for purchase by the government. The Quartermaster's Department is so overburdened with business that the detail of many line officers is necessary to help carry on current work. It is believed the best results may be obtained by following the experience of other nations and establishing a remount bureau, composed of cavalry and field artillery officers.

"The time has arrived when the efficiency of the expensive organization of cavalry and field artillery may be better

secured and maintained by the detail of a general officer in special charge, with an assistant from each mounted branch. The remount service should also be under the same control. Observation for some years leads to the belief that the mounted branches of the line are practically unanimous in the opinion that such action will be in the interests of economy and efficiency. The purchase of transport animals and the disbursements for all public animals should remain with the Quartermaster's Department. Some such action is necessary to meet the changing conditions."—[EDITOR].

# A NEW MOSQUITO BAR WHICH CAN BE USED WITH THE SHELTER TENT.

BY EDWARD B. VEDDER, A. M., M. D.,
FIRST LIEUTENANT AND ASSISTANT SURGEON, U. S. ARMY.

ACCORDING to the Surgeon General's report for the year 1905–6, malaria was most prevalent in the army in the Philippines, being second only to venereal diseases. There were also numerous more or less extensive epidemics of dengue, which is, in all probability also a mosquito-borne disease. For the prevention of these diseases the men use mosquito bars while in the post, but these are practically never used in the field, although the danger of infection is infinitely greater in the field than in a post, especially when encamped in, or near, native villages where a large percentage of both the mosquito and human population harbor the malarial plasmodium. Why do men who have slept for months under a mosquito bar in the post discard it at once when they go in the field, even though they know that they will be tormented by mosquitoes every night?

I believe they do so solely because it is utterly impossible to use the present quartermaster bar in a shelter tent for two men, as a trial will convince any one. After a great deal of trouble, and with the exercise of some ingenuity, it may be so suspended that one man may use it in a shelter tent, but it is impossible for two men to do so, for the simple reason that the quartermaster bar is only wide enough for one man. And even for one man, it is a very poor arrangement, because the bar is too long for the tent, is square on top while the tent is wedge shaped, and is too high for the tent,

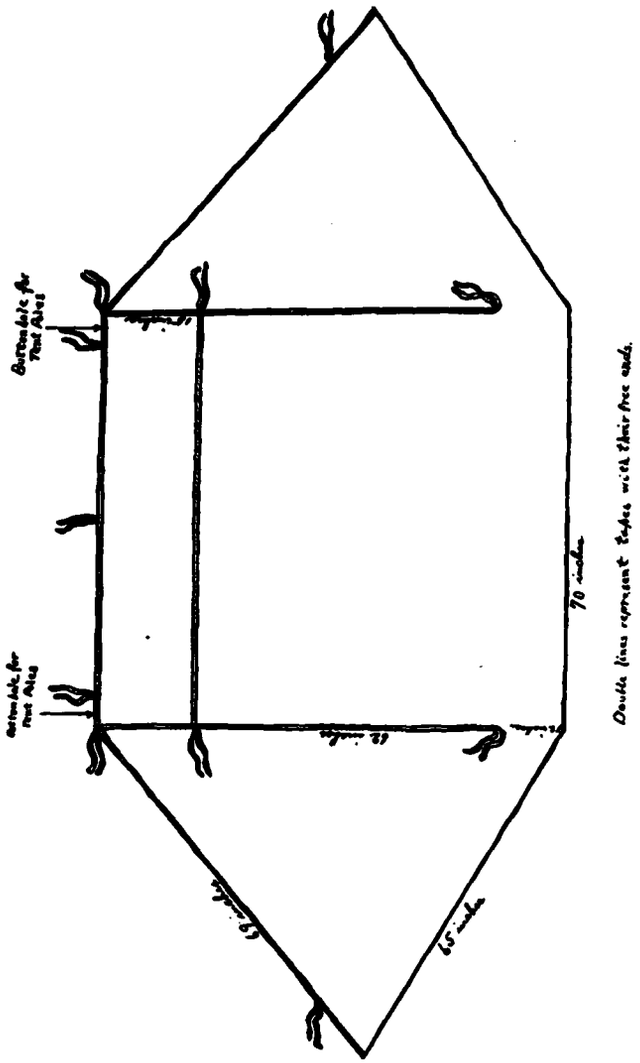



DIAGRAM OF ONE-HALF OF MOSQUITO BAR.



so that it lies on the ground in tangled folds very difficult for the sleeper to manage, whether he be going in or out.

This difficulty led me to try to devise a mosquito bar which could be used in a shelter tent, as well as on a bunk, and the following description and illustrations show the result of the effort.

The principle is very simple, the mosquito bar being made of exactly the same shape and size as the shelter tent, with the following exceptions:

THE FRONT OF THE SHELTER TENT PITCHED AS PRESCRIBED WITH THE MOSQUITO BAR.

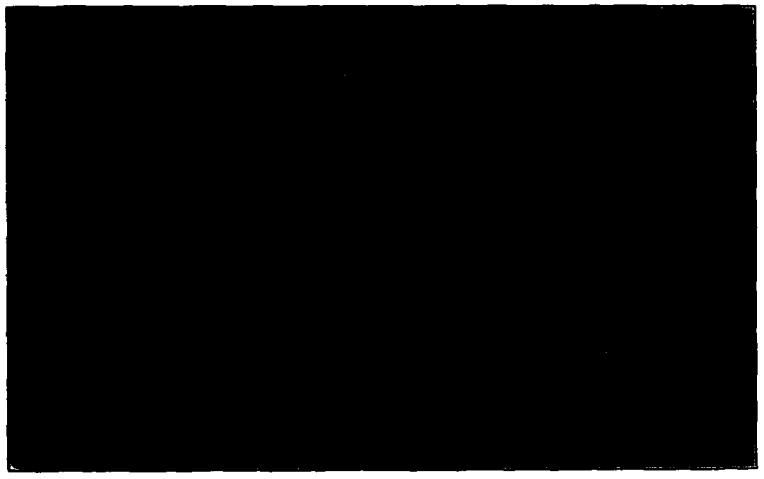
1. There is a triangular apron at the front, as well as the rear of tent. This enables either end to be used as front or rear, and no matter which end is used as the front there is sufficient slack so that it can be easily raised or lowered when entering the tent.

2. At the bottom the bar is a foot longer than the tent. This permits the free border to be laid upon the ground with the blanket spread on top of it, thus making it absolutely mosquito tight as well as protection against centipedes and other vermin.

3. The ridge of the bar is two inches longer than the

ridge of the tent. This allows of enough slack to prevent undue stretching of the bar.

The tent poles fit through two button holes in the tape that binds the ridge, which are so constructed as to be self-closing when the bar is used on the bunk. The ridge and six angles of the tent are bound with tape leaving free ends one foot from the bottom of the bar. These bottom tapes are tied to the shelter tent pins at the four corners and rear, leaving the front flap free.



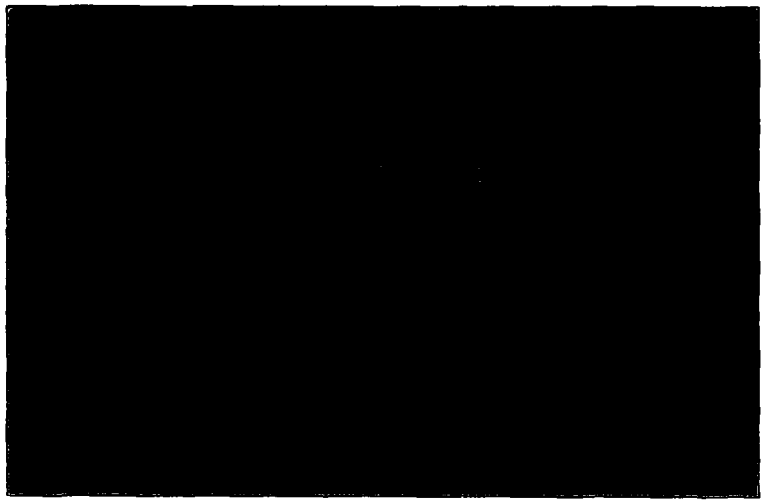
THE SHELTER TENT WITH THE LEFT HALF REMOVED.

Tapes are attached to the front and rear ends of the ridge of the mosquito bar, which may be tied to the front and rear guy ropes, thus affording additional support. Fifteen inches from the ridge of the bar, on each side, is a longitudinal tape with free ends. These are used when the bar is slung on a mosquito bar support of the quartermaster bunk.

In pitching the tent, the two halves are first buttoned as usual. The left half is then turned so that it lies over the right half, and the ridge of the mosquito bar is approximated to the buttoned halves. The tent poles are then introduced through the bar, inserting the ends through the slits of the bar and then through the rings of the tent halves. When



this is accomplished, the left half is turned back to its proper position and the whole tent is raised by lifting the two tent poles until upright, and the tent is then pegged down as prescribed. After this has been completed the tapes at the two ends of the ridge of the bar are tied to the front and rear guy ropes, and the bottom tape at the four corners and rear are tied to their respective pegs. The free border at the bottom is then smoothed out upon the ground, and the blankets spread upon it. The first illustration shows the front



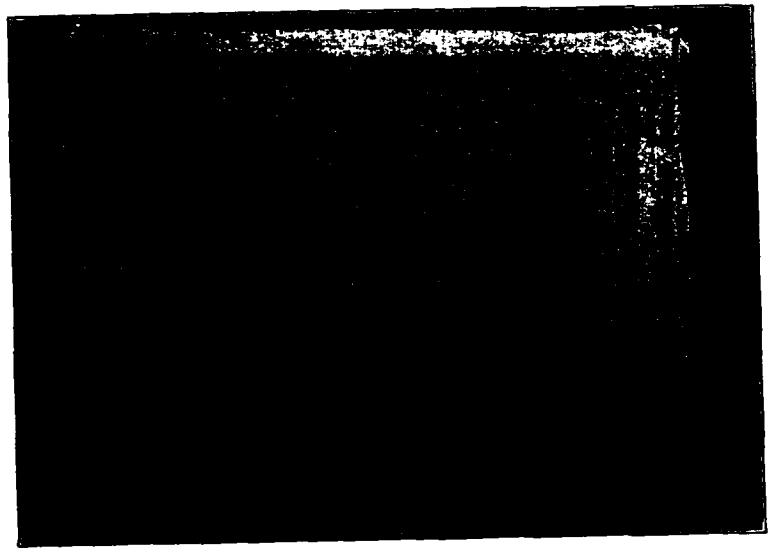
THE BAR SUSPENDED FROM THE RIDGE OF THE TENT.

of the shelter tent, pitched as prescribed with the mosquito bar. The second illustration shows the same with the left half of the shelter tent removed in order that a better view may be obtained of the mosquito bar.

During the day the front end of the bar may be lifted out of the way by tying the tape of this end to the front guy ropes, or the entire bar may be suspended from the ridge of the tent by untying the bottom tapes and rolling it up tightly, pushing it up along the tent poles, as it is rolled, when the whole may be secured in position by three tapes which are fastened at regular intervals along the ridge of the

mosquito bar; this is shown in the third illustration, where half of the shelter tent is again removed in order to better demonstrate this position of the bar.

On the quartermaster bunk, in the post, the bar is secured exactly like the old quartermaster bar by tying the tapes at the four upper corners to the uprights of the bunk, and tucking the free folds at the bottom under the mattress.



BAR USED WITH QUARTERMASTER'S BUNK, SIDE VIEW.

On the gold medal cot the bar may be used in precisely the same manner by fastening four sticks as uprights to the four corners of the cot, or, if in a locality where sticks are difficult to obtain, two uprights are sufficient; one in the middle of the head of the cot and one in the middle of the foot, and the mosquito bar may be tied by the tapes of the ridge to these two uprights.

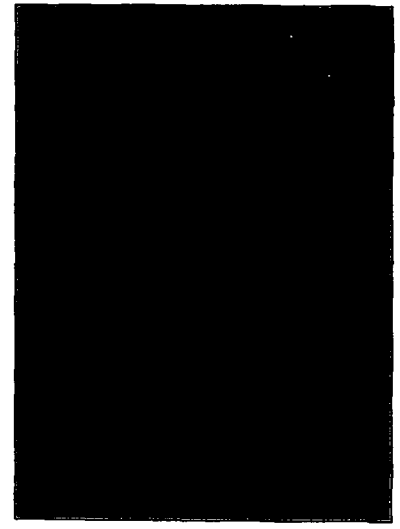
When the free ends are tucked under the mattress the bar would be wedge-shaped instead of rectangular.

The sixth illustration shows the mosquito bar as folded upon the shelter half ready to roll. This is readily accomplished since the bar is the same shape as the shelter half,



by folding over the two triangular ends exactly as is done with the shelter half itself, and then folding over to a sufficient distance the bottom of the mosquito bar, which is twelve inches wider than the shelter half.

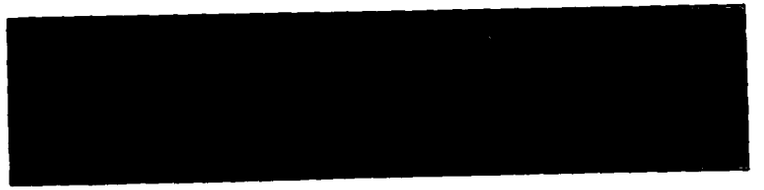
This bar is superior to the present quartermaster bar, in that it can be used in all ways that the latter bar can be used, and in addition it works perfectly in the shelter tent, where the latter cannot be used at all. It has twenty square feet less of surface than the present quartermaster bar, and therefore is bound to be lighter when made of the same material, a fact every company commander will appreciate. The model bar constructed weighs seventeen ounces, while a new quartermaster bar weighs about nineteen ounces. It is made of bobbinet netting similar to that of the mosquito bar furnished by the medical department. It is recommended that the bar be made of this material, which is much more durable than that at present used, and the meshes do not become distorted so as to admit mosquitoes. While the first cost would be greater, in the long run it would probably prove cheaper, as the bobbinet stands washing better.



BAR USED WITH QUARTERMASTER'S BUNK, END VIEW.

It is believed that the adoption of this mosquito bar, and its use in the field, would go far toward reducing the amount of sickness from malaria and other mosquito-borne diseases, such as dengue and yellow fever, not to mention the fact that the endurance and efficiency of the men would be increased by affording them a night of peaceful sleep, undisturbed by mosquitoes, centipedes and the numerous other vermin of the tropics.

In conclusion, I wish to thank those who have aided me in this work. I am indebted to Major W. P. Kendall, my senior surgeon, for a generous appreciation which has given me material assistance in the work, and to Captain E. D.



THE MOSQUITO BAR FOLDED UPON THE SHELTER HALF READY TO ROLL.

Shortlidge, assistant surgeon U. S. army, and First Lieutenant J. F. Siler, assistant surgeon U. S. army for several useful suggestions.

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NOTE.—The above was furnished the CAVALRY JOURNAL by Assistant Surgeon Vedder as an original article, with the statement that "it has already been accepted by the *Military Surgeon*, but no one but medical officers see that publication." It appeared in the September number of the *Military Surgeon*, and is reprinted with their kind permission. We are also indebted to the *Military Surgeon* for the use of the plates illustrating the article.

# REMOUNTS.

BY JAMES B. ALESHIRE, QUARTERMASTER GENERAL U. S. ARMY.

REMOUNTS for the armies of the United States have been supplied by the Quartermaster's Department since the organization of that department, April 14, 1818; the *purchase* of "dragoon and artillery horses" having been included in a "*project*" of the nature and function of the Quartermaster's Department, submitted by General Jesup, Quartermaster General, and approved by the Secretary of War, in July, 1818, and embodied in the "General Regulations of the Army," published in July, 1821.

No reference is made, however, to the method of purchase, which, it appears, "was left to the discretion and judgment of the Quartermaster General."

Inspections were made:

(*a*) By officers of the Quartermaster's Department.

(*b*) By such persons as may be appointed by the officer of the Quartermaster's Department to whom the horses were to be delivered.

(*c*) By boards of officers. In some cases the officers constituting the board were named in the contract.

At the outbreak and during the Mexican War, the supply of remounts and all other animals seems to have been under the contract system. The specifications of the horses desired, the requirements as to delivery, etc., and the manner of inspection can best be understood from the following extract from a contract covering the purchase of horses:

DRAGOON HORSES.

Captain S. D. Dusenbery, Assistant Quartermaster, with J. T. V. Thompson, St. Louis, Mo., January 31, 1845:

* * * * * * *

2d. The said J. T. V. Thompson agrees and promises that the horses contracted for under this agreement shall not be less than four nor more than seven years old, at least full fifteen hands high under the standard, and proportionately long and short bodied, and not over sixteen hands high under the standard, smooth, well coupled and compact in all their parts, perfectly sound and healthy, to combine strength, action and endurance, to fit them for the most active and arduous frontier service, of good vision, sure of foot, free walkers and trotters, manes and tails long, full and flowing, legs and feet free from old or recent injuries, or any indications of hard usage, free from the faults of vicious startings, stubbornness or laziness, perfectly free from all blemishes or defects, such as curbs, corns, splints, indications of spavin, or any other blemishes, defects, diseases or imperfections of any kind whatsoever that may, in the judgment of the officers who are or may be required to inspect them, interfere with the most efficient action in the field; that they shall be all of deep, sound dark colors, as follows, viz.: Two hundred and forty blood bays, 120 chestnut sorrels, 120 dark iron grays, 120 blacks, all with dark manes, tails, legs and hoofs; and it is understood and agreed between the contracting parties that no stallion, mare or pacer is to be received by the United States, nor in short any other than what is termed, in jockey phrase, "clear, upheaded; game geldings."

* * * * * * *

PURCHASE OF HORSES.

Captain M. M. Clark, A. Q. Mr., with William Miner, Washington City, 27th February, 1847.

The said Miner agrees to furnish one thousand dragoon horses and deliver the same at Jefferson Barracks, Mo., in lots of not less than one hundred, the whole to be delivered



on or before the fifteenth day of June, 1847. The horses contracted for under this agreement shall not be less than four nor more than eight years old, not less than fifteen hands high under the standard, and proportionately long and short bodied, and not more than sixteen hands high under the standard, smooth, well coupled and compact in all their parts, perfectly sound and healthy, to combine strength, action and endurance to fit them for the most active and arduous frontier service, of good vision, sure of foot, free walkers and trotters, with good manes and switch tails, legs and feet free from old or recent injuries or any indications of hard usage, free from the faults of vicious startings, stubbornness or laziness, perfectly free from all blemishes, defects, such as curbs, corns, splints, indications of spavin, or any other blemishes, defects, diseases or imperfections of any kind whatsoever that may, in the judgment of the officers who are or may be required to inspect them, interfere with the most efficient action in the field; that they shall be of colors as follows: Bays, blacks, browns, red and chestnut sorrels, roans, grays, iron-grays, with dark or light manes and tales, according to color of the horse, generally dark. It is understood that no stallion, mare or pacer is to be received, nor in short any other than what is termed in jockey phrase, "clear, upheaded, game geldings." It is also understood that no horses shall be rejected for having a star, snip or blaze in the face, or one or more white legs, provided it does not extend to the knee or hock. The horses are to be inspected by such persons as may be appointed by the officer of the Quartermaster's Department to whom they may be delivered. Each horse delivered and accepted according to this agreement is to cost the United States $87.50, being in full for all charges, expenses, risks or claims whatsoever.

In case of failure on the part of said Miner to deliver horses in compliance with the terms of this contract, then the said Clark or other agent of the government shall have full power to purchase the horses in the open market, and the said Miner agrees to forfeit to the United States fifty per cent. on the amount of said failure in current funds of the United States.

This system (or method) of supplying remounts was continued until 1859, when, on May 11th of that year, the supply of horses for the light artillery was transferred from the Quartermaster's to the Ordnance Department, (General Orders No. 11, Adjutant General's Office, May 11, 1859), and on June 24, 1861, "the duty of buying horses for the light artillery service was retransferred" to the Quartermaster's Department (General Orders No. 36, Adjutant General's Office, June 24, 1861).

By Act of Congress, approved June 23, 1860, it was enacted "That all purchases * * * shall be made by advertising, a sufficient time previously, for proposals respecting the same."

Remounts were, therefore, at the outbreak of the War of the Rebellion, supplied by purchase under contract, after due advertisement, and inspected by an officer of the Quartermaster's Department, or a board of officers of the mounted service, as at present.

This method of supplying was continued without material modification or change until July, 1863, when, as stated by General Meigs (in the annual report of the Quartermaster General, 1866):

"To systematize and regulate the purchase and supply of horses to the cavalry then actively engaged in the field in operations attended with great destruction of horses, a cavalry bureau was organized, under General Orders 236, War Department, Adjutant General's Office, July 28, 1863."

Instructions to promote the efficiency of the cavalry service were promulgated and Major General George Stoneman was announced as the Chief of the Cavalry Bureau in Washington. (See General Orders 237, War Department, A. G. O., Washington, July 28, 1863.)

Cavalry depots for the supply of horses were established at Giesborough, on the eastern branch of the Potomac River; St. Louis, Mo.; Greenville, La.; Nashville, Tenn.; Harrisburg, Pa.; Wilmington, Del. The principal depot was at Giesborough, and was probably the largest depot ever organized for the supply of animals to any army.



As to the method of purchase, the following is taken from General Stoneman's report to the Secretary of War, dated October 15, 1863:

"I should recommend that the contract system be dispensed with, as far as consistent with the public interest, and that most of the purchases be made in open market and first hands.

"In order that owners of horses may derive the most benefit from this system of purchase in open market, and at the same time the government be enabled to get all the horses in the country without the necessity of increasing the number of agents too largely, the same agent can be assigned to different points in his district or region, spending a limited time at each point, due notification being given to all concerned of such an arrangement. These points should be located on main avenues of land or water transportation, and the horses shipped or sent to depots as fast as they are purchased."

Up to October 15, 1863, the total number of horses offered on contracts was 145,195; the total number accepted on contracts was, 30,950; the number received from contractors and bought in open market was 6,562; from which it is of interest to note that notwithstanding the great demand for horses, only 21.3 per cent. of the horses offered on contracts were accepted.

The purchase, inspection and supply of horses by the Cavalry Bureau was continued (as directed by General Orders 236 and 237, 1863) until April 14, 1864, on which date it was ordered that "the duties in relation to purchase and inspection of horses, the subsistence and transportation of horses purchased, will be performed by and under the direction of an *officer of the Quartermaster's Department*, specially assigned to that duty." (G. O. 162, W. D., A. G. O., Washington, April 14, 1864.)

By an Act of Congress to provide for the better organization of the Quartermaster's Department, approved July 4, 1864, the *first* division of the office of the Quartermaster General was placed in "charge of the purchase, procurement and

disposition of horses and mules for cavalry, artillery, wagon and ambulance trains, and all other purposes for which horses or mules may be procured for the armies of the United States." (General Orders No. 30, Q. M. G. O., July 30, 1864.)

Rules and regulations (including specifications of cavalry horses, artillery horses and mules) relating to the purchase, procurement and disposition of all animals for the army were published for the information and guidance of all concerned. (G. O. No. 43, Q.M.G.O., September 23, 1864.)

Purchase of *horses*, under the direction of the Cavalry Bureau, ceased December 31, 1864, but purchase of both horses and mules required for the army were continued under the direction of the first division of the office of the Quartermaster General, until May 9, 1865, on which date all purchases of animals ceased.

The Cavalry Bureau was abolished October 4, 1866, by General Orders No. 83, W. D., A. G. O., 1866.

The results of the purchase and supply of horses by the Cavalry Bureau and first division of the office of the Quartermaster General were most satisfactory, all requisitions for public animals were promptly filled, as shown by the following extracts from the annual reports of General Meigs and General Ekin:

"The purchase of cavalry horses for some months past has been under the direction of the Cavalry Bureau. Since the passage of the law of the fourth of July, 1864, for the better organization of the Quartermaster's Department, the purchase of all animals for the Department has been placed under the direction of the chief of the division of this office, specially charged with the supply of horses and mules. The result is a more regular system, a better control of supply, and greater uniformity and greater skill in the inspection of all these animals." (From the annual report of General Meigs, Quartermaster General, fiscal year 1865.)



QUARTERMASTER GENERAL'S OFFICE,
FIRST DIVISION,
WASHINGTON, D. C., October 17, 1865.

General:

* * * * * * *

"It is a source of great satisfaction to me that during the great campaigns immediately preceding the downfall of the rebellion, as indeed in preceding operations against the enemy, the Cavalry Bureau and this division was enabled, with the energetic coöperation of the various quartermasters and assistant quartermasters at the several purchasing depots under my direction to meet promptly all requisitions for the supply of public animals to our gallant armies in the field. The animals thus furnished were generally of a very good quality, owing to the rigid character of the inspections made by the inspecting officers, who were governed in their actions by General Orders 43, of the Quartermaster General, series 1864. As the war progressed, those furnished to the Armies of the Potomac and the James, especially, were so superior as to elicit the commendation of Brevet Major General Rufus Ingalls, Chief Quartermaster, from whose endorsement of November 30, 1864, forwarding estimate of public animals required for these armies for the month of December, 1864, the following is an extract:

'The supply (of animals) is already very good, and it is proper to state that the artillery and cavalry horses sent to these armies during the past three months have been the best we have received during the war.'

Testimonials of a similar character were received during the past year from chief quartermasters in the armies of the South and Southwest.

* * * * * * *

I am, General, very respectfully, your obedient servant,

JAMES A. EKIN,
*Brevet Brigadier General,*
*In charge First Division, Q. M. G. O.*

*Brevet Major General M. C Meigs,*
*Quartermaster General, U. S. A.,*
*Washington, D. C.*"

(From the annual report of General Ekin, 1865.)

QUARTERMASTER GENERAL'S OFFICE,
WASHINGTON, October, 1866.

SIR:

* * * * * * *

CAVALRY BUREAU.

"A report from General Ekin of the operations of the Quartermaster's Department in connection with the Cavalry Bureau, and especially of the construction and operation of the principal cavalry depot at Giesborough, is submitted herewith. It gives a history of probably the largest depot ever organized for supply of animals to an army.

