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MAJOR OLIVER L. HAINES, Cavalry, *Editor*

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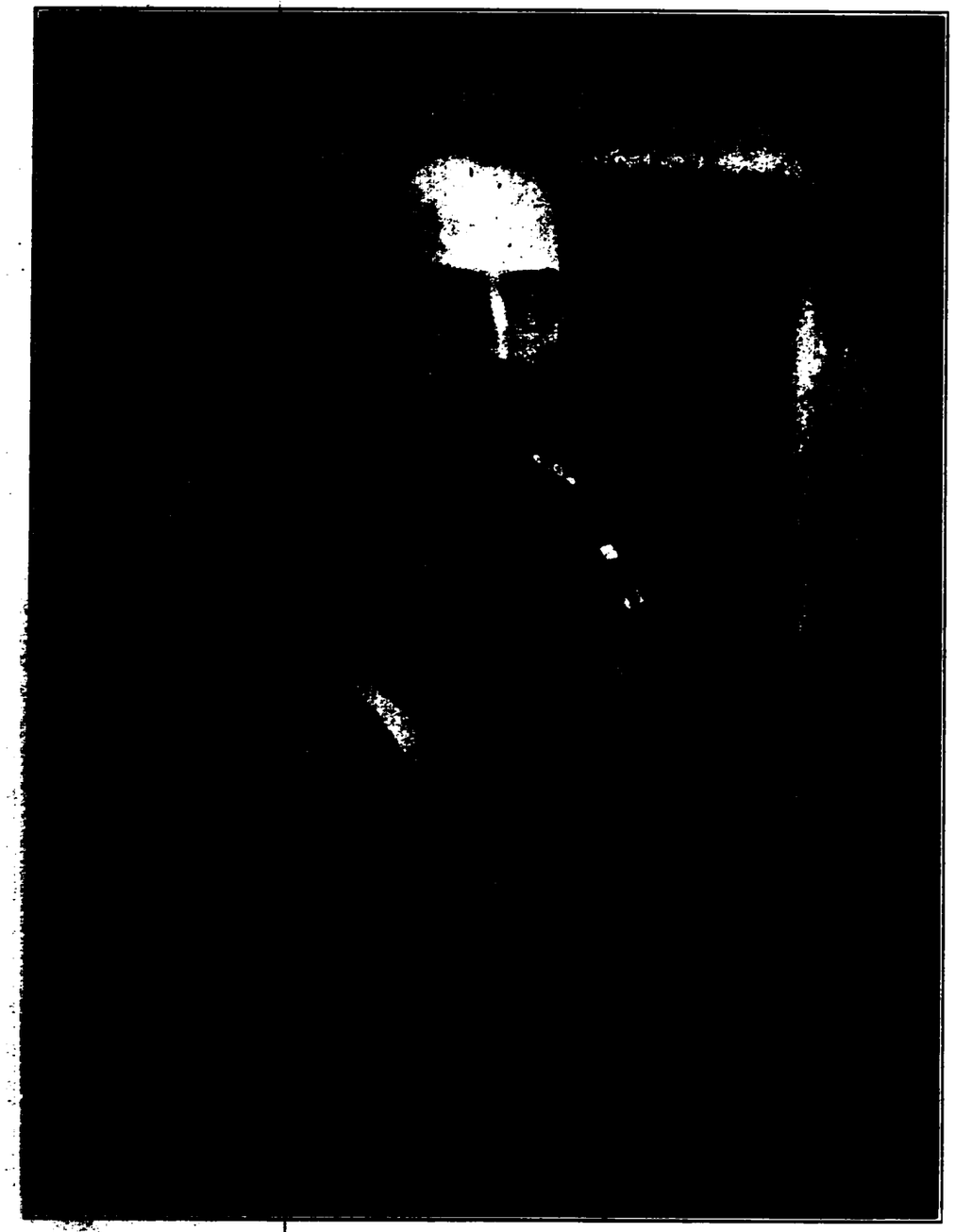

GENERAL DOUGLAS MacARTHUR

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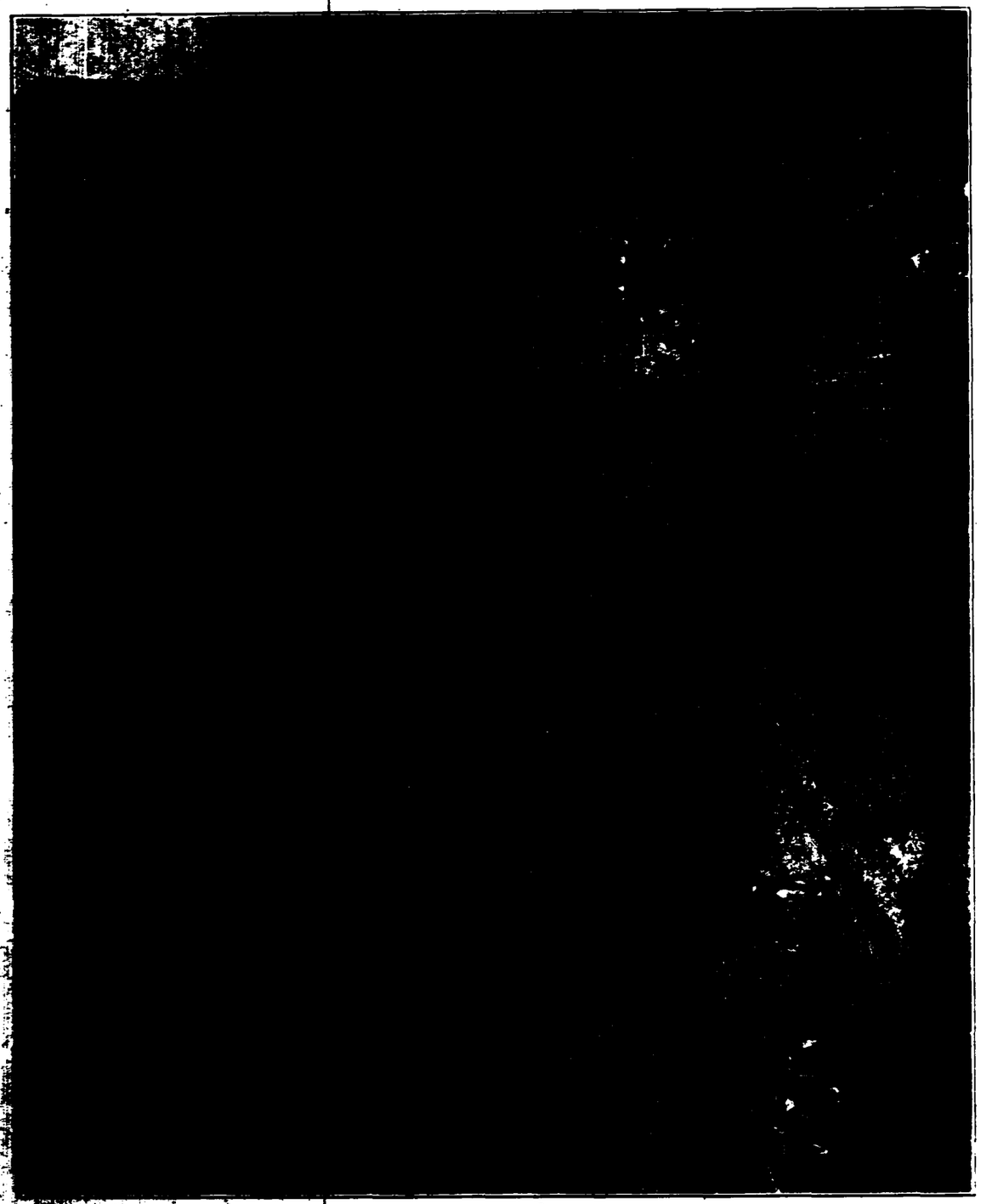

107th CAVALRY AS ESCORT TO PRESIDENT HERBERT HOOVER, CLEVELAND, OHIO, OCT. 2nd, 1930.

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THE CAVALRY JOURNAL

VOL. XXXX JANUARY, 1931 No. 162

Authors alone are responsible for statements contained in their articles.

Cavalry Packs and Marches

By Colonel Albert E. Phillips, Cavalry

Colonel Phillips has invented and developed the Phillips pack saddle which is now an important part of the equipment of every cavalry troop. The following article therefore presents information and instruction on the handling of packs in the Cavalry from the highest authority on the subject. It merits the careful study of every cavalryman.—EDITOR.

"WITHOUT its packs Cavalry would be reduced to approximately the power it had at the end of the Civil War and would be out of place in modern combat," says Col. Van Voorhis in the October, 1930, CAVALRY JOURNAL. Every cavalryman will agree with this statement. All realize that fire support is now a necessity for all maneuver elements, be they Infantry or Cavalry.

Up to the World War, Infantry (as well as Cavalry) was primarily a maneuver element with rifle fire power and a small amount of machine gun fire. Each year since finds the Infantry adding to its fire power. Cavalry likewise has added strictly fire elements of machine rifle, machine gun, one pounders, etc., until today approximately one-half of its enlisted regimental *combat* personnel is assigned to the fire elements. These fire elements consist of both horse and motor units. Sixteen percent of all horses (111) in the present peace strength Cavalry regiment, exclusive of officers' horses, and forty percent of the men are on duty with packs. The packs include radio, pioneer, demolition and the troop cooking, ration and picket line packs, in addition to the packs of the fire elements. The percentage of pack horses and men on duty with packs will be greater when the peace regiment is in the field. The necessity for thorough training in pack saddlery is obvious.

Importance of Training

Even with packs as part of its equipment, Cavalry may again be "without its packs," and thus be reduced to its former status, thru lack of personnel trained in the handling of pack saddlery and the marching of Cavalry with its packs. This very thing happened to all the Cavalry regiments but one during the Pershing Expedition in Mexico in 1916—they lost their pack units and their auxiliary fire power. True, the pack equipment of those regiments consisted of aparejos; but the one unit that did remain with its regiment and marched many hundreds of miles farther also had this same type of equipment. Training in the handling and fitting of pack saddlery and the marching of Cavalry pack elements enabled this unit to remain with its regiment.

Pack transportation at Cavalry gaits is a problem quite different from that of pack transport at the amble and walk. Rates of march in a Cavalry column, with its halts, further complicates the problem. And when we are told that "unremitting care and closest supervision are necessary to maintain pack transport in a high state of efficiency, without which, continuous operation is impossible"—and this refers to pack trains—we may appreciate the necessity for training personnel to handle Cavalry combat pack units, from the fitting of saddlery to the marching of Cavalry with its packs. That the importance of training in this subject is now recognized is indicated by steps being taken by the Chief of Cavalry.

This article, therefore, will briefly discuss and emphasize, basic principles and measures to achieve desired results with the Phillips pack saddlery, Cavalry type, pending the publication of training regulations.

The Phillips Pack Saddlery

The development of the Phillips pack saddlery and the more logical positioning of the many new pack loads has simplified the problem from the equipment standpoint. But this very simplification of equipment has caused organizations and individuals to neglect the study of saddle fitting and pad adjustment. Troops have gone and still go on practice marches without their pack saddles, either shipping them or carrying the pack saddles and loads in the troop wagons, thus passing up the opportunity for gaining experience. Most organizations do not have any trouble with packs—in fact those that do are few indeed—but some trouble will occur on extended field service from causes beyond the control of troop commanders, such as changes in conformation of animals from fatigue and lack of supplies, from the gaits and rates of march of Cavalry columns, with the halts, hours under load and lack of time properly to supervise adjustment of equipment.

Causes of Injuries

Practically all Cavalry horses lose weight in the field, especially a loss of surplus fat on each side of the withers. This natural change in conformation usually necessitates adjustment of the pack saddle pads—to build up the front of the saddle to its former position. Extended field service will frequently cause a change in the entire saddle position of an animal's back and

the weight and pounding of the pack load will occasionally work down somewhat the "saddle position" of the pack saddle. These changes then require a building up of the "saddle position" of the saddle.

Causes of injuries within the control of troop commanders are as follows:

1. First and most important of all the assignment of horses to carry packs. In nearly every troop of Cavalry there are the requisite number of horses that are *undesirable* for riding. Let it not be understood that "undesirable" here means "unsuitable." Broad-ribbed artillery type horses, single footers, pacers and others of undesirable gaits, buckers, and outlaws of other types which no soldier likes to ride are usually assigned to packs, though many are unsuitable for the purpose. In inspections of Cavalry commands the writer has found but one officer who stated that he selected his pack animals first and required his soldiers to ride the other horses. All the animals of this organization were in splendid condition.

2. Poorly mated teams of riding and pack animals with no team training. The importance of mated teams and team training in most cases has been entirely overlooked or not understood. There is also a difference between leading a pack animal and "driving" it. The artilleryman drives his teams.

3. Faulty saddling, a primary cause of injuries, includes the whole category of saddle fitting, cinching, etc. It will be said that all cavalry officers know the principles of saddling. Inspections show that many organizations do not apply them.

4. Hanger loads, properly positioned at the Arsenal, but the required balance not maintained. Improvised hanger loads not properly positioned—and invariably they are not. Saddles allowed to ride to a side for the full time between halts, instead of correcting the position of the saddle at once. A few minutes of this may mean an injury that would take over a week to heal.

5. Lack of instruction in the adjustment of saddles and the proper care of pack saddlery and pack horses in the field; these are all duties of troop commanders.

Other causes of injuries chargeable as a rule both to troop commanders and to higher commanders are:

1. Higher commanders unaccustomed to marching Cavalry with its pack units. In some cases these commanders base their marches entirely on the riding elements and leave the pack elements to get along as best they may; yet it is well known that the eight mile trot is based on that of the slower horses.

2. Over extended gaits of riding horses cause many pack animals to take the next higher gait; loads not removed during the longer halts; men not given sufficient time at the shorter halts to attend to their own personal needs and the needs of both riding and pack horses—in which cases the pack horses are usually neglected. Long hours under saddle and load at slow rates of march and occasionally at excessive rates.

Conditions of field service will seldom admit of ideal march conditions but marches constitute the greater part of the work of Cavalry in the field. Rapid maneuvering of Cavalry is an entirely different matter for the packs are so designed and loads are of such weight and so positioned as to admit of equal maneuverability. "Nuf said" to focus attention on marches; more will be said at the end of this paper.

Conformation of the Pack Horse

The subject was fully discussed in a previous issue of the CAVALRY JOURNAL (April, 1928) and will, therefore, be but briefly discussed in this article.

The first requisite of Cavalry pack transport is the selection of suitable horses both for the packs and for the riders who drive the pack horses. Mated teams, especially as to size, gaits and disposition are necessary.

Size is an important element of conformation. The tall horse is difficult to pack and unpack; it generally travels high both at the walk and the trot with considerable motion of the back at all gaits. A greater number of suitable horses are found among the horses of approximately 15½ hands. These horses, if short coupled, usually travel low to the ground and with less back motion than taller horses. In considering size avoid the very small, the tall and especially the excessively broad artillery types. No horse should be selected that is so broad as to push the sides of the pack saddle outward.

For strength, gaits and ease of fitting the backs should be short, straight, strong and well muscled with emphasis on straight backs. The barrel should be large, gradually increasing in size toward the flanks, strong and full through the waist. The chest should be of large girth; ribs well sprung, long, well separated and sloping backward. The withers should be of medium height, not too thin nor too thick, well developed and well muscled.

The neck shall be light, moderately long and tapering toward the head; crest firm and longer than the under side. This is the specification of the neck for Cavalry horses in A. R. 30-440 and not that for pack animals. The Cavalry pack horse is a typical Cavalry horse of certain desirable specifications. As he is driven as part of a team his neck must be of proper length.

The loins should be broad, straight, short and muscular.

Hindquarters—wide, thick, not too long, well muscled and well directed.

Legs—straight, strong legs with heavy bone, pasterns short and strong and not too oblique.

Gaits and Disposition of the Pack Horse

Success in marching a Cavalry pack unit is largely based on the rates of march and the gaits of the pack animals. The Cavalry pack horse should walk, trot and gallop with free, bold and prompt action. All other gaits are undesirable. It should have but *little motion to the back at the walk* and should travel low to the ground at the trot.

Horses that walk with excessive transverse motion of the hindquarters or with considerable longitudinal or "camel like" movement of the back are unsuitable for packs. The Cavalry pack horse should be a fairly good jumper.

As the pack-horse is part of a team it is evident that the ridden member of the team should be mated as to gaits and disposition. In forward movements at all gaits the pack horse should have its head in line with or slightly leading the head of the other horse. The pack horse that hangs back is unsuitable.

The pack horse should be gentle, with a kind disposition and be free of vicious habits. It normally carries an important combat load and time in action is too valuable to waste on a horse that bucks, bolts or is high strung and nervous. The pack horse should stand when being packed and unpacked. It is evident from the above that the pack team should receive team training.

Col. Phillips Demonstrating "The Phillips Pack" to Members of the 123rd Cavalry

Phillips Pack Saddles

The Phillips pack saddle was developed to meet the need for a pack saddle of simple but of scientific design. Two sizes of this saddle—the Cavalry and the Cargo—meet all normal army requirements. For expeditionary and other special purposes where native and smaller animals are found the Pony size is used. The saddles are all of the same type.

The Cavalry saddle is used for all Cavalry needs and for light loads of the different services, such as the infantry machine gun and communication loads, the field artillery 75 mm. communication loads, engineer and Signal Corps loads, etc. The Cargo saddle is the adopted saddle for Q. M. Pack Trains, for the infantry 37 mm. and howitzer loads; for the pack artillery regiments of 75 mm. pack howitzers and for engineer pack cargo. The Pony saddle was used on Philippine ponies and several hundred were shipped for expeditionary purposes in Nicaragua.

The Phillips pack saddle, Cavalry, was designed to fit all horses that measure up to or closely approach the specifications prescribed for Cavalry mounts (and for mules or similar type) without adjusting the pads. The saddle then, as issued, should fit approximately 95% of all Cavalry mounts. This article will discuss the Cavalry pack saddle only; it will give suggestions and practical hints not covered or not sufficiently stressed in the pamphlet on the saddle and furnish information on new equipment.

Recent Improvements

The adopted type of saddle was first issued in 1924. During the past year a saddle containing many improvements was issued. The pads of this saddle are reinforced internally with ribs of a nickel-chromium-aluminum alloy in place of steel. The top rib which forms a backing or bar for the saddle position is approximately six inches wide. There are three one inch horizontal ribs and one vertical rib near each of the front and rear edges, all riveted together. A slight change was made in the upper front of the pads on each side of the withers. New type foot-rests or pockets were placed on the lower corners of the pads to better facilitate the use of ropes when hitch loads are packed. When this type of load is packed it would be preferable to use this latest model saddle.

The Frame. The only change in the frame is in riveting the spring steel ribs to the side bars where three instead of four rivets are used. By leaving the lower rivets out greater flexibility is obtained. These ribs are made of specially tempered steel and shaped

Rear View of the Latest Model of the Phillips Saddle Cavalry Type

to a definite radius. Troops should not attempt to weld broken ribs nor should ordinary soft steel ribs be used for repairs. Ribs are issued as spare parts and they are easily replaced. It is preferable to use the saddle with broken ribs than to substitute soft steel ribs on an "off" radius. The saddle may also be used temporarily without ribs provided a piece of metal or wood is placed horizontally on the pad where the "distance pieces" or the lower parts of side hangers rest.

The hooks on the bottom bars of the frame are used when a rope hitched load is packed. The "hole" in the depression of each arch is used for bolting the light type of "load arch" to the frame. There are two types of standard "load arches," a light and a heavy type.

The Cinchas. A new adjustable type of mohair strand cinch is now being issued. The cinchas are all of 20 strands instead of 24 strands for both Cavalry and cargo saddles. The cargo cinchas are 20 inches long and the Cavalry type 24 inches. These lengths are the maximum required for garrison service; for the field the cinchas may be shortened two inches by merely placing the small D thru the bars of the larger D from outside to belly side and smoothing out the folds. For further shortening a piece of rope, wood, etc., may be placed thru the fold of the strands—See illustration.

The D's and safes are narrower than the McClellan Type and lie flat against the animal; the cinch is wider.

The Cinch Quick Release Device. A larger and stronger cinch quick release device operating on the same principle as the old type is now being issued. The strap of this device is of "harness" leather instead of the thinner "strap" leather used with the old type smaller devices. Notes on the use and care of these devices will be given under "Saddling."

The Breeching. The vertical "stay" piece of the breeching has been stiffened by the addition of a metal piece between the leather folds. The "croup piece" has been enlarged by a circular piece of leather under the 4-inch rings.

The Mohair Pad. The pads for the Cavalry saddle are 27 x 38 inches. As the saddle is 23 inches long this provides four inches of spare pad when saddling. There is sewed to the middle lower edges on each side a small canvas patch. These patches are for organization markings. By this method of marking the pad may be reversed end for end or turned completely over and the marking will always be visible.

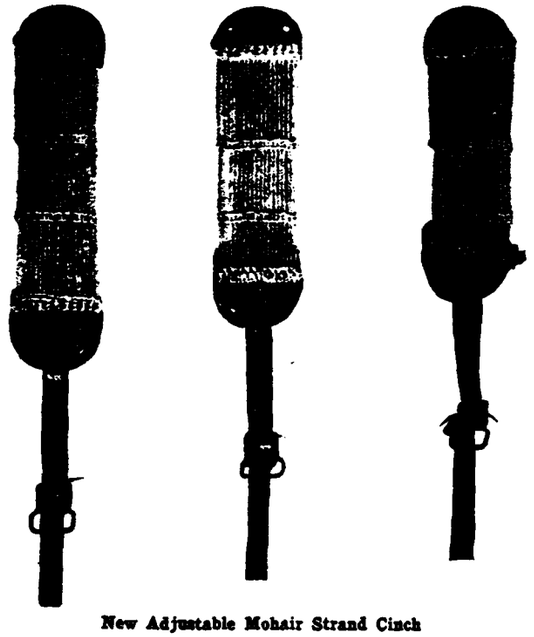
Tie thongs for securing the pads to the saddles are now placed in the pads at the depot. Some troops use a small leather piece sewed to the mohair pads for securing the thongs; these pieces should not be used as the pads cannot be reversed; further, the leather piece often gets under the saddle and causes rubs. The thong should be placed through the mohair pad using a lead pencil or similar article to open the weave. It should be placed slightly above the small D on the front edge of the saddle.

Fitting the Saddle

New saddles should receive a breaking in process before making any adjustments of the pads (See below) except for animals of abnormal size or conformation. For the Cavalry saddle, this breaking in is accomplished by using balanced side loads on daily marches of ten miles for approximately one week.

Saddling

Position of the saddle. Too much stress cannot be laid upon the proper position of the saddle. It almost seems unnecessary to stress this point yet inspections



New Adjustable Mohair Strand Cinch

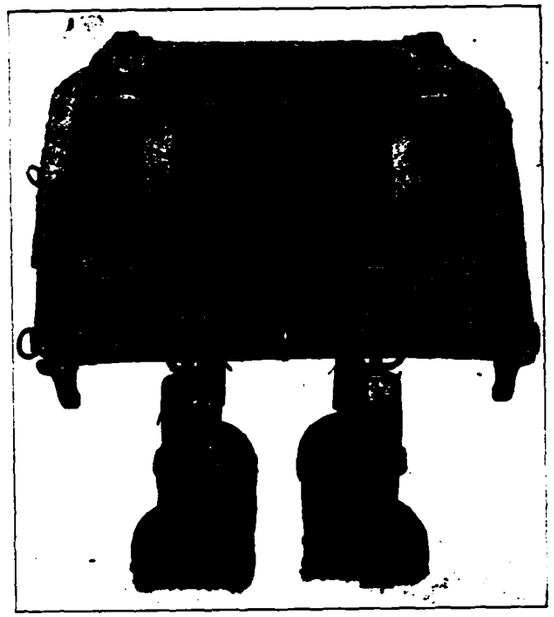
show that the majority of troops place the saddles too far forward. The forward edge of the saddle should be sufficiently in rear of the shoulder blades for these members to operate. Three or four inches is the correct measurement. The saddle should be viewed from the front and from the rear to see that it is centered and from the sides to see that the bottom bars are horizontal or inclined slightly downward and forward—*never downward toward the rear.*

Cinching. With the saddle in its proper position upon the animal the most important feature of saddling is correct cinch pressure. A pack saddle covers such a great amount of movable surface and parts that correct cinching is vital to success. There must be no excessive binding of the front cinch, which may injure the backs or sides, interfere with breathing or cause cinch galls. And the rear cinch *must not* be as tight as the front cinch, for the rear of the saddle covers the area of greatest motion.—the flexible short-ribbed region and the tender region over the kidneys. It must be remembered that the hind legs are the propelling members and the hind quarters not only oscillate from side to side in travel but also have a vertical motion which must not be bound by cinch pressure. There must be no interference with locomotion. The method of the double cinch admits of considerable and proper adjustment of longitudinal pressure.

The saddle is cinched principally with the front cinch. The rear cinch should be only sufficiently tight to hold the type of load carried. Minimum cinch pressure is always best. The fingers of a hand should pass easily between the cinchas and the animal's belly. The fingers should be inserted from "rear to front" so that when they are withdrawn the hair will not be ruffled.

Final adjustment of cinch pressure is made after the

Front View of Latest Model of the Phillips Pack Saddle Cavalry Type



Side View of the Latest Model of the Phillips Saddle Cavalry Type

load is placed upon the saddle; not when first saddling. Correct cinch pressure cannot be determined when the animal is first saddled. Many pack animals "blow" against the cinchas and the weight of load settles the saddle.

Adjusting cinchas on the march. After the animal is on the road for a few miles its belly draws up and this, with the settling of the saddle due to the weight of the load, makes adjustment of cinchas at the first halt necessary. When not practicable to remove pack saddle loads at halts, great relief will be afforded the animal and injuries possibly prevented by releasing cinch pressure. The position of the saddles and the cinch pressure should be inspected at each halt. The cinching device affords a ready means for accurate and rapid adjustments.

The cinching device. This is a simple efficient device for the rapid and correct adjustment of cinch pressure: it eliminates the tying and untying of knots and is especially valuable on marches where time is so important. The normal method of using it is given in the pamphlet on the saddle and this is the method that should be used with Cavalry pack saddle. For the cargo saddle however, the method of operating the device is reversed. The strap of the device is attached to the cinch D of the saddle and the device hooks to the cinch. With this method, it is only necessary to pull upward on the cinch strap to tighten the cinch. Excessive pressure may be applied however, if one is not careful.

The Breeching. The breeching should be adjusted for slight play around the buttocks. The lower or "holding" straps that are attached to the bottom D

rings of the saddle regulate the action of the breeching. Therefore these lower straps should be tighter than the upper or "hold up" straps. A breeching not properly adjusted may cause a saddle injury. In no case should the breeching be too tight.

Breast collars. One of the primary causes of saddles being too far forward is snug-fitting breast collars. There is a tendency in the service to have snug-fitting collars at the walk, for neat appearance. A snug collar at the walk will be a tight collar at the gallop or at an extended trot. A tight breast collar pulls the saddle forward, causing the front of the saddle to move upward, interfering with the operation of the shoulder blades, throwing excessive weight on the kidneys and sometimes causing the breeching to bind. In practically all cases the saddle will ride better in its proper position without breast collars. The proper adjustment of the breast collar for the gallop gives a sloppy collar at the walk.

Mohair Pads. As all pads, blankets, etc., have a tendency to move rearward under the saddle it is advisable to place three inches of the pads forward of the saddle. The pads may be tied to the front edges of the saddles if desired. The pads should receive the same care as that prescribed for saddle blankets. They should be folded with the wet side in after unsaddling and not exposed to the sun to dry. The pads should occasionally be washed in cold water to free them of salt and dirt.