"To systematize and regulate the purchase and supply of horses to the cavalry, then actively engaged in the field in operations attended with great destruction of horses, a cavalry bureau was organized, under General Orders 236, War Department, Adjutant General's Office, July 28, 1863.

"The principal depot for supply of horses for the armies in the Atlantic States was established at Giesborough, on the eastern branch of the Potomac, opposite the Capitol. Other depots were established at St. Louis, Mo.; Greenville, La.; Nashville, Tenn.; Harrisburg, Pa., and Wilmington, Del. The principal depot was at Giesborough, occupying a farm of about 625 acres.

"Within three months after commencing operations in the summer of 1863, provisions were made for the care of 15,000 animals, and within six months the depot had a capacity for 30,000. The largest number present at any one time was 21,000. Stables, stock-yards, corrals, forage-houses, workshops, storehouses, mess-houses, and quarters for the operatives and officers were constructed. A large steam mill for grinding grain and cutting hay and straw and steaming feed were erected. Wharves with berths for three large steamships, waterworks with reservoir, 27,000 feet of mains, steam pumps for raising the water, and all other conveniences for the safe-keeping, handling, and feeding of 21,000 animals, were constructed.

"The estimated cost of the buildings and other constructions is $1,225,000. There were in all received, issued, died,



or sold at this depot to the 30th of June, 1866, 208,659 horses, of which 196,036 were cavalry horses; 25,958 horses died at the depot, most of which had been returned from the armies in the field broken and disabled; 50,372 horses were sold from the depot to the 30th of June, 1866, at which time 32 horses remained on hand."

* * * * * * * * *

M. C. MEIGS,
*Quartermaster General,*
*Brevet Major General U. S. Army.*

*Hon. Edwin M. Stanton, Secretary of War.*

(From the annnal report of General Meigs, 1866.)

* * *

In 1868 the Quartermaster General recommended that "a stock farm be established at some healthy position, and that there be kept there a year's supply of horses for the district," * * * and "that an appropriation of $50,000 be asked for the purchase of land in Texas and of breeding animals." (Report of the Quartermaster General, 1868, as follows:

"Officers on duty in Texas, in which district a large portion of the cavalry of the army must for some years continue to be employed, report that horses of the native stock, though hardy and wiry, are not stout enough to last under the severe duty to which our cavalry horses in pursuit of Indians are subjected.

"The Northern horse, bred in Missouri, Kentucky, or Virginia, or the States still further north, requires a year's residence in Texas before he becomes acclimated. If put to severe work at once on arriving in the State, he breaks down. After a year he seems to become acclimated, and then will outwear in this service several of the native horses.

"It is recommended that a stock farm be established at some healthy position, and that there be kept there a year's supply of horses for the district. It is stated that many of the Northern horses taken to Texas by the volunteer cavalry regiments, and left in that State on the discharge of the regiments, at the termination of the war, are still sound and ser-

viceable, while two or three sets of native horses, bought in Texas, have worn out alongside of them.

"Horses and cattle seem to multiply and thrive in Texas, if native born. As our best horses are descended from the Arab or Barb, natives of a climate hotter and more arid than that of Texas, I believe that the difficulty is not in the climate, but in the breed.

"I am of the opinion that it would be greatly of advantage to the service were a stock farm established for the Department in Texas, and one also on the Western plains. To these, horses unfit for duty could be sent to recover. All the mares now in service fit for breeding could be collected at those two points, and if money were appropriated for the purchases of a few good stock horses, in a few years these farms would supply the country with remounts at much less cost than the present, and with animals of better quality and acclimated by birth in the district in which they are to serve.

"The surplus mares could be sold, and being of good blood, would tend to improve the quality of horses of the country. Thus a benefit, whose value cannot be estimated, would be conferred upon the farmers of the West and Southwest.

"The average cost of the cavalry horses bought during the fiscal year has been $142; of artillery horses, $155; to which is to be added the cost of transporting them from the district in which they were purchased.

"There were purchased during the fiscal year 2,741 cavalry and 72 artillery horses, and 2,864 mules, costing $788,971.25.

* * * * * * * * *

"I recommend that an appropriation of $50,000 be asked for the purchase of land in Texas and breeding animals.

"In the Department of Missouri, there is land enough which is the property of the government, and which can be set aside as military reservation without cost."

No action seems to have been taken on this recommendation, and the purchase and inspection of remounts were made



by boards, as indicated by the following extract from the annual report of the Quartermaster General, U. S. Army, for the fiscal year ending June 30, 1873 (page 13):

* * * * * * * * *

ANIMALS.

"These purchases were made by boards of officers assembled by the department commanders, each board consisting of a quartermaster and one or two officers of the regiment for which the horses were intended. The boards moved through the districts assigned for their operations; published their wants by posters, and purchased from farmers and stockraisers direct, without intervention of middlemen. The result has given satisfaction and the system secured good horses at fair prices."

* * * * * * * * *

There was no material change in this system until 1884, when it appears that remounts were purchased under authority of the Lieutenant General of the Army and of the Secretary of War, by boards of officers specially designated for the purpose by the division commanders.

Open market purchases were terminated by the Act of Congress making appropriations for the support of the army for the fiscal year 1885, which provides as follows:

* * * * * * * * *

"For the purchase of horses for the cavalry and artillery and for the Indian scouts and for such infantry as may be mounted, two hundred thousand dollars; *Provided*, That the number of horses purchased under this appropriation added to the number on hand shall not at any time exceed the number of enlisted men and Indian scouts in the mounted service; *And provided further*, That hereafter all *purchases* of horses under appropriations for horses for the cavalry, artillery and for the Indian scouts *shall be made by contract*, after legal advertisement by the Quartermaster's Department, under instructions from the Secretary of War, the *horses to be inspected under the orders of the general commanding the army;* and no horse shall be received and paid for until duly inspected. The Quarter-

master General shall report to the Secretary of War, for the transmission to Congress and yearly all purchases and contracts for horses, mules, and military supplies for the army made by his department."

The following year it was provided that the *inspection should be* by the Quartermaster's Department, under the direction of the Secretary of War.

HEADQUARTERS OF THE ARMY,
ADJUTANT GENERAL'S OFFICE,
GENERAL ORDERS } WASHINGTON, July 8, 1886.
No. 47. }

* * * * * * *

"For the purchase of horses for the cavalry and artillery and for the Indian scouts, and for such infantry as may be mounted, one hundred and thirty thousand dollars; *Provided*, That the number of horses purchased under this appropriation added to the number on hand shall not at any time exceed the number of enlisted men and Indian scouts in the mounted service; and that no part of this appropriation shall be paid out for horses not purchased by contract, after competition duly invited by the Quartermaster's Department, and an *inspection by such department*, all under the direction and authority of the Secretary of War."

* * * * * * *

And accordingly remounts were inspected by an officer of the Quartermaster's Department until 1904.

Paragraph 1072 of Army Regulations, 1904, provides:

"The purchase of animals will be made by the Quartermaster's Department, after their inspection by that department, and, unless otherwise directed by the Secretary of War, by contract after due competition."

The appropriation act for the current fiscal year provides:

"*Horses for Cavalry, Artillery and Engineers.*

"For the purchase of horses for the cavalry, artillery, and engineers, and for the Indian scouts, and for such infantry



and members of the hospital corps in field campaigns as may be required to be mounted and the expense incident thereto, one hundred and fifty thousand dollars; *Provided*, That the number of horses purchased under this appropriation, added to the number now on hand, shall be limited to the actual needs of the mounted service, and, unless otherwise ordered by the Secretary of War, no part of this appropriation shall be paid out for horses not *purchased by contract*, after competition duly invited *by the Quartermaster's Department and an inspection under* the direction and authority of the Secretary of War. When practicable, horses shall be purchased in the open market at all military posts or stations, when needed, at a maximum price to be fixed by the Secretary of War.

* * * * * * *

Transportation of the army and its supplies * * * the purchase and hire of draft and pack animals: * * *

Under existing law and regulations all public animals are purchased by the Quartermaster's Department and inspected under the direction of the Secretary of War.

Experience during the last two years would indicate the impracticability of supplying remounts and draft animals by open market purchases, as provided in the appropriation act, and practically all of the horses and mules have been and are of necessity "purchased by contract after due competition."

With a view to fully and completely informing prospective bidders as to the character, kind and class of horses desired, detailed specifications have been prepared under the direction of the Quartermaster General, as follows:

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
WASHINGTON, November 25, 1903.

*Specifications for Cavalry Horses, Prepared Under Direction of the Quartermaster General.*

The cavalry horses must be sound, well bred, of a superior class, and have quality; gentle and of a kind disposition; thoroughly broken to the saddle, with light and elastic mouth, easy gaits, and free and prompt action at the walk

trot, and gallop; free from vicious habits, without material blemish or defect; and otherwise to conform to the following description:

A gelding of uniform and hardy color, in good condition; from 4 to 8 years old; weighing from 950 to 1,100 pounds, depending on height, which should be from 15 to 15¾ hands.

*Head.*—Small and well set on neck; with ears small, thin, neat, and erect; forehead broad and full; eyes large, prominent, and mild, with well-developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep; lips thin and firmly compressed; nostrils large and fine; and branches of underjaw (adjoining neck) wide apart.

*Neck.*—Light, moderately long, and tapering toward the head, with crest firm and longer than underside; mane fine and intact.

*Withers.*—Elevated, not unduly fine, well developed and muscled.

*Shoulders.*—Long, oblique, and well muscled.

*Chest.*—Full, very deep, moderately broad, and plump in front

*Fore Legs.*—Vertical, and properly placed; with elbow large, long, prominent, and clear of chest; forearm large at the elbow, long, and heavily muscled.

*Knees.*—Neatly outlined, large, prominent, wide in front, well situated, and well directed.

*Back.*—Short, straight, and well muscled.

*Loins.*—Broad, straight, *very short*, and *muscular*.

*Barrel.*—Large, increasing in size toward flanks, with ribs well arched and definitely separated.

*Hind Quarters.*—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

*Tail.*—Fine and intact; well carried and firm.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear, well situated, and well directed.

*Limbs.*—From knees and hocks downward vertical, short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.



*Pasterns.*—Strong, medium length, not too oblique, and well directed.

*Feet.*—Medium size, circular in shape, sound; with horn dark, smooth, and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic, and healthy.

Each horse will be subjected to a rigid inspection, and any animal that does not meet the above requirements should be rejected. * * * No white or gray horses will be accepted.

* * *

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
WASHINGTON, October 15, 1906.

*Specifications for Artillery Horses for Light and Horse Batteries, Prepared Under Direction of the Quartermaster General.*

The artillery horse for light and horse batteries must be sound, well bred, of a superior class, and have quality; of a kind disposition, well broken to harness, and gentle under the saddle, with easy mouth and gaits, and free and prompt action at the walk, trot, and gallop; free from vicious habits; without material blemish or defect, and otherwise conform with the following description:

A gelding or mare of hardy color, in good condition, from 4 to 8 years old; height from 15½ to 16 hands; weight from 1,150 to 1,250 pounds. Horses otherwise satisfactory which fall short of or exceed these limits of weight by not more than fifty pounds, due to temporary conditions, may be accepted. Mares in foal will not be accepted.

*Head.*—Small and well set on neck; with ears small, thin, neat, and erect; forehead broad and full; eyes large, prominent, and mild, with well-developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep; lips thin and firmly compressed; nostrils large and fine; and branches of under jaw (adjoining neck) wide apart.

*Neck*—Moderately long and tapering toward the head, with crest firm and longer than under side; mane fine and intact.

*Withers.*—Elevated, not unduly fine, well developed and muscled.

*Shoulders.*—Long, oblique, well packed with muscle, not too heavy, smooth, rounded, and so formed as to properly support the collar.

*Chest.*—High, wide, very deep; plump in front, and full.

*Fore Legs.*—Vertical and properly placed; with elbow large, long, prominent, clear of chest, and well-placed; forearm wide, thick, long, heavily muscled, and vertical.

*Knees.*—Neatly outlined, large, prominent, wide in front, well situated, and well directed.

*Back.*—Short, straight, and well muscled.

*Loins.*—Broad, straight, very short, and muscular.

*Barrel.*—Large, increasing in size toward flanks, with ribs well arched and definitely separated.

*Hind Quarters.*—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

*Tail.*—Fine and intact; well carried and firm.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear, and well directed.

*Limbs.*—From knees and hocks downward, vertical, short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

*Pasterns.*—Strong, medium length, not too oblique, and well directed.

*Feet.*—Medium size, circular in shape, sound; with horn dark, smooth, and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic, and healthy.

Each horse will be subjected to a rigid inspection, and any animal that does not meet the above requirements should be rejected.

The artillery horse for light and horse batteries is required for quick draft purposes, and should be heavy enough to move the carriage, ordinarily, by weight thrown into the collar rather than by muscular exertion. Long-legged, loose-jointed, long-bodied, narrow-chested, coarse, and cold-blooded horses, as well as those which are restive, vicious, or too free in harness, or which do not, upon rigid inspection, meet the above requirements in every respect, will be rejected. A horse under five years old should not be accepted unless a specially fine, well-developed animal. No white or gray horses will be accepted.



* * *

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
WASHINGTON, October 15, 1906.

*Specifications for Artillery Horses for Siege Batteries, Prepared Under Direction of the Quartermaster General.*

The artillery horse for siege batteries must be sound, *well bred*, of a superior class, and have quality; of a kind disposition, well broken to harness, and gentle under the saddle, with easy mouth and gaits, and free and prompt action at the walk, trot, and gallop; free from vicious habits; without material blemish or defect, and otherwise conform with the following description:

A gelding or mare of hardy color, in good condition, from 4 to 8 years old; height from 16 to 17 hands; weight from 1,350 to 1,650 pounds. Horses otherwise satisfactory which fall short of or exceed these limits of weight by not more than 50 pounds, due to temporary conditions, may be accepted. Mares in foal will not be accepted.

*Head.*—Small and well set on neck; with ears small, thin, neat, and erect; forehead broad and full; eyes large, prominent, and mild, with well-developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep; lips thin and firmly compressed; nostrils large and fine; and branches of under jaw (adjoining neck) wide apart.

*Neck.*—Moderately long and tapering toward the head, with crest firm and longer than under side; mane fine and intact.

*Withers.*—Elevated, not unduly fine, well developed and muscled.

*Shoulders.*—Long, oblique, well packed with muscle, not too heavy, smooth, rounded, and so formed as to properly support the collar.

*Chest.*—High, wide, very deep; plump in front, and full.

*Fore Legs.*—Vertical and properly placed; with elbow large, long, prominent, clear of chest, and well-placed; forearm wide, thick, long, heavily muscled, and vertical.

*Knees.*—Neatly outlined, large, prominent, wide in front, well situated, and well directed.

*Back.*—Short, straight, and well muscled.

*Loins.*—Broad, straight, very short, and muscular.

*Barrel.*—Large, increasing in size toward flanks, with ribs well arched and definitely separated.

*Hind Quarters.*—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

*Tail.*—Fine and intact; well carried and firm.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear, and well directed.

*Limbs.*—From knees and hocks, downward, vertical, short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

*Pasterns.*—Strong, medium length, not too oblique, and well directed.

*Feet.*—Medium size, circular in shape, sound; with horn dark, smooth, and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic, and healthy.

Each horse will be subjected to a rigid inspection, and any animal that does not meet the above requirements should be rejected.

Long-legged, loose-jointed, long-bodied, narrow-chested, coarse, and cold-blooded horses, as well as those which are restive, vicious, or too free in harness, or which do not upon rigid inspection meet the above requirements in every respect, will be rejected. A horse under five years old should not be accepted unless a specially fine, well-developed animal. No white or gray horses will be accepted.



WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
WASHINGTON, November 25, 1903.

*Specifications for Light Draft (Coach) Horses, Prepared Under Direction of Quartermaster General.*

The light draft horse must be sound, well bred, of a superior class, and have quality; of a kind disposition; thoroughly broken to harness; with easy mouth, and free, prompt, straight, and true action at the walk and trot; free from vicious habits; without material blemish or defect; and otherwise conform to the following description.

A gelding of uniform and hardy color, in good condition; from 5 to 7 years old; weighing from 1,100 to 1,200 pounds, depending on height, which should be from 15½ hands to 16 hands.

*Head.*—Small and well set on neck; with ears small, thin, neat, and erect; forehead broad and full; eyes large, prominent, and mild, with well developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep; lips thin and firmly compressed; nostrils large and fine; and branches of underjaw (adjoining neck) wide apart.

*Neck.*—Light, moderately long, and tapering toward the head, with crest firm and longer than underside; mane fine and intact.

*Withers.*—Elevated, not unduly fine, well developed and muscled.

*Shoulders.*—Long, oblique, well packed with muscle, not too heavy, smooth, rounded, and so formed as to properly support the collar.

*Chest.*—High, wide, very deep, plump in front, and full.

*Fore Legs.*—Vertical, and properly placed; with elbow large, long, prominent, clear of chest, and well placed; forearm wide, thick, long, heavily muscled, and vertical.

*Knees.*—Fine, thick, and wide in front, prominent, well situated, well directed, and free from blemishes.

*Back.*—Short, straight, and well muscled.

*Loins.*—Broad, straight, very short, and muscular.

*Barrel.*—Large, with ribs definitely separated from each other and well arched from girth toward flank.

*Hind Quarters.*—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

*Tail.*—Fine and intact, well carried and firm.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear, and well directed.

*Limbs.*—From knees and hocks downward vertical, short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

*Pasterns.*—Strong, medium length, not too oblique, and well directed.

*Feet.*—Medium size, circular in shape, and sound; with horn dark, smooth, and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic, and healthy in appearance.

Each horse will be subjected to a rigid inspection, and any animal that does not meet the above requirements should be rejected.

* * *

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
WASHINGTON, November 25, 1903.

*Specifications for Medium Draft Horses, Prepared Under Direction of Quartermaster General.*

The medium draft horse must be sound, well bred, and of a superior class; gentle and of a kind disposition; thoroughly broken to harness, with easy mouth, and free, prompt, straight, and regular action at the walk and trot; free from vicious habits, without material blemish or defect, and otherwise to conform to the following description:

A gelding of uniform and hardy color, in good condition; from 5 to 7 years old; weighing from 1,200 to 1,400 pounds, depending on height, which should be from 15½ to 16 hands.

*Head.*—Small and well set on neck; with ears small, thin, and erect; forehead broad and full; eyes large, prominent,



and mild, with well developed brow and fine eyelid; vision perfect in every respect; muzzle fine; mouth deep; lips thin and firmly compressed; nostrils large and fine; and branches of under-jaw wide apart adjoining neck.

*Neck.*—Moderately long and tapering toward the head, with crest firm and longer than underside; mane fine and intact.

*Withers.*—Elevated, not unduly fine, well developed and muscled.

*Shoulders.*—Long, oblique, well muscled, smooth, rounded, and so formed as to properly support the collar.

*Chest.*—Full, high, wide, deep, and plump in front.

*Fore Legs.*—Vertical, and properly placed; with elbow large, long, prominent, clear of chest, and well placed; with forearm large, thick, long, heavily muscled, and vertical.

*Knees.*—Fine, thick, and wide in front, prominent, well situated, well directed, and free from blemishes.

*Back.*—Short, straight, well muscled, and strongly coupled to hind quarters.

*Loins.*—Broad, straight, very short, and muscular.

*Barrel.*—Large, with ribs definitely separated from each other, and well arched.

*Hind Quarters.*—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

*Tail.*—Fine and intact; well carried and firm.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear, and well directed.

*Limbs.*—From knees and hocks downward vertical, very short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

*Pasterns.*—Strong, medium length, not too oblique, and well directed.

*Feet.*—Medium size, circular in shape, and sound; with horn dark, smooth, and of fine texture; sole moderately concave, and frog developed, sound, firm, and large, elastic and healthy in appearance.

Each horse will be subjected to a rigid inspection and any animal that does not meet with the above requirements should be rejected.

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
WASHINGTON, November 25, 1903.

*Specifications for Mules, Prepared Under Direction of the Quartermaster General.*

The mule must be sound, well bred, and of a superior class; of a kind disposition, gentle, and well broken to harness, with the exception of the pack mule; with free and prompt action at the walk or trot; free from vicious habits, without material blemish or defect, and otherwise to conform to the following description:

A gelding or mare of uniform and hardy color, in good condition; from 4 to 8 years old; weight depending on height, to be as follows:

Wheel mules for six-mule teams, to weigh from 1,150 to 1,200 pounds, and be from 15 hands 3 inches to 16 hands high.

Swing mules for six-mule team, to weigh 1,050 to 1,150 pounds, and be from 15 hands 1 inch to 15 hands 3 inches high.

Lead mules for six-mule team, to weigh from 950 to 1,050 pounds, and be from 14 hands 3 inches to 15 hands 1 inch high.

Wheel mules for four-mule team to weigh from 1,100 to 1,200 pounds, and be from 15 hands 2 inches to 16 hands high.

Lead mules for four-mule team, to weigh from 1,050 to 1,100 pounds, and be from 15 hands 1 inch to 15 hands 2 inches high.

Pack mules to weigh from 850 to 1,000 pounds, and be from 13 hands 3 inches to 15 hands 1 inch high.

*Head.*—Fine and of medium size, with ears fine and erect; forehead broad and full; eyes large, clear, prominent, and mild, with well-developed brow and fine eyelid; vision perfect in every respect; nostrils large and open.

*Neck.*—Medium length and smoothly joined to the shoulder and withers, with crest firm and full.



*Shoulders.*—Long, oblique, well and smoothly muscled, and so formed as to provide proper support for the collar.

*Chest.*—High, wide, very deep, and full.

*Back.*—Short, straight, and well and smoothly muscled.

*Loins.*—Broad, straight, very short, and muscular.

*Barrel.*—Large, with ribs well arched and definitely separated from each other.

*Fore Legs.*—Vertical and properly placed; with elbow large, long, and clear of chest; forearm large, very long, heavily muscled, and vertical.

*Knees.*—Large, wide in front, well placed, and free from blemishes.

*Hind Quarters.*—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear, and well directed.

*Limbs.*—From knees and hocks downward vertical, short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

*Pasterns.*—Strong, medium length, not too oblique, and well directed.

*Feet.*—Medium size and sound; with horn dark, smooth, and of fine texture; frog well developed, elastic, and healthy.

Each mule will be subjected to a rigid inspection, and any animal that does not meet the above requirements should be rejected.

These specifications are so drawn as to require the animals to be *first* class in every respect, and if only such as conform with the specifications were purchased, the supply of suitable and satisfactory animals for all purposes would be *insured.*

In this connection the following is quoted from "Horses, Saddles and Bridles," page 3, Introductory:

"When bought under contract the price paid by the government for horses is usually fixed by the lowest bidder. It is not, therefore, to be expected that ideal animals will be presented for inspection, but only such as the contractor can procure at a lower price than he himself received.

"There will be a few first class, many fair, and a superabundance of indifferent and meidocre horses presented."

If by this we are to understand that the *delivery* of animals conforming with the specifications is not to be expected, then, the views of the author are not in accord with those held by the office of the Quartermaster General in transmitting instructions to the depot quartermaster at St. Louis, Mo., October 15, 1895, from which the following is an extract:

"The inspecting officer has simply to hold firmly to these conditions. The Quartermaster General desires especially to impress upon the officers that the price of the horse is determined by the contractor; that it signifies absolutely nothing to the inspecting officer what that price may be, whether $100.00 or $200.00. His duty is to procure under the contract, the specified horse without reference to the price, and to accept no other."

As a result of a strict compliance with these instructions, more than ninety per cent. of the remounts supplied in 1896 and 1897 were reported as satisfactory by troop and battery commanders to whom they were supplied. The price, however, of the remounts was very materially increased.

Cavalry and artillery horses are now inspected by boards composed of officers selected from the cavalry and artillery, and draft horses and all mules by an officer of the Quartermaster's Department.

This system of inspection was adopted with a view to placing the selection of remounts for the cavalry and artillery in the hands of selected officers from these branches of the service, respectively.

With the most favorable results obtainable, the contract system is more or less objectionable in time of peace, because of defects, of which the following are most important:

1st. The *delay* necessarily resulting because of the time required to advertise, to make award, execute contracts, assemble horses by the contractor and to inspect, accept and ship the horses by the board is usually from two to four



months, depending upon the number of horses to be delivered and to a great extent on the quality of those presented by the contractor. As remounts required for, are to fill *existing vacancies*, this delay is *most objectionable*.

2d. It is not practicable to procure data as to where the best and most suitable horses can be found, or to make other necessary provisions to meet emergencies, such as an increase to war strength, etc.

3d. As a rule, deliveries are made by contractors at large horse markets, such as St. Louis, Mo., Chicago, Ill., Kansas City, Mo., etc., and as a result the horses almost without an exception contract some one of the diseases so prevalent in all such markets, due to the large number of animals that are received at and passed through all live stock markets or yards, from all parts of the United States.

4th. Well broken and aged horses, such as conform with the specifications for remounts, are in demand for riding and light harness purposes; we are therefore in competition with all *dealers* and the *commercial world*, when such horses are purchased, be it under contract or in open market.

5th. Accepting and shipping remounts to troops without an opportunity of judging of their character or disposition, or of determining whether they are free from vicious habits, such as would result in their early condemnation.

6th. The animals must be shipped without delay and in all stock yards or horse markets, shipments are made by their employees, thus precluding the possibility of properly fumigating and cleansing cars, a most important factor in the prevention of influenza, car-fevers, etc., some of which under present conditions almost invariably follow upon, or shortly after, arrival of remounts at a post.

The difficulties to contend with in procuring suitable and satisfactory remounts are therefore most apparent.

*Number of Remounts and Transport Animals Required.*—Considering the authorized allowances as fixed by General Orders of the War Department, the Army Regulations, Field Service Regulations, and other official records, there are required to equip the United States army in time of

peace, as at present organized, with mounts and means of transportation, 17,900 horses and 11,213 mules.

DISTRIBUTION OF HORSES AND TRANSPORT ANIMALS REQUIRED TO EQUIP THE U. S. ARMY AS AT PRESENT ORGANIZED.

| | HORSES | | MULES | | |
|---|---|---|---|---|---|
| | Cavalry Artillery Riding | Draft | Draft | Pack | Riding |
| 15 Regiments of cavalry | 12,215 | ..... | 1,800 | 150 | 75 |
| 6 Regiments of Field Artillery | 3,450 | ..... | 624 | 1,008 | 30 |
| 30 Regiments of Infantry | 600 | ..... | 2,160 | 300 | 150 |
| 3 Battalions Engineers | 231 | ..... | 432 | 36 | 15 |
| 11 Co's Sig. Corps (full allowance for 4 companies only included herein) | 200 | 48 | 304 | ..... | 4 |
| Medical Department with troops | 430 | ..... | 1,092 | ..... | ..... |
| 4 Field hospitals | ..... | ..... | ..... | ..... | ..... |
| 4 Hospital sections | 32 | ..... | 128 | ..... | 5 |
| 4 Ambulance company sections | 44 | ..... | 240 | 16 | 5 |
| 151 Posts, 1 spring wagon each, as per A. R. 1109–1904 | ..... | ..... | 604 | ..... | ..... |
| At hdqrs. divs., depts, now supplied | 5 | 90 | 61 | ..... | ..... |
| At gen. depots, etc., o. h | 7 | 240 | 124 | ..... | ..... |
| 8 Pack trains now organized in U. S. and Cuba | ..... | ..... | ..... | 400 | 112 |
| 10 Pack trains required for Philippines (based on No. o. h.) | ..... | ..... | ..... | 500 | 140 |
| 170 Co's Coast Atty., 1 4-mule team to each company, as per authority Quartermaster General | ..... | ..... | 680 | ..... | ..... |
| U. S. Military Academy West Point, New York:— | | | | | |
| Cavalry on hand | 143 | 93 | ..... | 17 | ..... |
| Artillery on hand | 72 | ..... | ..... | ..... | ..... |
| Total | 17,429 | 471 | 8,249 | 2,427 | 536 |

For the purpose of arriving at an approximate number and kind of *additional* animals that would be required to equip the army with remounts and means of transportation to meet *all* emergencies such as would necessitate an increase to the maximum strength, as authorized by General Orders No. 9, 1901, it is assumed that the army would be organized and equipped as three divisions of three brigades each, and, based on the Field Service Regulations, 8,596 horses and 4,419 mules would be required in addition to the maximum number authorized in time of peace. These additional remounts and transport animals would be distributed as follows:



DISTRIBUTION OF ADDITIONAL ANIMALS.

| FOR | HORSES | | MULES | | |
|---|---|---|---|---|---|
| | Cavalry Artillery Riding | Draft | Draft | Pack | Riding |
| One corps headquarters | ..... | ..... | 16 | ..... | 2 |
| Three division headquarters | ..... | ..... | 36 | ..... | 6 |
| Nine brigade headquarters | ..... | ..... | 72 | ..... | 9 |
| Led horses for 15 regiments cavalry | 1,335 | ..... | ..... | ..... | ..... |
| Led horses for 4 regiments artillery | 276 | ..... | ..... | ..... | ..... |
| Led animals for 3 regiments mounted artillery | 36 | ..... | ..... | 100 | ..... |
| Ammunition columns for 3 divisions | ..... | ..... | 1,260 | ..... | 75 |
| Supply columns for 3 divisions | ..... | ..... | 972 | ..... | 45 |
| Medical department, with corps, division and brigade headquarters | 31 | ..... | ..... | ..... | ..... |
| Advanced Medical supply depot | 9 | ..... | 72 | ..... | ..... |
| Stationary hospital | 15 | ..... | 60 | ..... | ..... |
| Base hospital | 15 | ..... | 60 | ..... | ..... |
| Q. M. Dept. depots | 30 | ..... | 360 | ..... | 20 |
| Additional cavalry horses required to bring 15 regts. cavalry to war strength | 6,325 | ..... | ..... | ..... | ..... |
| Six additional signal corps | 300 | 72 | 456 | ..... | 10 |
| Eight field hospitals:— | | | | | |
| Eight hospital sections | 64 | ..... | 256 | ..... | 10 |
| Eight ambulance company sections | 88 | ..... | 480 | 32 | 10 |
| Total | 8,524 | 72 | 4,100 | 132 | 187 |

We are therefore confronted with the following problem:

1st. To supply such number of suitable and satisfactory *remounts* and transport animals each year as may be required to keep the army fully equipped at all times during peace—under ordinary conditions, as at present—with the maximum authorized allowance thereof, viz: 17,900 horses and 11,213 mules.

2d. To be prepared at all times to supply under short notice the 8,596 horses and 4,419 mules, that would be required to fully equip the army increased to maximum strength, and such other additional animals necessary to place the army on a war footing in the most satisfactory manner and shortest time.

This problem, it is thought, can best be solved, and the difficulties experienced in, and objectionable features of the contract system, be overcome by the establishment of a *remount service*, based upon an *annual supply* of *not* to *exceed* a *fixed per centum* of the authorized number of horses to each

organization, and the purchase of *young horses* for both cavalry and artillery (from 3 to 4 years old and otherwise) to conform with prescribed specifications, and to be held at depots until they are in condition and of suitable age for issue to troops, (generally from 6 to 9 months).

### THE REMOUNT SERVICE.

To be a separate division of the Quartermaster General's Office, designated "Remount Division," which shall be under the charge of an officer of the Quartermaster's Department, specially selected by the Secretary of War, on the recommendation of the Quartermaster General of the Army.

There shall be a main office (headquarters) located in the Quartermaster General's office, and three or more remount depots, to be organized, located, equipped and operated as follows:

*Organisation and Personnel.*—The main office of the Remount Division to consist of the following personnel:

1 officer Quartermaster's Department, in charge of Remount Division.

1 Chief Veterinary Surgeon (veterinarian and expert inspector).

2 Clerks.

1 Messenger.

Under the supervision of the Quartermaster General, the officer in charge of the Remount Division to have charge of all matters pertaining to the purchase and supply of all remounts and draft animals for the army; exercise supervision and control over the remount depots and districts and make such inspections thereof as may be necessary.

The chief veterinary surgeon will accompany the officer in charge of the Remount Division on tours of inspection, and will examine into the condition of the animals, especially as to health, the sanitary condition of the remount depots, etc.

To each of the three or more remount depots to be assigned a remount district. Each remount depot to have:



1 officer Quartermaster's Department (appointed from the cavalry or field artillery and especially adapted for this duty) in charge of the remount depot and district.

1 Clerk.

1 Veterinary surgeon.

1 Farrier-blacksmith.

1 Overseer (expert in handling horses).

1 Stableman (groom, rider or driver) to every 20 horses.

1 Foragemaster or storekeeper.

1 Assistant veterinary surgeon, when necessary.

1 Blacksmith's helper, when necessary.

1 Saddler.

Under the supervision of the officer in charge of the Remount Division, the officer in charge of each remount depot to have charge of all matters pertaining to the management thereof, and to be accountable and responsible for all animals, supplies, property and funds necessary to the successful operation of the depot.

He will personally superintend the care and handling of the horses under his charge and see to it that the horses are well fed and cared for, gently and kindly handled at all times, and properly exercised and broken.

When directed by proper authority, he will purchase young horses, to conform with the specifications above referred to, within the district assigned to his remount depot, to which depot they will be shipped.

He will acquaint himself with and keep a record of the number and class of horses, how bred (if possible) by whom owned, where located, and generally a complete data of the horse and mule production of his district, and be prepared to direct a purchasing officer or to go himself, to the places *most* suitable for the establishment of sub-depots in case of an emergency, and where the best horses can be found.

*Employees at Remount Depots.*—It is thought that the duties of the employees at remount depots are sufficiently manifest as to render any reference to them in detail unnecessary in this paper. Employment should be given *preferably* to *expert packers* and *discharged soldiers* whose record and known

capabilities are such as would make it especially desirable to retain such men in the government employ.

*Districts.*—The object or purpose of the districts is to give each remount depot a particular section of the United States from which to receive its supply of young horses, and which shall include the stations of the mounted troops to be supplied from said depots and definitely fix a zone or territory with the horse production of which the officer in charge of the remount depot shall fully acquaint himself and make of record. Accordingly, the following remount districts are suggested:

*First District*, to include all States east of Illinois, Lake Michigan and the Mississippi River south of Cairo.

*Second District*, to include the State of Illinois and all States and Territories to the west of Lake Michigan, Indiana and the Mississippi River south of Cairo, and east of and including the States of Montana, Wyoming, Colorado, and Texas, and the Territory of New Mexico.

*Third District*, to include the States of Idaho and Utah, and the Territory of Arizona, all States west thereof, and the Philippine Islands.

*Location of Remount Depots.*—In selecting localities at which to establish remount depots within the limits of these districts, there have been considered:

*First.* The climatic conditions, which should be such as to permit the handling and working of horses practically the entire year without the use of closed riding halls.

*Second.* The desirability, as a matter of economy, of making use of military reservations or other public domains.

*Third.* The railroads and other facilities for shipping horses to remount depots and from depots to posts in the district.

*Fourth.* Character of grasses and value of same for pasturing animals.

*Fifth.* The location of the best horse raising and producing sections of the districts with respect to the military stations to be supplied.

The extent, character and drainage of the land, the water supply and the many other necessary and important



requirements, are left for the consideration of those who select the particular sites for the remount depots.

The military reservations or other public lands of sufficient extent, suitable climate and available for use of remount depots are so limited that but little or no choice can be made with respect to the *other conditions* above referred to, and therefore they can receive practically no consideration, if government lands are selected.

Where all of the above mentioned conditions are considered, the best and most advantageous locations for the remount depots would be as follows:

*For the First District*, in Ohio, near Springfield; in eastern Kentucky in the vicinity of Lexington or Danville, or in Virginia, near Washington, D. C. There are, however, no public lands available for this purpose in the vicinity of either of these cities, nor elsewhere in the first district, unless it would be at the Chickamauga and Chattanooga National Park, which is therefore suggested as a location of Remount Depot No. 1.

*For the Second District.* Northwestern Missouri, near Plattsburg or St. Joseph, Mo., this being the best horse-producing section in Missouri; has best blue grass pasture; is well watered; has fine railroad facilities, but there are no public lands available in this section; and to avoid purchase or lease of sufficient land, Fort Reno, Oklahoma, is suggested as the location of Remount Depot No. 2, with a subdepot or annex at Fort Niobrara, Nebraska.

*For the Third District*, it is thought the remount depot should be located on the Pacific slope, on or near the prominent railroads (Santa Fe and Southern Pacific). The nearest approach to such a location of any public domain is the Sequoia National Park, the Mount Whitney Reservation, and the Yosemite National Park, all in California, but neither of which is considered a desirable location for a remount depot.

In view of the railroad facilities, the character of the country and climate, and the many large horse ranches in the southern part of California, it is suggested that Remount Depot No. 3 be located between Fresno and Bakersville,

Cal., on or near the Southern Pacific and Sante Fe Railroads; with a sub-depot or annex in Walla Walla or Yakima Counties, Washington.

*Capacity of Remount Depots.*

In determining the requisite capacity of the remount depots there have been considered:

1st. The maximum number of horses and mules required to supply the troops in each district.

2d. The life of period of duration of horses and mules in the United States army.

*Maximum Number of Animals Required in Each District.*

In arriving at the maximum number of horses and mules required in each district, it is assumed that the troops will, in the future, be stationed and the maximum strength of each troop of cavalry and battery of field artillery will be practically as at present; that riding horses will be supplied to all arms of the service as provided by the field service regulations, and that all troops will be equipped with the authorized allowance of transportation for field service, exclusive of ammunition and supply trains. This will give as the maximum number of cavalry, artillery, riding horses, draft, pack and riding mules, that will be required to supply troops at the various posts in each of the remount districts above referred to approximately the following:

| DISTRICT. | HORSES. | | | | | MULES. | | | | Total animals authorized in each district. |
|---|---|---|---|---|---|---|---|---|---|---|
| | Cav. | Art. | Riding | Draft. | Total. | Draft. | Pack. | Riding | Total. | |
| 1st Dist.... | 2,083 | 545 | 341 | 229 | 3,198 | 2,513 | 433 | 80 | 3,026 | 6,224 |
| 2d Dist..... | 5,743 | 2,261 | 574 | 115 | 8,693 | 2,830 | 1,002 | 273 | 4,105 | 12,798 |
| 3d Dist..... | 4,532 | 716 | 634 | 127 | 6,009 | 2,906 | 992 | 184 | 4,082 | 10,091 |
| Total ... | 12,358 | 3,522 | 1,549 | 471 | 17,900 | 8,249 | 2,427 | 537 | 11,213 | 29,113 |

*Life of Period of Duration of Animals in the U. S. Army.*

From the records of the Quartermaster General's office, it is found that, during the period from 1876 to 1897—twenty years—there were purchased 24,668 cavalry and artillery horses. In the absence of any authorized allowance of mounts for the cavalry during that period, the total maximum authorized *enlisted strength* is taken as the total maximum number of cavalry horses that could be authorized. This total of enlisted strength of the cavalry—150,150—increased by the total maximum authorized allowance of artillery horses—6,750—gives 156,900, which is taken as the maximum authorized allowance for cavalry and artillery horses, for the period under consideration, and when compared with the total number purchased during the same period. shows that an average of 15.7 per cent. of the *maximum number* of cavalry and artillery horses authorized were replaced each year.



A similar comparison of the total number of cavalry and artillery horses purchased, 11,234 from 1902 to 1906, inclusive, five years, with the total maximum anthorized allowance of cavalry and artillery horses, 74,430, for the same period, we find that an average of 15.1 per cent. of the maximum authorized allowance of cavalry and artillery horses were replaced each year during that period; or, considering the entire period from 1878 to 1906, inclusive, excepting the years 1898 to 1901, during the Spanish War and insurrection in the Philippine Islands, *a total period of twenty-five years*, it is found that 15.5 per cent. of the maximum authorized allowance of horses were replaced each year. During the same period (1878 to 1897 and 1902 to 1906—25 years) 15,068 mules were purchased; and compared with the total number reported on hand, 158,444, it is found that an average of 9.4 per cent. of the mules were replaced each year.

The average life, or period of duration of cavalry and artillery horses has therefore been 6.4 years, and that of the mules 10.6 years.

In view of the fact that the young horses to be sent to the remount depots will be carefully selected and be purchased for remount purposes before they are worked down, injured or spoiled by improper breaking, and since the number of remounts to be supplied *annually is to be limited*, which in time will result in the mount of each organization being composed of horses of ages from 4½ years up, the number

of each age being approximately that supplied each year, it is submitted that the average life or period of duration of remounts for cavalry and artillery, will be materially increased by this system of purchase and supply, and it is therefore taken at ten years (barring epidemics, etc.).

For similar reasons the average life of a mule is taken at 12½ years.

Considering this in connection with the maximum number of cavalry, artillery and riding horses and transport animals required in each district, the minimum capacity of the respective remount depots should be approximately for the following number of animals:

| REMOUNT DEPOTS | HORSES. | | | | | MULES. | | | | TOTAL ANIMALS |
|---|---|---|---|---|---|---|---|---|---|---|
| | Cav. | Art. | Riding | Draft. | Total. | Draft. | Pack. | Riding | Total. | |
| No. 1..... | 208 | 55 | 34 | 23 | 320 | 201 | 35 | 6 | 242 | 562 |
| No. 2..... | 575 | 226 | 57 | 11 | 869 | 226 | 80 | 22 | 328 | 1,197 |
| No. 3..... | 453 | 72 | 63 | 12 | 600 | 223 | 79 | 14 | 316 | 916 |

*Area of Land for the Remount Depots.*—While a considerable tract of good grass land would be desirable and useful in connection with each of the remount depots, the area thereof necessary to meet actual necessities is not so great; it should, however, include sufficient good grass land to pasture its full complement of animals for approximately half of each year and to supply ample paddocks, corrals, loading pens, etc., in addition to the space required for the necessary buildings.

In reply to an inquiry as to the amount of land considered necessary to pasture one animal on ordinary grass from spring to fall (five or six months) and an estimate for pasturage in southern California, Fort Riley, Kan., at Chickamauga Park, Ga., the Department of Agriculture reports as follows:

"On the range about ten acres are required to pasture one animal. * * *

"At Fort Riley, Kan., it takes about three acres of prairie to keep one animal.



"In Kentucky blue grass region one acre sustains about three animals.

"One (1) animal per acre would be a safe estimate for the vicinity of Chickamauga Park, Ga.

"In southern California range conditions exist and a considerable area of native wild land is required to feed an animal. With irrigation, however, good pastures are obtained, and the estimates of pasturing capacity must necessarily vary under these conditions."

The grass at Fort Reno is said to be abundant and of good quality, and the same is true of Walla Walla and Yakima Counties, Washington.

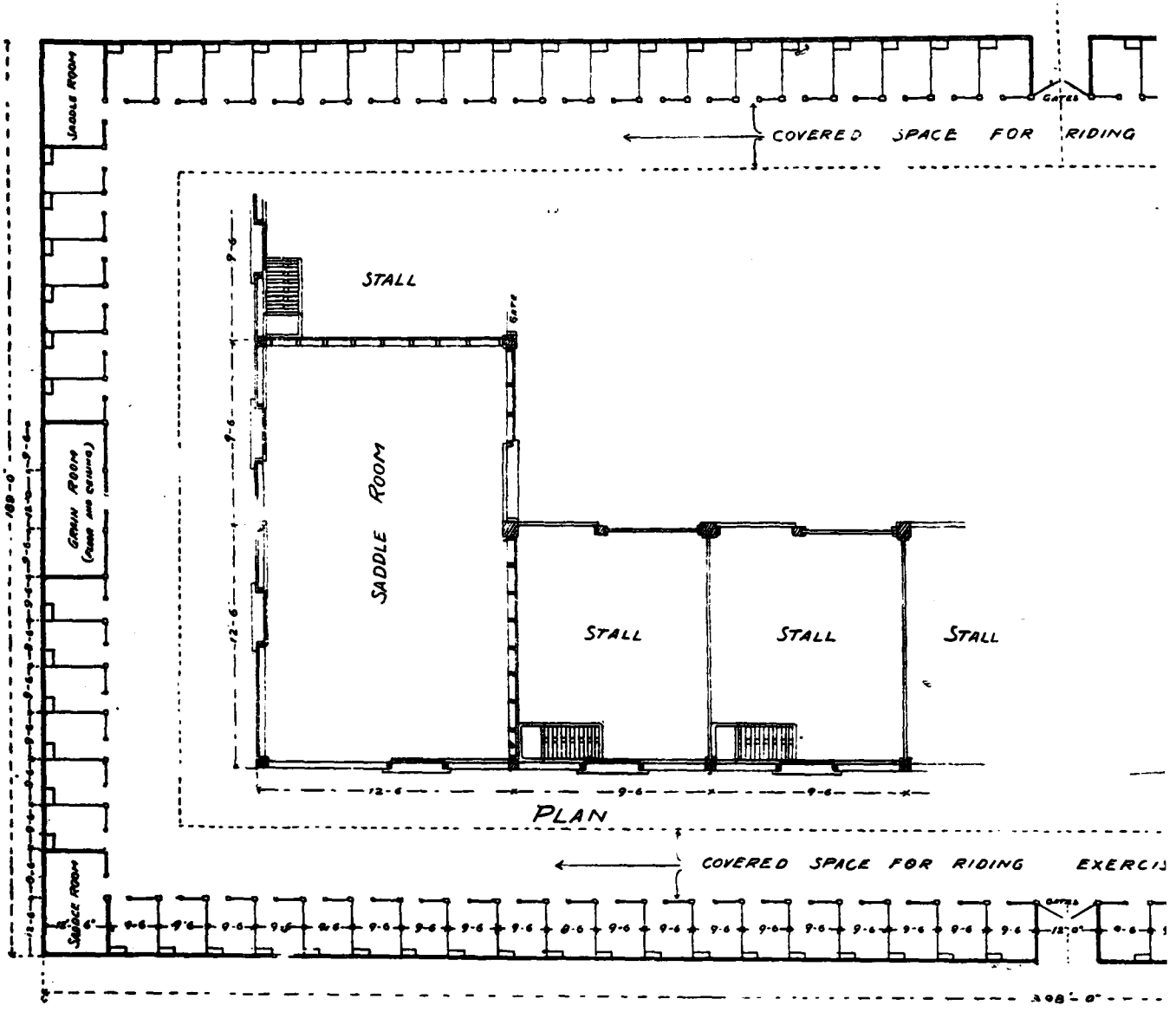
On the Fort Niobrara reservation the grass is scarce and of poor quality.

In view of the foregoing, the following estimate as to the amount of land required for the remount depots is submitted:

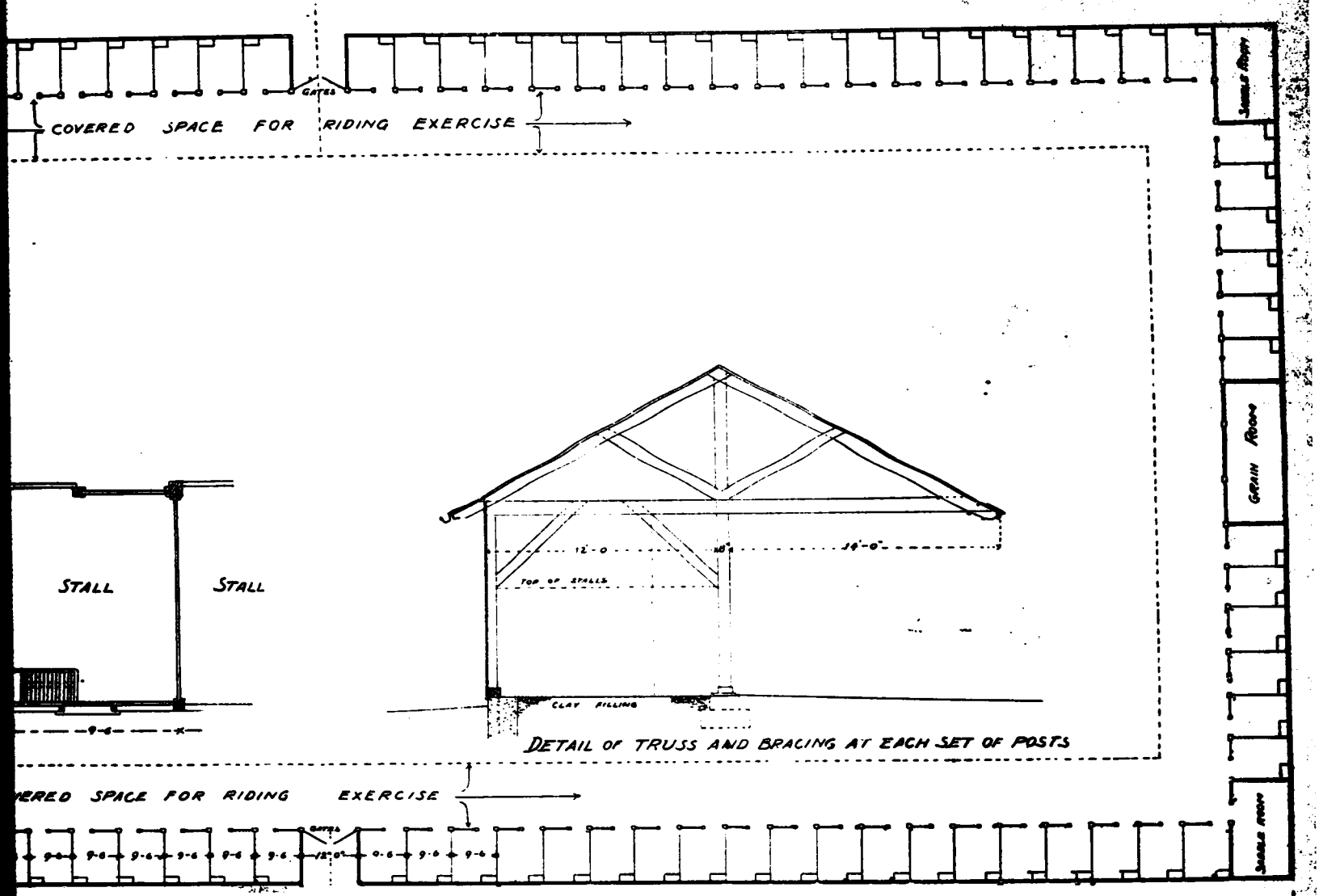
| Remount Depot | LOCATION | Number Horses | Number Mules | ACRES OF LAND REQUIRED | | TOTAL |
|---|---|---|---|---|---|---|
| | | | | For Horses | For Mules | |
| No. 1 | In Ohio, near Springfield | 320 | 242 | 300 | 225 | 525 |
| No. 1 | Near Lexington or Danville, Ky | 320 | 242 | 150 | 125 | 375 |
| No. 1 | In Virginia or near Washington | 320 | 242 | 300 | 225 | 525 |
| No. 1 | Chattanooga National Park, Ga | 320 | 242 | 350 | 350 | 700 |
| No. 2 | Northwestern Missouri, near St. Joseph, or Plattsburg | 869 | 328 | 500 | 175 | 675 |
| No. 2 | Fort Reno, Okla | 869 | 328 | 2000 | 750 | 2750 |
| No. 3 | Southern California between Bakersfield and Fresno | 600 | 326 | 1200 to 1500 | 600 to 750 | 1800 to 2250 |

The following buildings, with estimated cost, will be required at each remount depot, the capacity and number of each to be determined by the number of animals at the respective depots:

1. *Stables.*—To be of two kinds or classes.




PLAN OF STABLE FOR 100 H(




PLAN OF STABLE FOR 100 HORSES.

(*a*) *With box or loose stalls and ordinary stalls* for about one-third the number of horses at the depot, each stable of this class to be equipped with saddle and harness rooms, and granaries, to accommodate approximately 100 horses, and be constructed on a rectangle four hundred feet by one hundred and seventy-five feet, with a covered track from 14 to 16 feet wide within the rectangle along the inner side of stalls and under same roof, as indicated by inclosed plan. The track to be used for exercising and training horses in bad weather and the area of the enclosure (as a riding school) in favorable weather. Estimated cost of one stable for 100 animals, $6,850.