Condition Requiring Adjustment of Saddle Pads

No adjustment of saddle pads is required for pack animals of normal conformation. Adjustments, therefore, come under two general classifications:

First. Adjustments to *prevent* injuries. These include:

a. Adjustments for fitting animals of abnormal conformation. These adjustments usually require the removal of hair to reduce pressure in parts of the pads.

b. Adjustments for maintaining the fit or bearing surface of the pads for animals of normal conformation which have lost flesh in campaign. The adjustments require the addition of hair or other material for building up the pads.

Second: Adjustments to *relieve* injuries. These require reduction of pressure and friction from that part of the pads covering the injury, usually by the removal of hair, and occasionally the addition of hair to other parts of the pads.

How to Adjust the Pads

The pads are adjusted by first detaching them from the frame. The pads are held to the frame at the top by two bronze staples that are engaged to two single hooks of the frame and, at the bottom, by the bottom bar pockets. No tools are required for detaching and attaching the pads.

To detach a pad. Press downward upon the head of each bottom bar pocket pin, turning the pin to the left until the lug on the pin springs upward through the keyway of the pocket; remove the pin. When both pins are removed take hold of a cinch ring with one hand and, with the other hand near the edge of the pad, push the lower part of the pad from the frame. Swing the pad to the middle of the frame and remove it by lifting it off the staple hooks at the top of the frame.

NOTE: The pad can not be detached until it is swung to the middle of the frame.

To attach the pads. Turn the saddle frame on its back; put the canvas saddle cover in place, leaving room in the four openings of the cover for attaching the staples of the pads to the staple hooks of the frame. Attach a pad by holding it near a line through the middle of the saddle arches—away from the bottom bars of the frame—and engaging the staples to the hooks, lifting upward to secure them. Hold the pad engaged and bring it against the bottom bar of the frame.

NOTE: By holding the engaged pad against the bottom bar it cannot become detached. In case one man is attaching the pads, rest that side of the frame with the engaged pad on the ground. Repeat for the opposite pad. Hold the pads to the frame and turn the saddle "right side up" and straighten the canvas cover. The cover is easily straightened by swinging the pads toward the middle of the frame, then pulling the cover downward. Swing the pads back and engage them to the bottom bars of the frame. The bottom bars are pressed into the pockets of the pads by holding one hand on the foot of each pocket, in turn, and pushing the pad outward toward the bottom bar with the other hand. Insert the bottom bar pocket pins in the holes of the pockets and engage them by pressing down the heads and turning the lug on the pins one-quarter turn to the right, when the lugs should snap into place.

Adjustment of pads to prevent injuries. As the pads of the Phillips pack saddle are molded to form, no change of this form should be made unless absolutely necessary.

In fitting animals of abnormal conformation it is good practice first to place the saddle in position upon the animal without the blanket or mohair pad, and observe the fit from the front, sides, and rear.

The front of the saddle should fit smoothly against the animal with no compression of the withers. The sides of the saddle should not be pushed outward excessively. The rear of the saddle should follow its natural curved lines without pinching the animal. And there should be uniform bearing of the pads along the weight-bearing muscles of the back as viewed from the rear. If any of the above conditions are not found the pads should be adjusted.

The abnormal types of animals usually found, in so far as conformation of the body for packsaddles is concerned, are:

Withers—too thick, too flat, or too thin.

Back—too short, swayed, or roached.

Chest—broad-ribbed draft type.

Barrel—excessively large.

The excessively thin withered and the sway-back types require the addition of hair to build up the pads. The other abnormal types require removal of hair.

For the short-back type, it may be necessary to remove hair and pressure from the rear of the pad.

Adjustments for building up the pads for all normal animals that have lost flesh in campaign consists merely in replacing with hair the flesh lost. These adjustments should not be resorted to until necessary to prevent injuries. When made, however, the normal shape of the pads should gradually be restored as the animal gains in flesh.

In fitting the saddle, especially for abnormal types, there are two convenient methods for obtaining an accurate fit, each depending on whether hair should be added or removed; these methods are:

In cases requiring the addition of hair, thoroughly wet the saddle position (back and sides) of the animal, then carefully place the saddle in position without the mohair pad and cinch it tightly, leaving the saddle in place for a few minutes. When the saddle is removed the dry spots on the pads indicate the positions where hair should be added.

In cases requiring the removal of hair from the pads, wet the place on the animal where hair should be removed, then place the saddle, without mohair pad, in position and cinch tightly. The wet marking on the pads indicates the spots where hair should be removed.

The spots or region requiring adjustment should be marked with chalk or colored pencil. Colored grease, white zinc oxide or methylene blue may be used instead of water to give more distinct markings.

The amount of hair to be added or removed may conveniently be determined by holding the detached saddle pad in position upon the animal where the fit may be observed. But the pad must be held in the exact place where it will bear when it is attached to the frame.

After adjusting the pads attach them to the frame and check the accuracy of the adjustments by again saddling without the mohair pad and observe the fit of the saddle. In fitting the withers, space must be left for the mohair pad.

How to make the adjustments. Practically all adjustments are made through the handholes in the leather backs of the pads, thus conserving the original smooth contact surface. As the pads are formed and tied in a mold, it is important to untie only the minimum number of thongs.

Untie the thongs covering the markings and tie a loose knot near the ends. If thongs are removed it is necessary to use the awl to replace them. Remove the leather slip covering the handhole. If hair is to be added thru a handhole use the 12" stuffing rod of the saddle kit for pushing the hair to place; if hair is to be removed, use the hair hook. Hair should be well loosened before stuffing and only small amounts put in at a time. It should be firmly compressed into place, being careful not to push the tool through the felt contact surface.

Adjustment of pads to relieve injuries. With properly positioned hanger loads there is but small chance for either the saddle or the load to be a primary cause of injury. Before adjusting the pads determine the cause of the injury and decide whether or not it may be corrected by other means.

Basically all packsaddle injuries may be relieved by reducing or removing pressure or friction from over the injured part; this may be accomplished by chambering or making a recess in that part of the pad immediately over the injury.

Many injuries are relieved by correcting a faulty position of the saddle; by readjusting the breeching or breast collar and by attention to cinch pressure and loads.

A minor bruise would not ordinarily require removal of hair from the pads, nor would removal of hair be necessary for a swelling that has subsided, unless the swelling was caused by a lump of hair in the pad. It is often possible to relieve pressure by tightening a thong instead of removing hair.

To chamber a pad. Detach the pad from the frame and loosen all thongs passing through the marked area so as to have a chamber of at least 1 inch greater radius than the marked area. Tie a loose knot in the end of the thongs. Pull the leather slip out of the handhole nearest the marked area. Use the hair hook of the tool kit and pull the required amount of hair, pulling small amounts each time from the back of the pad. Press in the chamber on the contact or felt side and tie the thongs. Rest the contact side of the thong on a rock or stick to secure a tight hold or have an assistant push the thongs inward with the handle of the hammer.

Check the accuracy of the work by holding the pad upon the animal in the exact position it would occupy, observe the chamber, and see that all pressure would be relieved when the pad is attached to the frame. Repeat this checking with the pad attached to the frame.

As soon as the injury is healed the normal shape of the pad should gradually be restored.

In restoring the normal shape of the pads or in building up pads in the field any soft material may be used if curled hair is not available. Pieces of gunny sacks, grass, hay, or paper may be used until curled hair can be obtained. The resiliency of curled-hair pads may be restored by pounding the pads with the clenched fist.

The methods for determining the parts of the pads from which hair should be removed; how to add and remove hair, checking the accuracy of the adjustment and tying thongs are described under "Adjustment to prevent injuries."

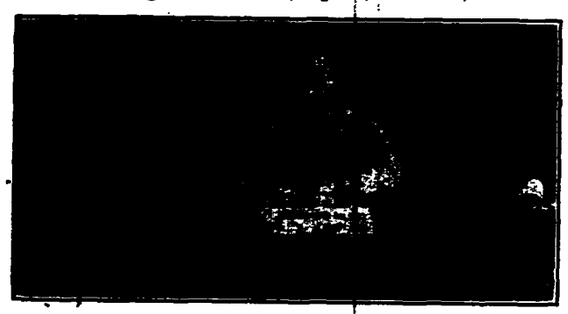
(To be continued in the February issue)

The Nicaragua Canal Survey

Lieutenant Colonel Dan I. Sultan, Corps of Engineers

Commanding U. S. Army Troops in Nicaragua and in Charge of the Nicaragua Canal Survey

FOR about 100 years following the voyages of Columbus to the Americas, early explorers sought a natural short water passage to the Far East. After all hope of finding a natural strait had been given up, attention was directed to the construction of a canal. England, France, Spain, Holland, and the



Lieutenant Colonel Dan I. Sultan

United States at various times took the lead in advancing the idea and promoting companies to secure concessions. Over a period of years, investigations into the practicability of such a project narrowed the usable sites to a choice between Panama and Nicaragua. Both routes were studied and reported upon numerous times and private corporations started work on each. In 1901 the report of the Walker Board (the Isthmian Canal Commission), appointed by the United States to study the subject of all interoceanic canal routes, chose Nicaragua rather than Panama as the location of any canal to be built by the United States. Its report was subsequently modified to favor the Panama route because the work already done by the French, and the accompanying equipment, supplies, surveys, concessions, and railway, were offered for sale at such a price that the estimated total cost of a canal at Panama was five and a half million dollars less than the cost of a canal at Nicaragua. The money saving argument was too potent to resist at the time the matter was decided. The 1926 traffic figures indicated that the great advantage of the Nicaragua route as compared with Panama was and is the fact that it would save one or two days time for about 80 per cent of the ships that use a canal.

Long before the Panama Canal had been put in operation it was recognized that at some future time the installations at Panama would be insufficient to care for the traffic that would develop. Whether the necessary increase in facilities would take the form of an enlargement of the Panama Canal or the construction of a second canal was left for decision when the need for it should appear. With an eye to eventualities, the United States in 1916 entered into a treaty with Nicaragua (the Bryan-Chamorro Treaty) which provided that in return for $3,000,000 the United States should have the exclusive rights to build a canal in Nicaragua.

Within the last few years it has become apparent that the time has arrived to decide what shall be the next step taken by the United States to provide passage through Central America for the world's ships. The estimated rate of the growth of traffic through Panama has been far exceeded. The Panama Canal was opened in 1914 but suffered at first from the effects of slides and the great war, so that the world's trade did not begin to flow through it on a large scale until about 1920. Traffic has now reached the amazing figure of 30,000,000 tons annually, variously estimated at from three-fourths to three-fifths of the present practical operating capacity of the canal. It is high

Diamond Drill in Operation at Machuca Damsite

time to consider what steps should be taken to provide additional canal facilities, because from ten to fifteen years will be required to survey, plan, and con-

struct the Nicaragua Canal or to enlarge the Panama Canal.

In 1929 Congress adopted a resolution providing for a new study of the Nicaragua Canal. The President of the United States decided to have the survey made by the Corps of Engineers, U. S. Army, and to use army personnel. Survey personnel arrived in Nicaragua in August and October of the same year. The troops employed are the Headquarters & Service

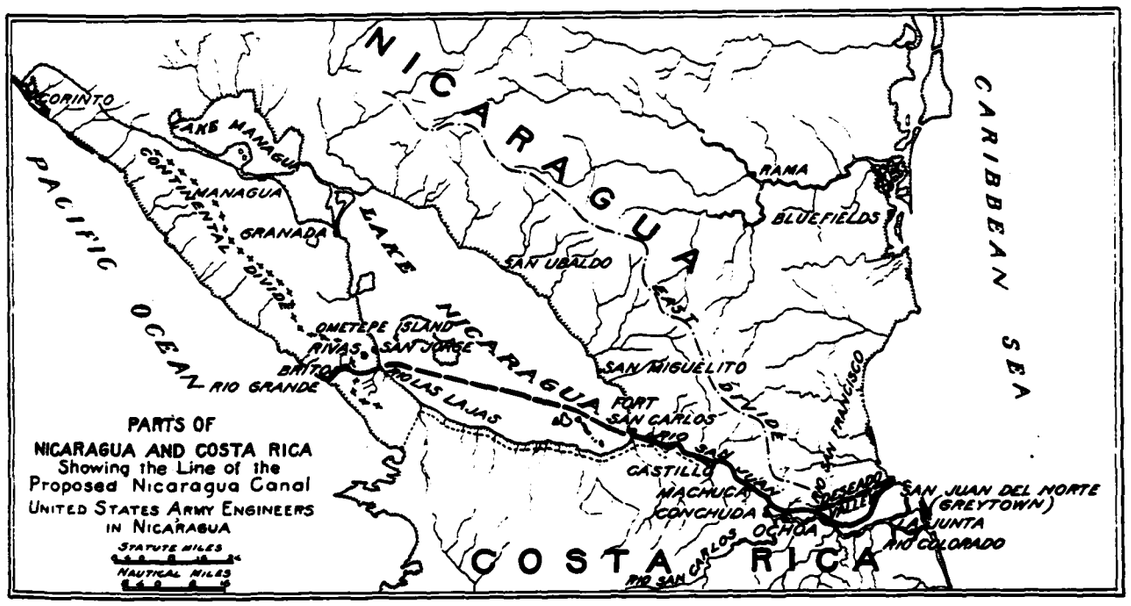
Gauging the San Juan River

Platoon, 29th Engineers; Company A, 1st Engineers; Company F, 11th Engineers; with medical, quartermaster, signal, and finance detachments.

Starting from Brito on the Pacific Ocean, the Nicaragua Canal will follow generally the Rio Grande to a low ridge (the west divided) and thence down the Las Lajas to its mouth on Lake Nicaragua a few miles south of San Jorge. In this, the Pacific section, the main problems to be studied are the layout and plans for the harbor at Brito, and the location, design, and lifts of the locks. The canal as planned from old surveys is now inadequate. Larger ships and the greatly increased commerce that will use the canal require a larger and better harbor. Locks must be larger and will require more extensive rock foundations. The time of transit of ships must be reduced in every way consistent with economy in canal construction and with sound engineering. Time is of more importance than it was thirty years ago and each hour's delay caused to shipping today represents a large sum of money. The present problem in the Pacific section is therefore to straighten the canal and to determine the correct location and layout of the locks and terminal harbor. Large areas are being surveyed and much diamond drilling is in progress to determine the adequacy of foundations.

From the vicinity of the mouth of the Las Lajas the canal will cross Lake Nicaragua to Fort San Carlos. Locating the channel in the lake so as to provide safe navigation with minimum dredging and curvature, and designing the lake harbors are the main problems in this sector.

Below Fort San Carlos the canal will follow in general the San Juan River Valley to the vicinity of the main dam. The water level of the lake or reservoir behind the dam must be so regulated as to provide ample water at all times for lockage purposes. During the rainy season enough water must be stored to carry through the next dry season. Sites for such a dam exist between Ochoa and Machuca Rapids, both inclusive. The present problem is to determine the best site. It goes without saying that such a site must have suitable foundations for the huge dam structure that will be necessary. The spillway must be capable of discharging 100,000 second-feet. The lower down the San Juan Valley the dam is located the higher it must be. The nearer to the Carribean the dam is placed the longer the lake above it will be, and navigation in a deep lake is preferable to navigation in



narrow cuts. In general it may be said also that the farther down the valley the dam is placed or summit level is carried, the smaller will be the amount of excavation between the dam and Greytown. Defense plans require that the dam and the locks must not be in exposed locations. They cannot be too close to the sea. The location of this main dam is one of the big problems to be solved.

In the Carribean sector below the big dam there are many important problems that must be studied. It is perfectly feasible to build a canal following in general the north bank of the San Juan River to Greytown. Such a canal would have poor foundations for the extensive embankments that would be necessary. A so-called high-level line is coming in for special study. A canal on this line would leave the San Juan River near Conchuda, cross the basin of the San Francisco River at lake level to the East Divide, and thence follow the valley of the Deseado River to Greytown. A harbor at Greytown, which is common to both lines, is feasible and practicable from an engineering point of view, but it involves the solution of many delicate problems and will be expensive because of the enormous sand movements taking place along the coast.

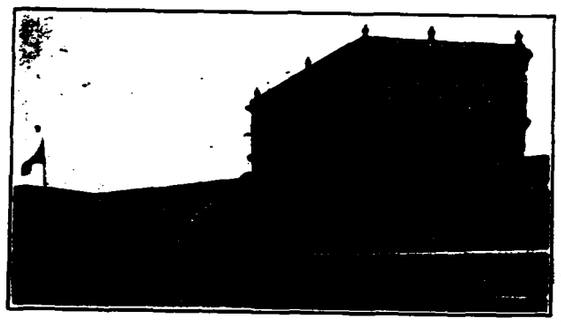
Surveying Under Difficulties in the San Juan River Swamp

There is an old saying to the effect that if you have

Main Street, Greytown

not seen Paris you have not been to France. It is equally true that if you have not penetrated the jungle of the San Juan River you do not know what real jungle looks like. Can you imagine a rainfall of about 300 inches a year? Perhaps not unless you have been to Greytown at the mouth of the San Juan River, for that is the wettest place in the Americas. In such a country tents are useless. Thatched native shacks are the only solution to a temporary housing problem. Have you ever tried to make a map in a continuous down pour, in a jungle so thick that you cannot see ten feet in any direction, where the foliage is so dense overhead that little light penetrates and a permanent gloom pervades? Have you ever tried to run a traverse across miles of swamp where at no place is the footing sufficiently secure to keep you from sinking to your waist, frequently your neck, and usually over your head? Imagine unnumbered mosquitoes, insects by the million, so varied as to size, shape, bite and method of locomotion that classification is impossible. Throw in some alligators, snakes, scorpions, vipers and poisonous small reptiles, not to mention the ticks, and you have a picture of the conditions under which Army personnel have been laboring in Nicaragua.

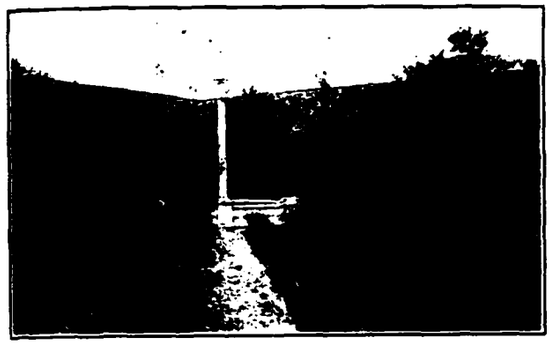
The headquarters of the survey is located at Granada, a quaint but comfortable place to live. Headquarters is housed in an old monastery that is rich in history, as it has played a part in the many revolutions of the country. It contains six patios with many wide corridors. More comfortable barracks or a more satisfactory layout for a headquarters could not be found. The base camps—Camp Hoover at Ochoa and Camp Hurley at Greytown—have been made as comfortable as conditions permit. Portable electric generators furnish lights, all walks and streets have duck-



San Francisco Church and Monastery. Headquarters of the Survey at Granada

boards, and radio sets maintain communication with the Granada headquarters. Field hospitals are well equipped and are screened. Because of the meticulous observance of sanitary regulations by the troops, and the expert supervision of all medical and sanitary matters by the chief surgeon and his assistants, the health of the troops has been excellent.

There is a young second lieutenant, out of West Point about a year, in charge of the supply line from Fort San Carlos, on Lake Nicaragua, to Greytown. His only connection with the rear is a sixty-year old lake steamer that runs from Granada once a week.



Main Patio of Headquarters Building, Granada

He must supply the camps along 125 miles of river. The American soldier is not satisfied with a native ration of rice and beans; his health, his happiness, and his efficiency demand the good old army ration in full. And such a river! The upper section near the lake causes no trouble. Then comes the rapids section where the river drops 35 feet over five series of rapids, with one place a fall of six feet in one-third of a mile. The lower 20 miles of the river is so choked with sand bars that during the dry season only native dugouts can be used, and they must be dragged by hand most of the way. This young officer has two small launches built of native green wood, half a dozen wooden pontoon boats for barges, and numerous small craft such as native *cayucas*. He has his troubles,

Camp Hoover at Ochoa. Most of Tents Were Later Replaced by Thatched Huts

but he also can see the results of foresight, good judgment, initiative, and leadership. I recommend the job for any youngster who wishes to develop these qualities.

Take the case of the commanding officer of Company F, 11th Engineers, not because his job on the Canal Survey has been more difficult than the others but because he was the first to arrive. The transport anchored in six fathoms of water some miles off shore at Corinto. The company broke out the supplies from the ship's hold and loaded them into Navy motor sailers. Fortunately the "Denver" was in port and her captain made available four motor-sailers for lightering cargo. Upon arrival at the dock, supplies had to be lifted by hand and transferred to waiting freight cars. More than 200 tons were handled between 7:00 A. M. and 11:00 P. M.; by 2:00 A. M. the cars were loaded and the company then got some rest in an old public building at Corinto. The railroad trip to Granada consumed all the next day. At Granada the troops were billeted in an old monastery placed at our disposal by the Nicaraguan government. From Granada the company had to proceed at the rate of one platoon a week via lake steamer to Fort San Carlos, thence down the San Juan River to its work area, which includes the river line from El Castillo to Greytown and the high-level line to the East Divide. The company has had as many as

Temporary Quarters for Married Officers at Ochoa

ten sub-camps scattered through the jungle at one time, to which supplies are transported in frail native dugouts over log-choked tributary streams, or over trails by native packers. Aside from his engineering experience, this company commander has had all the experience and training that go with maintaining an almost independent command scattered over a large area.

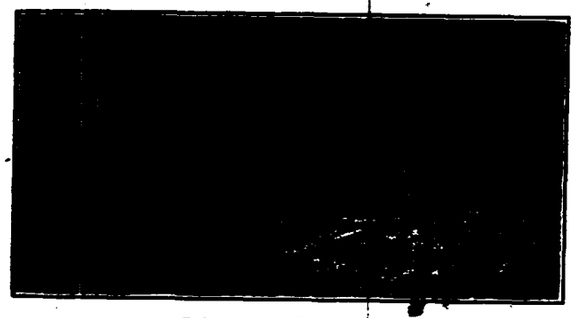
The San Juan River Valley is not in the bandit zone, but Sandino, the old enemy of the Marines, has published threats that he will not let the canal work proceed, so some thought has to be given to the safety of the camps.

Company A, 29th Engineers, in the Greytown area, has its base camp in the old Canal Company's machine shops on Greytown Lagoon, and its activities extend along the Deseado River to its headquarters on the East Divide. Much of the diamond drilling to determine foundation conditions is in this area.

Company A, 1st Engineers has the Rivas-Brito area, extending from the Pacific to Lake Nicaragua, the

survey of the lake itself, and the San Juan River area down as far as Castillo. This company has a large area but it has better country in which to operate. Around Rivas there are some so-called roads that can be used by oxcarts in the dry season. In the remainder of the canal zone any wheel transportation is useless. Pack ponies and pack bulls were tried without success.

With respect to the Panama Canal, expensive delays to shipping will occur unless the proposed third set of locks is ready by the time annual traffic needs more facilities. A third set of locks will cost something like $100,000,000, and their construction should begin about ten years before they are actually needed. The traffic at Gatun in 1929 averaged 17 lockages per day; in 1920 the average was seven. It will take at least ten years to increase the facilities of the Panama Canal or to build a Nicaraguan canal. Which is the more profitable investment? The Nicaragua Canal should have



Sub-camp on Lake Silico

locks larger than those of the Panama, which are 1,000 by 110 feet. The trend of commercial ship building is decidedly in favor of larger ships and it may be expected that the size of new locks will have to be greater than that of the locks of the Panama Canal.

Shorter and cheaper traffic lanes create new trade. The cost of transportation is a vital factor in the development and extension of domestic and foreign trade. The Nicaragua Canal will develop commerce and trade in Central America that will never be developed with the Panama Canal alone. The history of the United States shows conclusively that there is hardly any limit to the number of transportation facilities that are desirable, and that each one generally develops commerce and trade far beyond the estimates made for it.

The Nicaragua Canal will shorten the distance from the Atlantic seaboard to the west coast and the orient by about one day, and from the gulf coast by about three days. It will provide a shorter route for 80 per cent of the traffic that used the Panama Canal in 1926.

A second canal will have national defense value—both routes must be destroyed by an enemy before interoceanic communication is severed. The Nicaragua Canal Zone is not as subject to severe earthquake shocks as the Panama Zone. The argument of danger from earthquakes, like that of danger from human enemies, is an argument against Panama as well as

Sub-camp of Company F, 11th Engineers, in Rieo Negro Hills

against Nicaragua, and is an argument for two canals rather than one.

The canal will develop the resources of Nicaragua and promote its prosperity. Prosperity means better roads, more railroads, and other improved means of communication in Nicaragua. A prosperous Nicaragua will mean a quiet Nicaragua. Revolutions and internal strife will cease. Foreign capital can enter Nicaragua in safety. The canal will promote trade and friendly relations with the countries of Central and South America. The United States needs their trade and friendly cooperation.

The Nicaragua Canal will be built within the life-

Supply Train of Company A, 1st Engineers, in Rivas-Brito Area

time of the present generation. Just when work should be initiated may be open to argument and discussion by statesmen, diplomats, strategists, economists, and tax payers in general. The present survey will clear up many of the doubtful factors.

Industry and National Defense

Major General George Van Horn Moseley, U. S. A.

TWO million dollars an hour—that was the sum being spent by the American government during the closing months of the World War. In the aggregate the United States spent twenty-two billion dollars during its nineteen months of active participation in the conflict. That amount approximately equalled the total prior disbursements of the government in the 140 years of its existence, including the expenses of all previous wars. Modern war is an expensive business, even for the apparent victor. It is worse: it is a grim and costly tragedy exacting always a frightful toll in material wastage and in human suffering and sacrifice.

To contemplate the furthering of any national policy through an appeal to arms is today almost inconceivable. Yet, without exception, civilized nations devote a considerable portion of their annual revenues to the maintaining of organizations which would be valueless of the conception of war and conflict could be abolished. This is accounted for by the fact that situations can and do arise under which the possession of military and naval units may be vital to the nation's best interests, and perhaps even to its continued existence. Such a situation may confront the most peace-loving of peoples. In November, 1916, a majority of American voters gave their hearty support to a policy that had kept us out of the European war. A scant five months later the President, with the enthusiastic approval of the mass of our citizens, recommended to the Congress that war be declared against the Imperial German Government, stating, "We enter this war only where we are clearly forced into it because there are no other means of protecting our rights."

Our own theory of national defense is based upon the maintenance of the minimum force that will insure our safety in an emergency until the full strength of the nation can be developed. The development of the nation's complete strength, under our system, would necessarily require considerable time after the beginning of a war. The shorter we can make this period, the smaller can be our peace time establishments, and the less will we have to dig into our pockets to pay for national safety insurance.

To understand the task facing us during such a preparatory period, it is first necessary to grasp clearly the nature of modern warfare. Since the invention of gunpowder, the superiority of the missile over the sword, the spear, and other cutting weapons has continuously increased. Every contrivance that has materially speeded up the rate of throwing bullets and shells at the enemy has been eagerly seized upon by military commanders. But every gain in this respect has served to tie armies more and more closely to supply bases and to ammunition factories. Moreover, huge modern armies cannot subsist on the products of the country in which they operate as did the smaller forces of bygone times, but must depend upon food and supplies brought up from the homeland. A military commander today could not possibly emulate Hannibal's example in marching boldly into the heart of the enemy's territory and there, completely cut off from his own country, campaign successfully for years. A modern force attempting it would quickly be destroyed. An army may be visualized as a gigantic and insatible consumer of munitions—food, clothing, ammunition, weapons, and a thousand other items that are essential to effectiveness in combat. These, generally speaking, must be produced in the home country and forwarded to the fighting front. Failure in the industrial program, or in the transportation systems connecting the army with its source of supply, would inevitably mean defeat for the army.