(*b*) *With loose pens.* Each stable or barn of this class to be 240 feet long by 80 feet wide, with an alley 20 feet wide through the center extending from end to end, and four loose pens on each side of the alley, each pen to be about 60 feet long by 30 feet wide, equipped with suitable gate leading into the alley, feed and watering troughs along the ends and sides, and accommodate from 25 to 30 loose horses or mules. Estimated cost, $7,850.

2. *Veterinary Hospital.*—Cheap frame buildings, stalls for 15 or 20 sick horses, operating room equipped with operating table, facilities for slings, etc., 30 feet by 35 feet, with room for dispensary and veterinary supplies, veterinary surgeon's office, and attendants' sleeping room. Estimated cost, $4,200.

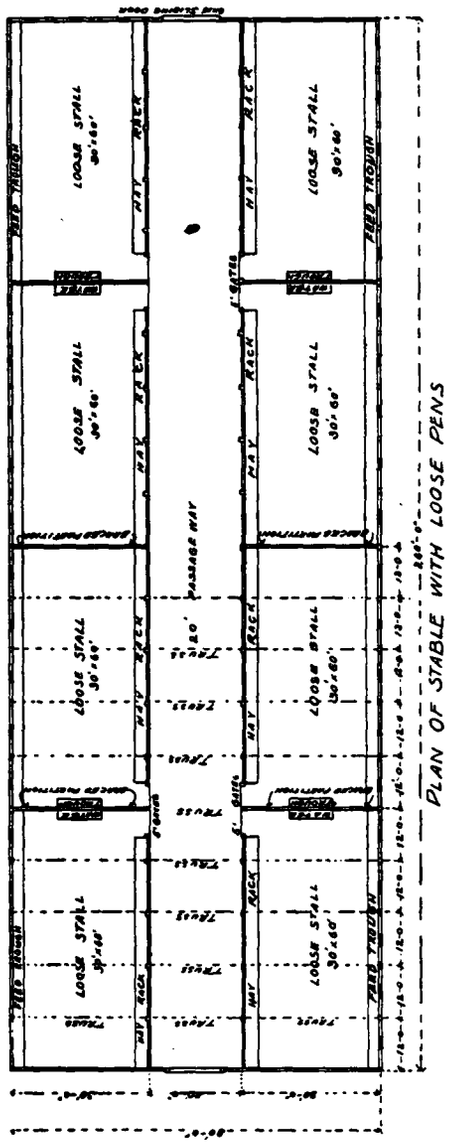
3. *Inoculating Chutes.*—$300.

4. *Quarantine Paddocks.*—With necessary sheds, for use of animals when first received at the remount depot. Estimated cost, $1,500.

5. *Blacksmith and Saddler's Shop.*—25 feet by 45 feet, with necessary equipment. Estimated cost, $985.

6. *Granary, Hay Shed and Storehouse.*—Corrugated iron roof, of capacity for about 240 tons baled hay; 180 tons oats in sacks and 30 x 30 feet storage. Estimated cost, $6,500.

7. *Wagon Shed.*—For 10 to 15 vehicles, standard Quartermaster Department plan. Estimated cost, $1,500.




PLAN OF STABLE WITH LOOSE PENS



8. *Fences.*—As may be necessary, Page's woven wire fence (13 wires, 58 inches high) preferred. Estimated cost, with posts, etc., complete, $1.00 per rod.

9. *Office Building.*—With four rooms, 30 x 30 feet. Estimated cost, $1,300.

10. *One Set Officers' Quarters for Captain.*—Estimated cost, about $7,500.

11. *One Set Quarters' for Chief Veterinary Surgeon.*—Estimated cost, about $4,500.

12. *Two Double Sets Quarters, with kitchens.*—For the following employees: One (1) clerk, one (1) foragemaster and storekeeper, one (1) blacksmith, one (1) overseer. Estimated cost, $5,000.

13. *Quarters.*—(Cheap barrack building), with mess facilities for stablemen (grooms, riders and drivers). About one man to every 20 horses, 50 mules.

14. *Loading pens and chutes.*

15. *Mills for Grinding and Chopping Feed, Etc.—Water supply* should be ample and provide for water in quarters and for watering troughs in the stables, hospitals, paddocks, etc. Not practicable to submit cost thereof without knowing character of site and location and source of water.

From the foregoing it is estimated that the cost of the remount depots, fully equipped for horses, would be approximately as follows:

| | |
|---|---|
| Remount Depot No. 1—320 horses | $ 50,635.00 |
| Remount Depot No. 2—869 horses | 106,385.00 |
| Remount Depot No. 3—600 horses | 90,685.00 |

### *Purchases.*

The young horses to be purchased for both cavalry and artillery should conform in every respect with the following specifications:

### *Specifications for Young Cavalry Horses.*

The young cavalry horse must be sound, well bred, and of a superior class; gentle, free from vicious habits; with free and prompt action at the walk, trot and gallop; with-

out blemish or defect; of a kind disposition; with easy gait, and otherwise to conform to the following description:

A gelding of uniform and hardy color; in good health and fair condition, from three to four years old, weighing from 875 to 1,000 pounds, depending on the height, which should be from 15 to 15½ hands.

*Head.*—Small and well set on neck; with muzzle fine, mouth deep, lips thin and firmly compressed, nostrils large and fine, branches of under jaw wide apart, forehead broad and full, eyes large, prominent and mild, vision perfect in every respect, and ears small, thin and well put on.

*Neck.*—Light, moderately long and tapering (towards its upper end) with crest firm and longer than under side.

*Withers.*—Elevated, not unduly fine, well developed and muscled.

*Shoulder.*—Long, oblique and well muscled.

*Chest.*—Full, deep, moderately broad and plump in front.

*Fore Legs.*—Vertical and properly placed, with elbow large, long, prominent, and clear of chest, forearm large at the elbow, long and heavily muscled, knees large, prominent and wide in front.

*Back.*—Straight and well muscled.

*Loins.*—Broad, short and muscular.

*Barrel.*—Large and ribs well arched from girth to flank.

*Hind Quarters.*—Long, wide, full, rounded externally and muscular.

*Hocks.*—Neatly outlined, lean, large, wide from front to rear and well directed.

*Limbs.*—From knees and hocks downward, short, wide, laterally with tendons and ligaments standing well out from bone and distinctly defined.

*Pasterns.*—Strong, medium length, not too oblique and well directed.

*Feet.*—Medium size, circular in shape, and sound, with horn black, smooth and of fine texture; sole moderately concave and frog well developed, sound, firm, large, elastic and healthy in appearance.



Each horse will be subjected to a rigid inspection, and any animal that does not meet the above requirements in every respect must be rejected.

The young artillery horse should be a stockier animal than the young cavalry horse, 4½ to 5 years old, weight 1,050 to 1,150 pounds, depending on the height (15¼ to 15¾ hands), gentle in harness, with shoulders sufficiently broad to support the collar and otherwise conform with the above specifications.

Purchase to be made, preferably, between June 1st and November 1st of each year, horses to be of the age stated in the specifications January 1st of the year in which purchased.

In considering the purchase of these young horses, it must be remembered that there is practically no demand for them commercially, and therefore they are not shipped to the markets. We, then, are creating a market for young horses, and will have few, if any, competitors; the first cost should therefore be less, whether purchase be under contract or in open market.

Under the appropriation act for current fiscal year above referred to, these horses can, it is thought, be purchased either under contract after due advertisement or in open market at the maximum price to be fixed by the Secretary of War.

The officers in charge of the remount depots should be authorized to make open market purchases of horses *delivered at the depots at any time*, so long as the authorized number of horses for their respective depots is not exceeded. This would encourage horse raisers, farmers and others having horses for sale to bring them to the remount depots before offering them elsewhere.

Open market purchases should also be authorized at specified towns, after advertising in local newspapers and otherwise, and publishing the dates on which the purchasing officer will be at the designated towns, which should be selected in the best horse-producing sections of the districts.

When purchases are made under contract, deliveries should be required at remount depots or towns located on railroads and equipped with loading pens and facilities for handling

the horses. Horse markets, such as East St. Louis, Chicago and Kansas City, etc., should be excluded as points of delivery for these young cavalry horses.

*Inspections.*—All horses to be inspected by the officer in charge and veterinary surgeon of the remount depot for which they are purchased, all officers and inspectors (veterinary surgeons) to be held responsible for their purchases.

When horses are accepted they will be branded with the letters "U. S.," so modified as to indicate by whom the animals were purchased, thus:

U S Assigned to Captain Johnson.
U S Assigned to Major B.
U S Assigned to Captain S.
U S Assigned to Captain A, etc.

These modified brands to be assigned the purchasing officers and made of record in the main office of the remount division, thereby enabling the Quartermaster General to fix the responsibility for the purchase of animals not suitable for the service.

Young horses conforming in every respect with the specifications suggested, will be a superior class of animals, which, with proper handling, will make the very best obtainable cavalry and artillery remounts.

It is expected that many of them will be thin and below the minimum weight as at present fixed, but they *must be sound, well bred,* in good health and of the prescribed conformation. They *may be unbroken and green,* but they must be gentle and kind, with free and prompt action at the walk, trot and gallop and without blemish or defect.

With a view to encouraging farmers and others to raise horses suitable for remount purposes, high classed stallions of proper breeding, quality, size, conformation, action, etc., should be placed at the remount depots. The service of these stallions to be free, the government to be given an option on the colt when from three to four years old. Only such mares as are well bred, have quality, good smart action, and of proper conformation, etc., should be served.



These young horses being under age, not well broken and undeveloped, are to be sent to the remount depots, there to be placed in condition, gentled, carefully handled, and prepared to receive their military training at posts, upon assignment to troops, during the following spring and summer, when they will be 4 to 5 years old.

### *Care and Handling at Depots.*

On receipt of the young horses at the remount depots, an accurate description of each horse, showing where, when, from whom and by whom purchased, how bred (if known) cost, etc., will be made of record. They will then be subjected to the mallein test, placed in quarantine paddocks, and if after proper observation and examination the animals are pronounced in good health by the veterinary surgeon, they will be transferred to the pens with other horses received.

One man will be assigned to the care of the horses in each pen. He will be required to remain with and among them the entire day, handle them with the greatest care and gentleness, and endeavor to get each horse so he can be caught by hand. When this is accomplished, each horse will be bridled with a snaffle bit, taken out of the pen, and with the assistance of another man, if necessary, broken to ride, and to harness if the horse is suitable for artillery.

*Classification.*—As the handling and development of the horses progress, they should be classified as follows:

1. *For Artillery,* the largest and heaviest horses, and otherwise suitable.
2. *For the Cavalry,* the best of the smaller and lighter horses.
3. *For the Engineers, Hospital Corps, etc.,* the remainder of the smaller and lighter horses that are suitable for the service.
4. All horses that are not suitable for the service for any cause whatever.

Horses that are in the best condition and sufficiently gentled and broken, as to make them suitable for more pro-

gressive handling, will be placed in stalls and given special care and attention for at least one month prior to their issue.

In this way the young remounts will be gentled, broken, classified and prepared for their military training, which it is thought is all that should be attempted at the remount depots. To do more would necessitate the employment of experts, with a corresponding increase in the cost of our remounts. Why should we do this when the most competent experts in training young horses for our military service are to be found among the officers of our army who have taken the course in equitation at the School of Application for Cavalry and Artillery at Fort Riley? The excellent results now being accomplished by the Department of Equitation, insures the unqualified success of this plan, by sending officers who are experts in training horses to all mounted organizations in our service. The military training of the young remounts is therefore deferred until their arrival at the posts or stations of the troops to which they are assigned, when it can be taken up under the supervision of competent officers.

In view of the fact that the annual supply of remounts is not to exceed 10 per cent. of the maximum authorized, the number of young remounts to be trained each year will be small.

### *Supply and Shipment.*

Remounts to be supplied on approved requisitions as at present, but no organization under normal conditions will be furnished a greater number thereof during a fiscal year, than the maximum authorized annual allowance. Requisitions to be filled between March 15 and May 31, depending on the location of the post or station to which the animals are to be shipped.

Each horse to be carefully inspected by the veterinary surgeon at the time of shipment and only such as are in first-class condition in every respect will be shipped.

Stalled cars, commonly known as palace horse cars, will be used in all shipments, and they will be thoroughly cleaned and fumigated just prior to each shipment.



An attendant will be placed in charge of each car. He will be required to remain in his car with the horses, be provided with a few necessary remedies, blankets, buckets, lanterns, etc., and every precaution will be taken to insure the delivery of the horses at destination in the best possible condition.

### *Cost.*

With the present price of horses it is thought these young animals will average from $90 to $100 per head when purchased, and that their approximate cost when delivered to the troops under this system would be from $150 to $160 per head as compared with the price of a lot of cavalry and artillery horses recently delivered under contract at St. Louis, $162.50 per head for cavalry, $192 for artillery, wheel, and $179 for artillery, lead. In considering the comparative cost of remounts supplied under the proposed system, with the cost under the present system, it should not be overlooked that under the proposed system in time of peace, the number of remounts supplied would be reduced by one-third and that there will be a proportionate reduction in the cost of transporting horses to the posts, which includes freight, attendants' wages and return transportation, rent of stalled stock cars, etc. Therefore, it is apparent that if the cost of the young remounts on leaving the remount depots, is equal to or slightly greater than that of the aged horse under the present system, the *net cost* to the United States government under the proposed system for a definite period of years would be at least *one-third less*.

### *Mules.*

The present system of supplying mules and draft horses has, it is understood, generally proven satisfactory, yet it is believed that a part at least of the draft and pack mules required can be more advantageously and economically supplied from remount depots in practically the same manner as outlined for the supply of remounts for the cavalry, artillery, etc.

By supplying young mules, 3 to 4 years old, they can be purchased in connection with the young remounts at practically no increased expense, the life or period of duration will be increased in about the same proportion as that of the remounts, the government will have the advantage of growth and consequent increase in value, which for young mules is very considerable, they can be cared for with practically the same labor required to care for the remounts, they can be shipped with the remounts, thus saving considerable for freight and attendants, and on the whole it is submitted that the present cost of remounts and draft and pack animals for the army during a definite period would be reduced from 30 to 40 per cent.

*Inauguration of Proposed System.*

To inaugurate the method of purchase and supply of remounts herein outlined, the maximum authorized allowance of horses as now fixed should be increased to the maximum enlisted strength for the cavalry, and by ten per cent. for the field artillery, engineers, hospital corps, etc.; ninety per cent. of the allowance thus fixed to be with the organizations and ten per cent. to be young horses at the remount depots.

There should be purchased —

1st. The entire number of young horses during the summer and fall and sent to the depots for issue the following spring.

2d. Such number of aged horses, conforming with the present specifications, as may be required to bring the number of horses now on hand up to ninety per cent. of the authorized enlisted strength of each organization.

There should then be no further purchases of aged horses; all further supply of remounts to be from the depots.

*To Meet Emergencies.*

While the system of purchase and supply of animals herein outlined refers to time of peace, it provides for the assignment to duty in the remount service of at least four officers on duty in the Quartermaster's Department and for a



complete record of the numbers, location and owners of animals suitable for the service throughout the United States. It is therefore submitted that within one or two years after the establishment of the remount depots there will be a sufficient number of officers familiar with the duties of the remount service, and the information compiled by each remount depot will be so far completed that the Quartermaster's Department can, on short notice, establish sub-depots in the best horse-producing sections of the districts, for the supply of animals from 5 to 9 years of age by open-market purchase or otherwise, and be prepared to meet any emergency, such as war, requiring a large increase in the number of horses and mules for the army.

*Advantages.*

Among the many advantages of this system of supplying horses to the cavalry and artillery may be mentioned the following:

The army will be supplied with young, fresh, sound and well broken horses in every way suitable for the service, and that have not been spoiled or injured while breaking, as is often the case under the present system.

These young horses will be fed grain and receive the best of care a year earlier, and therefore be much stronger and better animals when sent to the troops and batteries at from four to five years of age than if wintered by farmers or on the ranges and purchased a year later, as at present. It creates a market for young horses three to four years old, and the Quartermaster's Department would have few, if any, competitors; the first cost should, therefore, be less, and the department as a buyer would be in close touch with the horse raisers and breeders.

The average life or period of duration of the horse will be longer, a less number of remounts will be required, with a corresponding reduction in expenditure.

The cost will be less, as the department will be able to select desirable young horses from all over the United States, whereas at present Western horses, though in many cases

well bred, are not desirable, as they are not broken, gentled or handled until a week or two before they are offered for sale as cavalry and artillery horses, and when purchased many of them are never serviceable. This system will afford time and means to properly handle and break these young horses and to accustom them to man from an earlier age.

An opportunity will be afforded for a close and careful observance of all horses for several months before issued, and such as are found undesirable or not suited for the service can be disposed of from the depot. The government will therefore save the freight to posts on such horses, and since they are young, they should sell at the depot for nearly their first cost.

Horses will be uniform as to conformation, action, etc., and the special type desired will be standardized and understood by breeders and farmers.

Horses can be shipped in first class condition in every respect and in cars that are sanitary; there should therefore be practically no sickness on arrival at posts.

Requisitions can be filled promptly without waiting for advertising and purchase, as at present, and horses of desired color can be sent to a particular troop or battery at no additional expense.

Finally, after a period of from four to ten years, required for development of the system and the supply of a large part, if not a complete renewal of remounts from these depots, it is submitted that the United States army will have the best mounts of any army in the world.

NOTE.—The foregoing article was written before the passage of the bill for the reorganization of the artillery.

## Reprints and Translations.

### THE PASSAGE OF STREAMS BY CAVALRY.*

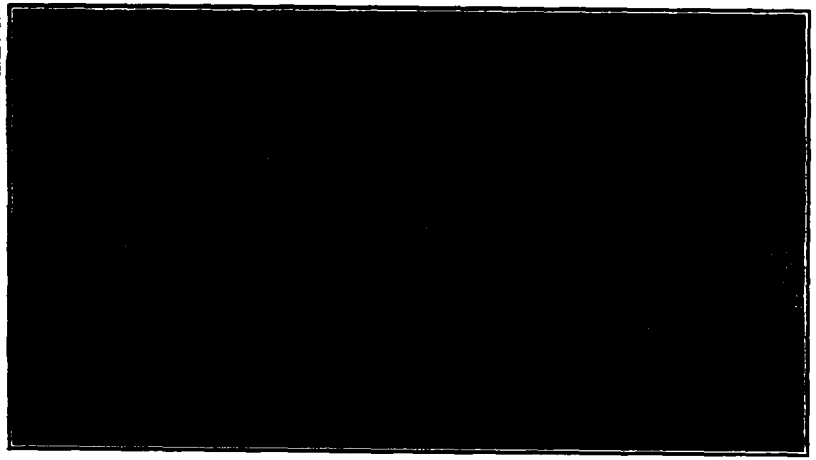
TRANSLATED FROM THE "ARMEE ET MARINE" FOR OCTOBER 20, 1905.
BY CAPTAIN F. R. McCOY, THIRD CAVALRY.

MODERN campaigns, with their turning movements, their large and rapid diversions on the flank of an adversary by mixed detachments, gives special importance to the question of passage of rivers by troops in campaign. The question seems to be settled so far as the infantry is concerned, thanks to the ponton bags recently invented by Major Habert. This apparatus, by its simplicity, lightness, and facility in handling, is remarkably well suited to all conditions; nevertheless, the Habert ponton bag, if convenient for our infantry, is a great deal less so for cavalry, and not at all suitable to the passage of artillery. Without doubt in summer the cavalry can be amphibious, the horses perfectly trained to swimming, and the troopers as handy as infantrymen in improvising rafts; but in winter it is different, and as it is difficult to find the necessary materials for constructing rafts, the entering into the water of horses, and even accidentally of the troopers, may cause the most grave results. It is in order to avoid these results that M. Veyry, an officer of the Army Service Corps, has conceived a system of most ingenious ponton boats, which has the great merit of being utilized by the three arms in all conditions of modern war. It is composed, briefly, of a simple collapsible boat, transported two to a mule, displaces very little water, and can carry 1500

*Can be utilized by all arms.

kilos, or a dozen men comfortably seated on two movable hanging seats, adapted to the apparatus, whose lower exterior surface is entirely protected against injury by a sort of cover, both light and strong. Not only does this boat, put together and in the water in a moment, suffice to transport small detachments, but better still, it constitutes an ideal ponton for use in the construction of temporary bridges.

Under this heading it can be put to numerous uses, and so easily transported by any kind of transportation, thanks to the very ingenious disposition of the material and the parts, that it may be fitted and put together in a few minutes in such



a manner as to form a bridge of variable width and length, according to the stream and to the use to which it is to be put, whether for infantry, cavalry or artillery. The floor system is composed of balks assembled end to end and side by side, receiving a platform made of interlocking pine chests, and held in position on the balks by means of a jointed hand rail. The union of the gangway is done on the bank so that the men are not obliged to get into the water. In order to do this, the boats, in proper number apportioned to the weight to be supported and to the width of the stream, are put afloat and received successfully from the near bank,



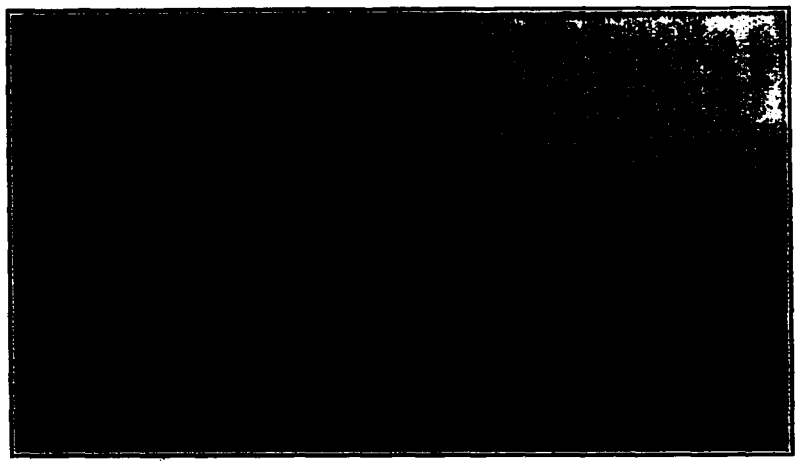
while portions of the platform are put on progressively until the opposite bank is reached. The very simple assemblage of all parts of the apparatus is made without the aid of any tool. There is no need of employing a special trained force.

The trials recently given, by order of the Minister of War, at Dole, at Lunéville, and last of all, during the grand maneuvers in the east, have proved this conclusively. Everybody has agreed in stating that the bridge of M. Veyry is a wonder, and very much surpasses anything of the sort which has been tried up to date in France or in any foreign country.

The Germans, meanwhile, are far from being satisfied, it seems, with their ponton system for the use of cavalry, carried on a special wagon, called faltbootwagen, in spite of the improvements adopted since 1904 from the Lieblecke system. This material, heavy and cumbersome, entails for each division of cavalry two wagons per regiment, and provides for a ponton bridge of a length at most of 120 meters, and a width of one meter, employing a special personnel. The system used in the Austrian army is still more defective, and presents no solidity. On the contrary, the material of the Veyry system, transported in one wagon of any kind, sufficient to

construct in a few moments and without risk of accident a foot bridge of a length of 240 meters; if a wider structure is needed, its length will be over 120 meters, and will permit the rapid passage of a division convoy.

This is the impression, at least, which has resulted from the trials on the occasion of the eastern maneuvers at Lunéville, where M. Veyry has constructed with troopers taken at hazard from sqnadrons of the Ninth Dragoons, first a bridge 1.20 meters in width, on which have passed troops in two ranks and horses; second, a bridge 2.40 meters wide, for



the passage of men in column of fours route step. In neither case has the construction suffered change of form.

Thanks to the utilization of the apparatus invented by M. Veyry the passage of the Aube has been made by a detachment of cavalry with the greatest ease. It is estimated, after these experiences, that a ponton bridge of 45 meters should have three Veyry boats, and may, perhaps, be constructed in twenty-five minutes, to permit the passage in six minutes of a squadron, troopers mounted and marching head to croup, without a change of formation. It is becoming well understood that the Veyry material, being the most complete in existence, can be employed not only in reconnaissances, but



its rôle is more general, and we are, perhaps, not far from the moment where its properties of lightness and facility in transport will make it preferred to our present heavy and cumbersome ponton trains.

COMMANDANT ANNET.

TRANSLATOR'S NOTE.—A description in most general terms of a recently invented ponton system by M. Veyry of the French Army Service Corps. It apparently possesses every property of simplicity, lightness, and facility in transportation which our own system lacks. Suggest that our attaché in Paris be called on for details of the system, as the points of superiority claimed so enthusiastically can only be guessed at from description and pictures.

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## CAVALRY IN MODERN WAR.

[From the *Broad Arrow*.]

IT is being advanced in some quarters as an argument in favor of a reduction in the numbers of cavalry, that the performances of this arm in Manchuria were so meager that the days of cavalry in war may be said to be over. Never was a greater mistake made nor a more false lesson learnt. To begin with, neither the conditions of the country nor the actual work performed by the mounted branch can have been studied. A regiment of cavalry, "second to none," is about to be removed from Edinburgh; it may then be argued with us that the numbers of our horse-soldiers are greater than our needs. Whatever troops may be sacrificed in the needless passing of our children through the Moloch of economy, cavalry should be the last to be disbanded. Cavalry costs more to raise and equip, takes longer to instruct than any other branch of an army. It is the fashion to say that the Russian cavalry did nothing in Manchuria. We must remember that the whole mounted force employed by Russia in the Far East, with the exception of one brigade, was Cossack, not regular cavalry. This last was represented by only two regiments, very good ones, the Fifty-first Chernigoff and Fifty-second Niejinsk Dragoons, or by twelve out of the 179

squadrons in the army employed. The Cossacks, whose reputation is legendary since 1812 and 1814, have been too much praised since those dates. As M. Charles Malo says, if they had been what a vain people considered them, not a single French soldier would have recrossed the Beresina. The Germans were quite right when they refused to allow the Cossacks the right to rank with regular cavalry. Cossacks may have special qualities as reconnoiterers, but they are rather mounted infantry than cavalry. They have then the uses of the former but cannot develop the qualities of the latter. Those who have seen them and also our Indian cavalry, for instance, in large numbers, feel confident of the result of a meeting between the two. It is not therefore in any way fair to the Russian regular cavalry to visit the shortcomings of the Cossack on the much superior Russian dragoon.