Any nation, faced with the prospect of taking up arms against a major power, must develop its acres and gear its factories to emergency needs. She must look as anxiously to her ability to produce war munitions as she does to the ability of her armies and navies to use them effectively. Contrast with Hannibal's Italian campaign the experience of the British army in France during the World War. Automatic weapons, big guns, airplanes, gas appliances, tanks, bombs, and thousands of tons of ammunition were but a few of the items used daily on the battle front. To meet the needs of the British forces, and to keep them constantly in condition to fight during a war lasting four years, taxed the industrial capacity of Great Britain to the utmost. Dependent as she is upon foreign commerce, she would have collapsed quickly if her battle fleet and merchant marine had not kept the markets of the neutral world constantly accessible to her. The Germans clearly appreciated this fact. The basic objective of their whole submarine campaign was to disrupt the economic life of Great Britain and thus force her withdrawal from the war. The extraordinary and heroic efforts made by Great Britain to combat this menace had their inspiration in the grim necessities of the moment, and her bitterly won success in preserving her sea communications was a vital phase in the operations that led to the eventual victory of the allies. Due to the continuous drain upon England's economic life, her leaders quickly learned the necessity for exercising a highly centralized control over all the resources of the nation. Before the end was reached, England, and indeed all the other large countries of Europe were, in effect, huge industrial organizations engaged primarily in producing the material things absolutely necessary to support the fighting forces and the civil populations.

The task of producing munitions, great as it is, is not the complete story of the contributions that in-

dustry must make to a nation at war. Since a well organized, smoothly running industrial machine is essential to each belligerent, it follows that the destruction of that machine will be a legitimate objective of its opponent. As previously noted, Germany attempted to disrupt England's industrial life by the use of submarines and aircraft, the only tools permitted to her by her circumscribed position. But the allies, in addition to the well-nigh continuous band of steel with which they surrounded the Central Powers, employed other effective weapons. Neutral countries on the borders of Germany were inviolate to Allied military operations. They soon discovered, however, that England and France held a powerful weapon in their ability to control the flow of some of the material things upon which the life of the neutrals depended. When the United States joined the list of nations arrayed against the Central Powers, this control became almost absolute. Trans-shipments to the Central Powers practically ceased, and the gradual economic strangulation of the Central Powers had a profound effect on the outcome of the war. For themselves, the allies obtained essential items from neutrals through the threat of withholding other items necessary to the welfare of the neutral concerned. Thus, in this day and time, the economic factors may wield as effective an influence upon an enemy as can the armed forces themselves. President Wilson expressed this idea when he said: "Modern wars are not won by mere numbers. They are not won by mere enthusiasm. They are not won by mere national spirit. They are won by the scientific conduct of war, *the scientific application of industrial forces.*"

The term "Nation in Arms" expresses succinctly the thought that every man, every dollar, and every material thing should contribute its full share to make possible the successful conduct of the war. We recognize that every individual should bear his or her burden in the conflict, be it with a gun, a plough, a loom, a lathe, or the humble kitchen stove. Sacrifice for the common good should be uniform and universal, and no class should benefit at the expense of other classes.

Generalizations are easy to make, and make them we do, in spite of the fact that a shrewd old cynic once told us, "All generalizations are false, including this one." Nevertheless, the generalizations that appear above express an aim toward which we should strive. The real test is to evolve methods for the attainment of that aim.

To accomplish all that is implied by the "Nation in Arms" is a task of herculean proportions. Our 122,000,000 people have a national heritage of nearly two billion acres. Our estimated wealth is 400 billion dollars, represented by money, factories and other facilities, land, and raw materials. In the event of war these diverse, often competitive, elements must be quickly shaped into an orderly organization and directed toward the accomplishment of the common purpose.

Before the World War, Germany had not entirely failed to appreciate the necessity for industrial as well as purely military preparations, and had accomplished a great deal along this line. For instance, Germany's railway systems had been so located as to facilitate the mobilization and concentration of troops and supplies in the event of war, rather than solely to meet its transportation needs in peace.

In peace such things are far more easily accomplished under an autocracy than under a more liberal form of government. Once war has actually been declared, however, a democracy such as ours enjoys a great advantage over an autocracy in rallying the individual wealth and efforts of the people to its support. "The highest and best form of efficiency is the spontaneous cooperation of a free people." An autocratic government might succeed in forcing its subjects to fight against their will, consequently the desired spontaneous cooperation would be lacking. On the other hand, the United States could scarcely be plunged into a major conflict except upon the insistence of the majority of its citizens. The wave of popular feeling that would force our nation into war would inspire also each individual to make unusual sacrifices to serve the needs of his country.

Fortunately, also, this country is more nearly self-sustaining economically than is any other great nation. We have huge and efficient manufacturing facilities, and a strong financial system. Except for a few vital items such as rubber, tin, manganese, and several others, all raw materials essential to us in war are found either within our borders or in such close proximity as to insure access to them under any conditions that are likely to exist.

In view of these facts we can always count with reasonable certainty upon the things that President Wilson pointed out as insufficient within themselves —numbers (both men and material), national spirit, and enthusiasm. These are the factors which, intelligently directed, make possible the realization of the ones he set up as the decisive elements, namely, the scientific conduct of war, *and the scientific application of industrial forces.*

When we express our problem in such terms as "the scientific application of industrial forces," we are still talking in generalities, still seeking a solid foundation for the structure we hope to erect. Let us then approach it in this way. We have the industrial forces: we want them to produce the vast quantities of munitions without which modern armies and navies are powerless. Why is this particular problem so difficult to solve?

Primarily, it is the time factor that lifts this whole matter out of the realm of ordinary business transactions. There can be no doubt that American industry could meet all requirements of the Army and the Navy with very little disturbance in its normal procedure if the orders could be placed gradually and spread over an appreciable interval of time. But the *opportunity to do this will never exist!* When nations go to war, time is vital—to delay is to invite disaster. Large portions of our industry must shift quickly from peace-time operations to the job of producing munitions for the fighting forces.

Usually distinction is made between two great classes of munitions—commercial and non-commercial. Commercial items include all those used in the normal life of the nation, and produced continuously in our country, such as food, automobiles, clothing and other textiles, horses and harness, simple items of mess equipment, shoes, and so on. The second class comprises articles such as ammunition, guns, tanks, fighting planes, gas appliances, uniforms, special vehicles and many others.

The procurement of the first class is a relatively simple matter. In certain cases production must be gradually accelerated, products must be altered slightly to meet the specific needs, and procurement of necessary raw materials must be assured. All these difficulties appear in aggravated form in the production of non-commercial items, so that no further mention need be made of commercial items.

Procurement of guns, ammunition, and other non-commercial items, is a question of far more serious import. Assuming that the Army and the Navy will, upon the declaration of war, know the approximate quantities and types of munitions necessary—an assumption justified by the zealous and detailed attention now being given this matter in those services—the problem narrows itself down to the organization of industry to supply these particular needs.

Procurement involves a consideration of several essential elements. They are raw materials, transportation, factories, power, labor, and finance.

For instance, consider a simple artillery shell, made principally of steel, brass, and copper. Its production involves first the procurement of pig iron, which must be processed through a blast furnace supplied with coke, lime, and manganese. The coke involves the mining of bituminous coal and passing it through coke ovens. The manganese must be imported from South America. The steel must then go through a plant where it is forged, machined, and equipped with a firing mechanism. The copper in the shell, obtained in a different place, is extracted and refined under entirely different methods. After the powder has gone through a similarly complicated and intricate process, all elements are shipped to a plant where they are finally assembled into a completed shell.

The flow of all these raw materials must be continuous and uniform, and if the supply of any one promises to be inadequate, we must find a substitute for it, or other sources where it may be obtained. Adequate transportation facilities are essential, for even the most favored spot on earth does not contain all the necessary elements for the production of a piece of steel. Every industrial facility performing a function in the whole chain of these operations must be assured of power, labor, and adequate financial support. Some of the factories must be converted from other uses, since in our country no commercial plants are engaged in the peace-time production of artillery ammunition. This task in itself is an intricate one. Very recently the executives of an automobile plant, popularly credited with being the most efficient institution of the kind in America, decided to re-design the model of the car they produced. Their product was not changed from an automobile to a shell—it was simply a change in the type of the car to be marketed. Yet, with all plans carefully worked out months in advance, that factory, at an expenditure of millions of dollars, required a full year before it was again producing automobiles in marketable quantities.

Bessemer Converter in Action, Lackawanna Steel Company

Suppose, that without warning, the same factory had been asked by the Government to begin the quantity production of artillery ammunition. How much time would have elapsed before completed shells would have been ready to serve the needs of the fighting forces?

Thus, a single requirement of the fighting forces—a shell—involves many ramifications of industry, and the production of some of its component parts occasions radical changes in equipment and procedure. Consequently, it is not difficult to understand that when we engage in the simultaneous production of thousands of items of equal importance, overlapping and interference will occur in marshalling to the proper points, at the proper times, the essential elements of production.

Moreover, while industry is attempting to adjust itself to this strain, it must continue to supply the necessities of the civilian population. The industrial machine of this great country has been designed and geared to a certain speed to meet the demands made upon it in normal times. The war load must be distributed judiciously, so as to avoid inefficiency, delay and possible disaster.

The Second article of this Series will appear next month.

Defense Against Tanks

Lieutenant Colonel K. B. Edmunds, Cavalry

DISCUSSIONS of tank actions or defense against tanks should be based on certain assumed characteristics of the future tank, for the purpose of the present discussion they are:

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To anyone who has followed the recent developments of the track-laying or the combination wheel and track vehicle, both in this country and abroad, it will be evident that these assumptions are by no means visionary and that there will be tanks with these characteristics or with characteristics closely approaching them in our next war. It is high time for us to develop some ideas for their tactical use in both offense and defense.

In another paper[1] the conclusion is reached that a mechanized force, as a separate arm, is a weapon of the army commander and that he will use it in attack in the direction of the main blow of his army, and against objectives well in rear of the objectives of his infantry divisions. In considering the defensive it is necessary to realize that fast tanks will also be present in the attacking divisions and corps, and that defensive measures must be taken along the whole front of an army position, as well as on any exposed flank, excepting only on those portions which the terrain makes obviously impracticable for tank maneuver.

Present Defensive Measures

Apparently our present defensive measures are limited to developments of the World War anti-Tank gun. The Field Artillery is very properly turning its attention to fire on rapidly moving targets, and we may expect a larger percentage of hits on such targets in peace-time practice as a result of this training. But we must guard against the conclusion that results on the battlefield will even approximate those on the target range.

The division artillery field order, on the defensive, usually directs that two or more guns in each (infantry) brigade sector be located for antitank defense. Defense in depth may be obtained by directing the most advanced batteries of the supporting artillery to select alternate gun positions for antitank employment.

Further than this we can not expect field artillery to go until a new doctrine for the defense is developed. Its present measures can be considered adequate only on the assumption that they will be effective in stopping a very large proportion of fast tanks before the latter can penetrate the organized defensive areas.

The Infantry has recently made a heavy increase in the number of 37 mm. guns with the regiment, and they now also appear in the cavalry regiments. While these guns are not intended exclusively for use against tanks, their battle positions are such that they can be used for that purpose. The efficacy of their fire against tanks, however, has not been fully demonstrated.

Defense by Counterattack

So far as is known by the writer, the system of defense by antitank guns and 37 mm. guns is the only system contemplated at present in our Service. Its disadvantages are quite apparent:

a. We may expect a tank attack to be supported closely by artillery using direct fire. As the attacker has the initiative, he can concentrate a number of guns to support an attack at the point selected greater than the number of antitank guns in the defense at that point. The fire of these supporting guns being directed at stationary targets (the antitank gun of the defense) will be more effective than the defensive fires on rapidly moving tanks.

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c. The system requires the use of an unreasonably great number of guns for any open warfare situation. The number necessary to defend the entire front and flanks of a field army would exceed the number of light guns in a field artillery brigade. These guns can not be used for any purpose other than antitank: they have no power of maneuver: and they must either be taken from the supporting artillery or added to the large number already with the divisions. The system may be likened to that of a country which defends its coast by spacing coast defense guns along it, rather than by building a mobile navy and by organizing its army for counterattacks on landings.

In the future, defense by antitank guns will probably be limited to those localities on the front and flanks of a field army which are most vital to hold, or which are most vulnerable to tank attack. The remainder of the ground held will be left to the 37 mm. guns of the infantry and the cavalry.

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Presumably the organization of an army in defense will be similar to that of its attacking opponent. There will be division tank units for local counterattack against the tanks of the assault divisions, as well as an army mechanized force to meet the blow of the enemy's mechanized force. All of these units will be capable of rapid maneuver and concentration opposite points threatened, differing in this respect from the antitank guns, which are fixed in position. In counterattack the units will have the advantage of meeting their opponents when the latter are disorganized by a long advance and by the resistance of the defending front line troops, and separated from their supporting artillery.

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Before considering the conduct of the defense it is necessary to indicate briefly the conduct of the attack. An army mechanized force will probably consist of three main combatant elements:

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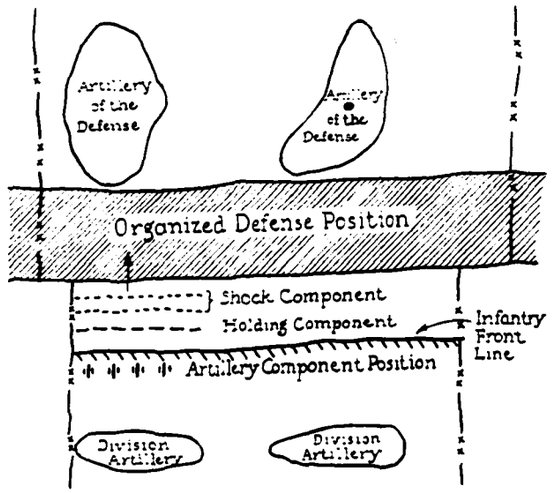

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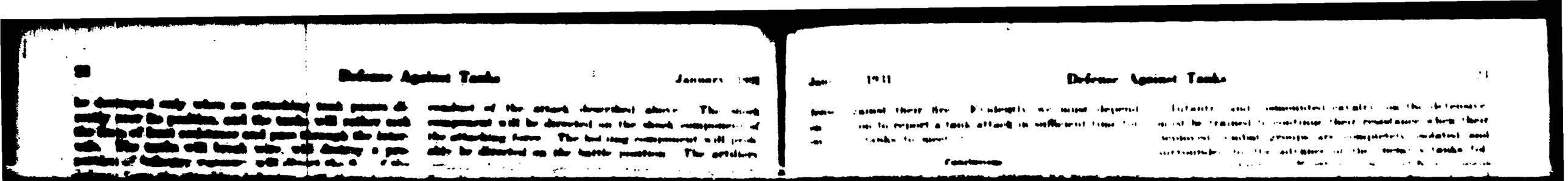

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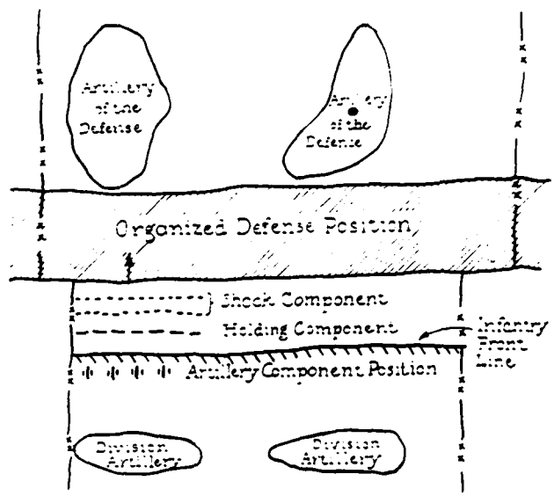

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be destroyed only when an attacking tank passes directly over its position, and the tanks will rather seek the lines of least resistance and pass through the intervals. The tanks will break wire, will destroy a proportion of infantry weapons, will divert the fire of the defense from the attacking infantry, will disrupt communications—but they cannot be expected completely to annihilate the defense.

The infantry, on dismounted cavalry, remaining on the battle position must be trained to continue their resistance after their lines are penetrated by the tanks. Of course we have this principle already as applied to an infantry infiltration, but it must be expected to apply also to the enormously faster penetration of the fast tanks. While we have no historical examples of attacks by fast tanks, such as that described above, we have the analogy of a mounted attack by cavalry against dismounted troops. There were several of these which were successful during the World War in Palestine and, on a smaller scale, on the Western Front. It is noteworthy that the infantry resistance, whether German or Turk, ceased as soon as the lines were penetrated by the horsemen. Compare this with Quatre Bras and Waterloo, where the French cavalry penetrated between the British squares and remained there for some time without being able to break them. It is only a few years ago that our Infantry was trained to meet a cavalry attack by rallying by squad or section. The spirit of this training must be revived in a different form.

Hedges of bayonets backed by the fire of small arms are no obstacle to tanks as they are to horsemen. However, we can place the combat groups on ground which is difficult for tank movement, then, by artificial means, protect them further from physical contact. If no other means can be found, ground grenades are sufficiently portable for open warfare and might well displace, in our transportation, wire which has become less effective with the advent of the fast tank, and which takes longer to install. A few large ground grenades distributed along the front and flanks of each combat group should break the formation of tanks and cause them to flow between, rather than over, these islands of defense, which can then continue their resistance until relieved by counterattack.

The extent to which these passive measures of defense are installed will depend largely on the time and materials available with which to organize the ground, but a few grenades would be at least as close to the troops as the combat trains. The means available should, in any case, be concentrated on the fortification of localities actually occupied, rather than scattered in an attempt to make an impenetrable barrier along the whole front, as the latter system will fail to give an adequate defense anywhere and will hamper the maneuver of the defending troops.

The maneuvers of the tanks of the defense will be similar to those of any defensive reserve. As soon as the direction of the main blow of the attack can be determined, the tanks of the reserve will be moved to a position from which to launch a counterattack. The conduct of the counterattack will be similar to the conduct of the attack described above. The shock component will be directed on the shock component of the attacking force. The holding component will probably be directed on the battle position. The artillery component will support the counterattack by direct fire, its targets in this case being the hostile tanks. The infantry reserve will move to restore the battle position and relieve the troops deployed thereon.

Conduct of the Army Defense

The action described above will be repeated in each division sector along the entire front of battle. Where the tank forces are nearly equal the advantage should lie with the defense. The offense will win where, by massing tanks, it is possible to get through the organized defensive area with a sufficient tank reserve to dispose of the tanks of the defense in that portion of the field. As in a cavalry battle, the least formed reserve will usually decide the victory.

The mechanized force of the defending army will be held in reserve to meet the enemy's mechanized force, which in turn will be used in the direction of the main blow of its army. If the attack maneuver be

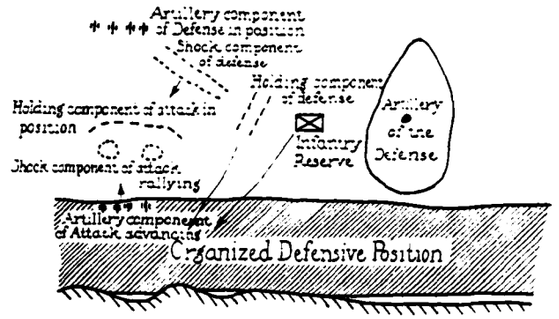


Figure 2. The Counterattack.

an envelopment, the attacking mechanized force will be directed on objectives well in rear of the infantry envelopment and it will be followed and its success exploited by cavalry divisions. In a penetration the employment of the cavalry must be delayed until arrangements for its passage can be made through the organized defensive area, and through the attacking infantry units. The counterattack of the defending mechanized force will not differ materially from the tactics of the division tank units.

The foregoing has assumed a situation in which one army has had time deliberately to occupy and organize a position, on which its opponent has launched a coordinated attack. The principle of defense against tanks by counterattack applies with even more force to troops in deployed defense, on the march, in a meeting engagement, in retreat, or in withdrawal; for in these cases there will be less time for organization of ground and fire or the location of antitank guns. Marching troops, whether infantry or cavalry, may be able to avoid the shock of tanks to some extent by deploying and moving into the intervals between them, but have no offensive power against tanks and no defense against their fire. Evidently we must depend on aviation to report a tank attack in sufficient time for our own tanks to meet it.

Conclusions

In the organized position defense we must either accept the principle that antitank artilley and 37-mm. guns can stop a tank attack by fire, or we must abandon the rigidity of the battle position, assume that it can be penetrated rapidly, and depend on a mobile reserve of fast tanks to meet the penetration.

The first is a dangerous doctrine, and one not supported even by experience with the slow tanks of the World War. Should we cling to it, and should it fail, it means that our command posts and communications will be destroyed, our supporting artillery silenced, and our infantry reserves immobilized wherever the fast tanks of our opponents penetrate. The attacker, supported by his artillery, can then reduce the battle position at his leisure.

The second theory modifies our conception of the battle position, which becomes a permeable barrier on which the waves of the tank attack are broken and disorganized, but not stopped. It involves a greater dependence on the counterattack, particularly of tanks, brigade and division reserves; and an increased spacing of groups deployed on the battle position, with a corresponding increase in the strength of reserves behind it. The principle involved is not new, for we find the troops of Alexander instructed to open their files and allow the Persian chariots, the tanks of that day, to pass through.

In situations other than position defence, tanks, coordinating with aviation, must be maneuvered to meet a tank attack before the latter can strike our columns.

Infantry and dismounted cavalry, on the defensive, must be trained to continue their resistance when their deployed combat groups are completely isolated and surrounded by the advance of the enemy's tanks followed by infantry. Further, some artificial means must be found to protect combat groups from physical contact with tanks, and these means must be sufficiently portable for use in open warfare situations. Ground grenades have already been mentioned. It is probable that additional expedients can be developed. If tanks can destroy combat groups at will, the ideas of some people will become facts—infantry and cavalry as we understand the terms now will disappear from the battlefield.

Field artillery is faced with the need of developments in gunnery, tactics, and materiel. More time and effort must be placed on training in direct fire on rapidly moving targets. The fire support of a fast tank attack or counterattack is a tactical problem totally different from the missions heretofore assigned division artillery, although it resembles in some respects the operations of horse artillery. A mount and tractor must be designed with speed and maneuvering power equal to those of the fast tanks which they will accompany, and capable of going into and out of action with great rapidity. Seconds will count. This requirement of mobility may result in the adoption of a calibre less than 3-inch or 75-mm. for this type of artillery. Its ranges will usually be short and its striking power need not be greater than that necessary to disable a tank with a direct hit.

The conception of a tank battle will affect tank armament. Each tank must carry a weapon capable of disabling a tank with a direct hit.

The College Trained Army

First Lieutenant Ralph A. Palmer, 338th Infantry

COLLEGE graduates are notorious for deserting the fields of activity for which they prepared while in college. They leave not only the Reserve but professions and businesses for which they have spent many more hours in fitting themselves. The loss after graduation is not merely a sluffing off of the poorest men. There is a loss all down the line, from the best to the poorest, which indicates that the trouble is not so much in the quality of men graduated as in the reception that they get after graduation.

To state the situation in a brief, mild way which may not suggest treason, the student officer who graduates from the Reserve Officers' Training Corps into the Officers' Reserve Corps also graduates, under present conditions, from daily contact with and application of military training to irregular contact and application; from a fixed training program to an indefinite training program; and from a status recognized by all of his daily associates to a status which is known and significant to probably about one-twentieth of his daily associates. This is a trying test upon the loyalty and interest of an officer; a test which is unnecessary and which few R. O. T. C. graduates are prepared to pass.

The R. O. T. C. graduate needs to be made to feel the responsibility of his commission. He neglects it because it does not command attention. He fails to take an interest in it because it has not been made to seem worthwhile.

Four years of R. O. T. C. training in time of peace cannot develop in a man the interest in and loyalty to the service developed by a period of active duty in time of war. The officers produced by the R. O. T. C. are therefore easy victims to some of the hundred and one other interests which are daily competing for their attention. If the O. R. C. expects to compete successfully for its share of the time and attention of its recruits, it will have to increase greatly the number and frequency of its contacts.

So far as the Reserve Officer on inactive status is concerned, the custom of the service in the matter of social calls needs to be reversed. Officers with World War experience and R. O. T. C. graduates who have survived the critical period of the first commission should assume the initiative in calling on and otherwise making contacts with officers junior to themselves, to drive home the importance of the national defense program, the O. R. C. as an element of it, and the junior officer as an element of the O. R. C. The optional group conference system is not adequately meeting the contact needs of these junior officers. This matter of contact, particularly at the lower end of the chain of command, is of sufficient importance to warrant its being named as an activity required for recommission or promotion.

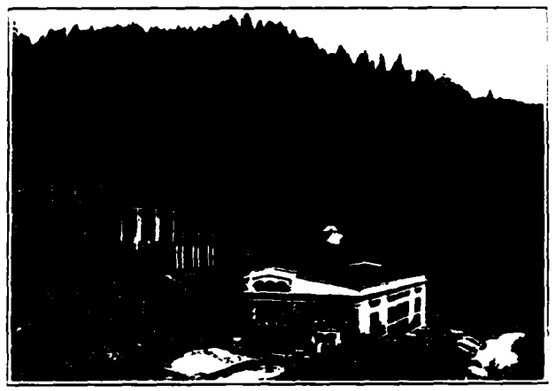
The contacts that are being made can be increased in effectiveness if the World War men will watch their attitude toward preparedness in talking to college trained officers. Men who have been through one or more wars are mostly realists. R. O. T. C. graduates, because of their youth and college training, are more inclined to be idealists. That accounts for the fact that older officers often talk preparedness for the next war to young officers who are interested in preparedness as a means of maintaining peace. Whatever may be the personal convictions of the war officers, there is only one basis on which national defense can be "sold" to R. O. T. C. graduates and the American civilian public in time of peace. It is expressed in the motto of the Reserve Officers Association, "Patriotic Preparedness Promotes Peace."

Graduates from the R. O. T. C. will also learn to respect and value their commissions more highly if the significance of these commissions in civil life on inactive status is increased. Ceremony, recognition of ability, and frequent opportunity to demonstrate ability are provided to help officers and men on active duty to maintain a high standard of efficiency. These elements seem to have been forgotten in providing for the inactive duty training of the reserves. Those who were in the war have their psychological demand for ceremony and recognition met in a measure by their veterans' organizations and activities on patriotic occasions. The R. O. T. C. graduate, who needs them more, has not even these. Civilians, when they think of it at all, think of patriotism and military leadership only in terms of men who have fought in past wars or who are in the Regular Army. This is a situation which the World War veterans who are still in the Reserve can do something to correct. They can, in their veterans organizations, give occasional social recognition to the college trained officers and see that it comes to the attention of their whole community. They can see that these younger officers are invited to take part in local patriotic ceremonies, and possibly can find other means of letting the public know that they have among them young men who are making personal sacrifices to help maintain a national defense program and thereby to further the hope of peace.

War is too vague and remote a possibility in the minds of most R. O. T. C. graduates to stand alone as a strong incentive to training. Being recognized, trained, and subject to emergency call for civil law enforcement would enable the reserve officer to see that his military training might become valuable to himself and his friends at any time. The handling of civil emergencies such as floods, strikes, and local crime situations call for the same quality of leadership and much of the same technique in which the reserve officer is trained. With a little special training he

could be highly useful in situations which strain ordinary civil law-enforcement facilities but which are not serious enough to warrant calling out the National Guard, or which require quicker action. There would be no legal complications to deputizing as a civil officer a reserve officer not on active duty.

Reserve officers must be ready for the call. The initial cost of the uniform and equipment is an item



Study of the Tactical Significance of Localities is Important

which keeps some R. O. T. C. graduates from ever becoming active reserve officers. At some schools the cadet uniform is so different in style from an army officer's uniform that it is a dead loss after graduation, and the graduates of those schools have to choose between paying about a hundred dollars out of their own pockets before going to camp, to get a passable uniform, or never going to camp. Many choose the latter course. If it is considered important that some schools have a distinctive cadet uniform it should also be considered important that this should not impose a financial burden on their graduates in taking up their duties as reserve officers; or should not, as is more often the case, defeat the purpose of their R. O. T. C. training.

Where officers on active duty are required to pay into camp headquarters money for mess, personal services, and the like, there should be a public accounting of these funds. By the time he has graduated from the R. O. T. C. a man knows just enough about the world to be suspicious of any expenses which are not satisfactorily accounted for. To appropriate arbitrarily a part of his pay and not account for it more definitely than to say it is for the mess, or electric lights, or orderly service, leaves a bad impression on him. It breeds dissatisfaction. To eliminate this source of dissatisfaction as far as possible, there should not only be a public accounting of such funds, but a summarized statement of the accounts should be placed in the hands of each officer whose money is involved.

Some suggestions for improving the training of reserve officers, to stimulate the interest of R. O. T. C. graduates, are:

1. Require or offer some special inducement to R. O. T. C. graduates to take active duty training at the first opportunity after graduation. A satisfactory period of active duty training is necessary to give the graduate a little confidence in his ability as an officer, to stimulate his interest, and to establish a habit of participation in reserve affairs.

2. Break up the training requirements for recommission or promotion into monthly tasks. The present lack of a definite inactive duty training schedule encourages the officer to keep putting off his training until it is a burdensome task and he is tempted to choose the simple alternative of dropping the whole matter.

3. Training should be planned for the efficient use of such time as the reserve officer may be able to give it. In this line, army extension course lessons should be shortened so that an officer may easily be able to complete a lesson at one sitting.

4. There is a tactical advantage in having each officer well trained in and capable of performing any and all of the duties of his grade and branch. In the Regular Army this is possible. In the Reserve it is impossible. If reserve officers were allowed to specialize more in their training along lines consistent with their individual inclinations, abilities, civil training, and pursuits, the gain in efficiency and interest might more than offset the loss in flexibility. In other words it might be better to let a man train to be a good rifle company officer, machine gun officer, or supply officer and give him a permanent assignment in his chosen line, than to attempt the discouraging task of training him a little in all the duties of his grade and branch, but not enough to enable him to work efficiently anywhere.

5. Require and provide for the reserve officer to study the military significance of the terrain features of the country in the vicinity of his home. This study should include local resources of all kinds and railroads which might be units in the industrial preparedness program. Such training would stimulate him to recall at sight the military significance of each feature in the environment of his daily life, would improve his ability in reconnaissance, and would add interest to his training.

6. Give more consideration to regimental assignment in active duty training and place more emphasis upon duties of mobilization and problems of administration. The latter should include a study of the actual management of the mess at which the officers eat, and the problems it involves. This would do much to make the officers satisfied not to complain about necessary expenses and inconveniences, and would help to eliminate any unnecessary cost and cause for dissatisfaction.

7. Concentrate training mostly on principles and technique which are not apt to become obsolete soon.

The O. R. C. is not simply a regular army short of funds. A skeleton organization of war veterans and college men, partially trained as officers, to be maintained and further trained mostly on an inactive duty basis, presents many administrative and training problems which differ from those of the Regular Army and the National Guard. Their lack of contact with troops, their civil status, training-interests, pursuits, independence, freedom from discipline, and peacetime apathy toward preparedness, demand different leadership and methods than are traditional in the usual military organization. Let us study more carefully to learn where transplanted Regular Army methods will work and where new and original solutions are necessary.

Success in War

Major George S. Patton, Jr., Cavalry

WAR is an art and as such is not susceptible of explanation by fixed formula. Yet from the earliest time there has been an unending effort to subject its complex and emotional structure to dissection, to enunciate rules for its waging, to make tangible its intangibility. As well strive to isolate the soul by the dissection of the cadaver as to seek the essence of war by the analysis of its records. Yet despite the impossibility of physically detecting the soul, its existence is proven by its tangible reflection in acts and thoughts.

Above armed hosts there hovers an impalpable something which on occasion so dominates the material as to induce victory under circumstances quite inexplicable. To understand this something we should seek it in a manner analogous to our search for the soul; and so seeking we shall perchance find it in the reflexes produced by the acts of the Great Captains.

But whither shall we turn for knowledge of their very selves? Not in the musty tomes of voluminous reports or censored recollections wherein they strove to immortalize their achievements. Nor yet in the countless histories where lesser wormish men have sought to snare their parted ghosts.

The great warriors were too busy and often too inapt to write contemporaneously of their exploits. What they later put on paper was colored by strivings for enhanced fame, or by political conditions then confronting them. War was an ebullition of their perished past. The violent simplicity in execution which procured them success and enthralled the world looked pale and uninspired on paper, so they seasoned it.

The race yearns to adore. Can it adore the simple or venerate the obvious? All mythology and folk-lore rise in indignant protest at the thought. The sun gave light: therefore he was not hot gas or a flame, but a god or a chariot. The ignus fatuus deluded men of nights. It was a spirit; nothing so simple as decomposition could serve the need.

So with the soldier, to pander to self love and racial urge he attributes to his acts profound thoughts which never existed. The white-hot energy of youth which saw in obstacles but inspirations and in the enemy but the gage to battle, becomes to complacent and retrospective age the result of mathematical calculation and metaphysical erudition: of knowledge he never had and plans he never made.

With the efforts of the historians the case is even worse. Those who write at the time are guilty of partisanship and hero worship. While those who write later are forced to accept contemporaneous myths and to view their subject through the roseate light which distance, be it that of time or space, sheds ever to deprive us of harsh truth. In peace the scholar flourishes, in the war the soldier dies; so it comes about that we view our soldiers through the eyes of scholars and attribute to them scholarly virtues.

Seeking obvious reasons for the obscure, we analyze their conduct as told by historians and assign as reasons for their success apparent, trivial things. Disregarding wholly the personality of Frederick we attribute his victories to a tactical expedient, the oblique order of battle. Impotent to comprehend the character of Rome's generals, a great historian coins the striking phase: "At this time the Roman legionary shortened his sword and gained an empire." Our research is further muddled by the fabled heroism of all former fighters. Like wine, accounts of valor mellow with age, until Achilles dead three thousand years stands peerless.

Yet through the murk of fact and fable rises to our view this truth. The history of war is the history of warriors; few in number, mighty in influence. Alexander, not Macedonia, conquered the world. Scipio, not Rome, destroyed Carthage. Marlborough, not the Allies, defeated France. Cromwell, not the Roundheads, dethroned Charles.

Were this true only of warriors we might well exclaim: "Behold the work of the historian!" but it is equally the case in every phase of human endeavor. Music has its myriad of musicians but only its dozen masters. So with painting, sculpture, literature, medicine or trade. "Many are called, but few are chosen."

Nor can we concur wholly with the alluring stories in the advertising sections of our magazines which point the golden path of success to all and sundry who will follow some particular phase of home education they happen to advocate. "Knowledge is power," but to a degree only. Its possession per se will raise a man to mediocrity but not to distinction. In our opinion, indeed, the instruction obtained from such courses is of less moment to future success than is the ambition which prompted the study.

In considering these matters, we should remember that while there is much similarity there is also a vast difference between the successful soldier and the successful man in other professions. Success due to knowledge and personality is the measure of ability in each case; but to all save the soldier it has vital significance only to the individual and to a limited number of his associates. With the soldier, success or failure means infinitely more, as it must of necessity be measured not in terms of personal honor or affluence but in the life, happiness and honor of his men—his country. Hence the search for that elusive secret of military success, soul, genius, personality—call it what you will—is of vital interest to us all.

As has been shown, history and biography are of but limited assistance and the situation is still further complicated by other circumstances which we shall

now discuss. First, we must get an harmonical arrangement between two diametrically opposed views—namely, that there is "Nothing new under the sun" and that there is "Nothing old."

Referring to the first assumption, that of immutability, we refer to the tendency to consider the most recent past war as the last word, the sealed pattern of all future contests. For this theory we of the military profession are largely to blame. First we realize, none

Stonewall Jackson—In War the Right Man is Everything.

better, that in the last war it was necessary to make many improvisations and to ply our trade with ill-assorted tools. We then read our books and note with a thrill of regret that in the war next preceding our own experience: "Things ran with the precision of a well-oiled machine," for so the mellowing influence of time has made it appear to our authors.

In our efforts to provide for the avoidance, in future, of the mistakes which we personally have encountered, and to insure to ourselves or to our successors the same mathematical ease of operation of which we have read, we proceed to enunciate rules. In order to enunciate anything we must have a premise. The most obvious is the last war. Further, the impressions we gained there were the most vivid we have ever experienced; burned on the tablets of our memories by the blistering flash of exploding shell, etched on our souls by the incisive patter of machine gun bullets, our own experiences become the foundation of our thoughts and, all unconscious of personal bias, we base our conceptions of the future on our experience of the past.

Beyond question, personal knowledge is a fine thing; but unfortunately it is too intimate. When, for example, we recall a railroad accident, the picture that most vividly presents itself to us is the severed blue-gray hand of some child victim; not the misread signals which precipitated the tragedy. So with war experiences, the choking gas that strangled us sticks in our memory to the more or less complete exclusion of the important fact that it was the roads and consequent abundant mechanical transportation peculiar to western Europe which permitted the accumulation of enough gas shells to do the strangling.

Even when no personal experience exists, we are bound to be influenced by the most recent experience of others. Because in the Boer War the bayonet found no employment, we all but abandoned it, only to seize it again when the Russo-Japanese conflict redemonstrated its value. Going back farther, we might point countless other instances of similar nature, as witness the recurrent use and disuse of infantry and cavalry as the dominant arms according to the most recent "lesson" derived from the last war based invariably on special conditions, in no way bound to recur, yet always presumed as immutable.

So much for the conservatives; now for the optimists: The "Nothing old" gentry. These are of several species, but first in order of importance come the specialists.

Due either to superabundant egotism and uncontrolled enthusiasm, or else to limited powers of observation of the activities of other arms, these people advocate in the most fluent and uncompromising manner the vast future potentialities of their own weapon. In the next war, so they say, all the enemy will be entrenched, gassed, bombed or otherwise specially exterminated, depending for the method of his death upon the arm to which the person declaiming belongs. Their spectacular claims attract public attention. The appeal of their statements is further strengthened because they deal invariably in mechanical devices which intrigue the simple imagination, and because the novelty of their schemes and assertions has a strong news interest which insures their notice by the press. Earlier examples of this newspaper tendency to exploit the bizarre is instanced in the opening accounts of the Civil War where "masked batteries" and "black horse cavalry" seemed to infest the whole face of nature.

Both the standpatters and the progressives have reason of sorts, and as we have pointed out, we must seek to harmonize the divergent tendencies.

A British writer has said: "The characteristic of war is its constant change of characteristic," but as is ever the case with aphorisms his remark needs explanation. There is an incessant change of means, to attain the inevitable end, constantly going on; but we must take care not to let these inevitable sundry means, past or predicted, attain undue eminence in the perspective of our minds. Since the beginning, there has been an unending cycle of them, and for each, its advocates have claimed adoption as the sole means of successful war. Yet the records of all time

show that the unchanging ends have been, are, and probably ever will be, the securing of predominating force, of the right sort, at the right place, at the right time.

In seeking a premise for the enunciation of rules for the employment of this predominating force, we must cull from the past of our experience or reading the more permanent characteristics, select our weapons and assign to them that importance which reason and the analogy of experience indicate that they will attain. Bearing in mind these considerations and the definition of predominant force, we shall resume our search for success in war.

No matter what the situation as to clarity of his mental perspective, the conscientious soldier approaches the solution of his problem more or less bemuddled by phantoms of the past, and deluded by unfounded or unproved hopes for the future. So handicapped, he assumes the unwonted and labored posture of a student, and plans for perfection, so that when the next war comes that part of the machine for which he may be responsible shall instantly begin to function with a purr of perfect preparation.

In this scholarly avocation, soldiers of all important nations use at the present time what purports to be the best mode of instruction—the applicatory method. The characteristics of some concrete problem are first studied in the abstract and then tested by applying them, with assumed forces and situations, in solving analogous problems either on the terrain or on a map representation of it. This method not only familiarizes the student with all the tools and technicalities of his trade, but also develops the aptitude for reaching decisions and the self assurance derived from demonstrated achievement.

But as always there is a fly in the amber. High academic performance demands infinite intimate knowledge of details, and the qualities requisite to such attainments often inhabit bodies lacking in personality. Also, the striving for such knowledge often engenders the fallacious notion that capacity depends upon the power to acquire such details rather than upon the ability to apply them. Obsessed with this thought, students plunge in deeper and ever deeper, their exertions but enmeshing them the more until, like mired mastodons, they perish in a morass of knowledge where they first browsed for sustenance.

When the prying spade of the unbiased investigator has removed the muck of official reports and the mire of self-laudatory biographies from the swamp of the World War, the skeletons of many such military mammoths will be discovered. Amid their mighty remains will lurk elusive the secret of German failure. Beyond question no soldier ever sought more diligently than the Germans for prewar perfection. They builded and tested and adjusted their mighty machine and became so engrossed in its visible perfection, in the accuracy of its bearings and the compression of its cylinders, that they neglected the battery. When the moment came, their masterpiece proved inefficient through lack of the divine afflatus, the soul of a leader. Truly in war "Men are nothing, a man is everything."

Here we must deny that anything in our remarks is intended to imply belief in the existence of spontaneous untutored inspiration. With the single exception of the divinely inspired Joan of Arc, no such phenomenon has ever existed, and as we shall show, she was less of an exception than a coincidence. We require and must demand all possible thoughtful preparation and studious effort, so that in war our officers may be equal to their mighty trust—the safety of our country. Our purpose is not to discourage such preparation but simply to call attention to certain defects in its pursuit. To direct it not towards the glorification of the means—study; but to the end—victory.

In acquiring erudition we must live on, not in, our studies. We must guard against becoming so engrossed in the specific nature of the roots and bark of the trees of knowledge as to miss the meaning and grandeur of the forests they compose. Our means of studying war have increased as much as have our tools for waging it, but it is an open question whether this increase in means has not perhaps obscured or obliterated one essential detail: namely, the necessity for personal leadership.

Hannibal, Caesar, Heraclius, Charlemagne, Richard, Gustavus, Turenne, Frederick, Napoleon, Grant, Lee, Hindenburg, Allenby, Foch, and Pershing were deeply imbued with the whole knowledge of war as practiced at their several epochs. But so were many of their defeated opponents: for as has been pointed out, the success in war lies not wholly in knowledge. It lurks invisible in that vitalizing spark, intangible, yet as evident as the lightning—the warrior soul.

There is no better illustration of the potency of this vitalizing element than is portrayed in the story of the "Maid of Orleans." For more than ninety years prior to her advent, the armies of France had suffered almost continuous defeat at the hands of their British opponents. The reason for this state of things lay not in the inferiority of French valor, but in the reappearance of the foot soldier armed with the missile weapon—the long bow—as the temporary dominating influence on the battlefield. As a result of the recurrence of this tactical condition, France suffered almost continuous defeats, with the result that her people lost confidence, and developed an inferiority complex. Then came Joan, whose flaming faith in her heaven-sent mission rekindled the national spirit. Yet, great as were her powers, it is idle to suppose that, all unschooled in war as she was, she could have directed unaided the energy she produced. Like the fire beneath the boiler, she produced the steam; and ready to her hand she found competent machinery for its utilization in the shape of those veteran soldiers, Dunois, La Hire, and Saint Railles. The happy coincidence of her ignorant enthusiasm and their uninspired intelligence produced the phenomenal series of victories which freed France.

We shall now seek to evaluate and place in their just ratio the three essentials to victory—inspiration, knowledge, and force (mass).

Napoleon won many battles with numbers inferior

Petain Receives the Marshal's Baton. "Many Are Called But Few Are Chosen."

to the enemy: he never lost a battle when he was numerically superior. In other words, even his transcendent ability was not equal, on every occasion, to the task of counterbalancing numerical inferiority. When he was confronted with the admittedly incapable Austrian generals of 1796 he destroyed armies; while later, particularly after 1805, his victories were far less overhelming. So with Caesar. Against the Nervae, he was a consuming flame; against Romans, a successful contender. Grant in the Wilderness was as nothing compared to Grant at Donaldson or before Vicksburg. Here we have three soldiers of the highest type, both mentally and spiritually. By way of contrast we may note how the learned but uninspired Prussians of 1870 triumphed over the poorly led French, while in 1914 their equally learned and uninspired descendents were far less successful in the face of better opposition.

We may therefore postulate that no one element—soul, knowledge, or mass—is dominant; that a combination of any two of these factors gives a strong presumption of success over an adversary who relies on one alone, while the three combined are practically invincible against combinations of any other two. Comparing our own resources as to mass with those of any possible opponent or group of opponents, we strike at least a balance. The demonstrated ability of our trained leaders in past wars shows that so far as education is concerned, our officers have no superiors and few equals. This being so, victory will fly to or desert our standards in exact proportion to the presence or absence, in our leaders of the third attribute.

War is conflict; fighting is an elemental exposition of the age-old effort to survive. It is the cold glitter of the attacker's eye, not the point of the questing bayonet, that breaks the line. It is the fierce determination of the driver to close with the enemy, not the mechanical perfection of the tank, that conquers the trench. It is the cataclysmic ecstacy of conflict in the flier, not the perfection of his machine gun, which drops the enemy in flaming ruin. Yet volumes are devoted to armament; pages to inspiration.

Since the necessary limitations of map problems inhibit the student from considering the effects of hunger, emotion, personality, fatigue, leadership, and many other imponderable yet vital factors, he first neglects and then forgets them. Obsessed with admiration for the intelligence which history has ascribed to past leaders, he forgets the inseparable connection between plans, the flower of the intellect, and execution, the fruit of the soul. Hooker's plan at Chancellorsville was masterly, its execution cost him the battle. The converse was true at Marengo. The historian, through lack of experience and consequent appreciation of the inspirational qualities of generals, fails to stress them, but he does emphasize their mental gifts, which, since he shares, he values. The student blindly follows, and hugging the notion of mentality, pictures armies of insensate pawns moving with the precision of machines and the rapidity of light, guided in their intricate and resistless evolutions over the battlefield by the cold effulgence of his emotionless cerebrations as transmitted to them by wire and radio through the inspiring medium of code messages. He further assumes that superhuman intelligence will translate those somber sentences into words of fire which will electrify his chessmen into frenzied heroes who, heedless of danger, will dauntlessly translate the still-born infants of his brain into deeds.

Was it so that Caesar rallied the Twelfth Legion? Could the trackless ether have conveyed to his soldiers the inspiration that Napoleon imparted by his ubiquitous presence when before Rivoli he rode five horses to death. "To see everything himself!" Staff systems and mechanical communications are valuable, but above and beyond them must be the commander: not as a disembodied brain linked to his men by lines of wire and waves of ether, but as a living presence, an all-pervading, visible personality. The unleavened bread of knowledge will sustain life but it is dull fare unless seasoned by the yeast of personality. Could seamanship and shooting have made the Bon Homme Richard prevail over the Serapis or have destroyed the French fleet in Abukar Bay, had Paul Jones and

Horatio Nelson been other than they were? What intellectual ghost replete with strategem could have inspired men as did these two, who in themselves have epitomized not only knowledge of war but the spirit of battle? In defining the changeless characteristics of war we mentioned force, place, and time. In our calendar of warriors, Napoleon Bonaparte and Stonewall Jackson stand preeminent in their use of the last of these—time. Of the first his soldiers boasted: "He wins battles more with our legs than with our bayonets," while Jackson's men proudly called themselves "Old Jack's foot cavalry."

Shrewd critics have assigned military success to all manner of things—tactics, shape of frontiers, speed, happily placed rivers, mountains or woods, intellectual ability, or the use of artillery. All in a measure true, but none vital. The secret lies in the inspiring spirit which lifted weary footsore men out of themselves and made them march forgetful of agony, as did Messena's division after Rivoli and Jackson's at Winchester. No words ever imagined could have produced such prodigies of endurance as did the sight of the boy general, ill, perched on his sweating horse, or of the stern puritan plodding ever before them on Little Sorrel. The ability to produce endurance is but an instance of that same martial soul which arouses in its followers that resistless emotion defined as *élan*, the will to victory. However defined, it is akin to that almost cataleptic burst of physical and mental exuberance shown by the athlete when he breaks a record or plunges through the tacklers, and by the author or artist in the creation of a masterpiece. The difference is that in the athlete or the artist the ebullition is auto-stimulated, while with an army it is the result of external impetus—leadership.

In considering war we must avoid that adoration of the material as exemplified by scientists who deny the existence of aught they cannot cut or weigh. In war tomorrow we shall be dealing with men subject to the same emotions as were the soldiers of Alexander; with men but little changed for better or for worse from the starving shoeless Frenchmen of the Italian campaign: with men similar, save in their arms, to those whom the inspiring powers of a Greek or a Corsican changed at a breath to bands of heroes, all-enduring and all-capable.

No! History as written and read does not divulge the source of leadership. Hence its study often induces us to forget its potency. As a mirror shows us not ourselves but our reflection, so it is with the soul and with leadership: we know them but by the acts they inspire or the results they achieve. Like begets like; in the armies of the great we seek the reflection of themselves and we find Self-confidence, Enthusiasm, Abnegation of Self, Loyalty, and Courage.

Resolution, no matter how adamant, mated to knowledge, no matter how infinite, never begat such a progeny. Such offspring arises only from blood lines as elemental as themselves. The leader must be incarnate of them.

The suggestion of Nicodemus as to rebirth (John III 3 to 6) is not the only means of producing such a leader. There are certainly born leaders, but the soldier may also overcome his natal defects by unremitting effort and practice. Self-confidence of the right sort as differentiated from bumptious presumption based on ignorance, is the result of proved ability, the sense of conscious achievement. Its existence presupposes enthusiasm, for without this quality no one could endure the travail of acquiring self-confidence. The enthusiasm which permits the toil and promises the achievement is simply an all-absorbing preoccupation in the profession elected. Endurance too is linked with self-confidence. Mentally it is the ability to subvert the means to the end, to hitch the wagon to a star and to attain it. Physically it presupposes sufficient enthusiasm to force on nature, no matter how reluctant, the obligation of constant bodily fitness through exercise. The expanding waist line means the contracting heart line; witness Napoleon at and after Jena. Abnegation of self seems perhaps incongruous when applied to such selfish persons as Frederick or Napoleon, but this is not the case. Self can be subordinated to self. The Corsican, leading his grenadiers at Lodi, subordinated the life of Bonaparte to the glory of Napoleon. Loyalty is frequently only considered as faithfulness from the bottom up. It has another and equally important application, that is from the top down. One of the most frequently noted characteristics of the great who remained great is unforgetfulness of, loyalty to their subordinates. It is this characteristic which binds with hoops of iron their juniors to them. A man who is truly and unselfishly loyal to his superiors is of necessity so to his juniors, and they to him.

Courage, moral and physical, is almost a synonym of all the foregoing traits. It fosters the resolution to combat and cherishes the ability to assume responsibility be it for successes or failures. No Bayard ever showed more of it than did Lee after Gettysburg.

But as with the Biblical candle, these traits are of no military value if concealed. A man of diffident manner will never inspire confidence. A cold reserve cannot beget enthusiasm, and so with the others there must be an outward and visible sign of the inward and spiritual grace.

It then appears that the leader must be an actor, and such is the fact. But with him, as with his bewigged compeer, he is unconvincing unless he lives his part.

Can men then acquire and demonstrate these characteristics? The answer is they have—they can. For "As a man thinketh so is he." The fixed determination to acquire the warrior soul, and having acquired it, to conquer or perish with honor, is the secret of success in war.

Border Cavalry Stations

In this number JOURNAL *will be found descriptive articles of the Cavalry posts at Fort Brown, Fort Ringgold and Fort Clark, Texas.*

In taking up the various posts it is the aim to present complete data as to their most important features, and it is hoped that these articles will prove of interest to officers of the Cavalry and to others who may be stationed at these posts.—EDITOR.

Fort D. A. Russell, Marfa, Texas

FORT D. A. Russell, Texas, located in the outskirts of Marfa, Texas, the county seat of Presidio County, in the heart of the Big Bend of Texas, is one of the most attractive of the Border posts along the southern boundary of the United States. Placed as it is in the southern end of the Davis Mountains, with an altitude of 4750 feet, the climate is dry and at night always cool.

Fort D. A. Russell is now benefiting and has hopes of much further improvement by the Army Housing Program. Steam heating by the Arcola system and electric ranges for all officers' quarters have been ordered installed by October 30, 1930. Talking pictures have been placed in the Post Moving Picture Theatre and the Fort D. A. Russell Circulating Library contains all the latest works of fiction.

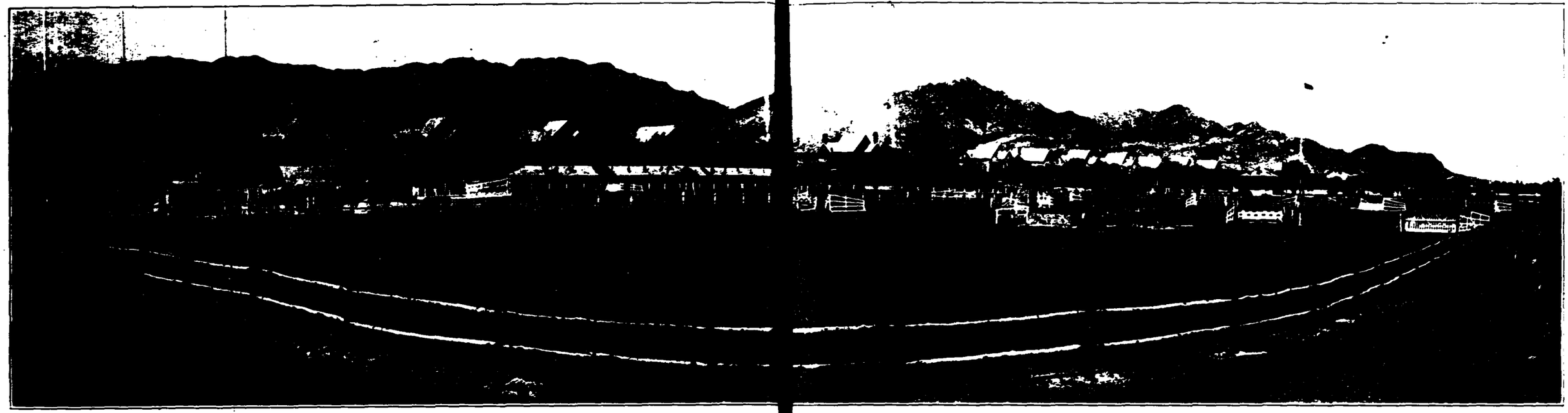
For athletics the Post has two polo fields, a baseball diamond, a football gridiron, basket ball and tennis courts, a horse show ring and an excellent swimming pool. The remarkable climate makes it possible for all sports to be continued throughout the entire year. The post has a baseball league, a basketball league, and two polo teams from the First Cavalry participate yearly in the First Cavalry Division Polo Tournament and in several local tournaments. Each year the First Cavalry sends a horse show team to compete in the First Cavalry Division Horse Show at Fort Bliss, Texas.