We must also remember that a large proportion of the Cossacks employed in Manchuria belonged to the second, and even the third category, having scarcely any military instruction. To say that, because they did little, cavalry is useless, is absurd. As to doing "nothing," the statement is exaggerated as regards either the Russian or the Japanese cavalry. Mishtchenko's raid into Korea, only eight sotnias strong, though too weak to be of much use, did bring back valuable information, which was not acted upon. The same leader considerably retarded the advance of Kuroki's army, giving Kouropatkin plenty of time to effect his concentration at Liaoyang. In the same way Samsonoff skillfully screened the hazardous march of Stackelberg to Wa-fan-gu, and in the battle at that place, by finding out the direction of the Japanese turning column, saved the Russian corps from complete disaster. Samsonoff again at Liaoyang rendered the same service to the whole Russian army in holding back the Japanese pursuit, and thus also permitted the reserves to play a part in the battle. At Sandepu, Mishtchenko's attacks on the flank and rear of his opponents offered a chance of success which was foiled by the indecision of the Commander-in-chief. At Mukden, Kouropatkin on the false reports of spies (the Cossacks having brought in contrary and exact information), placed the main force of cavalry in the mountains on his left, where it remained powerless and of no avail. Nevertheless what remained on the right (including Stepanoff's regular brigade above mentioned) signalled the advance of the Third Japanese Army as soon as it commenced, and did its best to retard the same. If the cavalry did no more, it was perhaps because its brave Generals, Mishtchenko, Samsonoff and Rennenkampf, were all wounded. We know that cavalry is of the value of its leaders, and is only of value when they are valuable. The Japanese cavalry, although weak and ill-mounted, showed an energy and a tactical fitness that cannot be denied. To the north of Mukden it carried out raids in the best American style. At Wa-fan gu it gave just as good help to its side as Samsonoff's horsemen did to theirs. So well have the Japanese learnt the lessons of the war that they are about to raise the strength of their cavalry to the enormous proportion of eight divisions to sixteen divisions of infantry.



In the *Revue de Cavalerie* lately appeared the following sentence: "The progress made by artillery caused some to say that its part in battle would be in future decisive. It is not so, its rôle is but important. * * * On the contrary cavalry masses, thanks to their mobility, will play the preponderating part in the battles of the future. They will form the reserves that the general officer commanding will hold in hand and with which he will carry out his tactical surprises. On the enormous front of the battles of to-day no other arm will be able to arrive quickly enough to produce this effect. Cavalry fire, suddenly bursting forth in an unexpected direction, will change retreat into a rout; the cavalry on horseback, saber in hand, will then gather in more trophies than it ever did in the past. Far from being diminished in value, its place will be the most important of all. And to fill this place cavalry must be many in number." This eloquent plea in favor of the cavalry of the future is from the pen of General Négrier, who curiously enough at this moment is in favor of reducing the number of the regiments of cuirassiers. We trust that if the French cavalry be reduced the example will not be followed by us, who should look rather towards Japan

than over the Channel for an example. The cavalry division of the future will be, especially under such leaders as French, Baden-Powell, Scobell, and others, a unit self-contained of all arms. It will have its (mounted) infantry, its artillery, its engineers, its park, its balloonists, its railway troops, its transport, all in one. And each of these units will be able to keep up in pace with the main body. To urge the reduction of cavalry on the premises, which as we think we have proved are false, that the Russian and Japanese cavalry "did nothing" in Manchuria, is to throw away and not to learn the lessons offered by that campaign. Dull care may sit behind the horseman in time of peace. But in war his will be the frequent and glorious opportnnity.

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## BLIND STAGGERS IN HORSES.

By Lieutenant Colonel MORITZ v. KAISENBERG.

[Translated from *Kaallersistiche Monatshefte* (Cavalry Monthly, Austrian), by Sergeant Harry Bell, Corps Engineers U. S. army.]

BLIND staggers, that insidious condition of our horses which makes the animal entirely unserviceable and worthless, has always been of interest to me because three of the horses that I have owned and used were taken with that complaint.

Blind staggers is a disease, an acute one, not an inherited one as many suppose and maintain, and is nothing more or less than inflammation of the brain. It may occur in different ways.

I shall commence with describing the symptoms of the sickness, which every one should be able to discern for his own protection when purchasing a horse. The existence of blind staggers is exceedingly hard to prove, and it is difficult to completely convince a commission of its presence when called in to ascertain whether or not it exists. Therefore we must be exceedingly careful in making our selections to prevent pecuniary loss. An animal susceptible to this disease has its "clear" days, and if we have no proof that prior spells of it have been observed, we are lost.



The symptoms by which we may recognize the disease are the following: An animal addicted to blind staggers has usually a sleepy, dull eye, a sluggish temperament and a very marked absence of feeling. You can put your finger deep into its ear, you can kick it with all force on the hock, and it will not move. The rush of blood to the head causes such a stupefaction that you may place one of the animal's legs across the other and it will remain in that ridiculous posture. The worst part of the disease is that such an animal will become absolutely dangerous to ride. It will take the bit in its teeth, bolt without cause, run into a river or down a steep declivity or even against a stone wall and break its head, and only the greatest activity and presence of mind may save the rider from certain destruction.

It is therefore recommended that one get rid of such a horse under all circumstances, even if we have to sell it to a horse butcher. I have never known a case of cure in the premises; that is, not a *complete* cure, as there always remained something of the disease. Horses addicted with blind staggers are generally dubbed in our service as "*professors.*"

As stated above, I had the doubtful pleasure of owning three horses afflicted with that disease, and I will give a short account of them, wherefrom the reader may be enabled to recognize the danger and disadvantage of possessing such an animal.

Number one of these three "*professors*" was a four-year old chestnut Wallachian half-breed by an Altmark stallion.

It was in the year 1859, when it was expected that we would have a war with France on account of the Luxemburg question. For the purpose of mobilization the troops of my old regiment, the Seventh Cuirassiers, were in cantonment around Halberstadt, and I was quartered with the fourth troop in Harsleben. We officers were ordered to put ourselves into a state of mobilization, and it was necessary to acquire a third horse, a so-called "mobilization horse." But where to get one without stealing it was the question. The

Jewish horse-dealers naturally did a good business, their prices being exorbitant, but there was no other way than to patronize them.

About that time a friend of mine, V. Wuthenau, who had been ordered to Stendal for the purpose of gathering in horses, offered to buy one for me. I took his offer, and one fine day I received this Wallachian, for which I paid the ridiculously small sum of 180 thalers. I rather liked the horse, although it was no Adonis, but it seemed to have four strong legs and a sound back, and appeared strong enough to carry my baggage. The only drawback was his age—he no longer being in his youth—and his starved condition; he did not appear as if he ever had consumed very much oats. "But," thought I, "this we will soon remedy," and caused him to be fed five "metzen"* of oats per day, to put him into condition by the time we would have to take the field.

This happened to be an unusually hot summer, and when I commenced to ride the horse he perspired out of all proportion to the work he did. At first I laid that to his thick and broad legs and to the difficulty he seemed to have in turning his head, and I thought nothing of it. One fine morning he commenced to step high and in a cramped manner, and to tell the truth, I, as a young fool, thought this very nice, as his style reminded one of the "Spanish" gait.

On the 13th of July I received orders to proceed by rail as quartermaster with three non-commissioned officers and fourteen horses to Duisburg. The country at the time was in a state of feverish excitement, and everyone, young and old, was looking forward to see the enemy beaten. With my men and horses I rode that day to the depot at Halberstadt to take the train. It was very hot and sultry, and I noticed that my Wallachian was streaming with perspiration and looked exceedingly weary. The entire corps of officers was assembled at the depot, all highly elated at the prospect of war, and singing, "To the Rhine." Our horses were entrained and the train started, my comrades calling "Auf Wiedersehen," "Good luck on your journey," etc., etc.

* A little more than one bushel, our measure, trsl.



But our dream of victory and so forth soon came to an end, as nothing came of the war talk; the pen having proved mightier than the sword; the diplomats gained the victory and our blades remained in their scabbards. When reaching Oschersleben I was handed a telegram reading: "Mobilization abandoned; return to your garrison."

Downhearted we returned to our cantonment, and my temper was not improved by the behavior or condition of my Wallachian. For, on unloading him from the car he suddenly, without any apparent cause, reared up and struck his head a severe blow. This may have contributed in bringing his condition to a crisis. He staggered as though he was drunk, and when we arrived at Harsleben he was as wild as a March hare. He continually jumped into his manger and kept his forehead tight against the wall. The veterinarian said it was inflammation of the brain, and no time was to be lost in trying to cure it. And what did he not try in the shape of remedies? First, he borrowed the village fire pump and threw a stream of water for several hours on the horse's head. As this seemed to have no effect, he bled him. My Wallachian thereby lost a lot of blood, but only with the result of his entirely collapsing and lying down. Then the veterinarian tried purgatives, then cold compresses, and when after several days' treatment no better results were obtained, he gave it as his opinion that the horse had the staggers and the best thing to do would be to either give him away or kill him. It was easier to say "give it away" than to do so, for who would want such a frantic beast in his stable? Finally, however, I found someone to take the horse off my hands, a friend of mine, Arthur v. Alvensleben. This was a most remarkable transaction, and even to day I do not know who made the worst bargain. Arthur had an old Trakehn full-blood stallion, a fine horse, only his fore legs should not be looked at, as they were crooked, but if he stood in water, so they could not be seen, he was an ideal horse. Therefore he was named "The water-stallion."

So Arthur received my Wallachian and I his "water-stallion" and three Fredericks-d'or. Each one of us believed he had the best of the bargain, but each soon came to another

opinion. My "water-stallion" stumbled one fine day, on a smooth road, over his own feet and hurt his knees badly, and Arthur was compelled to send the Wallachian, now entirely mad, to pasture at Schowitz for a cure. But as soon as the beast was fed oats again his malady returned. It is understood that the Wallachian was finally turned over to a horse butcher to be converted into sausages. My "water-stallion" came to a better end. As he continued to stumble and hurt himself, my pistol made an end of him. This was my first experience with a horse with blind staggers.

The second case, which happened some four years later, was similar. At that time I made a trade with a horse-dealer for a four-year old Hanoverian half breed mare, giving him in exchange my worn out charger, of which I had tired. This trade was also consummated during an exceedingly hot summer. I had the misfortune to see my second horse go lame and had to use my new acquisition, the roan mare, at drill. Her education had been hastened too much. One day, during regimental drill, when the parade march at gallop was practiced, I received orders to act as guide. As the first troop approached the point where I sat, the mare reared straight up on her hind legs like a rabbit on its haunches, and remained in that ridiculous position until all the troops had passed. You may imagine the deriding remarks thrown at me by my passing comrades. On account of this, the mare got such a bad name that I finally sold her to a farmer for next to nothing. This farmer sent the animal, suffering from inflammation of the brain, to pasture, and later I learned that he had her covered by a stallion, and that she had a foal, and was contentedly pulling the plow. However, I did not *see* that, and this would be the only case I know where a horse, afflicted with that disease, has been of any further usefulness.

The third "*professor*" I acquired many years after I had left the service and resided on my estate. One night this horse got inflammation of the brain, and the next day he ran with me into the Neisse and then against a stone wall with such force that several of the stones were dislodged. This horse was a splendid, strong Wallachian, and I could not understand how or why he stepped so high that morning, when led out of the stable, and why he had no feeling in his mouth; the reason, however, was soon made clear to me to my sorrow. The coachman, who slept in the stable next to the horse's box-stall, had heard the antics of the horse during the night, but had been too lazy to come to his assistance; and when he came to open the stall next morning he found the horse lying as if dead with his hind leg over the halter strap. When assisted to rise, the horse brought his head several times in violent contact with the manger, which caused the inflammation of the brain. The congestion was so strong that he fell several times when raised up. In spite of all this, the coachman prepared this horse for my ride. And what did I not do to cure this horse of its sickness? Cold compresses, injections of morphine, and the Lord knows what not. But nothing seemed to do any good. And I may state that these morphine injections, which I had to administer myself in the absence of a veterinarian, were not without danger to me, for even if the horse was crazy, he was not crazy enough to permit my piercing his thick hide (on the head) without resistance. As soon as I came near him with the needle-syringe, he snapped and kicked like possessed. I drenched him with all the mixtures that I had; he got bromide by the pound, and medicines which were calculated to make their inventors rich, but without avail. The horse's candition finally became so bad that there was no other alternative than to sell him to the butcher, which I finally did, and I expect the horse was made into sausage, and so finally became useful.



These were my experiences with horses with the blind staggers. The disease is incurable; if a horse is taken with it there is nothing that can be done. All we can say is: "What a shame."

# THE SPIRIT OF DISCIPLINE.

[From the *United Service Gazette.*]

THE Manual of Military Law tells us that "without discipline all military bodies become mobs, and worse than useless; but discipline enforced by punishment alone is a poor sort of discipline, which would not stand any severe strain. What must be aimed at is that high state of discipline which springs from a military system administered with impartiality and judgment, so as to induce in all ranks a feeling of duty, and the assurance that, while no offense will be passed over, no offender will be unjustly dealt with." This is not a new importation into our military law book, having been incorporated in it for many years, but it is so little known that to advance any plea for the maintenance of a proper disciplinary spirit without the aid of punishment, would be looked upon as rank heresy even in these days of progress and advanced ideas. It was written in the days when our system of punishment was of a most drastic nature, and when our illiterate soldiery knew no better than to couple discipline and punishment together as synonymous terms.

The British soldier of to-day, however, with the exception of an occasional refractory case, does not require much of that discipline that peremptorily and intolerantly compels instant and implicit obedience, because he is already amenable to that superior discipline of reason and spirit, a production of the higher moral and mental education inculcated in him under modern process of training. The discipline which we depend on mostly to-day—the kind of discipline that should be most carefully cultivated—is that of trained intelligence more than anything else. The day is long past, at least with us, when the absolute mental, physical, and moral subordination of the individual were the principal essentials of training in the ranks. Initiative is now encouraged on every side, and it is equally in the functions of our officers in peace times to teach and encourage their men



to be as much the masters of their own intelligence as the dependents of texts and regulations, yet at the same time to guard against anything akin to undue officiousness.

In his primary course in obedience the young soldier should be thoroughly impressed with a real sense of its value. First to obey, then to have a staunch faith in his superiors, and, finally, faith in himself—that is his lesson. Doubt of superiors and want of self-confidence go a great deal further towards making cowards than actual fear does. A lack of dependence in self is a weakness in the modern soldier that should be assiduously guarded against. Over discipline, in this respect, is worse than under discipline, for a latent spirit is better than one that has shown itself only to be crushed. A writer in a recent number of the *Revue des Deux-Mondes*, says that the true spirit of discipline "can be developed only through the activity of the officers in technical instruction, combined with the eminent resolve not to belittle, on any pretext of discipline, either the initiative or the individuality of the young man who has become a soldier." This spirit is really a habit, and is formed by careful training, and by developing and cultivating in peace training all those manifold qualities that compel the highest spirit in the soldier.

And it is astonishing how much can be accomplished by systematic training and discipline. See how, for instance, out of the most unpromising materials—such as weedy youths picked up in the streets of a city, or raw, unkempt country lads taken from the plough—steady discipline and training will bring out the unsuspected qualities of courage, endurance, and self-sacrifice; and how, in the field of battle, or even on the more trying occasions of perils by sea—such as the burning of the *Sarah Sands*, or the wreck of the *Birkenhead*—such men, carefully disciplined, will exhibit the unmistakable characteristics of true bravery and heroism. What other nation in the world can point to such a splendid example of the exalting spirit of true discipline as that shown at the wreck of the *Birkenhead*, off the west coast of Africa, in which the officers and men went down, among a shoal of sharks, formed up as on parade and firing a *feu-de-joie*, after

first seeing the women and children safely embarked in the boats. This is the true spirit of discipline, the spirit of patriotic discipline, the same spirit that inspired the Japanese soldiery and that enabled them to cross country tangled over and criss-crassed with barbed wire, sown with ground mines, and bristling with obstacles and death traps in every direction, and that animated them to go to their deaths as willingly and as loyally as did our own brave men on the *Birkenhead*.

True discipline is not of the kind engendered by the fear of punishment, and this was recognized in the old days even by the machinery of the War Office, as shown by the stress laid on this point by the observations embodied in the Manual of Military Law. Rather is it of the nature that impels all to work for the common good; to sacrifice self for the due maintenance of good fellowship and loyalty to the common cause. There is nothing imaginative about this conception of true discipline, for we are called on to witness it daily in our athletic sports, whether football, cricket, rowing, shooting, etc. All are cheerfully and willingly obedient to their leader, all are striving for the good of each other, all are surrendering their wills in the supreme desire to work for the common good, to strive for a collective victory. But discipline such as this can never possibly be born of punishment and fear, inasmuch as, to use the words of a recent lecturer, "an army whose discipline is maintained by fear of punishment is in a rotten and unhealthy state."

Mr. Arthur Diosy, the well-known vice-president of the Japan Society, in a paper which he read before the Royal Artillery Institution, Woolwich, some little time back, on "The Spirit of the Armed Forces of Japan," states that "Every Japanese officer is expected to form the moral character of the men placed under his command, and in the navy and in the army at least one hour weekly is devoted to 'moral instruction,' to what is called in the Japanese services 'spiritual training,' imparted by each officer to the men immediately under his command. Whereas in our navy the men are periodically mustered to hear the Articles of War read out to them, with their certainly not very cheerful refrain of 'And the punishment for this offense shall be death,' etc., the men on board a Japanese man-of-war are assembled to listen to moral maxims issuing from the captain's lips, and to be told, to the best of that officer's ability, how to be good men and good sailors in the navy, and good citizens when they leave the service. The same obtains in the army." This is inculcating self-control and self-discipline, and personal discipline is the corner-stone of collective discipline, and of all true discipline. Men who willingly submit to the rigid code of an athletic club, and who will uncomplainingly and enthusiastically endure every form of self-sacrifice in order to "train," cultivate the true spirit of discipline, and if the same principles were implanted in the men who train for drill and duty, there would be little need to compel discipline by drastic measures of punishment. Discipline, in its best sense, is something that we are all in a sense striving for, seeing that it elevates the individual to his highest capabilities, and converts even an unruly mob into an orderly, well-behaved assembly.



* * *

The article which appears elsewhere in our columns on "The Spirit of Discipline," prompts us to make a few remarks on the subject. In the old days discipline and punishment were practically synonymous terms, and the soldier of the old school would find it difficult to differentiate between them, except as to nomenclature. But the spread of education and the modern desire to encourage initiative has changed all that, and true discipline is now accepted as a collective term for willing and voluntary obedience, such as that for which the Japanese soldiery are distinguished, and which as certainly glorified the heroes of the *Birkenhead*, who went cheerfully to their deaths without hope of reward or fear of punishment. Let it be said to the credit of the body that now constitutes the Army Council, that it is this purer spirit of discipline they are seeking to foster and develop, and that it is by way of an incentive to it that they recently abolished marching to school, leaving it to the men's

sense of obedience to attend at the stipulated time. Strange to say, in this respect, the Army Council have been anticipated by one of our home battalions, for in the First Battalion Royal Irish Fusiliers at Dublin, a unit intensely possessed with the highest form of *esprit de corps* and a unique disciplinary spirit, it has been the custom for some time past to dispense with parades for fatigue duties, dependence being placed on the men to turn up for such fatigues at the appointed time. That the men appreciate this attitude of their officers, and meet it in a responsive spirit, is evinced by the fact that this particular battalion is remarkably free from crime of every description.

## PRIZE PROBLEM NO. 4.

*The Editor, Cavalry Journal:*

SIR:—The committee selected to examine the solutions of Prize Problem No. 4 has the honor to report that it has examined all the solutions submitted, and is of the opinion that none should be awarded the prize.

Tactically the solutions of PQR and QXZ are identical, both making the same error of marching troops in column in full view across the front of an enemy (supposed to be a troop dismounted) occupying a ridge from 600 to 800 yards away. Had they marched these troops via the road through Winston Woods, they would practically have tied on the prize.

QXZ argues ingeniously that the enemy, being engaged with an intervening company, would not fire upon troops marching along the road via Booth's Mill; but such an assumption gives little credit to the commander of the troops occupying the ridge in question. If one company is sufficient to occupy the attention of the enemy's entire force, a direct attack would be the quickest way of reaching Fay's Bridge.

The solution of Vibygor scatters the command too much.

D. H. BOUGHTON,
*Major, 11th Cavalry.*
A. L. CONGER,
*Captain, 29th Infantry.*
ROGER S. FITCH,
*1st Lieut., 1st Cavalry.*

SEPTEMBER 10, 1907.

## PRIZE PROBLEM NO. 6.

### OUTPOST CAVALRY.

*General Situation.*

ON OCTOBER 3, 1907, a Red division is advancing via Platte City, Missouri, on Fort Leavenworth, Kansas. A Blue division is concentrating at Atchison, Kansas. The Missouri River forms part of the boundary between the territories of the Red and Blue forces. Plum Creek and Salt Creek are fordable with difficulty. The weather is clear and cool.

*Special Situation—(Blue).*

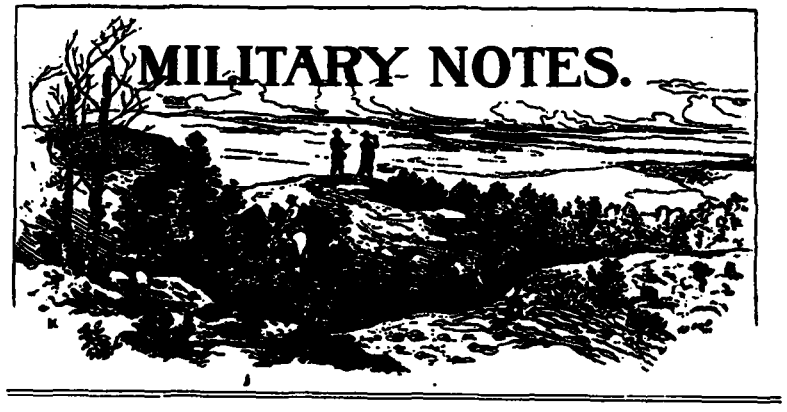
A detachment consisting of the First Infantry, the First Squadron, First Cavalry, and one section of a field company of the signal corps has been sent from Atchison to observe hostile troops reported to be crossing the Missouri River at Fort Leavenworth. Its cavalry encounters Red cavalry on Plum Creek and drives it back to the bridges over Salt Creek, on the Millwood road, and near Frenchman. The bridges are found to be strongly held by Red troops.

The Blue detachment camps at Kickapoo at 3 P. M., detailing Companies A and B and the machine gun platoon, First Infantry, and Troop A, First Cavalry, as outpost. The outpost is to hold the line L. A. Aaron-Plum Hill, and is to be reinforced on this line if seriously attacked.

Troop A, First Cavalry, is designated as outpost cavalry and ordered to take up a line of observation in the vicinity of the Millwood road, keep touch with the enemy and patrol the roads west and south of Leavenworth. Patrols of Red cavalry keep touch with the Blue outpost. The outpost commander, Major B, receives messages at Atkinson. Captain A communicates with him by means of a cavalry buzzer.

*Required*:—

1. Captain A's estimate of the situation.
2. His orders.
3. His messages and reports to Major B.




## CHIEF OF CAVALRY.

THE need of a Chief of Cavalry has long been felt by officers of our service. They have pointed out the existence of such an office in other armies. Among the nations which avail themselves of the services of this official are the following:

*Austria-Hungary.*—In Austria-Hungary the administration of the cavalry is supervised by the Third Division of the War Department. This division is divided into four sections, namely, Cavalry, Train, Remounts, and the Veterinary Department. The chief of the division is called a director.

*Belgium.*—Belgium has an officer entitled "Commandant Superieur de la Cavalerie," or translated, "Superior Commandant of Cavalry."

*France.*—France has a bureau of the War Department, entitled "Direction de la Cavalerie." The officer at the head of the bureau is called a director. The bureau has three sections, namely: (1) Personnel of the Cavalry, (2) Remounts, (3) Gendarmes.

*Germany.*—In the German army, the supervision of the cavalry is performed by the third section of the "General Department of War." The officer at the head of the section is called "Chief of Section" (or Division). He has the rank of lieutenant colonel.

*Great Britain.*—In Great Britain the Department of the Inspector General of the Forces is charged with the inspection of all the forces. Cavalry is supervised by an officer entitled "Inspector of Cavalry." He has the rank of major general.

*Italy.*—In Italy infantry and cavalry are grouped into one bureau of the War Department, the bureau being divided into two divisions, viz: (a) Infantry, (b) cavalry. The chief of the Cavalry Division has the rank of lieutenant general. He is called "Inspector."

*Japan.*—The administration of cavalry, in Japan, falls upon the Cavalry Division, a bureau of the Department of Army Affairs. The Cavalry Division controls the personnel of the cavalry schools, remounts, supply and equipment. The division is controlled by an "Inspector" with the rank of colonel or major general.

*Mexico.*—Mexico has a Department of Cavalry. The department is one of the divisions of the Department of War and Navy. The chief of the department has the rank of brigadier general. He is called "Chief of Department."

*Spain.*—Spain has, as one of the divisions of the War Department, a "Section of Cavalry." The section has a chief, an officer with the rank of brigadier general.

*Russia.*—According to the latest information on the files Russia has, as one of the divisions of her War Department, a section entitled, "General Inspection of Cavalry." The officer in charge is called "The Inspector General of Cavalry."