The sportsman will find Fort D. A. Russell in the center of an ideal hunting country. Ducks, quail and doves are numerous close to the post, and in season a limit bag may be obtained within easy driving distance from the reservation. There are many deer in the mountains between Fort D. A. Russell and the Rio Grande River, and in the fall of 1929 a hunting expedition from the Post ventured into Old Mexico under the expert care of the military commander and the mayor of Ojinaga, Mexico, and guided by a band of Yaqui Indians. This party was unable to transport all of the game which it brought down, but the heads of deer and antelope, the latter still fair game in Old Mexico, adorn several officers' quarters as a result of this foray.

Presidio County, Texas, has recently voted a $400,000 bond issue which, with the State and Federal aid, is to be devoted to paving the main arteries leading into Marfa and Fort D. A. Russell from the north, east, south and west. With a paved road all the way to Presidio, Texas, and Ojinaga, Mexico, the explorer of the many delights of Old Mexico will find his road made smooth for him.

It is impossible for a soldier to consider living conditions at any station without considering those affecting the practice of his profession. At Fort D. A. Russell they are ideal. A very long summer with very little inclement weather and four months of mild winter with about one or two snow storms a year makes it possible to carry out the training of troops and all the incidental details throughout the entire year. The many dirt roads leading from Fort D. A. Russell and the lack of traffic on these roads make practice marches a delight to an officer accustomed to conducting them in a more settled country.

Birdseye View of Fort D. A. Russell, Texas—Post Hospital and Officers' Line in the Foreground



Howze Stadium and Olympic Ring, Fort Bliss, Texas

Fort Bliss, El Paso, Texas

FROM two abode huts on the Rio Grande, where Ponce de Leon once paused in his quest for youth, there has sprung a border fort with a reservation scattered over 6,000 acres and with quarters and barracks for 5,000 officers and men. The history of this border post—Fort Bliss—since the earliest times has been inseparably identified with the developments of El Paso, the gateway of the Southwest, a city of 125,000, where army men are made to feel at home.

A great place to soldier. Fort Bliss, the home of the First Cavalry Division (less the First Cavalry Brigade), that's the consensus of opinion of officers, and men who have been so fortunate as to serve a tour of duty there.

Let's picture this post:

Winding out a modern highway from El Paso (its business section only five miles away) Fort Bliss looms up impressively on a rolling mesa. Approaching the south gate, the year-around splendidly turfed polo field is reflected in the sun.

On through the gate one halts to decide which green shadowed, tree-flanked, road to follow—there are twelve miles of them. To the left and right runs Sheridan road, its left course passing the long row of two story sets of quarters of the Commanding General, his staff and ranking officers. Bordered with evergreen hedges, they rise sheer out of a cluster of locust and mountain cottonwoods, while across the parade ground stretches gracefully an unbroken chain of Spanish type barracks.

Setting off the parade ground is Howze stadium and the Olympic jumping ring, home of the El Paso Fort Bliss Horse Show. With the horse show over it serves as a playground for post children.

Circling the parade ground, with its bandstand and flag pole in the center, one finds himself on Pershing road. He passes the post theater—a modern talkie palace, advertising the latest from Hollywood. Thence down into the heart of the Seventh Cavalry area, the low rambling bungalow officers' quarters facing Sheridan road on the right and the cantonment buildings of the enlisted men to the left.

Back over Pershing road, the modern brick bungalows for non-com's of the first three grades, past brigade and division headquarters, buildings forty-seven years old, and into the homeland of the Eighty-second Field Artillery which resembles the Seventh Cavalry area.

Of the permanent officers' quarters there are forty: fifteen of the two story type and twenty-five bungalows. There are fifty-one temporary sets of frame quarters.

For the hunter, Fort Bliss is an ideal post. There is an abundance of duck, quail and doves within a radius of twenty-five miles. Deer are found near Sierra Blanca, eighty miles to the east. The fishermen fish the Rio Grande, east of El Paso and at Elephant Butte Dam, west in New Mexico.

For the mounted sportsman El Paso is on an assured polo footing, and the First Cavalry Division's annual polo tournaments draw military and civilian teams from all the southwest. Also there's the El Paso-Fort Bliss Horse Show rapidly advancing and which it is predicted soon will equal long established eastern shows. Those socially inclined find the Officers' Club hops pleasant entertainment. There is an excellent mess at the club. Visiting officers are accommodated in modern quarters at the club's guest house. Adjoining the club is a swimming pool. Flying military men in El Paso for the night land at Biggs field where their ships are serviced.

The division maintains a vacation camp at Cloudcroft, New Mexico, in the Lincoln National Forest in the Sacramento Mountains, 160 miles from Fort Bliss. Nine thousand feet above sea level there are forty log cabins in the heart of a dense pine grove. Golf, tennis and fishing provide diversion.

Fort Bliss, high, mild, pleasant and healthful is truly a great border post.

Fort Huachuca, Arizona

FORT Huachuca was established back in the days when the Apache Indians divided their time between looting and murdering the widely separated ranchers, and making a quick and quite complete vanishing act into Old Mexico. Some of the original adobe barracks and quarters of this early period stand today. To a person of contemplative mind and gifted with imagination it is pleasant to stroll in the late evening past the old Post trader's building and hear the sound of Pre-Volsteadian revelry coming thru its dilapidated doors and windows.

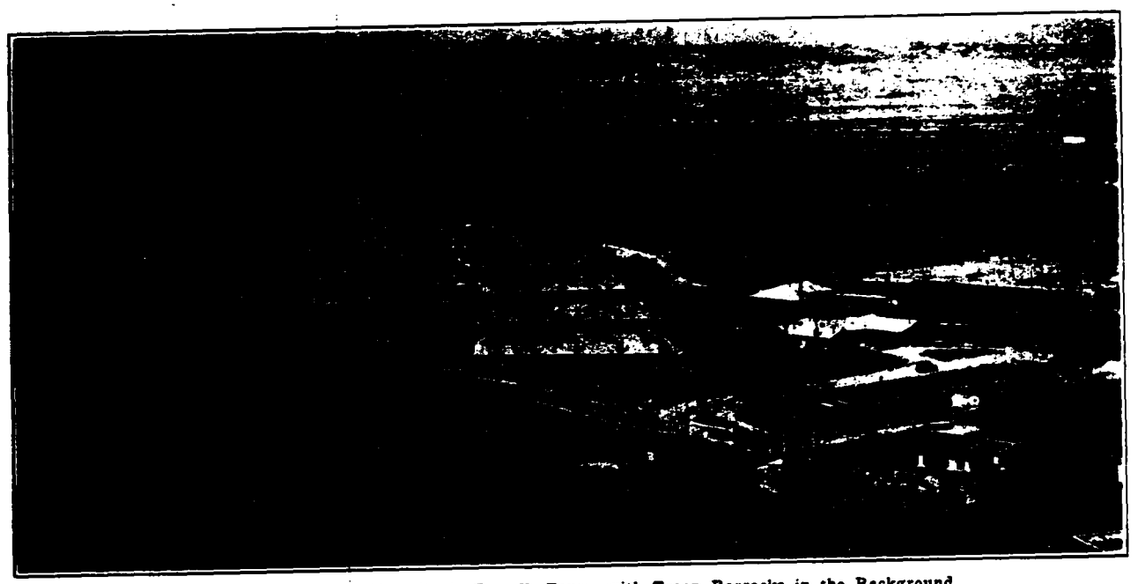
After a long period of complete isolation an enterprising railroad, seeking its way from the main line to Nogales, passed within seven miles of the post. Old timers will recall the Huachuca Siding at this point, for years the only outlet to the outside world. It was reached in the conventional way on the old army Daugherty wagon, drawn by four mules. Now we have a railroad into the post, connecting with the main line at Lewis Springs, thirteen miles away. Our train makes the trip to Lewis Springs daily and is popularly known as the Galloping Goose.

The present garrison consists of the 10th Cavalry and a battalion of the 25th Infantry, with the usual detachments. Prior to the peaceful penetration of the Infantry into our midst, Fort Huachuca had, since 1914, been known as the home of the 10th Cavalry, the Buffalo Regiment. The Infantry has however made its way here and is now a welcome and harmonious addition to the post.

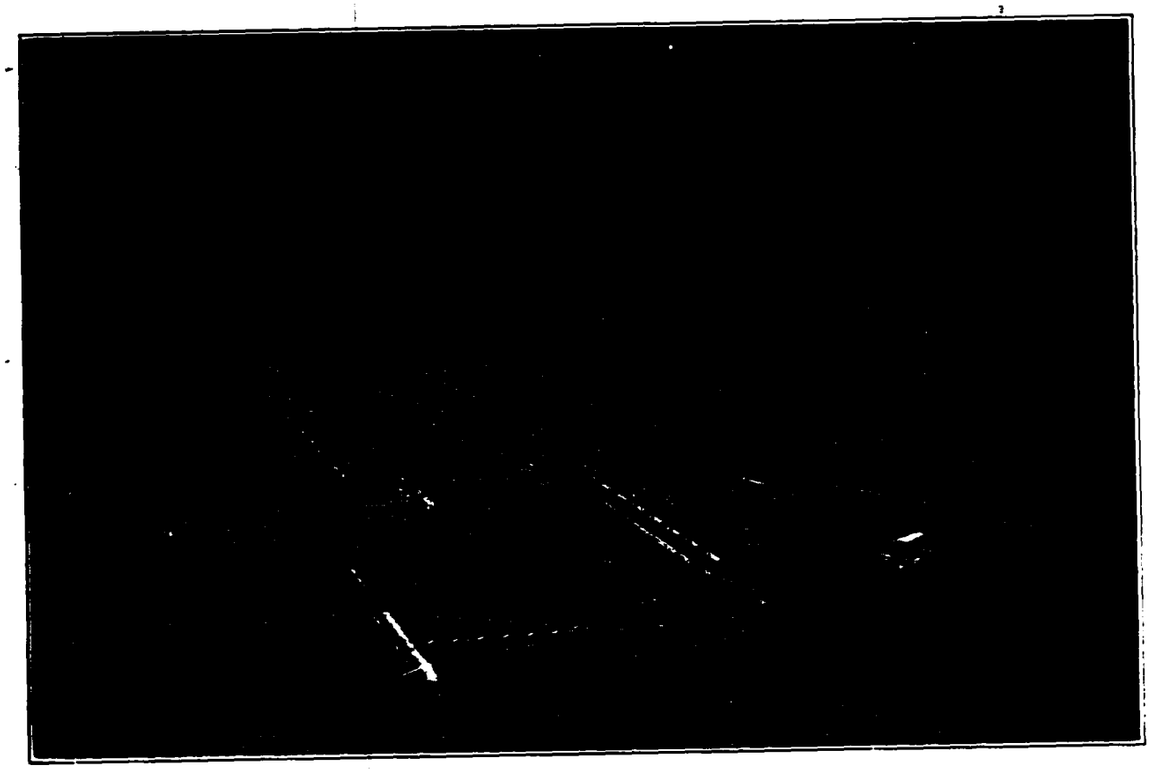
The barracks are two-storied frame buildings and are, according to our genial Quartermaster, in a constant state of being repaired. The stables are open frame buildings suitable to this climate.

The officers' line is shaped like a huge dipping ladle, the new quarters, or the loop, being the bowl. Eleven sets of the old adobe quarters remain and are reserved for field officers. They are large, comfortable, old-fashioned, haunted by memories of the past, and very attractive. The new quarters are duplicate frame buildings, designed for captains and lieutenants. The line is adorned with a rather fine double row of cottonwood trees—the ideal and universal shade tree of this section. In addition, a large number of fruit trees furnish an abundant supply of peaches, pears, apples, plums, quince, crab apple, nectarines and pomegranates. I have been told that the larger number of these trees were presented by a moving picture company that "worked" this site some years ago.

The water supply is piped from the Huachuca Mountains and is of good quality and abundant, ex-



Post Headquarters, Fort D. A. Russell, Texas, with Troop Barracks in the Background



FORT HUACHUCA, ARIZONA

Officers' Quarters on the Left; Barracks, Center and Stables, Right

Commanding General's (left) and Staff Officers' Quarters, Fort Bliss, Texas

ge in the driest months. The government is now drilling wells in Garden Canyon to augment the supply and take care of any possible concentration of troops at this place.

The post maintains its own power and ice plant and the quarters are equipped with electric cooking stoves. The field officers' quarters have been supplied with the new furniture.

The Post Exchange, in addition to its merchandise department, operates a butcher shop, a vegetable market and a dairy farm, which furnishes an ample supply of good milk for the post. There are the usual concessions, a restaurant, a tailor shop, a cobbler's shop and a barber shop.

Cochise County maintains in the post a separate school for colored and white pupils, with a primary department and an accredited high school for each race. There is also a private kindergarten for the little fellows.

The post, bathed in the sunshine of high altitude and washed by clean mountain air, is a wonderful place for babies and smaller children. A year or two in this climate should equip them with a physical stamina and vigor sufficient to last them a lifetime.

The post has one of the best equipped and most efficiently administered post hospitals in the army. There are no members of the Army Nurse Corps assigned to this station, however, and that is a need that is particularly important in an isolated station. This need has been called to the attention of higher authorities and should receive their earnest consideration.

There is a well-equipped Officers' Club which provides a meeting place and various amusements for officers and their families. Fort Huachuca is one of the few remaining posts whose very isolation makes the garrison more homogeneous and independent of outside civilian contacts and amusements. The result is a garrison life clearly reminiscent of the old days of the army.

The trails in the mountain canyons offer good riding, and adventure for the adventurous. We have tennis courts, an outside swimming pool, a horse show ring and a polo field. Years ago the most optimistic man in the world started a golf course, but it has gone the way of Nineveh and Tyre and Tombstone.

The Buffalo Club furnishes the enlisted men recreation and amusement and is well equipped for the purpose. The War Department maintains a theatre in the post, recently equipped with the talkies. The entertainment furnished is of a high order.

Tombstone, famous as the Eldorado of the Far West, is only twenty-seven miles away. Its glory has departed however, and its almost empty streets echo only the footsteps of its departed desperadoes. It has much interest to those who can recreate in their minds these shadows of the past.

The 5050 foot contour passes thru Post Headquarters and there are quarters in the post even higher. The winters are short and mild, the thermometer seldom reaching the freezing point. Snow is rare except in the mountains. It is not hot in the summer and the nights are cool and invigorating.

It is difficult to really picture this country to one who has never seen it or has only seen it in passing thru. It has fascination; it has glamour; but it only reveals itself fully to those who live with it.

To one from the effete East the first impression must be rather appalling. There are nine mountain ranges visible from the post. The distances are immense and brooding. The purple mountains against the sky appear for all the world like the back-drop of a huge stage.

The Huachuca Mountains rise in our back yard and shut off the view to the south; but to the north one over-looks the greater part of Arizona. In the late afternoons, the mountains take on magic, and the colors are quite unreasonable. If a buffalo or a giant Indian should gallop out on the sky line, dwarfing the mountains, it would not seem surprising. In such an atmosphere anything seems possible.

The Gallop as a Conditioning Gait

The following article on conditioning horses for military use and sporting events has been prepared by the Department of Horsemanship, The Cavalry School.—EDITOR.

THE gallop is the most rapid of the gaits. Its mechanism and speed exact the greatest expenditure of muscle and wind. It is this latter fact that makes the gallop the most important of the gaits from a *conditioning* standpoint. It is also the combat gait and the gait for rapid maneuver, therefore all military horses should be able to sustain the extended gallop for a distance of from 3,000 to 4,000 yards.

For young horses to be able to take their place in ranks at the earliest possible moment, in case of emergency, and for their physical development, it is necessary that they be galloped early in their training. The objective should be a gallop of 1,500 to 2,000 yards in 5 to 6 minutes at the end of four months' work: A gallop of 3,000 yards in 7 to 8 minutes at the end of the year's work. Many well-bred horses will be able easily to exceed this distance and time, while many cold-blooded horses will find it difficult to attain.

Special Cases.

In race track parlance *training* is synonymous with *conditioning*. In conditioning it is well to remember, "walk for muscle and gallop for wind." This excludes the trot as a *conditioning* gait without affecting its invaluable qualities as a military gait and as a gymnastic for the horse. Hereinafter the gallop will mean the *run at top speed*.

The successive steps in conditioning for special purposes, such as the Equestrian Championship ("Championnat Equestre"), flat and steeplechase races, etc., are:

First: Put the horse in health.

Second: Put the horse in muscle. (Long walks outside, slopes, long slow, swinging canters.)

Third: Put the horse in wind. (Gallops.)

In the above steps the first and second are no different from the conditioning of a horse for any military purpose and are of general knowledge. It may be said, however, that the vigilance of the trainer should be increased in proportion to the severity of the test in view.

When the horse has an excellent appetite, eyes clear, skin loose and resilient, feels "high," well-muscled and more than a little fat, he is ready to be galloped.

The following rules are applicable to military horses:

(a) Select good ground and, if possible, always use the same ground. This is an aid in preventing the horse from becoming a puller when hacking.

(b) Work horses in pairs—never gallop a horse alone if possible.

(c) Rotate the pairs so that certain individuals will not be consistently beaten.

(d) If pointing for a race, school daily at the barrier—a second saved in starting means distance at the finish.

(e) Gallop always with a lighter weight than the horse will carry in the test. He will become confirmed in striding a certain length and in a certain tempo and will make every effort to attain his stride when weighted in the race.

(f) Gallop the distance selected at stop speed and avoid pulling up sharply. A running horse will allow the gait to die out if the reins are relaxed.

(g) If possible, mount the horse each time with the rider he will carry in the test. It increases the horse's confidence as well as keeping the rider's judgment as to pace and peculiarities of his mount.

The horse should *never* be galloped in training the full distance of the test. The maximum effort that a horse can make on a flat is 1¼ miles. If the distance exceeds that, it becomes an endurance test and the maximum speed must be reduced accordingly. The maximum distance a horse should be galloped in training for 1¼ miles should not exceed ¾ mile. This distance is also the maximum when training for steeplechases on cross countries even where the distance will be 4 miles or better, although 1½ to 2 miles, well extended but not at top speed *(demi-train)* over obstacles once in a long while, will not be injurious.

In starting the work for wind the gallops should be short, one-eighth of a mile twice a week at first. Increase this to three times a week. Later increased to one-fourth mile twice a week, then three times a week and so on to the maximum. The schedule should be so arranged that the horse is brought to the maximum about a week or ten days before the test. He should be galloped the training maximum only three or four times, then let down at least two days before the test to leading and short canters in order to keep the muscles supple.

The days on which the horse is not galloped should be devoted to long walks in hand, or, if the horse needs further work in dressage, he can be worked mounted. The only provision is never to tire him on his off days but allow him full opportunity to recuperate.

Sample Schedule for Conditioning.

A sample schedule for conditioning a horse for a steeplechase is here offered as a guide solely, as the work given any individual depends upon the individual, his condition, and the particular event for which he is being trained:

For the first week and each succeeding week during which the distance is increased:

Monday: —Long walk over slopes in hand.
Tuesday: —Gallop.
Wednesday:—Long walk in hand.
Thursday: —Walk and canter.
Friday: —Gallop.
Saturday: —Long walk in hand.
Sunday: —Rest.

For weeks in which distance is not increased:

Monday: —Gallop.
Tuesday: —Long walk in hand.
Wednesday:—Gallop.
Thursday: —Long walk in hand.
Friday: —Gallop.
Saturday: —Walk and canter.
Sunday: —Rest.

The above is merely a guide and should not be considered an absolute rule. There is no absolute rule with horses. Each individual must be carefully considered and work increased or decreased according to his physical state or temperament. If the horse shows signs of rounding into top condition too early, work must be decreased to avoid the possibility of his going stale.

In conditioning for the Equestrian Championship "Championnat Equestre" the foregoing schedules are also applicable. The distance galloped should rarely exceed ½ mile. The off days can be used in perfecting the horse's schooling and jumping. However, in working a horse for this event, every effort should be made to complete his education in these two latter requirements sufficiently early to have the period of gallops for wind as free as possible, giving him only enough schooling and jumping to keep his memory fresh.

For horses with uncertain feet or legs, where the facilities are available, swimming can be substituted for gallops. The resistance offered to breathing, by the pressure of water against the lungs, develops the wind while the resistance offered by the water to the forward and back play of the horses' legs develops the galloping muscles. A swim of 150 to 200 yards is analogous to a half-mile gallop. Swimming is a satisfactory substitute for galloping, but is not by any means as effective, and should only be used in place of the gallop when absolutely necessary.

The Philippines

Major Vicente Lim, 45th Infantry (Philippine Scouts)

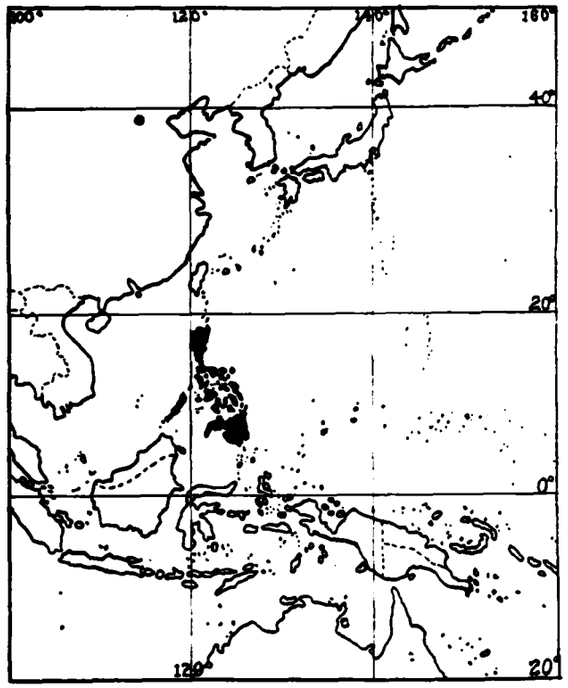
NOW-A-DAYS when commercial expansion is of paramount interest to the first power nations, countries of sparse population and still untouched natural resources have assumed special interest. These "industrial vacuums," as Dr. Bond so aptly termed them, are too few for the countries that need them; hence the increased demand for them.

Tucked in between the Pacific and the China Sea is such an "industrial vacuum" commonly called the Philippine Islands. Peopled by Malayans with a mixture of Chinese or Spanish blood, the archipelago has been constantly under the influence of a stronger power.

The history of the Philippines is full of struggles to be free from bondage, always unsuccessful but never completely repressed. For more than three hundred years the Spaniards ruled the archipelago, implanting the Catholic religion in all the islands except Mindanao. Church and State were very closely united, and by the 19th Century the Church had become so powerful that the Archbishop of Manila was the real ruler in the islands, and the Governor General but a figure-head. On account of this increased temporal power and the vast estates acquired by religious corporations, the missionaries who at first were the protectors and educators of the Filipino people were changed into opponents of their progress and enlightenment, because of extreme conservatism and the fear of loosening the ties that bound the Filipinos to the Church and Spain. As a result there was a widespread revolution in 1896. It was then that Emilio Aguinaldo became the leader of the Filipinos. Unable to cope successfully with the situation by means of arms, Primo De Rivera, recently Dictator of Spain, entered with Aguinaldo and the other Filipino leaders into a compromise which left matters in a state of suspended animation until the United States declared war against Spain in 1898.

One bright May morning the battle of Manila Bay gave victory to Commodore Dewey, who immediately blockaded the city of Manila. Far from his base, with no army to support him, Dewey gave 30,000 rifles to Aguinaldo, to whom he had furnished transportation from Singapore through the mediation of the American consul in that city. Aguinaldo persuaded the Filipinos to fight with the Americans, as he said the great American Commodore had promised him the independence of the Philippines. This was later denied by Dewey in the congressional investigation. During the blockade, and while the American soldiers were on the way, the Filipinos were conquering the small Spanish posts all over the islands. When the first contingent of 10,000 American soldiers arrived, only the city of Manila remained under the Spanish flag, and it was besieged by the Filipinos who were aided by Admiral Dewey.

The arrival of the American Army under the command of General Merritt, with definite instructions from the President, changed this relationship of mutual helpfulness to watchful suspicions. After the surrender of Manila, in order to minimize the possibility of friction, the Filipino forces were told to keep out of the city limits, and thus, Americans within and Filipinos without, the two forces faced each other for five months of increasing friction. Finally hostilities broke out in what is known as the Philippine Insurrection, which lasted until 1901. With that unsuccessful



struggle still fresh in their minds, the Filipinos thrill at the thought of immediate and absolute independence.

An observer with eyes only for external features would be right in saying that surely the Filipinos should be thankful to be under the American flag. During the 28 years of American tutelage, the islands have undergone an almost incredible transformation. In government, Filipino participation has been increased so that at present only the governor general, the vice governor, several judges in the supreme court and courts of first instance, and a few bureau chiefs, are Americans. The Philippine legislature and all the provincial and municipal authorities are composed of Filipinos. The influence of the efforts of the United

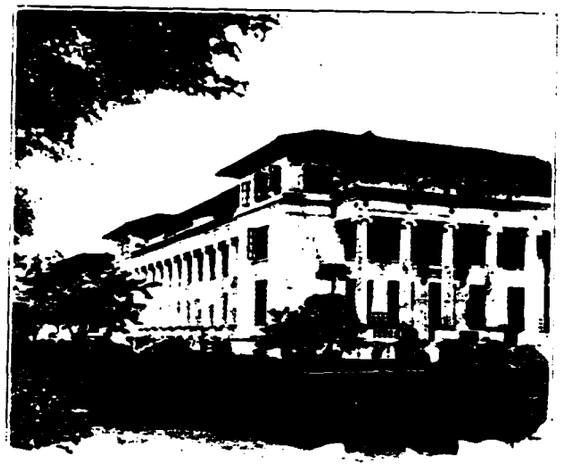
States to establish self government in the Philippines has extended far beyond the limits of the archipelago. It has reached every part of Asia, where the people dream of free institutions and representative government; it has brought hope and inspiration to millions of subjugated natives, who see in these new ideas a promise for the future; it has shaken seriously the colonial offices of European countries. Indeed no news of the Philippines and its development was allowed to appear in any periodical in the colonies; yet news of the beneficent innovations filtered through India, Malaysia, and even in Asia Minor. Representative Hindus say that the Indian movement for home rule has been largely due to American policy in the Philippines; the pressure of native opinion in Java, Ceylon, and Indo-China, which has led to native participation in government in those colonies, sprang largely from the same source. Mr. Charles Crane, in his report on his mission for the United States to Asia Minor in 1918, states that he found everywhere an eagerness that the United States should accept a mandate for those people in order that the Americans might do for them what had been done for the Filipinos. The Chinese, too, say that their belief in the honor and unselfishness of America is due largely to the Philippine policy.

In education, progress has been almost incredible. Almost before the sound of musketry had ceased, schools were established in which the erst-while antagonists were the teachers, and the children of the insurrectos were eager pupils. In a few years the system of education, patterned after the American system, was in full force. It has been so successful that now English is spoken throughout the islands and it is estimated that more than 2,000,000 Filipinos, or 20 per cent, speak English now whereas after the three centuries of Spanish rule only 7 per cent spoke Spanish. The public school system extends from the primary school in every small *barrio* or district to the University of the Philippines. The principle that underlies this system is that popular education is the life of a nation, a principle for which Rizal, the greatest Filipino patriot, worked and died. Fully 27 per cent of the Philippine revenue is devoted to public education, yet every year there are more pupils than can be accommodated in the schools. Just as the greatest legacy of Spain to the Filipino is Christianity, so America's greatest contribution to his civilization is the diffusion of the English language and American ideals in the Islands.

The great increase of school attendance is due to the fact that more children are finding an opportunity to go to school than ever before, on account of the growth of commerce and industry brought about by improved conditions of transportation, finance, public order, and the opening of markets. Statistics show that from 1909, when the Payne Bill established free trade between the United States and the Philippines, the gross trade of the Philippines nearly doubled for the first three years, and went on increasing until in 1920 it reached the remarkable total of $300,000,000.

If the savings of the people can be taken as an index of their prosperity, figures of the postal savings bank established in 1907 will be most interesting. By 1913 it had 40,000 depositors and more than $1,500,000 on deposit; in 1920 there were 107,000 depositors and the deposits totalled about $4,000,000.

But the advantages have not been wholly on the side of the Philippine Islands. I have heard it said that the Islands have been and are still a source of expense to this country and a weakness to its national defense. This is far from being true. The great expense incident to the American occupation and Philippine Insurrection was the logical outcome of the Spanish-American War; therefore it can not properly be placed as a debit against the Philippine Islands. After peace was established, all expenses of the insular government were paid from local revenues, and the only direct expense of the United States has been the cost of maintaining of a portion of the Army and the Navy in the Islands, and in building island defenses. But even if the Philippines were eliminated, the Navy could not be decreased, because of our extended coast line, the Panama Canal, and possessions in the Pacific such as Alaska, Hawaii, and Guam.



The University of the Philippines at Manila. Evidence of the American Influence.

Possession of the Philippines awakened the interest of the American people in the Orient, and subsequently led them to take advantage of its tremendous opportunities. Thus American trade has rapidly expanded in the Pacific. In the Philippines alone, American trade increased from less than $6,000,000 in 1895 to more than $171,000,000 in 1926. While in 1900 only 5 per cent of the total trade of the United States was with the Orient, it increased to 21 per cent in 1923.

With the coming of the American flag to the Philippines, the United States was compelled to think and act in terms of an Asiatic power. As such it promulgated the Open Door policy, which not only halted the impending partition of China but also gave the United States a place of commanding influence in the destiny of the Pacific. The European powers had for centuries been intrenching themselves in the East to secure its trade. England had Singapore, Hong-Kong,

and Kowloon; France, through its hold on Indo-China, controlled Saigon and Haiphong and the provinces of Kwantung, Kwangsi, and Yunan; Germany had the Bay of Kiaochow; Russia had Dalny, Port Arthur, and the province of Liaotung Peninsula; Portugal held Macao; and Japan secured Formosa and Korea. With the Boxer uprising in 1900 these powers would have had ample excuse to partition China exclusively among themselves, but the United States, through the presence of American troops in the Philippines, was able to rush two regiments of infantry to the scene and thus take active part and voice in the settlement of affairs. This resulted in what is known as the principle of Territorial Integrity of China, which became linked thereafter with the Open Door policy. Without these master strokes of American diplomacy, made possible by the presence of American forces in the Philippines, this country would have lost in the race for trade supremacy in the Pacific; and China would no longer be a nation, but a group of possessions.

The Philippines are therefore of great interest to European powers and the preservation of their colonies because these Islands act as a buffer state that prevents the advance of Japan into the Islands of Oceania. The United States, by its possession of the Philippines, holds in her hands the balance of power in the Pacific. In view of these facts the solution of the Philippine problem is mingled with that of the Far East as a whole, and its successful outcome will mean the preservation of peace, not only in the Pacific but also of the world.

Let us now turn our attention to the economic value of the islands of the United States. The tropical position of the Philippines and the great fertility of her soil make its future development of special interest to this country. Continued prosperity in the United States makes the necessities of life more numerous and complicated, and manufacturers are becoming more and more dependent upon tropical products. A partial list of these imported products which enter into American social and industrial life includes sugar and molasses, rubber and gutta percha, vegetable oils, cocoanut and its products, tobacco and its products, fibers of all kinds, cabinet woods, coffee, cocoa, fruits and nuts, gums and resins, spices, quinine, indigo, kapok, wood pulp, dye woods and extracts, pearl shells, sago, rice, sponges, tan bark, and others. The United States consumes more tropical products than any other nation in the world; its annual imports of wood and raw materials from the tropics amount now to more than $2,000,000,000. The Philippines today furnish about $100,000,000 of this import. According to experts, the Philippines can successfully grow all these tropical products and can supply the United States in sufficient quantities to free them from dependence upon foreign countries, with their tariff regulations and restrictions.

Today the Philippines hold a natural monopoly of Manila hemp, which is essential in the manufacture of binder twine and many other rope articles. As one planter expressed it, Mindanao alone could produce enough hemp to bind the entire wheat crop of America. It could also produce almost unlimited quantities of maguey and other fibers. The Islands are among the largest producers of copra and cocoanut oil, so indispensable in many food products. The forest wealth is now 100 years over-ripe, and only awaits cutting in order to supply the world's fast diminishing store of hard woods.

But of all these products rubber is the most interesting. Americans consume 75 per cent of the world supply of rubber. In 1923, when England levied an export tax on rubber grown in her tropical possessions, commodities made out of it went skyrocketing in price, and manufacturers here went frantically in search of lands in which to grow their own rubber. It was then found out by experts that there are 1,500,000 acres of potential rubber land in Mindanao capable of producing 300,000 tons of rubber, or about two-thirds of the annual rubber consumption of the United States.

These facts show the possible economic value of the Philippines to the American people as a source of supply for tropical products. Geographical proximity to China, destined to be the world's greatest market, makes the Islands the best trade base for American products in the east. Lord Northcliff, who visited Manila shortly before his death, said, "The interest of most Americans in the Philippines is sentimental, but the British and Australians know Manila as probably the finest distributing center in the East, not excepting Hong-Kong."

Admiral Hilary P. Jones testified before the Senate in 1924, "The Navy considers that we must possess bases in the Philippines. They are vital to our operations in the western Pacific—thus so vital that I consider their abandonment tantamount to abandonment of our ability to protect our interest in the Far East."

In view of all these facts, we can clearly see that the possession of the Philippines by the United States has resulted in big gain both for Americans and Filipinos. The work of America in the Philippines is one that any nation might be well proud of, an epic of achievement unprecedented in world history. It has meant to the Filipinos peace and security, progress and prosperity, liberty and opportunity. On account of a better standard of living, a happier frame of mind, and a more general prosperity, the present Filipino generation is stronger in constitution, more equable in temperament, and broader in conceptions. To Americans it has meant more business opportunities, a wider sphere of influence, and greater importance as a world power.

It is therefore of paramount importance that the Philippine problem be solved to the satisfaction of both parties. This problem, however, is surrounded by an artificial atmosphere. The good intentions of America are vitiated and misinterpreted by not a few Americans, well intentioned enough, who, when demonstrating that the separation of the Philippines from America would be a calamity to the former, have not been always thoughtful about the self respect and susceptibilities of so sensitive and high spirited a people as the Filipinos. Thus, instead of touching their better nature and enlisting their self interest, they

succeed only in hurting their pride and arousing their passions. Such a course has aided no one but those who find zest in animosity. Distrust replaces confidence. The Filipinos are made to feel the necessity of self defense. Americans are made to appear in the light of foes rather than friends, of condescending masters rather than willing helpers. With so baneful an atmosphere, it is not astonishing that in spite of the Filipinos' deep feeling of appreciation for the blessings America has given them, they have raised a cry against the continued relationship with their benefactors. Several formulas have been presented for the solution of this problem: the three best known being: (1) complete and immediate separation; (2) permanent annexation; and (3) complete local autonomy, with eventual separation. Whatever formula is taken for the solution, it must fulfill three responsibilities: (1) the responsibility of the Filipinos to themselves to keep their country a fit place in which to live; (2) the responsibility of America to the Filipinos to give them a chance to live as a nation in a reasonably safe and satisfactory manner; and, (3) the responsibility of America to herself to make morally sure that her possible withdrawal from the Philippines will not open the way to conflict in the Pacific which might develop into a world conflagration.

Equitation and Sports in European Schools

By Major Norman E. Fiske, Cavalry

IN methods of equitation European Cavalry schools differ widely both in theory and instruction practice. Each has developed its own system, although the influence of one on the other is often apparent. Basically, the difference lies in the wide divergence of opinion as to the proper location on the horse of the center of gravity of the rider's weight. Generally speaking, there are two contradictory ideas on this subject: the one taught in the past by French, German and Austrian riding masters, and now best expressed by the method taught in Germany, and the other, that originated and developed by the Italian school.

The Italian method is based on the argument that the horse in his natural state carries most of his own weight on the forehand, and that any additional weight should be placed on his back proportionately so as to preserve this natural and proper distribution. Since the position of the saddle is necessarily determined by the physiological structure of the horse, the weight of the rider can be displaced far enough forward only by adjusting the stirrups quite short and by keeping the body in a forward position well out over the forehand. In this position the buttocks are out of the saddle at all gaits faster than the walk and the shock between horse and rider is absorbed by the hinges at the waist, knee and ankle. The center of gravity of the rider's weight is high and security of the seat is maintained by the grip of the knees and lower legs.

The German theory on the other hand presupposes that the rider should sit well down into the saddle and keep the center of gravity as low as possible. To this end the stirrups are long and the body held erect. Shock between horse and rider is absorbed by suppleness in the hips or loins, or both, and security of seat is maintained by the low position in the saddle, the flat of the thigh against the saddle skirt, and the clinging of the thigh and buttocks to the saddle. Certain exercises are prescribed to develop the horse and to assist him to readjust himself to the resultant unnatural distribution of weight carried.

Which of these two basic concepts is best adapted to military equitation is still a much discussed question. A military method should provide for:

***a* Conditioning of the horse, necessitating outdoor work over varied terrain.**

***b* Full control over the horse *with one hand* at all gaits and in all changes of equilibrium.**

***c* A secure seat enabling the rider in any crisis to stay with the horse as long as the latter keeps his feet.**

***d* Distribution of the weight of the rider so as to cause the least possible fatigue and discomfort to the horse without sacrificing control and secure seat.**

The Italian method comes nearer to fulfilling these requirements; but though it is ideal for show ring riding it should, for military purposes, be modified, increasing the length of the stirrup to give additional security and greater control over the horse even at the expense of an accurate distribution of weight. This modification, however, is a slight one—in fact the Italian officer himself often makes it when in the field on maneuvers.

A good and satisfactory method for military riding is essential but it is of equal importance to make that method universal in the service so that instruction may be standardized and a large group of capable officer and non-commissioned officer instructors developed who can at mobilization impart this standardized instruction to recruits in minimum time.

While the method of riding taught in each European Cavalry school differs in details, it is true that there is a general trend toward the adoption of Italian ideas. At the present time the Polish school is closest to the Italian. Sweden has adopted the forward seat for all outdoor work, retaining the German position for riding hall exercises and schooling. Spain has evolved a composite seat halfway between the Italian and that taught at Saumur. Germany is actively experimenting with the Italian method but so far it has not found much favor with the older instructors and is not being taught to the students. Belgium and England are not as yet influenced by the Italian ideas.

Mounted Sports and Competitions

Sports and equestrian competitions form an integral part of the program of all the schools and are used extensively as a means of developing riders and of teaching horsemanship. England goes in for sports more than the other schools. The school is in the midst of England's famous fox hunting country and during the season the students and instructors alike hunt almost every day with one or another of the well known hunts that meet within riding distance of the school. Toward the close of the season each hunt has its point to point races in which the officers at the school compete. When the hunting season closes polo begins and continues throughout the summer. The polo played at the school is not of the high goal caliber seen at Hurlingham but it is nevertheless quite good and compares favorably to that at our own school.

Sweden and Germany maintain drag packs and hunt them for instruction purposes. In Sweden the drag courses are especially long and difficult. Poland and Belgium have no fox hounds. In Spain a pack is maintained by the Royal Court and officers of the school may ride, but hunting is not a part of the instruction and only a few of the officers ride habitually.

Racing is popular everywhere except at the German school. In Sweden, Poland, Belgium and Spain the training of steeplechasers is part of the course of instruction. Special military race meetings are held in

these countries and gentlemen's races are often run on the local tracks. British officers ride in the military and hunt point to point races.

Polo is played only in England and Spain. At the latter school it is part of the training for advanced course students. Cavalry officers of other countries are interested in polo on account of its acknowledged military value in training riders and horses but they hesitate to adopt it because of the expense involved. Italy may in the future establish polo as a military sport at Rome, Pinerolo and Udine, the three principal cavalry centers. The plan has been under consideration for some time and steps are being taken to put it into effect.

Equestrian competitions are conducted on the same principles in all of the countries except England. They are of three distinct types, each one differing from our horse shows. American officers have competed in contests of this kind only at the Olympic games and on certain other occasions when our equestrian team has taken part in competitions in continental Europe. The three types are as follows:

1 Jumping competition (*concours hippique*) over long and varied course with time a consideration.

2 Individual training competition (*concours de dressage individuel*) in the execution of school movements including those of the "haute ecole" such as the passage, pirouette and piaffer.

3 Equestrian championship (*championat de cheval d'armes*), sometimes referred to in Olympic competition as the "three day event" because it entails on successive days a schooling phase, a road march and cross country phase and a jumping phase.

The rules for these contests have recently been standardized by the Federation Equestre Internationale. The president of this organization, M. Hector, has recently transmitted copies of the rules to the Chief of Cavalry.* In view of the approaching Olympic Games and the probable continued participation of American teams in these events in Europe, the adoption of the rules *in toto* for our own military competitions would be an idea well worth considering. Our horses and riders would then be trained along the same lines as their foreign competitors and preparation for the Olympic Games would cease to entail unusual effort now necessary on our part. Both the *concours hippique* type of jumping and the equestrian championship event are of much more value in military training than the corresponding hunter, jumper and officers' charger classes usually seen at military horse shows in our country, for they are conducted outdoors at high speed over long courses and over varied obstacles of both height and breadth and they require for success bold riding, complete control of the horse and excellent condition on the part of both horse and rider. Since the competitions are standard and cash prizes are offered, horses may be rated and handicaps imposed on the basis of the amount of winnings. Standardized competitions held annually at our various army centers would attract many competitors and develop many horses and riders.** Competition of this nature would then be available to almost all officers instead of being limited as at present to riders detailed on the Horse Show Team for international competition.

*The Cavalry Association is the American organization holding official membership in the Federation Equestre Internationale. The rules here referred to have been received and a completion of the translation will be published in THE CAVALRY JOURNAL.—EDITOR.

**This plan was followed in the 1st Cavalry Division Horse Show this fall. See account in the "Sports" section of this issue.—EDITOR.

Co-Ordination of the Attack

Major-General J. F. C. Fuller, British Army

AS a brigadier it occurred to me one day, after the close of the collective training season of 1930, to consider what I had found to be the weakest link in the harness of my regimental officers. I soon came to the conclusion that it was planning, and more particularly planning in the attack, which to-day includes so many uncertain factors—increased fire power, new arms and imaginary ones. I feel that as regards this weakness most brigadiers will agree with me, and though I in no way pretend to be an expert of any kind, as a basis of thought and argument I have written the following brief paper. In it I do not intend to go into detail, but, instead, to elaborate a few general rules of guidance which are common to most forms of attack.

First, it must be recognized that cooperation between the arms is largely the result of coordination in the plan; second, that an attack is like any other physical operation. For example, take carpentry. A carpenter has an idea in his head, he has tools to work with and material to work on. In the attack there must be an idea in the mind of the commander, an idea as to what he intends to do; there are various arms—his tools—and the material is represented by the enemy and the ground. There is, however, one great difference; part of the material—the enemy—is alive and working against the plan. His plan is the unknown quantity, like immensely exaggerated stresses and strains in the carpenter's wood.

To coordinate simply means to work, to plan, that is in harmony, for no plan is purposely elaborated to create discord. If fighting were altogether like carpentry a plan could be an exact one, like a blue-print or a drawing; but this in fact is exactly what a plan cannot be, and because the material is alive it has instead to be, not an inexact, but a flexible plan. That is one which can be adjusted to circumstances—and be it remembered that common *sense* is nothing more than action adapted to circumstances.

The plan must also be a simple one, or as simple as possible, because if simple it can be more readily adjusted. How simple it is depends almost entirely on the object of the attack. A carpenter may be called upon to make a packing-case or a cabinet, the one is a much simpler piece of work than the other; yet the simplest piece of work can be done in a complicated way should the carpenter possess little understanding. Simplicity in war is one of the tests of efficiency because, as in carpentry, it saves time and material.

We thus arrive at three fundamental ideas in planning, namely:

(1) The plan must carry out the object;
(2) It must be as simple as possible;
(3) And as flexible as possible.

If soldiers will remember these three points, a foundation of rock will be laid to their planning.

What now is exactly meant by flexibility? Flexibility is like elastic, it is power to move where you want to without shattering your plan.

If the enemy can stop your plan working, in seven cases out of eight your command will become rigid and fixed. Conversely, to fix the enemy is the first step towards gaining flexibility. Therefore flexibility is gained by so distributing your arms that the chances are that you will fix the enemy before he fixes you.

How is this done?

The first thing to do, which is obvious, is to find the enemy and find out all you can about him, and never rest content that you know enough of his affairs, and never suppose that you know all of them. Never paint a mental picture of what the enemy is going to do, that is imagine something which you do not know for certain, and then act as if it were a true picture. Buying fakes in war, as in the sale room, is not a paying proposition, and when you create your own fakes and "mug" yourself into believing that they are master-pieces, no one will sympathize with your loss.

The second thing to decide is where you intend to attack and with what force. You have got to attack to hold, and you have got to attack to hit. Should you surprise the enemy you will hold him morally in place of physically, and greatly economize your force. But in such cases remember that should your surprise fail, lack of physical clinch may bring the whole of the enemy's forces on top of you: therefore the more risky a surprise is, the stronger must be the reserves wherewith to meet the unexpected, and they must be located in such positions as will enable them at the shortest of notice to clinch.

Thirdly you have got to protect your attacks. All attacks require a defensive, or protective, base to work from. "The whole art of war," says Napoleon, "consists in a well-reasoned and extremely circumspect defensive, followed by rapid and audacious attack." The protective troops are the bow and the offensive the arrow of the attack, for though the protective troops do not propel the offensive ones forward, they do break down the resistance to their advance, which is much the same thing in the end.

Lastly you must be prepared to meet the unexpected, therefore you will require reserves.

There are consequently three categories of troops in every attack:

(1) The attackers divided into those who hold and those who hit;
(2) Troops which protect the attackers;
(3) And reserves.

Your plan of attack is therefore an equation between these three forces, the object and the enemy. Consequently it needs much working out. The usual mistake is to look upon the attackers as a close-up and the reserves as back-ground detail. This is altogether wrong, and may be compared to fishing with a rod the top joint of which is heavier than the butt end. It almost always leads to loss of control. Napoleon once said: "I attack to be attacked." What he meant was that he threw forward a small fraction of his forces for the enemy to bite on, and when his adversary's jaws were fixed he moved up his large reserves—the capital of his tactical bank—and struck his real blow. Here is another saying of his: "Victory is to him who has the last reserve."

Now comes what would appear to be a difficult question to answer. Where is the decisive point of attack? For this point is, so to say, the pivot of the entire operation.

The decisive point is the rear of the enemy, and not his front. It is always the rear, and when it is impossible to attack the enemy's rear, then the point selected must be in relationship to this true goal of the decisive attack. That the rear of an enemy's army is the point to hit at should be obvious. If I can stab a man in the back, that is the safest way to kill him. Should he see me coming, and should I be able to maneuver him into a bog, and so fix himself, I can equally well carry out this operation. This should accentuate the stupendous value of fixing an enemy in war. The vital point in an army is its rear, just as the vitals of a man are in rear of his skin. If I hit a man on the jaw it is to upset the rear of his head; if I fire a bullet at him it is to hit his vitals and not his skin—to scratch an enemy only annoys him.

Frequently an enemy has a very strong jaw and a very tough skin, and as its front more often than not protects its rear, it is impossible to strike directly at the vital point. In such cases a flank should be chosen, that is a spot near to the rear, and when this is impossible and a frontal attack has to be made, then its object is not to destroy the enemy's front, but to penetrate it so that flanks may be created and a way opened to his rear.

We thus obtain three orders of attack, which in importance are:

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Now we must turn to another equation, that of our force in relationship to the nature of the ground and the enemy's force.

To take the ground first. It can either assist or resist you, also it can assist or resist the enemy. Its assistance and resistance is threefold in nature. It can facilitate or impede.

(1) Observation;
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Today we have two main categories of attacking troops—armored and unarmored, or petrol-driven and muscle-propelled. The first carries its own protection, the second does not. The second however, as far as infantry are concerned, can move over more difficult ground than the first: but their average speed over normally good going is far less. Surely then it is obvious that:

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A carpenter uses his tools according to the nature of the work and the material he is working on. He may sometimes use a chisel as a screw driver, but only if he is lacking the latter tool. Each of his tools has a purpose, so also has each weapon. By means of a combination of tools he fashions his packing-case or cabinet: so also in war it is through a proper combination of weapons that battles are *economically* won. Every tool is paramount in its own proper sphere, but no single tool is paramount over all other tools—so also with weapons, there is no God Almighty in the Ordnance Department.

Use weapons according to ground, and you cannot go far wrong.

To turn now to the enemy's force. You may or may not know what the enemy intends to do; nevertheless the ground and his communications will often tell you what he is likely to do. Step into his shoes and look at the ground from his position. As you are going to attack him he is probably on the defensive. Should he not be, then you must force him to defend himself before the decisive blow falls. The weakness in the defense is that the defender cannot be certain where the blow will fall. As long as he can move, he may be able to frustrate the attack; therefore fix him.

This now becomes your first problem. What part of your force will you require for this operation? It does not necessarily follow that you will require an equal or a superior force to the one you intend to fix. The whole art in this operation of war is to fix a large force by means of a small force. You can do one of three things:

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(2) To support the attack or the defense:
(3) To pursue or cover a retreat.

When you have settled this point you can then turn to your decisive attack, and see what you have left over for it.

It may be said, "This is a very cautious way of proceeding." My answer is that now-a-days there are so many bullets flying about on a battle field that caution has become a high virtue, as high as if not higher than courage itself. Few things are so expensive as a shattered attack. Large numbers in the decisive attack are not usually essential, but the following factors are:

(1) Surprise, which morally multiplies numbers;
(2) Concentration of force, which means superiority of weapon-power at the point of attack;
(3) The fullest possible protective power to safeguard the attack.

Having settled all these points, we must consider two other factors without which coordination can remain but a theory. These are control and supply.

The brain is the chief controlling organ of the body. Note where it is placed. At the forward or top end of the body. In battle the force headquarters represents the brain, and they should be as far forward as it is safe to put them, and all the subsidiary headquarters—artillery, tank, and cavalry—should be close up to them. Remember that the force headquarters controls all the arms and services; remember also that every yard of cable which is unnecessary holds within itself a possible break down. Distance in war is not so much a matter of miles as of communications. What is your power to communicate? That will tell you what your radius of action is. In your plan of attack you must remember this, for loss of control means paralysis.

Lack or loss of supply may mean starvation, and in battle itself supply is largely a matter of getting ammunition up, and its converse—getting the victims of the enemy's ammunition down. It is no good launching an attack which cannot be supplied; and remember also that in this day of aircraft, armored forces, and motor cars, the front of an enemy does not necessarily protect its supply services. To cut these out is like removing the stomach from the body. They are the ultimate goal of the decisive attack or pursuit, for an enemy without bread and beef is soon reduced to a starving mob.

Coordination in the attack, which may be defined as the intimate relationship between functions, whilst cooperation is the intimate relationship between actions, depends on:

(1) Correct distribution:
(2) Rapid control;
(3) And adequate supply.

Distribution is arms fitted to ground in relation to the enemy and the object. Its aim is:

(1) To pin the enemy down—initial attack;
(2) To keep a reserve in hand—for unexpected attacks;
(3) And to carry out the decisive attack—final attack.

Control depends on:

(1) Full information of the enemy;
(2) Full information of our own troops;
(3) And rapid communication of orders.

Supply depends on:

(1) Adequate transportation:
(2) Good and safe roads:
(3) And traffic control.

If these four trinities are remembered, the result will go a long way toward establishing unity of action which is the ultimate goal of coordination in the attack—"United we stand, divided we fall."

The National Guard

Colonel S. C. Vestal, Coast Artillery Corps

TWO of the six primary reasons for ordaining and establishing the Constitution of the United States, as laid down in the preamble, are "to provide for the common defense" and "to preserve domestic tranquility." With these ends in view, Congress was vested with power to raise and support armies, to provide and maintain a navy, and to provide for organizing, arming, and disciplining the militia. There is not the slightest hint in any phase or clause of the Constitution that Congress should rely upon the state governments to provide money for these purposes.

When, after the close of the Revolution, our independence was recognized by Great Britain and the British troops had left our shores, Congress resolved to try the experiment of carrying on government without an army. The Army was reduced to eighty men, who were kept in the service for the purpose of guarding arsenals and public property. Congress soon learned that war lies ever in the background, even in the most peaceful communities. Its dreams of universal peace were interrupted by a formidable outbreak in Massachusetts, known as Shay's Rebellion. Some of the grievances alleged by the rebels were, in the opinion of historians, reasonable; and some were absurd. Whilst rebellion was raising its head in Massachusetts, those in control of Congress were insisting that we should not be prepared for defense, that we should influence others by example rather than by exciting fear, and that we should look to safety not by carrying arms, but by an upright, honorable course. The national government was impotent and could give no aid to the state authorities.

The conduct of the venerable Samuel Adams in the crisis is interesting and instructive. The means employed to excite the people to rebellion in Massachusetts were the same as he himself had used at the beginning of the American Revolution. Those who stood by the state government felt that Adams had much reason to be embarrassed; but there is no evidence that the old revolutionist hesitated for a moment. While the public suffering was undoubted, it was the result of the Revolution, which he himself had done so much to promote. Whatever injustice existed could be remedied by constitutional means, without revolution, a thing which, in his opinion, could not be said of conditions under British rule. As the danger increased, he declared for the sternest measures. The entire state militia was called out, and was well commanded; for the veteran officers of the Revolution stood stoutly by the side of law and order. General Benjamin Lincoln, who had received Cornwallis' sword at Yorktown, made a thirty-mile march in midwinter, stole upon the rebels in a snow storm, scattered them, and ended the new revolution.

Adams opposed the extension of mercy to some of the rebels, who were tried and convicted. He laid it down as a rule that while in monarchies treason or rebellion might admit of being pardoned or lightly punished, on the other hand, men who rebelled against a republic ought to suffer death; which brought forth the remark of a humorist that it makes a great deal of difference as to whose ox is gored.

Samuel Adams did not have the illusion that republics should be able to forego the use of armed force in maintaining their authority. Many years before Shay's Rebellion, in the days when he, as a member of the Massachusetts Assembly, was leading that body toward open rebellion against the authority of Great Britain, the fishermen of Marblehead rose in rebellion against the authority of the Assembly, burnt a smallpox hospital, and defied the local magistrates. This small rebellion collapsed before it became necessary for the Assembly to resort to the use of armed forces but not before Samuel Adams had learned the great secret that revolutionists cannot tolerate other revolutionists, else complete anarchy will ensue. This incident taught him that liberty cannot be kept unless armed force is ready to protect it. It is a curious fact that the Southern Confederacy, which was founded upon the right of revolution, was itself confronted with incipient rebellion against its own authority upon more than one occasion, and that President Davis met the issue squarely as Samuel Adams had met it.