All the great powers of Europe have the office of "Chief of Cavalry," though varying his title. Even Mexico is alive to the necessities of the cavalry, and has a chief of that arm. No one can deny that, since the passage of the act of Congress authorizing a Chief of Artillery, the artillery service has increased in efficiency, and that since that date the artillery has had at the War Department an active representative



whose knife is always sharp and who is constantly cutting a big slice of the pie for his people. We have but to look at the War Department General Orders of the last few years to see the amount of careful thought that is being directed to the welfare of the artillery arm. It is more than probable that the zealousness with which appointments to the artillery are safeguarded is largely due to the active direction of the Chief of Artillery. This direction extends to all that pertains to the artillery in organization, instruction, equipment, discipline and efficiency. There is probably not an artilleryman, unless he be a reactionary (and that class does not count) who will recommend that the post of "Chief of Artillery" be abolished.

This is a day of specialties. He who would "shoot at the whole flock" instead of picking a particular bird, generally ends by missing everything. In the good old days the Adjutant General's Department was the mate and the cook and the captain bold, and regulated our good and ill being. Its functions are now performed by the same but reorganized department, the General Staff, and Chief of Artillery. Progress has resulted along the whole line, and this too, notwithstanding the growls that have gone up. But the end is not yet. If anyone is going to stand still, he will be passed by. In stagnation there is death. Gulliver the strong man permitted the weak people to tie him up with thread. The *esprit*, the self-reliance, and the knowledge of superiority that has always pervaded the arm of the yellow legs, is of course fine and commendable, but that alone will not bring the cavalry all that it is entitled to, and we should beware lest our feeling of strength should induce us to passive action.

The interests of the cavalry can best be handled by its own people, just as the artillery feels about its own affairs. The Ordnance Department designs and supplies us equipment; the Quartermaster's Department buys our horses; the Adjutant General drills our men; and the General Staff has charge of what is left, which is a whole lot. There was a time when coördination was everything, when even drill movements in the various line troops were assimilated to the limit. Coördination, of course, is still desirable, but each

arm can best work out all that pertains to its specialty, and this should be done under its own chief. Everyone will admit that the client at law has a better chance of success if his counsel be a distinguished man in his profession. Such counsel has more weight both with court and jury. A cavalryman of rank at the head of a cavalry bureau would insure due consideration being given to all that affects its welfare. Merely a cavalry board is not sufficient. The subjects to be considered are too numerous and important. Besides, a proper bureau with a man of weight at the top (and rank always has weight) will have prestige, and its recommendations will have greater force.

Whether a Chief of Cavalry shall be created, will depend largely upon the cavalry itself. If the interest be created, if the necessity be shown, and if the proper authorities be convinced, then the chief will be forthcoming. But somebody will have to work.

HOWARD R. HICKOK,
*Captain Fifteenth Cavalry.*

* * *

### *Speak Out.*

Have you been thinking for the past months about a Chief of Cavalry? If so, your thoughts are probably taking concrete form by this time. The cavalry wants to hear them. It is interested in knowing what you think about this matter. It makes no difference who you are, whether colonel or second lieutenant, your opinion and ideas are sought. Have you come to a decision in the matter? If so, tell us what it is. Do you want information? Ask for it, and maybe some one can help you out. Whatever the state of your mind, speak up and let your voice be heard. Let us have something on the order of the old time Methodist revival. If you are not one of the shouting kind, you can at least get up from your place away back in the corner and say, "I am for a Chief of Cavalry." If you cannot do that, certainly you can sit tight and yell "Amen" to what some one else says. You



don't have to show your face; you don't have to make known your identity. All we want is to hear you speak — to see you go on record in the JOURNAL. We know you are a good cavalryman, and that is enough. So if you are for a Chief, let the cavalry know it. If you are uncertain or opposed to the idea, say so; maybe what you say will serve to show the rest of us that we are wrong, and to point out the true solution for our trouble. We are trying to seek out the "something" that is wrong in the cavalry, and think the best way to do it is to select a single cavalryman to organize the entire cavalry into a big searching party, determined to discover the trouble and to correct it when found. Maybe those of us who think that way are wrong; but we will have to be shown before we are convinced. There may be some better method of regenerating the cavalry (it needs it), and if so, we want to find it out. We think a Chief of Cavalry will stop the cavalry from sliding down hill, and start it trotting up hill. If you think something else will better accomplish this, tell us what it is. If you think the same as ourselves, say so. In any case, talk out and help to find the remedy, whatever it may be, for the "something wrong."

Each of us has his share of the responsibility for the efficiency or inefficiency of the cavalry, and we cannot shirk it without injury to ourselves and to the cavalry. To strive for the betterment of the cavalry is the plain duty of all of us, and not of a select few. When we all see the matter in this light and attempt in some rational way to seek a solution for the dilemma, we will find it. If we could be assembled in one big mass meeting, behind locked doors, and compelled to thresh this thing out, we would soon find the kernel. It might look like a Chief of Cavalry, and it might be something very different, but we would find it. But that is impracticable. What then is the next best thing we can do? Just what we are attempting to do in the JOURNAL. Encourage discussion and thought about what we are to do until such time as we can intelligently vote upon some proposition that promises relief. A motion has been made to the effect that the first step is to secure a Chief of Cavalry. It has

been seconded several times. The question is before you for remarks, and we want the discussion to be animated in order that there may be no delay in coming to a vote. X.

* * *

*From a Leading Cavalry Officer.*

(Extract.)

"I agree perfectly with the idea of working legislation to the end of securing a Chief of Cavalry. A politician is needed for that place. What I mean by a politican, is a man with enough patience and sense to wait until the right time to talk business, and then talk it. A 'but-in' or a 'hold-off' will not do. The artillery is thoroughly organized and the infantry seems to have effected an organization. The artillery has the great advantage of already having a Chief, with carefully selected assistants, and the result is evident. The infantry has the great advantage of having its headquarters at Washington (Infantry Association). After years of work the artillery got what it wanted, and got it by advancing its own needs, and by not attacking or trying to weaken anyone else. The infantry seems to be working along the same lines, and it looks as if they were going to accomplish something, unless hard times come before legislation is secured. The cavalry should get together and decide what it wants, and then stick to that. Certain officers should be selected to work out the details of the proposed legislation, and the matter should be left in their hands, once the general scheme has been decided upon. Everyone else should keep hands off, except when our representatives call for help from anyone in the cavalry. It will be impossible to suit everyone, and the chosen committee will have to yield certain points to gain anything. Its members will need the loyal support of all; something may then be accomplished. If individuals get to work on the outside, to modify and improve, Congress will say, as has happened so often before, that we do not know what we want, and we should get nothing. The committee should handle the whole thing. Being practical men, on the spot, they can tell what to urge and



what to yield. The results may not be all they wished, but they will get results, and that will be better than a fine thing that can't be developed into a reality. The Chief of Cavalry should be taken from the colonels of cavalry, one well known in his own arm and in the other arms of the service; a fine soldier with broad views, devoted to the cavalry, but not blind to the virtues, needs and possibilities of the other arms; a man of good presence and address, possessing tact and adaptability in addition to his professional qualities."

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## THE RILEY REDOUBT.

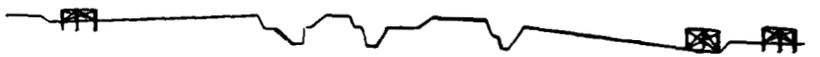
FORT RILEY, KANSAS, June 19, 1907.

*The Editor, Cavalry Journal:*

SIR:—The following brief description of a new field work may interest your readers:

To those of us who struggled with the normal profile, bastions, ditch and glacis, the field work illustrated here will seem a radical departure from old methods. The two wings

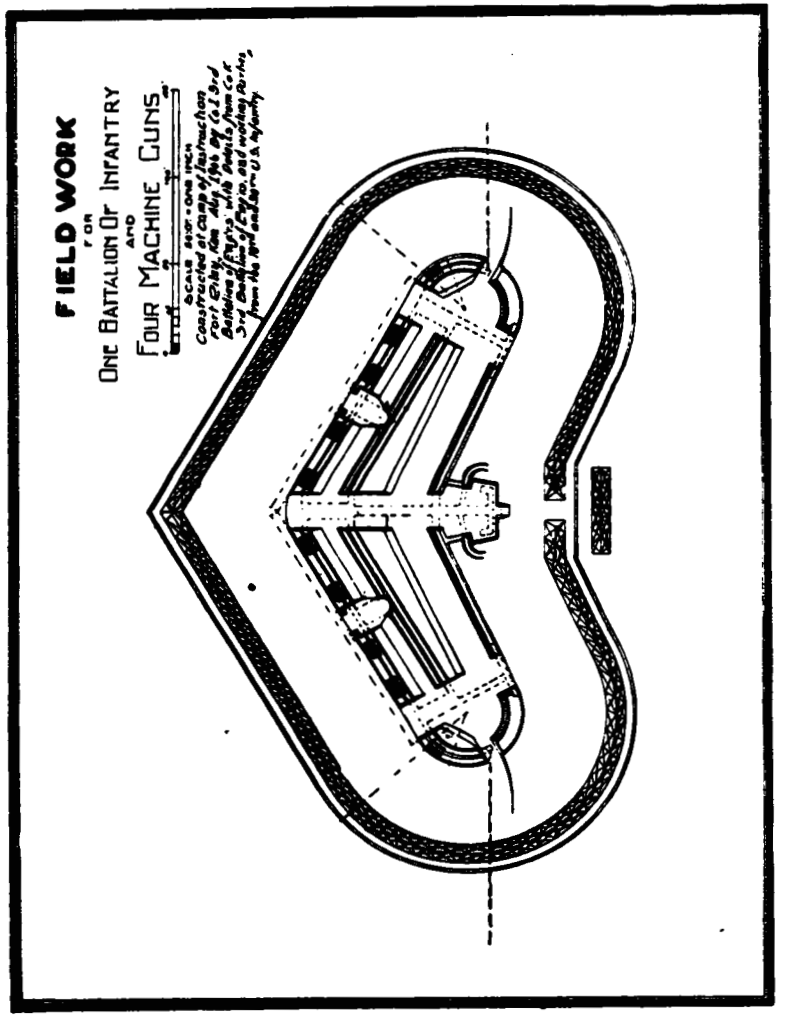
Section through covered way



Section through trenches

W. M. Whitman

of the redoubt form an angle of 120 degrees, and each wing consists of three open trenches for the three lines of defense. These trenches communicate with a covered way at the points "a," "b" and "c," running from front to rear of the work.






At the outer ends of the trenches are pits for machine guns. The first and second trenches also connect with each other by short covered ways "d" and "e." Eight flights of steps lead down from the banquette to the first trench.

There is a barbed wire entanglement sixty feet away, extending completely around the redoubt, with a width of ten feet. This obstruction is open only at the gorge, which is defended by loop-hole fire from the end of the covered way. The work was designed to hold one battalion of infantry and four machine guns. It was constructed during the camp of instruction at Fort Riley in August, 1906, by Company I, Third Battalion Engineers, with working parties from the Eighteenth and Thirtieth Infantries and Company K, Engineers.

It is contemplated to attack this work in September with infantry and artillery, the latter using explosive shell.*

Yours very sincerely,

W. M. WHITMAN,
*Captain and Quartermaster.*

* * *

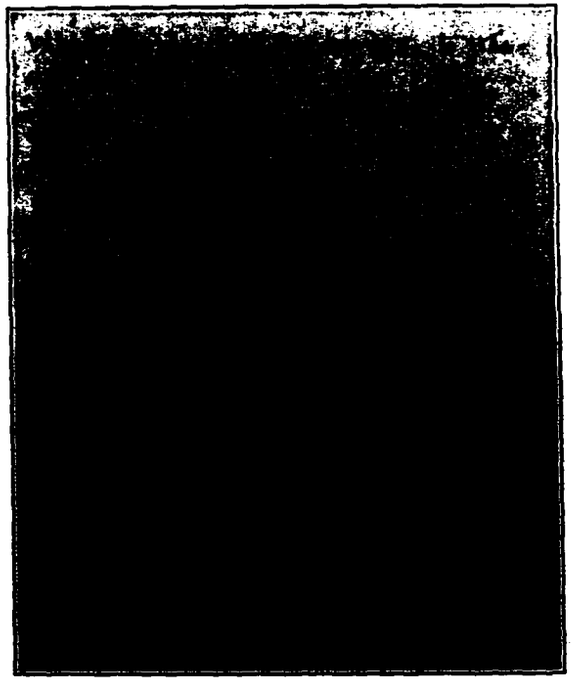
*Notes on Artillery Fire on Redoubt at Fort Riley.*

In order that they might appreciate something of the effect of modern artillery shell fire, the Staff Class and the Signal School at Fort Leavenworth were given permission to visit Fort Riley and witness one day's firing. To make the subject fully understood, Colonel Macomb of the Field Artillery delivered, before the redoubt was inspected, a short lecture on the subject of artillery fire and its employment. His remarks were supplemented by those of Major

* The editor is informed by Major Thomas H. Rees, Corps of Engineers, under whose supervision this redoubt was built, that the foregoing description is erroneous in enumerating three lines of defense. He states: "There is in fact but one defensive parapet extending entirely around the work and including faces, flanks and gorge. The interior trench parallel to the faces is a covered communication passing in rear of the bomb-proof casemates and connected with the front trench through the bomb-proofs and with the gorge trench through the covered galleries."

Judson of the Engineers, after the arrival of the class at the redoubt, and to these two officers a great many of the following ideas are due.

The redoubt, of a size to accommodate the present authorized strength of a battalion of infantry, was designed for the purpose of resisting the fire of a regiment of field artil-

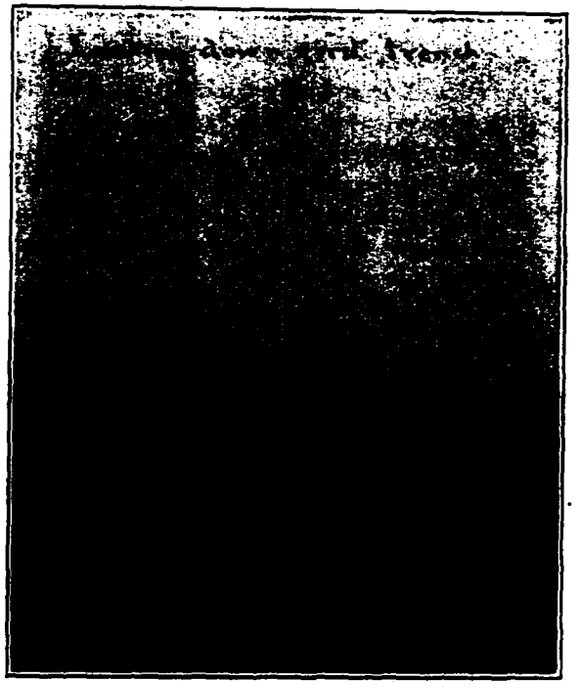


lery and the advance of a brigade of infantry, and it was supposed to be one of a large number of redoubts along a defensive position.

Being designed to resist the 3-inch field gun alone, the bombproofs and covered galleries were covered with about three feet of earth and from four to six inches of wood. The redoubt had a command of about four feet and a depth within the trenches of about five feet. It was of triangular profile and blended well with the shape of the ground, and it would



have been practically invisible had the exterior been sodded like the surrounding country. In this case no attempt was made to conceal it, for the object of the entire firing was to fully ascertain the results that could be accomplished by the 3-inch and 5 inch rifles and by the 7-inch howitzer, using common and explosive shell, and it was not for target practice.



In making deductions from the effects of shots and hits observed it must be remembered that this particular redoubt was built a year ago and that the ground has had full time to settle; in addition, the ground was naturally rocky and the shots observed would probably have accomplished a great deal more had the redoubt been recently constructed which would have been the case in actual war. This redoubt was

very similar in construction to those constructed by the Russians at Liao Yang, Mukden, etc.

The 3- and 5-inch guns, being fired at a very slight degree of elevation, produced a relatively slight effect, the projectiles were apt to richochet, and not striking a surface normal to a tangent to the trajectory, they did not produce the results that would have been seen had howitzers or mortars or any gun capable of very high-angled fire been used. It would seem reasonable, from the results observed, to arm a certain proportion of our field artillery with the largest howitzer capable of rapid field transportation. This I believe is already contemplated or projected by our field artillery.

On the afternoon of September 11, 1907, the redoubt was subjected to the fire of the 3- and 5-inch rifles and the 7-inch howitzer. About forty-eight shots were fired from the heavy siege guns and 144 from the 3-inch guns. The siege guns were fired at a range of 6000 yards and the 3-inch guns from a range of about 2700 yards.

Several of the 7-inch shells fell along the capital of the work itself and piercing the bombproofs would have inflicted much damage had they been occupied by living targets.

The fire lasted for about two hours, and it very probably would have kept the garrison crouching or in trenches behind the work until hostile infantry, under the shelter of this artillery fire and unopposed by any artillery of the defenders, could have reached within a few hundred yards of the redoubt. Shrapnel fire would have much more easily accomplished the same effect, but apparently shell fire is deadly enough. Out of ninety-four targets placed in the trenches of this work several were struck. This of course does not take into consideration those who, if human, would have been injured by shock or gases alone. The wire entanglement around the redoubt was sheltered only by a slight rise of the ground, and during the fire it was twice struck, once in front and once behind; both shots appeared to be by 7-inch shells.

The amount of damage to the redoubt by all this firing was very little, and it could very readily have been repaired, under cover of darkness, in a few hours by the garrison who



were supposed to have occupied it. From a tactical point of view this firing was instructive in allowing one to surmise from the accuracy of fire exhibited, how near the attacking infantry might approach the redoubt without injury from its own guns, the length of time required under service conditions for ranging and the effect of the artillery fire on the occupants of the redoubt.

H. L. H.

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## THE WAR GAME.

IN consequence of a demand among recent graduates of the Staff College and the School of the Line, and other officers who are interested in the war game, arrangements have been made to furnish, at a moderate cost, the following articles to officers desiring them.

War Game Set, 50 cents.

This set was devised by the Department of Military Art in 1906 and is now used exclusively in the Staff College and School of the Line in war games and has been found to meet all the requirements of the game. It includes colored pins, blocks of colored card board, strings of colored beads and a card board scale. This set is useful in devising and solving map problems.

Map Maneuver Map of Fort Leavenworth—scale 12 inches to 1 mile, $1.00.

This map is furnished mounted on cloth; it embraces a tract of ground about six miles long and four miles wide and is based on surveys made by the student officers of the Staff College. It is used in the war game in the Staff College and School of the Line.

Map Maneuvers, by Captain F. Sayre, Eighth U. S. Cavalry, 45 cents.

This is a booklet of 122 pages, bound in cloth, and includes five chapters entitled "Utility, Origin and Develop-

ment," "Maps and Material," "How conducted," "Problems," and "Fire Losses," also a colored four-inch scale map of Fort Leavenworth. It is specially adapted to the needs of beginners at the war game.

Officers desiring any of the above articles will address the "Secretary U. S. Army Staff College," Fort Leavenworth, Kansas. E. E. B.

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## DESCRIPTION OF A CHUTE SUITABLE FOR TRAINING HORSES AND RIDERS IN JUMPING ORDINARY OBSTACLES.

THE runway should be about twelve feet wide, rectangular in plan with well rounded corners, turns being thus made rather abrupt to prevent the animal getting into the habit of racing around the ends. The exterior dimensions should be about 150 feet long and 75 feet wide.

The fences should be at least six feet high, boards or poles nailed to the posts on the side next to the track so that the sides will be smooth. The gates should be in the middle of one end, opening outward on the outside fence and inward on the inside fence.

Two obstacles should be placed in the runway on each of the two sides. Stones piled two or two and one-half feet high in the form of a fence; a ditch about four or five feet wide filled with water or small brush to deter the horse from stepping into it; some bars or posts and rail fence and a hedge, or two or more logs piled on top of each other. All the obstacles to be as near in appearance to those encountered in the field as possible. Make the obstacles easy to jump and too strong to be knocked down.

The two obstacles on each side should be about fifty feet apart, giving the horse ample opportunity to get straightened out after making a turn before taking an obstacle and to be well collected before taking a turn after passing over an obstacle.



### INSTRUCTIONS FOR THE USE OF THE TRAINING AND JUMPING CHUTE.

This chute is used primarily for the instruction of horses unencumbered by a rider. The object is to teach the horse how to take small obstacles in his stride without hesitation, and by repeated exercise in the runway, to strengthen and develop those muscles used in jumping, which without such instruction, are not trained or properly developed. This training is accomplished by turning into the runway not more than three horses at a time, one of them being an animal which will not hesitate at a small jump, to act as a leader. The turns in the chute are made abrupt to prevent the possibility of too great speed. In preliminary training horses should be driven around the chute not more than five or six times in one lesson, three or four times a week until they take these small obstacles without hesitation in their stride. In their first lessons they should be sent or led around slowly to have an opportunity to observe the obstacles, so as to avoid any fright from them, and made to go over them quietly, at a walk if necessary.

After all the horses have received their instruction and training, then the conditions become ripe for the instruction of riders. The horses are used to instruct the riders how to ride comfortably over an obstacle. The horses of the organization that take the obstacles most smoothly are selected for this purpose. The preliminary demonstration consists in taking the men to be instructed inside the center ring, then put one or two horses in the runway and allow them to go around, calling the attention of the men under instruction to the movements of the horse as he passes over an obstacle. Dwell especially on the natural movement of the horse's head on approaching a jump and on landing. The nose, when not restrained, points slightly to the front so that the horse can well observe the obstacle before leaping, and as he lands his nose swings eight or ten inches further to the front. If this movement is interfered with, his equilibrium is interfered with and he cannot jump comfortably or smoothly, which tends to interfere with the rider's seat and balance.

If his nose is restrained by a man holding stiffly on the reins, the horse jumps into the bit on landing and receives unnecessary punishment. This hurts the horse, and if persisted in by a rider, the horse will acquire the habit of stopping short in front of a jump, hesitating, then gathering himself and hop over landing ungracefully and uncomfortably on all four feet in his endeavor to avoid injury to his mouth.

The first thing to be taught a rider is confidence. Saddle the horse with a McClellan saddle or use a blanket and surcingle; put no bit or halter on the horse's head; let that be free. Put a good strap on the cantle and pummel or a good strap around the horse's neck near his shoulders, for the rider to take hold of with both hands in his preliminary rides. The best authorities and practical steeplechase riders all agree that the body should be thrown slightly back on approaching a jump to throw the weight off the horse's forehand, and slightly further back on landing for the same purpose, and in order to have the rider be in a position of equilibrium should the horse fall. The two main points to be observed in the position of the rider's legs are, that the knee caps should be turned well into the blanket and toe always slightly in rear of the knee. If this is carefully observed, should the horse bobble or stop suddenly the point of rotation around which the body tends to move will be at the knees and not at the stirrup. The tendency to be unseated will be decreased just this amount; if the stirrup or point of rest is in front of the knee the tendency to rotation of the body around the stirrup acts in a direction to catapult or throw the rider directly out of the saddle and on to the pummel or over the horse's head. No good rider with a secure seat ever lets daylight show between the inside of his knees and the horse's side. If his toes turn out and his heels are held under the horse's side, the rider cannot possibly ride in balance. He has no grasp with his knees to prevent his turning over sidewise. He could never wear spurs without involuntarily using them.

The straps around the horse's neck and that on the saddle should be made use of by a beginner to hold himself down tight into his seat with his hands as near in his lap as



possible. After one or two trials the rider will experience but little difficulty when he sits tight and rides balanced. As soon as confidence comes let him continue over the obstacles without grasping any straps, always holding his hands down close in his lap, where they should be when he has reins. Never allow him to fold his arms or swing them in the air. Keep them down hard inside his thighs and near the horse's withers. After the rider demonstrates his ability to take all these obstacles with perfect ease, the horse may be equipped with a snaffle-bit or watering bridle and the man given the reins. If he persists in raising his hands or jerking involuntarily on the bit he should be put back in the chute on an unbridled horse. All authorities agree that the best riders over obstacles ride passively; that is, they use the legs and bit to control the speed and direction of the horse just approaching a jump, keeping him straight, and then when this is done to allow the horse to do his own jumping, the rider simply taking passage. The old theory that the rider should attempt to lift his horse or support him on landing on the opposite side has been exploded. The trained animal knows his feelings and how to use his jumping qualities better than his rider. If the horse starts to take off too soon in front of the jump it is thought better to allow him his way rather than to attempt to make him take another short stride before rising. To attempt to change him distracts the horse's attention, mixes him up, and often is the cause of a fall. Jumping a horse with a curb bit alone is disastrous; there is not one man in a thousand who can do this without injury to the horse's mouth.

The following points must always be kept in mind and absolutely adhered to:

1. Sit tight, body slightly back of the perpendicular and balanced.

2. Knee caps tightly turned into the saddle or blanket, thus forcing the heels out.

3. Feet slightly in rear of the knees.

4. Hand always low, held tightly in the lap and near the horse's withers.

5. Reins as long as possible, maintaining only sufficient pressure to feel the horse's mouth and to keep him straight.

Punishment by the rider for refusing a jump should not be resorted to. The probability is that the animal is not sufficiently trained to enjoy jumping or to jump with confidence. He should be put in the training chute without a rider and his schooling unmounted be again gone over.

In all preliminary training and instruction no spurs should be allowed on any man. As soon as a man demonstrates his ability to ride with his legs from his knees down stiff, his feet well back and heels turned out, then and only then should he be allowed to mount a horse for jumping equipped with spurs.

A horse is a creature of habit. If the horses awaiting instruction are held in a squad near the gate and the horses after jumping in the chute are stopped and caught at the gate and led out after completing their exercise, every time they go around the ring they will slow up or halt as they come to the gate, hoping to be taken out. To avoid this stopping habit, it is best to take all the horses that are to be used into the middle of the inside ring, keeping them hitched to the rail there. Never take a horse out of the ring that has stopped by his own volition. Stop him before he comes to the gate after taking the last obstacle or at the first turn after passing the gate by calling out sharply, "Whoa." If this is rigidly adhered to, no horse will get into the habit of halting without hearing the word "Whoa," but will continue going around the ring until so stopped. C. G. T.