Shay's Rebellion had more influence than any other event in bringing about the convention which met in Philadelphia in 1787 to frame a national constitution. It is well to note that the danger of civil war, rather than foreign war, brought about the meeting of the Constitutional Convention.

The wise men of the time, under the leadership of Washington, determined to found a government clothed with the necessary powers to meet the problems of peace and war. Washington and his friends did not want war, but they were living in a world of realities; and they realized that war may be the only alternative to losing the national life in a chaos of anarchy. They knew that no great nation had ever been able to establish and maintain a permanent form of government without armed power to sustain it.

The purpose for which the convention met may be determined from a statement of Mr. Randolph of Virginia, whose draft of a constitution was accepted by the convention as the basis of its deliberations. Mr. Randolph stated that the character of the new government ought to be such as to furnish security against foreign invasion and against dissensions between members of the Union, or seditions in particular states; it ought to procure to the several states various

blessings which they could not procure for themselves individually in their isolated situations; it should be able to defend itself against encroachment; and the Constitution should be paramount to the state constitutions. A careful consideration of this statement, and of the history of the convention, shows that the great question before the convention was to fix the status of the Army in the State.

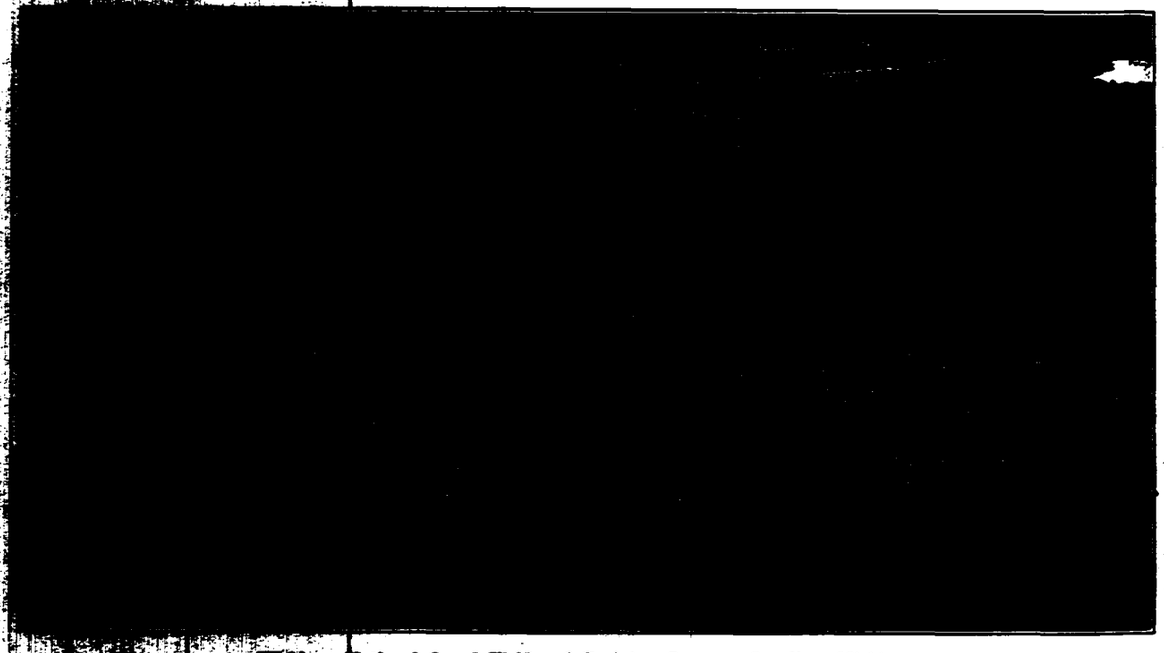
The convention decided to give power into the hands of the majority by putting the sword into the hands of the United States and by defining treason against the United States to consist in levying war against them, or adhering to their enemies, giving them aid or comfort. Thus a minority which appeals to the sword commits treason. According to the republican theory as embodied in the Constitution, right and power, or right and might, are vested in the majority, and are held to be synonymous.

In the Constitutional Convention, Mr. Madison pointed out that the militia was a national concern which should be provided for in the national constitution. He asserted that the states were neglecting their militia; and that the more they should be consolidated into one nation, the less each would rely upon itself for its own safety. He observed that if the states in turn should rely upon the counties for the care of the militia, the militia would be neglected altogether.

The great problem before the framers was to provide an adequate and effective force available for minor emergencies, state and national. It was not desirable that the States should have separate armies; and a provision was inserted in the Constitution that no States should keep troops or ships of war in time of peace without the consent of Congress. How then could the States be given in ordinary times the services of a military force, supported by the general government? The framers sought to reconcile a partial control over the militia by the States in time of comparative safety, with a complete control on the part of the federal government in times of danger.

The last thing that the framers contemplated was that the militia which they provided for in the Constitution should be paid for by the state governments. There was a manifest inconsistency in putting upon the federal government the care of the common defense, and in leaving in the hands of the state governments a considerable part of the nation's military forces. But the Convention went upon the principle that those who pay are masters of those who are paid. So long as the federal government should support the militia, it could control it for all needful purposes.

The Convention set up the frame of a republican form of government for the United States; and made it the duty of the United States to guarantee to every State in the Union a republican form of government and to protect each State, on the application of the legislature or of the executive when the legislature cannot be convened, against domestic violence. Thus in the last resort the United States is the guarantor of domestic peace in each State; but the States themselves are, within certain limits, sovereign nations; and each State has, in its sovereign capacity, the problem of enforcing the will of the majority. Each State therefore needs its own military force. It was the design of the framers of the Constitution to furnish this force to each State at the expense of the United States. At the same time the framers had a deep



Michigan National Guard Field and Training Camp at Grayling, Michigan

fear lest an ambitious president might use his power over the militia for his personal aggrandizement; and it was felt that state control over the training and the appointment of the officers of the militia would avert this danger. One of the enumerated powers of Congress was skillfully framed with these ends in view.

In addition to being authorized to raise and support armies Congress was given power to provide for organizing, arming, and disciplining the militia, and for governing such parts of the militia as may be employed in the service of the United States, reserving to the States respectively, the appointment of the officers, and the authority to train the militia according to the discipline prescribed by Congress. It was plainly the intention of the framers of the Constitution that the United States should pay all the expenses of the militia. There is, of course, nothing in the Constitution or the laws of the United States which prevents any State from expending money upon its own militia.

General Knox, Washington's first Secretary of War, recommended that all ablebodied men between the ages of eighteen and forty-five years should be enrolled in the militia and should receive eighty days training during the first three years of their service, and thereafter four days annually until they should reach the age of forty-five. This was to be a federal force, armed, equipped, and subsisted at the expense of the United States. Its members were to be required to take an oath of allegiance to the United States and to their respective States. General Knox merely proposed to carry out the plain and evident meaning of the Constitution.

In 1792 Congress passed an act establishing a uniform militia throughout the United States. The great fault of this law was that it did not provide for the payment of the militia by the United States. This fault was the father of all the other faults in the bill; because the United States, as long as she left to the States the burden of supporting the militia, could not impose standards of efficiency upon officers and organizations. Strangely enough, this primary fault of the bill has passed almost unnoticed by those who have criticized it; and it is difficult to find constructive criticism recommending that the federal government should pay the militia, as the Constitution plainly contemplates.

By the law of 1792, the United States sought to place upon the States the whole expense of a large military force to provide for the common defense, and to preserve domestic tranquility. In doing so she abdicated that authority over the militia which comes from the relationship of employer and employee. For more than a century the United States contributed little or nothing toward the support of the militia. When one remembers the failure of Congress to follow the intent of the makers of the Constitution by paying the militia, it is difficult to feel much indignation at the failure of the state armies to come to the rescue of the federal government effectually in time of peril. The law, not the Constitution, was at fault.

In his first annual message to Congress, President Jefferson observed that for defense against foreign invasion the number of the regular forces was as nothing. In his opinion the militia should be the great reserve of the country to meet great emergencies. He stressed the necessity at every session of Congress to amend the defects which might show themselves in the militia law. And he added: "Nor should we now or at any time separate until we can say we have done everything for the militia which we could do were an enemy at our door." Unfortunately he made no specific recommendations in regard to the militia. If the Regular Army had cause to complain about the neglect of the national government, the militia had much greater cause. The United States did actually support its Regular Army; but the militia, the reserve force upon which the nation depended in time of great emergency, received no monetary assistance whatsoever from the United States. The idea that the federal government should support its militia had passed completely from the minds of men. More than a century was to elapse before the idea was revived.

Near the close of our Civil War, delegates, comprising the leading men in both political parties in Canada, met and drew up a document which, when passed by the British Parliament, became the Constitution of Canada. The framers of the Canadian Constitution saw in American secession an awful warning against leaving the central governmet too weak. Accordingly, the deviations of the Canadian Constitution from the American Constitution are chiefly in the direction of an increase of federal power. Hamilton's plan for a national militia was adopted in full. The Canadian provinces have no forces, land or naval. The militia is paid for by the central government, which appoints the officers and commands the forces in peace and war.

With a few minor amendments, the American Militia Law of 1792 was the law of the land until the passage of the Dick Bill in 1903. The Dick Bill provided for the issue of arms, ammunition, and other supplies to the militia by the United States government, and for the participation of the militia with the army in joint maneuvers. It provided federal pay and allowances to militia attending maneuvers and taking courses of instruction.

Beginning in 1903, joint camps of instruction and maneuvers, in which the Regular Army and the National Guard took part, where held biennially. Thus, after 1903, the National Guard was subsidized by the federal government in a small way. Within a year after the passage of the Dick Bill, more than a hundred thousand new rifles and carbines were issued to state troops.

Under the Dick Bill, the organized militia was primarily under the control of the state authorities; but it was at the disposal of the United States for limited periods and for certain purposes. By the terms of the bill, the President must call the militia into service through the governors. There was no law to coerce the governors, who could refuse to heed the call, as

happened during the War of 1812 and at the beginning of the Civil War.

The Dick Bill was amended in 1908. More liberal allowances in arms and pay for personnel attending maneuvers were provided for; and power was given to punish by court-martial any officer or enlisted man for failure to answer the call of the President. Thus the national law was made to extend to the individual. The 1908 amendment provided, among other things, that the militia should be called into the service of the United States in advance of any volunteer force raised to meet any emergency that could not be met by the regular forces.

The great purpose of the framers of the Constitution in furnishing each State with a military force at the expense of the United States was not fully carried into effect until the passage of the National Defense Act of 1916, when Congress gave a monetary meaning to the word "provide" by taking the National Guard into federal pay.

In the voluminous literature upon our national defense, I have been unable to find any recommendation that the United States spend money in increasing the size of the militia or National Guard, and establishing national control over it, before February, 1916, when Colonel Roosevelt advanced the idea in an article entitled, "A Sword for Defense." This preceded by only a few months the National Defense Act of that year, when the idea was carried into effect.

The federalized National Guard, created by the Act of 1916 as amended by the Act of 1920, is a supplement to the Regular Army in the first line of defense. The personnel is paid by the United States. The States receive arms and equipment from the federal government, and allotments of money to cover the expense of target practice and other activities. In return, they assume an obligation to conform to the regulations of the War Department for organization, training, and discipline, and to turn over the troops to the nation when, in the judgment of the President, their services are needed. It is contemplated that they shall have enough training to be converted into a cohesive, effective fighting force in time to repel the first attack of an enemy.

The National Defense Act has found means to give the federal government complete authority over National Guard units in case of a great emergency. The National Guard may be "called" into the federal service for a short period of duty within the territorial limits of the United States without losing its state identity. When "drafted" into the federal service it becomes a component part of the Army of the United States.

As we review the history of the militia of the Constitution, we see that there has not been an accretion of power over the militia on the part of the federal government, but rather a return to principles not only laid down in the Constitution but clearly in the minds of the framers themselves as shown by their expressions on the subject. We have a National Guard today such as the framers contemplated when they sat in Carpenters' Hall in Philadelphia. It is truly national. The oaths of officers and men show clearly the precedence of the interest of the Union over all other considerations. Stability of government in each State is assured by the presence of an efficient National Guard, subject to the orders of the governor; and the National Guard is ready at the call of the President to meet national emergencies. Such was the conception of the role of the militia formed by the able and patriotic men, with Washington at their head, who signed the Constitution.

It would be far from correct to infer that the militia during the long interval prior to 1916 did not contain organizations that were efficient. The reverse was true. As an example, the Tennessee militia, led with Napoleonic energy by its commander, Major General Andrew Jackson, was a highly efficient organization; it proved itself so in the campaigns against the Creek Indians in 1813-14 and against the British at New Orleans. Other instances could be given. The circumstances in each case, however, were special and due in no way to the superintending action of the federal government. In spite of the handicap of a bad militia law, the militia, practically unaided by the federal government, formed the thews and sinews of the volunteer army of 1898; and its personnel contributed largely to the volunteer force of 1899-1901.

Our wars prior to the World War were fought practically by the volunteer forces and the Regular Army. The World War found us with the hitherto unused power of the Constitution newly resurrected by the wise law of 1916; and a new type of troops appeared upon the battlefield. National Guard divisions took part in the Marne Defensive and in the St. Mihiel, Meuse-Argonne, and other great offensives. The designations of these divisions have not been lost. They are living things.

We may rest assured that should any war come upon us in the future, divisions of National Guard origin will be found upon all the great battlefields alongside those of the Regular Army and the Organized Reserves. Whenever the Army shall be called into action, National Guard divisions will appear in our first line of defense.

SPORTS

Olympic Prospects at 1st Cavalry Division Horse Show

By Brigadier General Walter C. Short

WITH representatives of the nations's mounted regiments along the southern border participating, the ninth annual horse show of the El Paso-Fort Bliss Horse Show and Polo Association was held in October in the picturesque Howze Stadium at Fort Bliss, Texas. The show was of unusual interest in that it brought together several prospects for the equestrian events of the 1932 Olympic Games and provided General Henry, charged with the supervision of the American equestrian participation in the Games, an opportunity to witness these horses in action.

While retaining the general plan of former years, an attempt was made to meet the requirements of the Olympic competition by including in the program the Equestrian Championship and Prix de Nations events of the last Olympic games.

The Equestrian Championship required three tests: schooling, a demonstration of endurance, and jumping. The schooling consisted of some fifty simple movements requiring about eleven minutes for execution. The endurance phase consisted of ten and one half miles over roads and paths, a two-mile steeple chase and five and one half miles across country, in all eighteen miles of varied going over some twenty-eight moderate but solid obstacles and water jumps, in one hour and thirty-eight minutes. The jumping test, which was designed merely to test the condition and serviceability of the horse on the second day following the severe endurance test, was over a course which contained a bank jump, a water jump, a water in-and-out, seven other obstacles of varied types about three feet ten inches in height. The Equestrian Championship was won by the 10th Cavalry team, made up of Lieutenants Walter Burnside, R. W. Curtis and T. F. Trapolino, on *Tornado, Trinidad* and *Star*.

The Prix de Nations jumping competition was held over a course sufficiently long to permit maintaining a fifteen mile per hour gallop and containing a bank, water jump, water in-and-out and seven other jumps of solid appearance, with a maximum height of four feet seven inches and a maximum width of nine feet over water. The maximum width over the oxers and triple bar jumps was six feet, with an average width of five feet. The contestants competed in teams of three and the failure of any contestant to fulfill the requirements at any point resulted in the elimination of the entire team. The event was won by the 8th Cavalry team composed of Captain Jess G. Boykin, Lieutenant H. A. Luebbermann and Corporal V. M. O'Neil, riding *Woodrow, Charlie* and *Bunny*.

The two Olympic events added much color to the show. Teams competed from the 1st Cavalry, 5th Cavalry, 7th Cavalry, 8th Cavalry, 82nd Field Artillery and Special Troops, 1st Cavalry Division. Many visitors from the border stations attended.

Other events of unusual interest were the Horsemanship Hunt Team won by the 5th Cavalry. Lieutenants Charles G. Meehan, R. A. Drake and E. H. J. Carns on *Overall, Blue Jacket* and *Saplin;* the 2d Cavalry Brigade Trophy won by the Special Troops. Captain H. G. Holt, Lieutenant H. L. Kinnison, and Lieutenant T. S. Riggs on *Peter Pan, Squire* and *Wave;* the Jumper Championship for the Division Commander's Trophy, won by Lieutenant Ballantyne on *Red Wing* with Sergeant Paul D. Evans second on *Peter Pan;* the U. S. Cavalry Association Cup for the highest number of individual points in the entire show, won by Major R. L. Creed, 8th Cavalry; the General Howze Trophy, won by Sergeant Paul D. Evans, Special Troops; the 82nd Field Artillery Trophy, won by Sergeant Walter Murrell, 82nd Field Artillery on *Clysmic;* the 1st Cavalry Brigade Trophy, won by the 7th Cavalry and the Military Trophy, for the highest score in all military events, won by the 8th Cavalry.

The Show Championship was won by the 8th Cavalry. The 7th Cavalry captured both the Senior and Junior 1st Cavalry Division polo tournament championships in the contests held in connection with the horse show.

International Army Polo at Mexico City

RETURNING the visit made by the Mexican Army Team to Marfa last summer, a polo team of players from the Eighth Corps area visited Mexico City in November on the invitation of the Mexican government. The team, accompanied by officers, ladies and civilian friends were extensively entertained during their stay by official and personal friends in the capitol.

Three games were played, resulting in victory for the Mexican Army in each. The American players returned with high praise for their opponents. Not only was the quality of their play superior but the training and selection of their mounts was impressive.

First Game, November 21

U. S. Army: 4		*Mexican Army: 12*
Capt. C. E. Boyle, 12th F. A.	No. 1	Captain Navo
Lt. Harry Cullens, Sp. Trs., 2d Div.	No. 2	Captain Perez
Capt. T. E. Voigt, 7th Cav.	No. 3	Senor Julio Muller
Capt. John Smith, 2d F. A. Brig.	No. 4	General J. J. Quinones

Second Game, November 23

U. S. Army: 2		*Mexican Army: 6*
Lt. P. D. Hoskins, 7th Cav.	No. 1	Captain Nava
Lt. L. G. Smith, 1st Cav.	No. 2	Captain Peres
Capt. T. E. Voigt, 7th Cav.	No. 3	Senor Julio Muller
Capt. John Smith, 2d F. A. Brig.	No. 4	General J. J. Quinones

Third Game, November 25

U. S. Army: 8		*Mexican Army: 10*
Lt. P. D. Hoskins, 7th Cav.	No. 1	Captain Gracia
Lt. R. P. Gunn, Air Corps	No. 2	Captain Nava
Capt. T. E. Voigt, 7th Cav.	No. 3	Captain Quintin Reyes
Capt. John Smith, 2d F. A. Brig.	No. 4	Captain Perez

The Army Horse Show Team in International Shows

As a climax to its season's activities, the Army Horse Show Team appeared at the three great shows of the fall season which cooperated in securing the presence of foreign teams for international military competition. The Boston show took place October 28,-November 1, the New York National at Madison Square Garden November 5-12 and the Royal Winter Horse Show at Toronto November 19-27. Teams representing the armies of Sweden, Hungary, Germany, the Irish Free State, Canada and the United States took part in the series of shows.

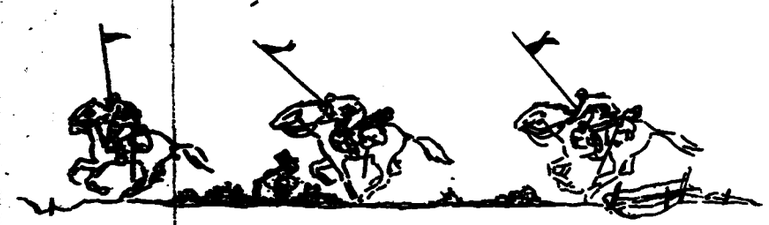
Coming in close succession, the results of the International classes of the three shows give a very fair indication of the comparative performances of the contending teams. The only winners of first places in the twelve International military events were Germany and the United States. Of the first places, Germany took four and the United States eight. The German team reached its peak in the New York show, taking three of the five International events. These included the International Military Trophy (Team event) which might be considered the most important team event of all the shows, and the International Individual Military Championship which likewise was the featured event for individual international competitors.

The riders composing the United States team were: Major H. D. Chamberlin, Captain W. B. Bradford, Captain J. T. Cole, Lieutenants J. W. Wofford, E. J. Thompson and Gordon Rodgers, all Cavalry.

Below are tabulated the winners of first places in the International military classes of the three shows.

Summary of 1st Places in International Horse Show Competitions, Boston, New York and Toronto Shows, Fall of 1930.

Event	Show	Won by	Horse	Rider
$1000 Championship International Military Stake	Boston	U. S.	*Dick Waring*	Maj. Chamberlin
Prize of International Officer's Jumpers	Boston	U. S.	*Suzanne*	Capt. Bradford
			Muskogee	Capt. J. T. Cole
International Military Trophy (Team Event)	Boston	Germany	*Derby*	Lt. Hasse
			Dedo	Baron von Nagel
			Kampfgesell	Lt. Momm
Jos Charbonneau Challenge Cup	New York	U. S.	*Joe Aleshire*	Capt. Bradford
$1000 International Military Stake	New York	U. S.	*Tan Bark*	Maj. Chamberlin
Prize of International Officer's Jumpers	New York	Germany	*Derby*	Lt. Hasse
			Kampfgesell	Lt. Momm
International Military Trophy (Team Event)	New York	Germany	*Kampfgesell*	Lt. Momm
			Dedo	Baron von Nagel
			Derby	Lt. Hasse
International Individual Military Championship	New York	Germany	*Dedo*	Baron von Nagel
International Military Handy Hunter	Toronto	U. S.	*Nigra*	Lt. Wofford
International Officers' Team, Three Abreast	Toronto	U. S.	*St. Paul*	Capt. J. T. Cole
			Proctor	Capt. Bradford
			Babe Wartham	Lt. Wofford
International Officers' Team Event	Toronto	U. S.	*Geraldyn*	Lt. Wofford
			Suzanne	Capt. Bradford
			Tan Bark	Maj. Chamberlin
International Military Broad Jump	Toronto	U. S.	*Babe Wartham*	Lt. Wofford



CURRENT TOPICS

The Cavalry Journal Becomes Monthly

THE Executive Committee of the Cavalry Association, at a meeting held December 10, 1930, voted to change the CAVALRY JOURNAL from a quarterly to a monthly publication. In conjunction with this change, it was decided to change the format of the JOURNAL to one more suitable for a monthly magazine and more appealing to the present day advertiser. With this issue, Number 1 of Volume XXXX, publication on the new basis commences.

In its new form the CAVALRY JOURNAL will present almost two and a half times the amount of text previously published per year without *change in the amount of dues or subscription*. The increased space available will allow a wider range of articles to be given the readers. Publication monthly will permit the JOURNAL to be more useful in presenting current information and to keep in more constant touch with the personnel of the Cavalry.

It is believed that the JOURNAL has made a step forward toward greater usefulness. To realize its full possibilities requires the cooperation of the Association members. Contributions to the discussions in its pages, suggestions as to topics for articles, criticisms even, can be made by practically all members. The JOURNAL exists for the benefit of the members of the Association; it will try to give you what you want or need if you will show us where to make improvement and will let us have the advantage of your suggestions.

General Douglas MacArthur

SINCE the last appearance of the JOURNAL, General Douglas MacArthur has taken up the duties of Chief of Staff of the army. The appointment of General MacArthur brings to this high post an officer reared in the army. Born in Little Rock Barracks, the son of Lieutenant General Arthur MacArthur, he first gained distinction by graduating at the head of his class at West Point. Varied and distinguished service prior to the World War included duty with the Engineer Corps, as instructor at the Mounted Service Schools, Fort Riley, with the Vera Cruz expedition of 1914 and two tours on the General Staff. During the World War General MacArthur served as Chief of Staff of the 42nd Division, Brigade Commander, 84th Infantry Brigade and Division Commander, 42nd Division. During this period he was twice wounded in action. Subsequently to the war, he was detailed as Superintendent of the Military Academy, 1919-1922, served in the Philippines to 1925, commanded the Fourth Corps Area, Third Corps Area and Philippine Department. During the World War General MacArthur was awarded the Distinguished Service Cross with Oak Leaf Cluster, the Distinguished Service Medal, and seven Silver Star Citations for personal gallantry in action.

General MacArthur's wide experience and intimate knowledge of the problems of the army and of its personnel assure to us a constructive and progressive period under his leadership. The Cavalry Association extends to him its congratulations on his appointment as Chief of Staff in behalf of the Cavalry officers of the army.

Notice of Annual Meeting

THE annual meeting of the CAVALRY ASSOCIATION will be held at the Army and Navy Club in Washington, D. C., on the evening of January 30, 1931, at eight o'clock. The annual meeting is for the purpose of hearing the annual report of the Secretary-Treasurer, election of officers for the ensuing year, and such other business as may be brought before it. In order to insure a quorum for the transaction of business, all active members unable to be present are requested to fill in the proxy printed below and mail it to the Secretary.

Oliver L. Haines, Major, Cavalry,
Secretary-Treasurer.

PROXY OR NOTIFICATION OF ATTENDANCE

January ____, 1931

I { shall / shall not } be present at the annual meeting of the United States Cavalry Association at the Army and Navy Club, Washington, D. C., January 30, 1931.

I hereby designate the Secretary of the Association or _____ as my proxy, to cast my vote at said meeting, or any adjourned meeting thereof, subject only to the following instructions:

_____

_____

Signature _____

Rank _____

Fill in, tear out, and mail to: U. S. Cavalry Association, 1624 H St., N. W., Washington, D. C.

Professional Notes and Discussion

Method for Representing Fire in Maneuvers

EARLY in the year steps were undertaken at the Cavalry School to improve what may be called the mechanics of maneuver. It was fully realized that the many faults, false actions, and situations which are constantly arising in two-sided combat exercises were almost entirely due to failure properly to indicate fire, and the School accordingly undertook a series of experiments with various devices to overcome this difficulty. Finally there was adopted an ordinary 5-cell, focusing, hand flash light. The use of this light proved successful to an extent that justifies a detailed account of the method of its employment and its effect.

Actual hostile fire is the principal real war factor which is absent in maneuvers. The umpire is provided principally to represent this factor, and upon his judgment of fire effect depends the success or failure of an exercise. Unfortunately, as maneuvers have long been and are now generally conducted, the umpire lacks practically all means to form even a fair judgment of fire effect delivered by ground troops. The means at present afforded him to form his judgment are: what he can see of the dispositions of the opposing force; the sound of blank ammunition fire; information conveyed to him through the umpire net; and suspension of the exercise to talk over matters with other umpires.

Inasmuch as taking advantage of cover is nowadays vital, what the umpire can see of opposing dispositions (unless he moves away from his unit or out of his area, thereby placing himself where he cannot make timely decisions) is for all practical purposes of little value.

The firing of blank ammunition is essential to keep up the interest of the troops, but for umpiring purposes it is generally ineffective or misleading. Blank ammunition does not produce anywhere near the volume of sound of ball ammunition. If the wind is blowing against the fire, it cannot be heard except at the shorter ranges. Blank ammunition is seldom issued in quantities sufficient to maintain throughout the exercise battle fire rates, but even if it were so issued, it would be futile to expect troops to uniformly fit the rate of fire to given situations. Finally, under the best conditions when the blank ammunition firing can be plainly heard and the smoke from the firing observed, it still remains impracticable to satisfactorily or even fairly evaluate the fire; a squad may be creating as much clatter as a troop.