## ONE OF THE NECESSITIES OF THE SERVICE.

IT is entirely practicable and also inexpensive to establish at every cavalry post in the United States a small "Riley," so far as an officers' riding school is concerned. This may be accomplished by requiring the attendance at riding school for a certain period each afternoon or several times a week of all officers below the grade of captain, and of all captains of less than ten years service, all of the aforesaid being either troop or squadron staff officers.

Taking the course at Riley as a model and the article on the school at Riley (CAVALRY JOURNAL for January, 1906) as a guide, what is there to prevent the carrying into execution at each cavalry post of the following: "Special attention is devoted to confirming the strong correct seat, and to teaching the use of the aids. Each officer is allowed to select a green horse from the command, and starts the training work with the cavesson and longe. Next follow bitting, bending and suppling, using the bit and bridoon."

Considering the course further, is it not practicable to take up, during these evening periods, the training of a green jumper chosen from the command, the riding of a trained bucker, the riding of the English saddle, first to acquire the correct seat and afterwards over a steeplechase course? With English saddles and bridles now supplied by the Quartermaster Department for polo, little expense will attach to the individual officer, except for the purchase of the proper bits.

Time will be found during the year to take up horseshoeing practically, to study hippology, forage, etc., under the tutelage of the regimental veterinarian; also to take up practical work with quartermaster harness and transportation.

Objection will be made that we have not instructors who can fully handle the subjects covered. This is recognized but not fully concurred in, for in each regiment can be found an officer who has had practical experience in one or more of the subjects to be covered; and as the subjects are changed

new instructors may be detailed until such a time as there shall have developed in each regiment one particular officer who is judged to be especially fitted for such work.

With this instruction, and coöperation among the officers concerned, much can thus be accomplished and a healthy rivalry excited among them. Such text books as may be necessary can be recommended and decided upon by the school at Riley, as well as a course of instruction to be followed.

Incidentally this system would provide a training school for recruit horses, an institution now lacking in a great many regiments.

HARRY L. HODGES,
*Second Lieutenant, First Cavalry.*

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## ARMS OF THE SERVICE SCHOOLS AT FORT LEAVENWORTH.


THE Academic Board of the Service Schools at Fort Leavenworth have recently adopted the arms shown above for use on the various publications of the three schools and as a distinctive mark of the institution for general use. It will be carved on the new War College buildings, together with the arms of West Point, Monroe, and the several service schools, and is reproduced here as being of interest to the service at large, and especially to the alumni of the schools.



The devices borne seek to express the aims and ideals of the schools. The three lamps on the shield signify learning and typify the three schools—Army Staff College, Army School of the Line, and Army Signal School, these names also having been changed recently from the former designations.

The military character of the schools is shown by the chevron and the crested helmet, while the motto, "*Ad Bellum Pace Parati*" (Prepared in peace for war), bespeaks the aim of the institution.

Throughout our service and in the foreign military world, the word "Leavenworth," above the shield, means more than the mutable name of a school. It is a word full of sentiment to its alumni and a wealth of promise to those who have its benefits still in store.

The design is the work of Captain H. E. Eames, Tenth Infantry, an instructor in the Department of Engineering.

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## CAVALRY OFFICERS, THEIR APTITUDE AND SELECTION.

MOST cavalrymen are pleased with the provisions of Par. 3, G. O. 179, current series, War Department, in pursuance of which a board of five cavalry and field artillery officers will be convened at West Point prior to the graduation of each class for the purpose of arranging the members of the graduating class in three groups after proper examination, viz :

1st. Those considered specially qualified for mounted service.

2d. Those considered qualified.

3d. Those considered not qualified.

The report of the board will be forwarded to the War Department and, though its purpose is not stated in the order quoted, it will most probably be a basis for assignments to the mounted services. While the assignment of graduates

to the cavalry has generally been acceptable, the above procedure will insure even greater care in making the assignment.

The initiative in this matter was taken by the Inspector General of the Army about two years ago, who recommended that only those graduates be assigned to the cavalry who had an aptitude for mounted service. This recommendation is now bearing fruit. It is hoped that this policy once begun will continue along its natural course and will be enlarged to include selections for and assignments to the cavalry from all sources. By the time a man reaches the cavalry from the Military Academy his military antecedents are of the best. If the determination of his aptitude for the cavalry service is considered desirable, how much more so is selection desirable from among those who are promoted from the ranks or who are appointed from civil life. These men, in all probability, have not had as excellent a foundation in horsemanship and experience in handling horses as graduates have had, and hence the necessity for a critical examination as to their aptitude for mounted service.

To such an examination there can be no objection on the part of the dismounted services, for the qualification required is not one that is an essential to either the infantry or to the coast artillery. While an ambition to enter the cavalry is laudable, the best interests of the service itself demand that only those be appointed officers therein who are good horsemen and have an aptitude for that class of work. H.

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## SUGGESTIONS FOR BEGINNERS AT POLO.

THE mallet should not be too long as the tendency is to hit the ground before the ball. The force and direction of the stroke is thus impaired and the arm of the player fatigued. The mallet should be held in the hand with only sufficient force to prevent losing one's grasp, not stiffly; the weight and speed at the head of the mallet is sufficient to



get the longest stroke without stiff, muscular effort. The ball in the forward strokes should be hit when about opposite the stirrup iron, never in the rear of the vertical from the shoulder, for in that case two impulses are given the ball, one forward and one into the ground which interferes with strength, direction and distance. The motion of the mallet should be a sweeping one going parallel to the ground for about a foot. Never "swat" at the ball. In making a forward stroke on the left hand side, the mallet should be held lightly in the hand and a sweeping pendulum motion made to the front, carrying the hand and arm on beyond the horse's nose. If the mallet is grasped stiffly the tendency is to swing under the horse's neck and hit him in the bits. This is equally true on the right hand side.

Whenever making a stroke at the ball always have in mind some object ahead towards which to drive the ball. This will ensure improvement in direction, a most important element. In making cross strokes under the neck from the right or left, lean well over and hit the ball when it is about in front of the horse's face, thus avoiding injury to your pony's legs or striking them with the ball or mallet. This besides injuring your pony, absolutely makes the stroke useless on account of the ball not going in the direction you intended to have it go.

When riding at a ball carry your mallet above and in rear of your shoulder; begin your stroke at least a horse's length before you think it necessary. It is much easier to slow up the movement of the mallet to meet the ball, than it is to hasten your movement when you haven't time. Your direction and chances of hitting the ball are thereby greatly improved by beginning your stroke early. Whenever making a stroke at the ball be sure and have the rein hand low and near or on the horse's withers. This will prevent your giving your mount an unintentional impulse to the right or left by an unconscious side movement of the rein hand, in an endeavor to maintain your balance and increase the force of your stroke. In making a stroke to the rear on the right or left, hit the ball when a little in the rear of your stirrup iron.

In training a pony and to avoid getting him into the habit of attempting to change his direction or speed whenever a stroke is made, practice swinging the mallet at different objects or spots on the ground frequently when no ball is there. He will thus avoid getting the habit of only expecting a stroke when he approaches a ball.

Polo stirrup irons should be large for safety to admit the foot up to the instep and its withdrawal without chance of catching. The seat should be a bareback seat and the stirrups long enough so that they are retained by pointing the toe down. Much weight is never put in the stirrup except in emergencies and for long reaches.

All horses used at polo should be equipped with a noseband, cavesson, not too short to allow him to extend himself in running, or long enough to allow him to throw his head and strike the rider in the face.

If the pony slips and is evidently going to fall, unless the rider feels that he can land completely free from his horse, it is better to sit tight and keep your legs around his body. Few legs are broken by a horse falling on them; the breaks are generally caused by a pony falling against the leg half free from him; experience has shown this to be correct.

As a matter of safety and to prevent unnecessary collisions, never turn your pony around without first turning your head to see that you are not going to cross some one coming rapidly from behind.

Always see that your throat latch has at least three or four inches play. Many horses are fatigued and choked down by throat latches too tight when the head is bent in and their breathing thus interfered with without the knowledge of the rider.

As a matter of play it is never considered good policy or safe to back a ball in front of your own goal. Better cross it ten feet than back it fifty feet. More goals are made by good team work than by brilliant star players. To this end always endeavor to keep your team in column, separated by never less than two horses' lengths. When a goal is well guarded by your opponent, it is no advantage for your leading player to knock the ball ahead to the opponent waiting for it. It is the leader's business to ride ahead and interfere with the opponent guarding the goal. It is invariably the rule unless the leading player has no one between him and the goal, or is in a position to make the goal by one short stroke, to leave the ball and confine his attention to riding off the man ahead of him guarding the goal. A safe rule is to always have one of your players ahead of the ball when it is going towards your opponent's goal.



By riding a man it is not meant to simply push him off the ball four or five feet. If you start to ride a man stay with him and push him well out of the way even to the sideboards if necessary, thus keeping him entirely out of the game. When you start to ride a man forget all about the ball; the man you are riding is the only man that is anxious to keep his eye on the ball.

In effective team work, a player of your own team, coming behind you, has a right to instruct you which way to drive the ball or to leave it. His instructions must be complied with absolutely. Accustom yourself to using definite signals. For example, "Take it," "Back it," "Cross it," "Leave it," or "Ride." "Leave it," means to continue on your course but not to touch the ball. "Ride" means not to touch the ball but to pick out the opponent nearest the ball and push him out of the way, confining your attention entirely to riding.

Every man on the field is invariably doing the best he can, so avoid sharp words and criticisms. They only irritate and do not improve matters.

If you have a referee, avoid getting into the habit of calling "Foul." It is always proper and well when a collision is imminent to call out a warning. If you have a foul to claim, do it quietly the first time the ball is out of play. The etiquette of the game permits the referee in case he has not observed the conditions, to question the players involved, and they are expected to reply frankly whether for or against.

C. G. T.

## FEEDING OF TROOPS EN ROUTE.

IN the September number of the *Military Surgeon* there appears an article, under the above title. by Captain William S. White, Assistant Surgeon, Illinois National Guard. This paper gives the experience of Captain William C. Gebhardt, Commissary First Infantry, Illinois National Guard, in subsisting about 700 men of that regiment while on a trip from Chicago to New Orleans and return.

They were transported in two trains of thirteen cars each, each train having ten coaches, two baggage cars and a sleeper. On each train, the two baggage cars were fitted up, one as a kitchen and storeroom and the other as a dining car, with tables that seated seventy men. Thirty feet of one end of the kitchen was partitioned off as a storeroom. The kitchen was provided with a ten-foot range, cooking utensils, etc., and the storeroom had arrangements for caring for iced meats, butter, etc.

The report states that the men were fed regularly three times a day with hot meals, in relays of seventy men each, twenty minutes being allowed for each relay for eating, and ten minutes between relays to clear and reset the table, besides washing the oil cloth table cover. Each man cared for his own tin cup, knife, fork and spoon, and there were two sets of tin plates in the dining car, so that one set could be washed while a relay was eating. The menus were ample and varied, coffee, bread, butter and potatoes in some form being served at every meal, while pickles, cold meats, liver and bacon, sausage, ham, fish, corned beef hash, breakfast bacon, rice, beans, etc., made up the other components of the meals. The entire cost, including $225.00 for fitting up each kitchen with a range, cooking utensils, etc., averaged only about twenty-two cents per meal per man.

A good suggestion made was to place the kitchen and dining cars in the middle of the train, not only to save the long tramp through a moving train, but also to have the kitchen farther removed from the smoke and cinders of the engine.



Experiments in this line have been made in feeding regular troops in their long trips across the continent, but it is believed that a study of this report will be beneficial to those who may have to try this method of subsisting troops while en route.

E. B. F.

# Editor's Table.

## A CHANGE OF OFFICERS.

On June 30, 1907, Captain Herbert A. White, Eleventh Cavalry, tendered his resignation as Secretary and Treasurer of the Cavalry Association and editor of the CAVALRY JOURNAL. This action was due to his having succeeded to the head of the Department of Law of the Service Schools and Staff College, and that as such he would be unable to devote the necessary time properly to conduct the affairs of these positions. The Executive Council of the Association accepted his resignation with great regret and tendered him a vote of thanks for the able manner in which he had managed the affairs of the Association and the energy and marked ability with which he had edited the JOURNAL. His accounts as Treasurer were audited by the Council and found correct. He transferred to his successor $1,174.17 and reported liabilities amounting to $342.39, an excess of $831.78 of cash on hand over the liabilities. Captain White was elected a member of the Executive Council to succeed Captain J. P. Ryan, Sixth Cavalry, relieved from duty at this station. The undersigned was elected Secretary and Treasurer of the Association and editor of the JOURNAL.

In his annual report for 1906, Captain White stated: "As for the work of the editor of the JOURNAL, no officer on duty at the schools has time to perform properly his duties to the schools and also to the JOURNAL. The work of editing the JOURNAL and running the business is daily becoming more arduous. If it were possible to find some retired officer of ability and the requisite energy, he might be given the JOURNAL, the Fire Association and the Library.



But you will have to scan the retired list more closely than I have to find one suitable."

The above remarks are eminently correct, and my observation during the year that I have been on duty here as librarian of the Service Schools and Staff College has confirmed the statement that no instructor at the schools has the time to devote to the work.

It is also equally true that, in these times of frequent changes of station, an officer on duty in the garrison of Fort Leavenworth is not available for this work, or if available and competent, he would scarcely have gotten the work well in hand before the inevitable change to another post would necessitate a change in the management of the JOURNAL. With these facts before them, the Executive Council determined to try the experiment of having a retired officer as Secretary and Treasurer of the Association and editor of the JOURNAL. Whether or not this move was a wise one or they have made a good selection, time only will tell.

When first approached upon the subject of assuming the official duty of librarian of the Service Schools and Staff College and of ultimately succeeding to the editorship of the JOURNAL, I replied that the first named duty would undoubtedly be pleasant and congenial for one retired from active service, but I was not fitted by aptitude or training for the second. That my life's work of nearly forty years service in the army had been in a line not calculated to improve my original lack of literary ability, and that while I had served in many staff positions, all had been in those departments that develop one's business ability rather than his literary talent.

To this the reply was made that the principal duties of the positions consisted in inducing other members of the Association to write for the JOURNAL and in running the business of the Association, and that in this I would have the assistance of the Executive Council and the active coöperation of the Publication Committee.

Notwithstanding this promised assistance, I take up the work of editing the JOURNAL with reluctance, not only be-

cause of the feeling that I lack editorial ability, but also because I succeed such able editors as my predecessors.

I find the financial affairs of the Association in good shape, considering the condition they were in during the few years following the Spanish War. I did not know until I assumed these duties and examined the books and records, and I believe the Cavalry Association generally does not fully understand, how much we are indebted to Captains Steele and White for the work they have done in getting the Association on its feet again after its collapse, due to that war.

Less than three years ago the Association owed over $1,300.00; had $7.13 in cash on hand; there was due from advertisers $442.10 and from members and subscribers about $800.00. A large part of these back dues from members and subscribers was never collected and still stands on the books, the delinquent members having been dropped from the rolls of the Association. To-day the Association does not owe a cent and has over $1,200.00 in bank.

EZRA B. FULLER,
*Lieutenant Colonel U. S. Army, Retired,*
*Editor.*

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## A BOOK DEPARTMENT.

The Executive Committee have authorized the Secretary and Treasurer of the Association to conduct a book department in connection with the JOURNAL, for the purpose of publishing and selling such military works as they may deem of interest or value to the members of the Association and the service in general. In all cases, however, this will be done only when it involves no financial risk to the Association or expense beyond the small incidental cost of advertising the books in the JOURNAL.

This will throw some additional work on this office, but as it will be a source of income to the Association and, it is believed, of professional benefit to our members, this extra work is cheerfully assumed.



The works to be published will probably be few in number and confined to such technical books as are prepared by officers of our service, and that have the approval of the Executive Committee as being of decided worth, such, for instance, as the "Stodter Score Book," already published, and the forthcoming work of Captains Cole and Stuart on "Military Sketching."

Although it is the intention to sell only such military books as have been reviewed in the JOURNAL and that are known to be worth purchasing, the Secretary will procure for our members any work relating to our profession, or, if desired, he will furnish them with a list of what is considered the best books on any particular military subject. The Secretary being also librarian of the Staff College and School of the Line, and in touch with the several instructors of these schools, is in a position to be of service to our members in this line.

Whenever our contract with the publishers does not forbid it, the discounts obtained will be divided between the Association and the purchaser.

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## THE FUTURE OF TRANSPORTATION.

An article under the above title appears in the August number of the *Metropolitan Magazine*, which, while it is of interest to the general reader, is particularly so to those in the military service.

It describes the mono-rail system as invented by Louis Brennan, which, it is stated, promises to revolutionize all present methods of transportation, and that "the conduct of wars would be changed and all our ideas of railroading upset." A model car was recently exhibited before the Royal Society in London, and its workings "astounded the scientific world, which hailed the inventor a worthy successor of Watt and Stephenson."

The peculiarity of this system is that by which the car is balanced on the single rail whether the car is in motion or at

rest. This is accomplished by means of two gyroscopes or fly-wheels, which rotate in opposite directions at a high rate of speed, they being mounted on horizontal axes, which are set at right angles to the length of the car. These fly-wheels are run by small electric motors or gasoline engines; their axes have special bearings, and all of the gyroscope being enclosed in a vacuum case, so that but little power is required to operate them, and it is claimed that they will continue revolving and accomplish their purpose of maintaining the stability of the cars for several hours after the motive power is cut off. The single cars are run up hill and down on a single rail laid on uneven ground or on a cable stretched across a stream.

Flying lines of this railway can be laid with great rapidity, so that, as the inventor claims, a line may follow in the wake of an army, and supply trains be brought forward to camp each night, or reinforcements be rushed up almost to the line of battle. The British War Department has taken great interest in the invention, and the Indian government has made an appropriation for building and testing a full-sized car. The motive power of the car may be electricity, gasoline or steam.

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## A COMBINED JOURNAL FOR THE MOUNTED SERVICES.

Since the recent legislation was enacted that so wisely made the field artillery a separate and distinct corps, some officers of that branch have advanced the idea that it would be a good plan for them to join forces with the cavalry, both being mounted services, and publish one journal in the interests of both branches of the service.

They argued that they are too few in number to maintain a separate publication; that they had many interests with the other mounted branches of the service; and that the *Artillery Journal*, although a fine technical publication, had been in the past and would probably continue to be mainly devoted to the interests of the coast artillery.



This matter having been brought to the attention of the Executive Committee of the Cavalry Association, they, at the meeting of June 30, 1907, directed the Secretary to correspond with the officers of field artillery and the members of the Cavalry Association with a view of ascertaining their views regarding the combination of the two branches of the service in publishing one journal.

As it was impracticable, at this time, to send a circular letter to all officers of both branches, it was deemed best to so communicate with the field officers of the field artillery and to bring the question before the members of the Association through the columns of the JOURNAL.

Accordingly a circular letter was sent to all field artillery officers above the grade of captain, informing them of the above facts and requesting them to not only give their individual opinions but also to voice the sentiments of all officers of their corps, in their respective commands, upon this subject. They were informed that, in case there was a general desire on their part for such a combination, it would be necessary to change our Constitution and to settle several questions before any such arrangement could be effected, such as "Should we unite and form one association or combine only as regards the publication of the journal?" and "What name should be given to the united association or journal?" etc.

Also, that our Executive Committee was not throwing out the suggestion with any view of bettering our financial condition, as the Cavalry Association was never in better shape as regards its finances, but that there was a similarity of interests of these two mounted services, and we might be benefited by the active coöperation of the bright intellects of the field artillery.

It is possible that it might have been better to have sounded the members of our Association first on this question for the reason that, in case they did not approve of such a combination, it might appear that we had invited our brethren of the field artillery to join us and then be compelled to inform them that they were not wanted.

However, this preliminary work was simply for the purpose of ascertaining if the opinions and wishes of the few field artillery officers, noted above, was general, and as it requires many months to hear from all members of our Association who are so widely scattered to the four corners of the earth, it was deemed advisable to work along both lines at the same time.

In the meantime, replies have been received from twelve of the leading officers of field artillery, and while nearly all of those expressing their individual opinions favor such a scheme, two of the colonels write that the officers of their regiments stationed at their posts are not in favor of such a combination.

A lieutenant colonel of field artillery wrote that the officers at his post wished for further time to consider the matter.

All, including the two colonels, mention the many points in favor of such action and the gracious action of the Executive Committee in bringing the matter to their attention. The two colonels hope that they may be able to form an Association of their own and to either publish a journal or to have a part of the *Artillery Journal* especially devoted to their interests. These letters are all so cordial, and many have such excellent ideas, that a few quotations are made from them:

"In reply to your letter of July 24, 1907, on the subject of the field artillery and cavalry combining to publish one journal, I have the honor to state that the question has been submitted to the regimental officers and maturely considered by them, with the result that while there is a universal feeling of appreciation of the courtesy shown by the Cavalry Association in inviting this expression of opinion, and while it is a source of great satisfaction to all to know of the friendly feeling toward the field artillery that undoubtedly prompted the issue of your circular letter, yet all things considered, it is regarded for the best interests of all concerned not to unite in one journal.

"There are many tactical points of common interest to both cavalry and field artillery, as there are also to the infantry and field artillery, and again each arm has many



purely technical questions of interest to itself only. This is particularly true of the field artillery, and the want of a special journal in which to discuss such matters is already keenly felt. These papers would not be of interest to cavalry or infantry officers, and would occupy space in the magazine better devoted to articles of more general interest.

"We therefore believe that the field artillery officers should, as soon as practicable, form an association and publish a journal of their own. In no other way can they keep posted on the progress of modern field artillery.

"We nevertheless feel that it is very important that the field artillery should keep in close touch with their brother officers in the cavalry and infantry in time of peace, so that there may be a complete mutual understanding in time of war of the powers and limitations of each arm.

"While there is some doubt at present as to the possibility of issuing an independent field artillery journal, it is believed that this will ultimately be accomplished.

"It is therefore hoped that in the meantime the columns of your journals will be open to articles contributed by field artillery officers, if not of too technical a nature, and that when a field artillery journal is established there may be an interchange of articles between it and the older journals."

* * *

"This suggestion having the sanction of the Executive Committee of the Cavalry Association, is certainly a very generous and courteous action on their part, and in behalf of the officers of my regiment, to whom the matter has been presented, I wish to express my own and their appreciation of the courtesy extended.

I have caused your letter to be read by all the officers of my regiment who are within reach, and have received expressions of opinion from many of them, including nearly all the captains serving at the post. The opinions expressed, with one exception, agree that the field artillery still has strong claims upon, and a close interest in the *Artillery Journal*, which the arm cannot at this time afford to give up.

"While the *Artillery Journal* has in the past seemed to incline to coast rather than to field artillery literature, it has been so because more contributions of that character were placed at its disposal, but its columns will be open in the future as heretofore, for any matters presented pertaining to field artillery.

"Further, since many of the officers of the field artillery have come directly from service with the coast artillery, the feeling is very general that the field artillery, as a separate arm, is too young, and its elements not yet sufficiently assimilated to decide at this time so important a matter, involving the severance of relations of such long standing as those uniting them with the *Artillery Journal.*

"Another objection to hasty action toward coöperation in a "journal of the mounted service," is its possible tendency to antagonize the infantry arm, causing them to look upon the field artillery as in some sense a rival, seeking alliance and friendship with the cavalry rather than with them. Except in case of the horse artillery, there must always be close sympathy between the infantry and the artillery, and any action on the part of the field artillery that might tend to prevent such relations with them should be avoided.

"Again, in assuring you that the suggestion advanced by the Secretary of the Cavalry Association is highly appreciated, it is not believed that such coöperation in the publi cation of a journal would be advisable at the present time."

* * *

"Just as the cavalry arm is interested vitally in not only all that concerns the mounted service but also in most every question that touches the infantry, so the field artillery is interested not only in mounted service questions but in scientific artillery matters.

"I think a progressive cavalry officer ought to read and subscribe to the *Infantry Journal* as well as to the CAVALRY JOURNAL; I think a progressive field artillery officer should read and contribute to the CAVALRY JOURNAL and the *Artillery Journal.*



"These ideas lead me to the belief that the line of division for our service journals ought to follow what you suggest in your circular letter.

"I think a journal devoted to mounted service affairs, preëminently to the *military horse* and all that concerns his selection, training, use and equipment, should have the support of all the mounted branches, and should interest the field artillery officer no less than the cavalry officer, though this interest should not abstract his support from the *Artillery Journal* or diminish to him its value."

* * *

"I have delayed replying to your circular of the 24th ultimo, hoping to hear from Fort Riley in regard to the possibility of establishing there a field artillery journal. I had written to them suggesting it, but I have heard nothing, so I will not wait longer. If such a scheme were favored by the Fort Riley people, who would have to do the work, I should favor it; but if they think it impracticable, I am most heartily in favor of combining with the cavalry as regards the publication of a journal if our cavalry friends will be so good as to allow us the privilege.

"I am a thorough believer in the principle so long advocated by General Langlois, that we must in season and out advocate the absolute necessity of the fullest coöperation of the three arms. The weakness of our general and field officers in this respect is shown at maneuvers in their hesitation in handling the two arms in which they have not served.

"Anything that tends to bring about a closer union and a better understanding among the three branches should have our hearty support. The cavalry and field artillery, both being mounted arms, have, of course, much in common, and a combined journal should, it seems, prove to be a success in every way."

* * *

"It has always been a question in my mind whether one magazine for all the service, mounted and dismounted, would not be sufficient. The only reason I can see for the splitting

up as they already have is for advertising purposes, and none of them seem to be making much money at that. I think the CAVALRY JOURNAL has been especially interesting and filled with material pertinent to mounted work. I would be in favor as a field artilleryman to bring about a combination of the literary talent in the cavalry and field artillery."

* * *

In view of the fact that the desire for thus uniting is not general among the officers of the field artillery, it is possible that the matter may be dropped, but at the same time, it is desirable to hear from our members on this subject, and also on the one recently advanced of having but one journal for all branches of the service.

In accordance with the wish expressed in one of the above quotations, our columns are open to our friends of the field artillery, and also to others on any military subject of general interest.

Finally, the Executive Committee wish it understood that in asking for an expression of opinion on this question, they did it because of the wish of some officers of the field artillery and as an act of courtesy to them and their brother officers, but with no idea of taking any further steps in the premises unless there should be a decided majority of our members that favored the scheme and, in fact, without having decided fully in their own minds how they would vote individually should the question ever come to a vote.

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## THE SERVICE JOURNALS.

The *British Cavalry Journal* for July has been received, and as usual is full of matter of live interest to cavalrymen. The leading articles are as follows: "Cavalry: Its Possibilities and Limitations," "American Cavalry," "Machine Guns with Cavalry," "Training of Scouts" and "Kellermann's Charge at Marengo."

The first, by Major Brown, of the Fourth Indian Cavalry, is a masterly essay on the necessity of trained cavalry,



and shows from many historical examples from the time of Hannibal to the present that the most signal successes of war have been due to the employment of masses of cavalry.

The second, however, is of especial interest to our members. It is by one writing under the *nom de plume* of "Eques," and from the many good things in it, the following are quoted:

"One may almost say, *no* cavalry existed in America before the Civil War. There were only five regiments of regular cavalry, an infinitesimal proportion considering the vast armies that were eventually employed. And during peace these regular regiments were never brigaded; indeed, they very seldom had a chance of even regimental drill, for they were scattered by squadrons along the Western frontier against the Indians.

"As for equipment, the Federal government, richer and with more resources than the South, was lavish to its cavalry. The Northern trooper generally had saber, breech-loading carbine, and revolver, besides saddle bags, cloaks, picketing-gear, etc. In fact, as the same writer previously quoted says: 'The most difficult thing a recruit had to do when ready to march was to get into or out of his saddle, and a derrick sometimes would not have been a bad thing."*

"But the Confederates from the early stages grasped the more essential principles of how to employ their cavalry and kept them very much concentrated in large bodies acting under the command of one man.

"The Confederate cavalry in consequence always met the Northerners in greatly superior force, and naturally always defeated them, thus greatly increasing their dash and enterprise. Their leaders were excellent. Such a body of leaders as the South possessed has never been equaled by any army since Napoleon. How different was their spirit from that of the German cavalry leaders in 1870. The Americans never hesitated to ride into the heart of the enemy's country for thirty or fifty miles, and right behind the enemy, what-

* This is a dig at our cavalry pack, an evil that we have been trying to correct from that day to this.

ever the country was like. On the other hand, the Federal cavalry were not put under one command, nor were they concentrated, or even employed on independent missions to seek the enemy and gain information. They went to the other extreme, and for the first two years were mostly attached to infantry brigades, divisions and corps, in more or less small bodies. They were employed either as orderlies and escorts to baggage, or on constant piquet duty in the neighborhood of the infantry. The infantry commanders were greedy to have as large a force of cavalry attached to them as they could, and then used it up in unnecessary and useless work. The result of all this was great demoralization and discouragement in the cavalry arm."

The old, old gag, "Whoever saw a dead cavalryman?" is stated to have been a great source of amusement in the Army of the Potomac, but adds: "Later on, in the first day at Gettysburg, when Buford's cavalry delayed a whole Confederate division for two hours, the dead lay thick enough, as well as at Brandy Station, and the four days fighting round Aldie."

"The fight at Brandy Station where the Federals, for the first time, placed their full force of cavalry on the field in opposition to Stuart, was more or less a drawn battle, but it raised the *morale* of the Federals enormously, for it showed them that they were at least the equals of the Southern cavalry. And from this date on, they never again assumed the rôle of inferiors, and the balance gradually altered in their favor till we see the effects of the leadership of Sheridan—young, bold, determined, active and a most skillful tactician."

It is well said, in the *United Service Gazette* for August 22, 1907, that "It is astonishing how this, the smartest of service journals, manages to maintain the high standard of excellence with which it inaugurated its existence, and certainly the officers responsible for its 'output' have every reason to congratulate themselves in the remarkable success they have achieved."

In this we most heartily concur, and we hope, as previously stated in these columns, that many of our members



can see their way clear to subscribe for this valuable cavalry journal and thereby reciprocate the friendly interest taken in our own journal by the many British cavalry officers on our subscription list.

* * *

The *United Service Gazette* for July 25, 1907, has an important article on "The Training of Cavalry," from which the following is quoted:

"The recent cavalry maneuvers in Scotland have afforded at least one useful lesson—that cavalry as cavalry are not obsolete, as a certain school would have us believe, but that armed and trained as cavalry ought to be, and handled in a manner consistent with cavalry tradition, they prove themselves just as useful and as needful as ever they did, and disprove the contention of a certain writer 'that their great use in modern war is as a sort of glorified species of mounted infantry only.' The maneuvers through which the cavalry have just passed were something more than a mere test of routine training; they were an instructive demonstration of the very highest order. Each phase of the maneuvers brought special stress to bear upon the particular *rôle* that highly trained cavalry might be called upon to carry out when actually engaged with a hostile cavalry unit, and proved that even in a difficult country like the one in which the maneuvers took place, opportunities will occur when cavalry, by skillful and rapid maneuvers, will put in as much effective work as ever they have done.

"The reactionary feeling that had set in against cavalry was but the whim of a moment, and, as might have been expected, vanished almost as quickly as it came. From the notion that cavalry have become obsolete there has been a quick transition to the belief that in the next great war, all other things being equal, victory will rest with the side possessing the most cavalry. Very fair infantry can be put into the field in two or three months, but that cavalry can be raised and made efficient in the same short space of time is next to impossible; therefore it should be our great aim to keep that arm as strong as possible in view of the contin-

gencies which the future may bring forth, and also to see that the training they receive is of the kind that will make them most effective when their services are needed to decide the fortunes of the day.

"On this question of training, opinions have been very much divided of late years, so much importance being attached to the rifle, that many are disposed to give more importance to the instruction of the mounted soldier in shooting, than to his natural *rôle* as a cavalryman. Speaking on this very subject about twenty years ago, Lord Wolseley said: 'We are told that the cavalry soldier ought to be as good on foot as the infantry soldier is. I do not believe in the jack-of all-trades; I think he is a myth. I believe the cavalry soldier ought to be taught to fight on foot when it becomes necessary to make him do so; but in my opinion to make him do so, except in an emergency, is a waste of power.' In 1891 he returned to the subject, and said: 'The cavalry soldier is intended to fight on horseback. If you intend to make him fight on foot, well, you will make him into a very bad mongrel, into a bad dragoon; but he will not be the dashing soldier you wish him to be in the open country. I should be very sorry to see it happen to our cavalry. To make men good horsemen, to teach them to fight as they do effectually when they are in the saddle, I think it would be a prostitution of the finest part of our service—the finest part of our army—if for a moment you convert our cavalry soldiers into men fighting on foot.'

"Cavalry, in Lieutenant-General Baden Powell's opinion, has suffered from its friends' injudicious enthusiasm It must be regarded 'not as a separate engine, but as a part of a great machine.' He defines, therefore, in the following clear terms, its duties in time of war: *Strategically*, to cover the front of an army, and by giving full information of the enemy's force and concealing their own, to give to their commander-in-chief complete liberty of action; to threaten the enemy's communications, and to force him to waste his strength in defending them. *Tactically*, to destroy the enemy's cavalry, to keep the infantry informed and protected, to cut off and hold the enemy (as at Paardeberg) for the infantry to attack, to chip in when required on the battlefield, to smash up the enemy in pursuit, or to protect one's own side from pursuit.' The *rôle* thus assigned to the cavalry in future wars, by this great cavalry leader, is one of the highest importance, and that it has not been overrated by him is evidenced by the opinion expressed by Colonel Lonsdale Hale, who, in one of his numerous addresses, pointed out that the modern cavalry division combines in itself all the powers of the three arms—cavalry, artillery, and infantry,—and that the independence it thus possesses confers on it a value it never had before, in helping the sister arms to win battles."



* * *

The *United Service Gazette* for September, 1907, has the following regarding the July number of our CAVALRY JOURNAL:

"A most interesting and valuable journal and very handsomely produced, being well illustrated throughout. 'The Strategic Use of Cavalry' is probably the best feature in a long list of contents, while the question put and answered by Lieutenant Coleman, 'Is the Garrison Ration Sufficient for a Good Ration?' is of special interest to us at the present time, when so much is being done in the way of messing reform in our army. 'Is the Rifle a Cavalry Arm?' and 'Horse Flesh as Telegraph Wire,' also command our attention, while other articles of sustaining interest are 'Rifle Practice in Competition Work for Cavalry,' 'Australian Horses for the Philippines,' 'A Proposed New Cavalry Pack,' etc."

* * *

The *Journal of the United States Artillery* for July and August is at hand, and has little of general interest to those outside of the artillery services. It is well edited, and the loss of its present editor, through a change of station, is to be deplored. That most valuable adjunct to the *Artillery Journal*, the "Index of Current Military Literature," is worth far more to the military reader than the price of the *Journal*.

* * *

A new cavalry journal, the "*Kavalleristische Monatshefte*" (Cavalry Monthly-Austrian), has appeared on our exchange list. This magazine was started in October, 1906, and judging from the contents of the two numbers received, bids fair to take a high stand among the service journals of the world. The following are the titles of the leading articles in the September number:

"What Does the War in Eastern Asia Teach Us in Regard to the Employment of Cavalry?"

"Organization of Machine Gun Detachments Attached to Cavalry."

"Considerations of the Activity of Cavalry During Battle."

"The Use of Machine Guns With Cavalry."

"Portable or Wheel Cavalry Machine Gun Detachments."

"Education of Cavalry in Battle Fire."

"Military Value of Long Distance Rides."

The first on the list is one of a series of prize essays that have appeared in this journal.

To those of our members who read German this new cavalry journal will prove a valuable addition to their list of military publications.

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## A CONSOLIDATED SERVICE MAGAZINE.*

There has been received from the editor of the *Journal of the Military Service Institution* an advance copy of an article on the above subject by General Charles A. Woodruff, U. S. army, retired.

He argues that, while he does not wish to disparage either of the present creditable service journals, the interests of the service at large would be better served by one magazine devoted to the welfare of the whole army; that it would avoid that great destroyer of family peace, jealousy, and that the combined journal would have greater weight in shaping public opinion.

He does not advise that the Cavalry and Infantry Associations lose their identity, but that they continue their work of

* NOTE.— This article has since appeared in the September number of the *Journal of the Military Service Institution.*



maintaining the *esprit de corps;* but adds that although an *esprit de corps* is very valuable, an *esprit* that includes the whole army is much more valuable.

He suggests that the editors of the three service journals (he does not include the *Artillery Journal*, as he understands that it is largely an auxiliary text-book of the Artillery School) constitute a board to select and pass upon the articles submitted for publication.

By this union he claims that the cost of publication would be greatly reduced; the income from advertisements would be immensely increased; that each writer would have far more readers, which would tend to stimulate them to better efforts, and that the subscription list would greatly exceed that of the three separate journals.

While the above points are well taken, there are many objections to the scheme that would render it impracticable and inadvisable.

Although an overdose of *esprit de corps* may be harmful, yet it is the main and most important factor in the upbuilding of any branch of the service, and we have never had too much of it.

It is true that there should be a coördination of all branches, and every officer should understand and fully appreciate the functions of the arms other than his own, but it is believed that this can be as fully attained by the service journals being open to writers from all the corps, as is now the case, and by reading all the journals, as is now generally done by officers who are students of their profession. At the same time these journals can carry on the good work of fostering loyalty to their own corps, and by united action, of securing legislation in their interests and that of the service in general.

There is but one place, and that is Washington, where officers representing their respective associations could be stationed to act as co-editor, and there are serious objections to that location for the headquarters of either association.

This is no new idea in the service, as it has been broached in one form or another many times within the last few years, and but few have been heard to favor such a combination.

## CHANGE IN PRICE TO FOREIGN SUBSCRIBERS.

Owing to the increased size of the JOURNAL, the foreign postage has correspondingly increased, and for some time past it has been furnished to our foreign friends at a loss. The Executive Committee has therefore decided to fall in line with all other publishers and charge an extra price to such subscribers. On and after January 1, 1908, an extra charge of fifty cents per year will be made for foreign postage. This, of course, will not apply to members of the Cavalry Association who are living abroad, as, under the Constitution, they are entitled to the JOURNAL free of cost. Members are not subscribers.

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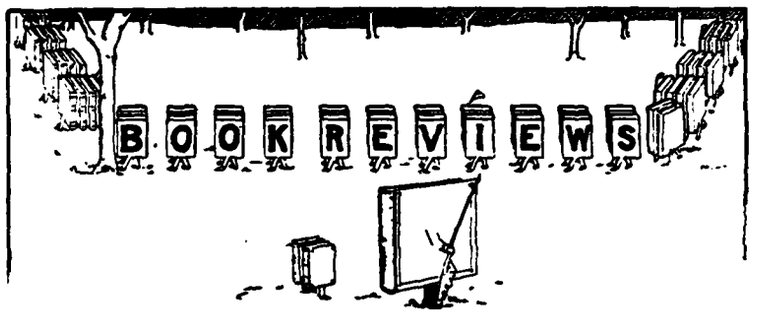
## OUR ADVERTISERS.

The attention of our readers is called to the several new advertisements appearing in this number of the CAVALRY JOURNAL. It is presumed that our members are aware of the fact that a large portion of our revenue comes from the receipts from advertisements. Such being the case, it is to the interest of every member of the Cavalry Association to not only patronize those firms that advertise with us, but *also to let them know why you trade with them.* Occasionally we have an advertiser who complains that he can trace no direct result from his advertising with us, although admitting that he has a large army trade. This is probably due to the failure of his patrons to mention the medium through which they came to know the firm. All members of the Association should be careful to mention the CAVALRY JOURNAL when ordering goods from our advertisers.




**The Life of Napoleon I.*** Not since the publication of M. Lanfrey's history of the First Napoleon has so much new historic material been brought to light and made available to the general reader as appears in Mr. Rose's excellent work. The author has had access to the British Archives and War Office and Admiralty records, and has searched them to good purpose, bringing out many valuable and interesting facts and clearing up a number of hitherto obscure points.

Although he has not been able to go into the continental side as deeply as into the British, yet he has consulted all the recent German and Austrian, as well as French authorities, and has not neglected the new material brought out by them. The point of view is essentially British; the writer has acquired a very genuine respect and even admiration for the subject of his labors, yet in all the transactions in which his own country is concerned he not unnaturally seeks to magnify its deeds and glory, and has a tendency to discredit evidence not flattering to British pride. He takes issue with M. Lanfrey on several disputed points, such as the massacre at the capture of Jaffa and the later alleged poisoning of the

* "THE LIFE OF NAPOLEON I." By John Holland Rose, M. A., late Scholar of Christ's College, Cambridge. The Macmillan Co., New York. 2 Vols. $8.00.

French sick and wounded, but fails to make his case convincing.

From a military point of view the work suffers from the author's lack of knowledge of affairs military, the just appreciation of which is so difficult for a non-military writer; yet the work is not without value from a military as well as from a political standpoint, and on account of the new material brought out bearing on all the Napoleonic campaigns.

There is still much to be known regarding the First Napoleon before the final judgment of history can be summarized in a single work; this volume forms an important contribution towards that judgment, however, and should be in the library of every student of the days of the Consulate and First Empire. A. L. C.

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**Instruction in Security and Information.***

This work contains, in the form of a small book which fits the pocket conveniently, a compilation of all the valuable matter which can be found in our service manuals and standard text books on the subject which it treats. The subject is presented in a progressive and interesting way and is illustrated by original problems, with solutions and discussions based on the Fort Leavenworth map. By this method the "normal formation" diagrams, which have often proved stumbling blocks to non-commissioned officers, are avoided.

The concrete cases taken up and discussed with the aid of the map will be thought by many to be the most valuable feature of the work, especially as they are suggestive of other similar exercises by which the work of instruction here initiated may be continued and varied by the company commander.

The practical exercises in map reading given are thought to be excellent, and convey instruction greatly needed in our service.

*"PRACTICAL INSTRUCTION IN SECURITY AND INFORMATION OF NON-COMMISSIONED OFFICERS OF INFANTRY." By Lieutenant E. K. Massee, Seventh U. S. Infantry. Franklin Hudson Publishing Co., Kansas City, Mo.



The forms for orders which are also included have no special application to the instruction of non-commissioned officers, and might well have been omitted. These set forms for orders seem likely to give as much trouble in our service as the normal formation diagrams have done.

Lieutenant Massee's book would be useful in the non-commissioned officers' school of every company of infantry and troop of cavalry in the regular service, and would be specially valuable in the instruction of officers and non-commissioned officers of the National Guard. F. S.

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**Instructions for the Infantry Private of the National Guard.***

The National Guard to-day is composed of men willing and anxious to become proficient in their duties, but opportunities for drill and instruction under the supervision of company officers are necessarily limited. The various text books and regulations require a certain amount of technical knowledge and experience for the proper understanding of them.

"Instructions for the Infantry Private of the National Guard" enters into an elementary discussion of the subjects which are most important to the private. It treats of military courtesy, discipline, customs of the service, camp and guard duty, in an interesting and entertaining way. To the important subject of rifle practice much space is given. The appearance of the book at the time that the various State troops were going into camp made it of special value to them.

It is made up in handy book form, completely indexed for ready reference. E. B. F.

*"INSTRUCTIONS FOR THE INFANTRY PRIVATE OF THE NATIONAL GUARD." By Captain John W. Norwood, late first lieutenant Twenty-third United States Infantry. Arms and the Man Publishing Co., 299 Broadway, New York. Eighty pages. Price 25 cents.

**Leading American Soldiers.*** A new series of biographies is now being published by Henry Holt & Company. This series comprises the following volumes: "Leading American Scientists," "Leading American Historians," "Leading American Lawyers," "Leading American Poets," "Leading American Novelists," "Leading American Essayists," "Leading American Soldiers."

The volume on soldiers is now ready, but the others are in publication. The work on "Leading American Soldiers," is by R. M. Johnston, lecturer in history at Harvard University. He is also author of the following works: "The Roman Theocracy and the Republic," "Napoleon; a Short Biography," "The Napoleonic Empire in Southern Italy and and the Rise of Secret Societies," "Memoirs of Malakoff."

Of course this insures that the material of "Leading American Soldiers" will contain authentic matter, that is as near as history contains authenticity. The style is much that of Parton but not so concise nor so brilliantly executed. The volume is one containing 371 pages and is devoted to short sketches of the following men: Washington, Greene, Jackson, Taylor, Scott, Grant, Sherman, Sheridan, McClellan, Meade, Lee, Jackson, J. E. Johnston.

The work is interesting and instructive. It is a good book for the library where young boys are growing up and forming their ideas as to our men of the past. But its value to the military student is very limited. Of course it contains many thoughts that are of value to the military man, but in order to grasp the value a previous knowledge of the matter is required. Its chief value to officers is in the handling of some of the political problems that necessitated changes in commanders at various times. This of course is valuable knowledge for our future commanders, for no man can expect to obtain fame in the republic in a military line unless he is a thorough politician by nature, and knows how to take advantage of every opportunity that will enure to his benefit before a newspaper-reading public. H. A. W.

* "LEADING AMERICAN SOLDIERS." By R. M. Johnston, lecturer on History at Harvard University. Henry Holt & Company, publishers.



**Script Phonography.*** It has not been the custom for the JOURNAL to notice books of a non-military nature, but it is thought that this little work of less than 100 pages may be of interest to some of our readers, particularly to some of our non-commissioned officers, who have the time and who frequently do take up this line of work.

It is claimed for this comparatively new method of shorthand that a student can master the system in nine days so as to be able to attain a speed of ninety words a minute.

The *London Daily Mirror* reports that as a test of the system, six candidates were selected by that paper who had no previous knowledge of shorthand whatever prior to July 4th last. These six pupils received instruction in this system of reporting from July 4th to July 13th, 1907, from 10:00 A. M. to 10:00 P. M. each day, and on this latter date were given a test before a large number of representatives of the press and others. In this test one pupil did satisfactory work at a speed of ninety words per minute, three at sixty words, one at fifty and the other at forty-five words per minute.

"Such is the system's simplicity that apart from speed, all its rules and principles, from its most elementary to its most advanced stage, are mastered by the average adult student in from twelve to twenty-four hours' tuition."

E. B. F.

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**Doniphan's Expedition.†** Mr. W. E. Connelley, of Topeka, has rendered the country and the army a valuable service by giving it, in revised form, an account of "Doniphan's Expedition," and, to use the language of the author in his preface, "the most remarkable military campaign in American history." This is, indeed, no exaggeration in describing the campaign, for the annals

* "SCRIPT PHONOGRAPHY." By Thomas Stratford Malone. Horace Marshall & Sons, 125 Fleet St., London, E. C. Price, 3s. 6d., net.

† "DONIPHAN'S EXPEDITION AND THE CONQUEST OF NEW MEXICO AND CALIFORNIA." By William Elsey Connelley, author and publisher, Topeka, Kansas. Price $2.50.

of this nor any other country do not contain an account of a military campaign in which those who participated can share credit for like suffering and hardships, aside from a constant round of victories, and not a single defeat.

John T. Hughes, a member of the First Missouri Mounted Volunteers (called into existence in 1847, and organized at Fort Leaveworth, from where it marched to Mexico), wrote an account of this expedition in 1847, and the only one in existence. Mr. Connelley has preserved this account in its entirety and has given us an additional fund of information, secured largely from official sources, that makes this new work invaluable to the military student and the future historian.

No book has come into our hands in recent years that is so highly interesting, particularly to officers who have served on the frontier in the long ago, as this account of "Doniphan's Expedition."

A mere recital of its contents in a review would not do it justice, but the following from the author's preface will give the reader an idea of the worth of the book, one that should be in every young soldier's library:

"The victory of Sacramento—the success of Doniphan's expedition—is a heritage more valuable than kingdoms and powers and principalities. It ought to be the theme of the poets, the song of the daughters the boast of the sons of old Missouri. It should become the pride and the inspiration of the people of that State.

"In order that I might put into this work incidents connecting with the present times the events of the remarkable campaign, I have sought all sources of information. That this book might be a living narrative, I have cast about for accounts of those things which light up the scenes of those times with human interest and individual action. I have endeavored to have these incidents picture the men as they marched, footsore and weary, over desert wastes, as they bivouacked shelterless on the frozen ground, under the cold and silent stars, as they starved, and their hair and beard ran riot, and their clothing fell to pieces, as they appeared on the



battlefield fighting like demons for their country which neglected them, and as citizens of a great State returning to the pursuits and pleasures of home. It is a picture worthy a great painter, who will one day spring from the soil of old Missouri."

H. S.

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## FORTHCOMING PUBLICATIONS.

**The Tragedy of Russia in Pacific Asia.*** This work by the distinguished journalist, artist and war correspondent, who has also become an author, will soon be published by the Outing Publishing Co. of New York. The attention of the editor was called to this forthcoming book by that other distinguished writer and war correspondent, Mr. Frederick Palmer, who stated that it would be one of the very best of the many works on the Russo-Japanese War, as well as the Eastern question in general.

Mr. McCormick was with the Russian army as special representative of the Associated Press, and shared the fortunes of that unhappy host during the dark days of the retreat from Mukden. He witnessed the first and second attacks on Port Arthur and all the principal land battles of the war. After the declaration of peace, he accompanied the Red Cross Squadron to Japan to arrange for the return of the Russian prisoners.

It is promised that his book will be a serious study of the Eastern question as well as a history.

The book will be handled by the U. S. Cavalry Association.

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* "THE TRAGEDY OF RUSSIA IN PACIFIC ASIA." By Frederick McCormick. The Outing Publishing Company, New York. 2 vols. Price, $6.00.

**Individual and Combined Military Sketching.***

This work on "Individual and Combined Military Sketching," published last year in pamphlet form for the use of the Infantry and Cavalry School and the Staff College, is now being revised so as to take full advantage of the information gained by the use of the book and its methods for a year by these classes. The book will give the very latest methods considered desirable for teaching the subject as well as for becoming proficient in individual work without a teacher.

As the book is the work of Captain Edwin T. Cole, Sixth Infantry, and Captain Edwin R. Stuart, Corps of Engineers, who have had considerable experience in teaching the subject of making contoured military maps, it will be thoroughly up to date on the methods so successfully used at Fort Leavenworth, and recently adopted by the Department of Practical Military Engineering at West Point.

The Cavalry Association will publish the book as soon as the revision is completed, which will be in the course of a few weeks.

Advanced orders for the work are now being filed and will be filled in the order of their receipt.

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**The Campaign of Santiago De Cuba.†**

There has been received for review the work recently published by the McClurgs on "The Campaign of Santiago de Cuba," by Captain H. H. Sargent, Second U. S. Cavalry, that skilled writer whose previous books on two Napoleonic campaigns have gained for him such wide and favorable notice. The work will be fully reviewed in the next number of the CAVALRY JOURNAL by Captain C. D. Rhodes, Sixth U. S. Cavalry. This work will be handled by the U. S. Cavalry Association.

* "INDIVIDUAL AND COMBINED MILITARY SKETCHING." By Edwin T. Cole, Captain Sixth U. S. Infantry, and Edwin R. Stuart, Corps of Engineers, U. S. Army. Published by the U. S. Cavalry Association. Price, $1.00.

† "THE CAMPAIGN OF SANTIAGO DE CUBA." By Captain H. H. Sargent, U. S. Army. A. C. McClurg & Co., Chicago. In three volumes, with twelve maps. Price $5.00.



**Ordnance and Gunnery.***

Lieutenant Colonel O. M. Lissak, Ordnance Department U. S. army, professor of ordnance and gunnery at the U. S. Military Academy, has prepared a new text book for the cadets of the Military Academy. This work was received too late for review in this number of the JOURNAL.

* "ORDNANCE AND GUNNERY." By Ormond M. Lissak, lieutenant colonel Ordnance Department, U. S. A., professor U. S. M. A. John Wiley & Sons, New York. Price $6.00.