The information gotten through the umpire net (after contact) never has been satisfactory, and little may be expected from this means because of difficulty of prompt transmission, and the fact that the situation, as a rule, has changed by the time the information has been received.

Suspending the exercise, where any considerable number of troops is employed, for the purpose of estimating the situation and making umpire decisions is, of course, as undesirable as it is difficult.

The problem then was to supply a mechanical means of quickly and definitely informing umpires of battle fire effect, when and if laid down. The answer, as above stated, was found in the employment of an ordinary hand flash light and flash lamp. The light of this lamp is plainly visible up to 2500 yards (probably farther) in the brightest sunlight and in any direction relative to the sun. On dull days it is of course even more effective, and has also rather a remarkable mist-piercing quality.

Operation of Flash Light. In using the light the beam was focused to its smallest diameter, and this diameter even at extreme ranges is relatively small, so small in fact that the man using it must aim it at the objective. The beam covers an angle of about 200 mils, that is to say, that when directed on an observer 1000 yards distant the light could not be seen from a point 100 yards to the right or left of such observer. It is obvious from this that the great value of the light lay in its indication of the direction from which fire was coming, and, by the assignment of fire value to each light, in its instant representation of the volume of fire as well. The lights were issued to and indicated the fire of units as follows:

Rifle platoon or major portion thereof—1 flash light only;

Machine rifle platoon or major portion thereof in action as to separate unit—1 flash light accompanied by the waving of a white flag;

Machine gun section—1 flash light accompanied by the waving of a red flag.

The fire of smaller units was represented by the use of blank ammunition. It should be remembered that the lights did not abolish the use of blank ammunition. It was used by all units as heretofore.

The special effects of the employment of these lights were noteworthy. The unit commander knew that the troops against whom he was firing must immediately know and feel the effect of his fire, and that its value was definitely apparent to the umpire with the opposing side. The umpire with the troops receiving the fire and the commander of these troops were instantly informed when they saw the light or lights that they, and they alone, were under that particular fire, and they knew as well the kind and volume of fire. Adding to this knowledge an estimate of the range gave them

data upon which very closely they could evaluate the fire effect and act accordingly.

The general effect of the employment of the lights was: first, to slow down an exercise involving fighting to a reasonable approximation of the rate of progression of a real battle; and, second, almost entirely to avoid unnatural and absurd actions and situations.

Representation of Artillery Fire. Artillery fire was represented by using an observation plane with streamers attached which flew from the artillery firing position over the troops which were being fired on. As it passed over the position under fire it dropped a message to the troops indicating the amount of artillery fire directed on them. This message was transmitted at once through the unit commander to the umpire for appropriate action.

Such success as attended the battle exercises during the last school year was due more to these simple systems of representing rifle, machine gun, and artillery fire than to anything else.

Semi-Automatic Shoulder Rifles

AN extensive test of semi-automatic shoulder rifles of reduced caliber is in progress before a board of officers appointed by the War Department. Two rifles of domestic manufacture are outstanding in performance.

Experimentation to develop a caliber .30 semi-automatic rifle within the weight limit of the present service rifle is in progress. There is promise of success. Caliber .30 is almost essential, due to interchangeability of standard ammunition and war reserves of arms and ammunition. A change of caliber will be made only as a necessity.

Rating Sheet for Polo Players

DURING the past polo season, Colonel George Williams as polo representative at the Cavalry School felt the need for an accurate record of the work of the various players in order fairly to rate them. To fill this need he developed the simple form shown below as the basis of the system.

By using this system for an appreciable length of time a polo representative is able to visualize the varying characteristics of the players: to spot the brilliant, selfish player who habitually hits to himself; to locate and correct, or remove, the man who costs more in fouls than he is worth in goals; and finally, to note and advance the player often unremarked who plays for his team rather than for the grandstand.

Team, Position and Name of Player	*Goals*		
	Periods		Total
	1	2	
No. 1			
No. 2			
No. 3			
Back			
Sub.			
Sub.			
Goals by Pony			
Goals by handicap			
TOTAL GOALS			

No. 1			
No. 2			
No. 3			
Back			
Sub.			
Sub.			
Goals by Pony			
Goals by handicap			
TOTAL GOALS			

Symbols for Scoring: (By Placing the Appropriate Symbols in the Proper Column Opposite the Player Indicated, the Record is Complete.)

1 = Goal.
x = Assist in making goal by placing ball for team-mate.
0 = Saving goal by hitting ball, crooking enemy or riding him out.
f = Foul.
s = Safety.
S1 = Goal from safety.
S2 = Goal from foul.

Organization Activities

1st Squadron, 3d Cavalry, Ft. Ethan Allen, Vt.

During the latter part of August and first of September the First Squadron, Third Cavalry made its annual practice march. The itinerary this year was through the most scenic part of New England and covered territory where regular Army troops had never been seen before.

The march terminated at Fort Ethan Allen Artillery Range where all regular army troops in the Corps Area were concentrated for maneuvers.

Upon return to the post, mounted pistol and saber courses were completed for record for the first time in several years, and Troop B participated in the Goodrich Trophy Training Test.

3d Cavalry (less 1st Squadron), Fort Myer, Va.

The readiness of the command to take the field was tested December 4th, which was designated as M-Day. Complete equipment was taken and all reports prepared for departure. Both in time required to move and in the inspections made, the results were most satisfactory.

The garrison had the pleasure of a visit by the Hungarian and German Riding Teams.

At present the regiment is engaged in the conduct of schools and in practice for the winter exhibition rides, scheduled to commence January 16th.

4th Cavalry, Ft. Meade, S. D.

Several projects which were sadly needed in the post have recently been completed, the major one being the installation of the new telephone system.

Other improvements include the hard surfacing of about one and one-third miles of road in the post proper. The stretch of road extending completely around the main parade ground has been graded, gravelled and given an application of thick asphalt. The construction of the new $18,000 War Department Theatre is nearing completion and will be equipped with the latest "talkie" apparatus. This project, when completed, will be a treat for members of the garrison during the long winter evenings.

5th Cavalry, Fort Clark, Texas

A platoon of Troop E, 5th Cavalry commanded by 1st Lt. C. A. Thrasher was winner of the Leadership Test for Small Cavalry Units completed on November 25th. Platoons from the 1st, 5th and 12th Cavalry competed in the test which was held this year in the vicinity of Black Knob.

The platoon from Troop E, 5th Cavalry made the commendably high score of 87.1500%.

The results were particularly gratifying in view of the unusual amount of rainy weather during the period devoted to training of this test.

6th Cavalry, Fort Oglethorpe, Ga.

The annual practice march of the regiment was made during the period October 29-November 17, 1930, to Nashville, Tennessee, and return. Total distance marched 314 miles. It is interesting to note that the 6th Cavalry has marched approximately 1500 miles through the states of Georgia, South Carolina and Tennessee during the past 15 months.

Troop B, 6th Cavalry, Captain G. X. Cheeves, commanding, completed the Goodrich Trophy Training Test on December 10, 1930.

7th Cavalry, Fort Bliss, Texas

In late October the regiment took to the field for a five day maneuver with the 8th Cavalry. The last day of maneuvers was a brigade problem under command of Brigadier General W. C. Short.

Troop F, under command of Captain Apgar, represented the regiment in the Goodrich Trophy Test.

Since winning both senior and junior polo tournaments, the ponies and players have been given a rest as far as polo in the regiment has been concerned.

8th Cavalry, Fort Bliss, Texas

As one of the measures to provide the cavalry quota of enlisted men for the fourth Air Corps increment. War Department orders made inactive the Eighth Cavalry band, effective November 15th, after sixty-four years active service.

The regiment is proud of its record of winnings in the recent First Cavalry Division Horse Show. The Eighth Cavalry team, led by Captain Jess G. Boykin, was high scorer of the show.

During the past quarter the Eighth Cavalry has taken the field twice, once for regimental maneuvers and once for the brigade maneuvers.

10th Cavalry, Fort Huachuca, Arizona

At the Cavalry Division Horse Show, two 10th Cavalry youngsters walked away with the two big events of the show. 2nd Lieut. Thomas F. Trapolino, on *Buddy*, won the Prix de Nation and 2nd Lieut. Raymond W. Curtis, on *Trinidad*, won the Equestrian Championship for the second time. The 10th Cavalry won several other places among which were the teams winning first in the Equestrian Championship and third in the Prix de Nation. Much credit for the success of the Buffaloes goes to 1st Lieut. Walter Burnside for his untiring efforts as coach and captain of the team.

11th Cavalry, Presidio of Monterey, Calif.

On October 31, 1930 Colonel Roger S. Fitch, 11th Cavalry, bid farewell to the regiment, the Presidio of Monterey and his active career in the United States Army. A review was held in his honor the last morning of Colonel Fitch's active command, every unit of the garrison being present at the march past in full strength down to the last and newest recruit.

There has been no polo activity since the team returned in September from their successful Santa Barbara trip, but it is believed that around Christmas week sufficient civilian talent to afford competition will arrive and that playing will be resumed on the Del Monte Fields.

12th Cavalry (less 2nd Squadron) Fort Brown, Texas

An innovation in training in ceremonies has recently been inaugurated by the Post Commander whereby twice each month an organization puts on an exhibition drill. The drills are alternated with the formal guard mounts ordinarily held on Friday of each week. Troops are left free to work up such features as will have both training value and at the same time be entertaining to the public.

The Annual Mid-Winter Polo Tournament got under way at Fort Brown on December 7th, when the Harlingen Team met the Reynosa (Mexican) Team. Both of these clubs are newly organized and considering their short experience in polo put up excellent performances. Reynosa came off victorious in the initial game with a score of 4 to 2.

14th Cavalry (less 1st Squadron), Fort Des Moines, Ia.

The 14th Cavalry (less 1st Squadron) returned to Fort Des Moines on the tail of an artie gale at 10:30 A.M., September 26th, completing a nineteen day march and maneuver to Clear Lake, Iowa, and return.

The regiment covered 263 miles in ten marches and each day's march was made under war conditions—i. e. a situation continuing from day to day was developed to test the troops in patrolling, scouting, attack, defense, pursuit, retreat, change of direction of march, covering forces forward displacements, communications, all phases of machine gun uses, etc.

At all times part of Headquarters Troop acted as the enemy, outlining enemy positions with flags and armed men using blank ammunition. All troops used blank ammunition at all times, and in this way realism was obtained and the interest of the personnel was kept up to a high degree.

1st Squadron, 14th Cavalry, Fort Sheridan, Ill.

Great interest was shown in the first Post Polo Tournament ever held at Fort Sheridan. Large crowds witnessed the Sunday games despite the, at times, cool weather. The week day games were also surprisingly well attended.

Five locally handicapped teams competed in a round robin tournament lasting until November 9th. This is the latest that outdoor polo has ever been played in this section of the country. No difficulties were encountered and the tournament was a great success.

The quality of remounts reaching this Squadron from the remount depots is steadily improving. Captain H. L. Branson, 14th Cavalry, has just completed training and conditioning thirty remounts, practically all of which turned out to be excellent polo prospects and are now being played regularly.

103d Cavalry, Pennsylvania N. G.

Within a few weeks two of the most important training conferences of recent years were held.

At Philadelphia, the Officers of the Philadelphia Unit gathered to discuss the "Lund System" of Training as used since the encampment. At this conference Colonel John W. Converse delivered a remarkable lecture entitled "Teaching and Training" explaining in detail the above system and its practical application.

Similarly at Lock Haven on November 30th, Major Wolfe presided over the Officers of the Second and Third Squadrons; both meetings were fraught with practical information and suggestions contributed by the keen observations of the officers who are responsible for the application of the system.

104th Cavalry, Pennsylvania N. G.

Two Troops of the Regiment, Troop E of Chambersburg, and Troop L of Punxsutawney, will shortly be housed in new administration buildings and stables which are in course of construction under the direction of the State Armory Board. Approximately $100,000.00 is being expended for the two units. With a few exceptions, the Regiment is now adequately quartered in nine cities and towns in which the scattered units of the Regiment are located.

The training of specialists is receiving particular attention in the training schedules of all organizations during the period November 1 to April 30. Master schedules in the form of questions and answers were prepared by the Regimental Staff and issued to all organizations. Every specialist in the Regiment is covered in these lessons.

107th Cavalry, Ohio N. G.

The 84th Brigade and Regimental Headquarters, both being located at Cleveland, the officers of the two staffs are holding their weekly drill meetings together, under the able instruction of Major John K. Brown, Cav. U. S. A. Senior Instructor on duty with the 107th Cavalry.

Negotiations are under way by the State of Ohio to provide an indoor mounted drill hall for units of the regiment located at Columbus. A new civilian riding hall has come into being at that city, and it is expected that the Cavalry units will be able to use its facilities for mounted drill during the inclement weather. This will materially assist these units, which have been handicapped for the lack of a mounted armory.

BOOK REVIEWS

COLOSSAL BLUNDERS OF THE WAR, by William Seaver Woods. The MacMillan Co., 1930. 269 pages. $2.50.

The fact that Mr. Woods is an experienced newspaper man might easily be gleaned from the style of this book, a style which wastes no time in searching for rhetorical effects but drives straight to the point. As editor of the *Literary Digest*, Mr. Woods has had ample opportunity to imbibe the newspaper story of the war. In addition, he has consulted original and other reliable sources and, by this procedure, has fortified his position until his statements are well-nigh unassailable.

The book's title sufficiently explains its contents; it is a recital of some of the larger, more important blunders which punctuated the course of the World War. In this recital the author is entirely impartial. Indeed, his method seems to savor of Donnybrook technique—"If you see a head, hit it!" Friend and foe alike are grist to his mill; he even mentions that unconventional march of the American 1st Division.

The author has marshalled his blunders by countries: Part I refers to the contributions of the United States; Part II refers to Germany; Part III to Great Britain and France; Part IV to Russia. Thanks to the newspaper man's nose for news, Mr. Woods has made an excellent selection of the more sensational breaks of the war and has written them into a very readable book. He not only shows how these mistakes were made but also exposes their results.

The great lesson which Mr. Woods draws from all these errors is that they wasted lives. Each blunder of the higher-ups cost human lives which should not have been lost. When he tells of the half-trained officer who tried to march his company in parade formation across a dangerous bridge he addresses every bereaved parent in the land and says, "*Your* boy might not have been killed in the war if *you* had made *your* Congressman give him proper leadership."

That is the note, constantly repeated, which dominates the entire book—that blunders in war are paid for in precious human lives. " * * the casualties of the men in France were double what they should have been if the officers and men had the proper training." The author comes to the logical conclusion that the only remedy, as far as the United States is concerned, is adherence to a suitable program of national defense.

It is too bad that Mr. Woods' book cannot be put into the hands of every person who lost a loved one during the war. It does no good for us, of the military, to preach the same ideas that Mr. Woods does (as we have been doing ever since there *was* an Army) for we are immediately suspected of ulterior motives. But if more good writers would unite to bring home to every American voter the fact that unpreparedness may empty a chair in his own particular home, then America would have a program of national defense suited to her vital needs.

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GEORGE WASHINGTON, COMMANDER IN CHIEF, by Thomas G. Frothingham, Captain, U. S. R. Cloth, 405 & XII pages, with illustrations, 1930. Houghton Mifflin Company, Boston and New York. $5.00.

The preparations for the bicentennial celebration of Washington's birth have awakened a new interest in the great life and accomplishments of our first commander in chief. It is, therefore, opportune and fitting that Captain Frothingham, a student of military affairs, has prepared this book on the military record of General Washington. Among the many biographies of our revolutionary commander in chief this work is unique, in that it is written from the military point of view, with the actual military operations as the guiding theme. The author conscientiously presents the military events in the career of Washington and thus impressively reveals to the reader a vivid and strong picture of the admirable leader and his character. The book has the Macaulay method of general annotation which readily permits the researcher to locate cited items in any of the several existing compilations of Washington's letters and papers. The book is a valuable addition to the already extensive Washington shelf and will serve to counteract the distorted and sometimes erroneous impressions made by some Washington biographers who have presented too many petty arguments and too much insignificant personal color. The reading public will enjoy the book, and military readers will find it valuable, instructive, and entertaining. Many facts, little known, even to the military reader, will be read with interest; for example, "Washington's Six Rules of War," some, if not all of which appear later in more or less the same form, in Napoleon's Maxims. The author has performed a patriotic service in his worthy effort to give an accurate, pleasing measure of Washington's truly great military genius. The reader will finish the book with a deeper appreciation of and a greater reverence for Washington.

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BEDFORD FORREST, by Captain Eric William Sheppard, Royal Tank Corps. Lincoln MacVeagh, The Dial Press, New York. 320 parges. Price $5.00.

Bedford Forrest, dashing cavalry leader of the Confederacy, is one of the outstanding figures of the Civil War. Although largely neglected by our historians, his personality, life and actions, often thrilling, always picturesque, mark him a hero of almost epic proportions. It remained for an Englishman to tell the story of this remarkable man.

Following the trend of modern biographers, Captain Sheppard's skillful pen has produced an interesting admixture of romance, historical novel, and biography. He introduces a number of fictitious characters, and

creates a number of imaginary incidents to provide the necessary atmosphere for his drama. While this adds to the human interest, the wisdom of resorting to such devices is at least questionable in a serious biography. The fact that he carefully lists his fictitious characters for the information of the reader hardly exculpates him.

The author, with consummate skill, has made all his characters, real and imaginary alike, living, breathing beings of flesh and blood. The scenes he depicts pulsate with life and action. Precisely therein lies the risk that, in spite of the author's prefatory admonition, the reader will be hard put, for example, to differentiate between the fictitious Charity Dunn and the flesh-and-blood Emma Sanson. Similarly, the reader will find it difficult to determine where history ends and fiction begins. To that extent the author defeats his purpose of writing history, notwithstanding the historic authenticity of the main events of his narrative.

Captain Sheppard has written a masterful piece of work well worth the reading. He has contributed generously to a better understanding and a greater appreciation of that brilliant American soldier, Nathan Bedford Forrest.

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THE LIVES OF A BENGAL LANCER, by Major Francis Yeats-Brown, The Viking Press, New York, 1930. 299 pages. $2.75.

A truly remarkable book, well-written, interesting, and informative. The story opens with nineteen-year-old Yates-Brown joining a native cavalry regiment, the 17th Bengal Lancers, years before the World War, and carries the reader through a polo-playing, pig-sticking, existence up to his return to England just before the World War. He becomes air observer in Mesopotamia and spends two terrible years as prisoner of war in Turkey. He returns to India and, after leaving the army, seriously studies Yoga. He tells much of Vedic philosophy and discusses in the appendix the eleventh chapter of St. John from the viewpoint of *kali-mudra* (death gesture) a self induced trance.

The book is an absorbingly interesting one for the thoughtful reader.

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THE OLD SERGEANT'S CONFERENCES, by Colonel William H. Waldron, U. S. Army. The Infantry Journal, Inc. Washington, 1930. 152 pages, $1.50.

In this book Colonel Waldron has given a unique treatment of the subjects that he discusses. The Old Sergeant and his wards assemble on the barrack steps after supper. Here the young soldiers bring their problems for solution. The Old Sergeant discusses them freely and frankly out of the wealth of his personal experience. In simple language he points out the pitfalls that lie in the way of the soldier, the Service, and how he may avoid them. Many a soldier serves years in the Army before he acquires the information contained in these conferences, and some never get it.

The chapters deal with the following subjects:

Success in the Army. The path that leads to success, and the rewards that await those who reach the end.

Bad Company. "That talk's made a Christian out of me," remarked Private Sob Sobinsky.

Military Courtesy. It is essentially the same as the code in civil life.

Military Discipline. Which explains this misunderstood and misinterpreted phase of military life so that the soldier can understand it and appreciate the need for it.

A. W. O. L.—Desertion. The value of an honorable —excellent discharge.

And a chapter of miscellaneous information, including customs of the Service and the reasons for the manner of doing certain things in the army.

Here is a book that every soldier in the Army should have as his own, to read and study with an attentive mind. If he does he will learn and appreciate military life; he will find help in avoiding the danger places. Company commanders will find that this book, put into the hands of their men, will help to solve many problems.

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THE REMINISCENCES OF A MARINE, by Major General John A. Lejeune, U. S. Marine Corps. Illustrated with Official and Personal Photographs. 488 pp. Dorrance & Co., Philadelphia. $4.00.

Written in clear, simple English, this is an interesting account of a particularly colorful and comprehensive career in the Naval Service of the United States.

The brief account of the writer's early youth in Louisiana in the period immediately following the Civil War is an arresting story of the tragic era of the Southland that is rapidly fading from our national consciousness. The many episodes in the active life of a Marine, serving under the American flag in Samoa, Cuba, Porto-Rico, Panama, the Philippine Islands, Mexico, France, Germany, Haiti, Santo Domingo, and Nicaragua, are told in an unassuming manner, but never fail to hold the interest of the reader. Particularly dramatic is the account of the wreck of the U. S. S. Vandalia at Apia, in which the author almost lost his life.

The frequent personal allusions to his numerous relatives, which are scattered throughout the book, while revealing his strong, clannish trend and a deep sense of kinship, detract somewhat from its literary merit.

Although the book was written for the general public, real gems for the military student will be found in the chapters dealing with the Battle of Saint Mihiel, the Battle of Blanc Mont Ridge, the 2nd Division in the Meuse Argonne, the March to Germany, and the occupation of the Rhineland. Not only are they historically accurate but they cover these actions from the viewpoint of a division commander who presents some of the actual problems confronting a commander in battle, and indicate his successful solution of these problems.

Any military student of American participation in the World War will suffer a real loss if he fails to read the four chapters covering the period in General Lejeune's career during which he commanded the 2nd Division in action.

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Conditioning Polo Ponies

By Captain L. K. Truscott, Jr., Cavalry

ALL of us have known some good playing pony to "go bad," becoming increasingly difficult to play, more unwilling to check, stop and turn, until finally he develops into a "puller." As a general rule, when confronted with such a problem, the player's first thought is a change of bit, usually for one more severe in order to "find something that will stop him."

Lack of basic training, pushing too fast when green, poor riding, abuse, sickness and injury, undoubtedly account for many spoiled polo ponies, but most pullers are made by playing them when they are not in condition—when they are physically unfit for play.

We have all experienced the pony that plays well for half the period and then starts pulling, the pony that plays better the second period than the first, and the pony that plays well, but tires, and gives out when there is still a minute or two to go. All these are examples of ponies not in condition and physically unfit for play.

When I began playing polo, and later as polo manager in my regiment, responsible for the care and conditioning of polo ponies as well as for the instruction of younger players, I felt most keenly the need of something which would describe for me the practical conditioning of polo ponies, give me some idea of what to strive for, how to recognize condition when I saw it, and outline for me a systematic procedure to follow to achieve the object. I was never able to find in print exactly what I needed and wanted. Nearly all treatises and books examined either treated the subject too briefly to fulfill my need of specific details, or so generally as to make modification for my own particular needs very difficult. This article will attempt to set forth some of these details.

Every polo player and horseman recognizes the importance and value of resting polo ponies that have finished a strenuous season of play. Turning them out to pasture for three or four months with such additional hay and grain as is necessary, enables Nature, the greatest veterinarian of all, to do wonders in healing weary legs, joints sore from concussion, battered mouths, tender and filled tendons, broken and diseased feet, and last, but not least, in restoring disposition which so often grows ragged with staleness near the end of the season.

In this discussion we shall consider only the conditioning of polo ponies, and specifically, only the problem of bringing mature ponies of one or more seasons experience, that have been let down and rested during the winter in pasture or elsewhere, back into condition for a season of active play. The problem of putting young ponies into play for their first season is a part of their training, and their conditioning does not present any particular problems if their work has been continuous and thorough.

We shall discuss condition in general terms, consider the many factors which enter into conditioning polo ponies, and finally present an illustrative and suggestive schedule approximating one which has been used with success.

Condition

When is a Horse in Condition? A horse is in condition when he is physically fit to perform *all* the work required of him in a satisfactory manner, and without detriment or injury to his health and well being. Thus, the draft horse is expected to pull heavy loads at slow gaits for long periods of time. He is in condition when he can perform the maximum amount of work through long hours without injury to neck, shoulders, state of health, or his willingness. The hunter is expected to gallop long distances at a good pace, often in heavy going, and to negotiate obstacles both natural and artificial. He is expected to do this not once, but two and perhaps three times a week throughout the hunting season of several months. The hunter, therefore, is in condition when he can perform the work required in a days hunt, and come out again two or three days later as good as ever, and continue so during the season. The polo pony is the equine gymnast. As Colonel Goldschmidt says in his excellent book *Bridle Wise:* "The highest result to which we can attain in horsebreaking is the finished polo pony. The task demanded of him in activity, prompt obedience, and sustained endeavor places him in a class by himself in the horse world."

The polo pony is in condition when he is fit to perform his task, that is to play one, two or more periods of polo, not once, but two, perhaps three times a week throughout the playing season.

There are, therefore, two aspects to consider in conditioning the mature polo pony; first, making him fit to play at the beginning of the season; and second, maintaining him in condition to give a level performance throughout the campaign of several months.

The problem differs in some respects from that of conditioning a horse for a single race. For example, the race horse must reach his peak on the day of the race and at no other time. The polo pony must approach his peak from the first, but ever maintain a

remain in order to carry on successfully and give a good performance throughout the long season.

In conditioning polo ponies we are primarily concerned with:

(1) *Muscular power; strength.* The pony must be strong, developed muscularly to the highest possible degree, in order to stand the terrific strain of one or more periods of polo two or three times a week throughout the playing season.

(2) *Wind.* Staying power means wind. No matter how strong a horse may be, if he is short in the wind, that is, if he cannot consume all the air required by extreme physical exertion, he can never last the fifteen or more minutes of play during the course of the game.

(3) *Legs and Feet.* Colonel E. D. Miller, in *Modern Polo*, says: "Half the sprains and lameness which occur at the beginning of a season arise from ligaments, tendons, and bones put to unaccustomed work."

Every horseman knows that more horses of all kinds have been rendered useless by disease and injuries to feet than from any other cause.

(4) *Agility. Suppleness.* In addition to muscular power, wind, and soundness of legs and feet, the polo pony must have agility—he must be active and supple to attain the activity and render the instant obedience demanded in polo.

How We Can Recognize Condition

"Indications of Condition. The ultimate test of condition is the ability of the animal to pass a test without undue fatigue. There are, however, certain indications of the condition of an animal which may be readily recognized. An animal in good condition presents the general aspect of good health. It has alert eyes and ears; a fine, glossy coat; soft skin; supple and good muscular development; well let down flanks; a good covering of flesh; a watery sweat which does not lather; a look of undue thirst after hard work; a quick return to normal breathing after severe exercise; a good appetite; and a free, springy gait. The tendons and joints should be smooth and clean, and the legs should neither puff nor swell after hard work." (*Animal Management*, Cavalry School Publication.)

In judgment of condition we are continually guided by the indications of condition as described in the extract quoted. The final test, however, the thing which determines whether or not the polo pony is in condition, is his performance on the polo field. The indications we judge throughout the period of conditioning by close observation, not only of the pony's performance, but of the manner in which he responds to diet and exercise.

Conditioning

The aim in conditioning mature polo ponies preliminary to commencement of the season's play is not only to have the pony physically fit for play when the season begins, but fit to continue playing in good form throughout the season's matches following. He must, however, be "right" to begin with. If he is too fine at the season's start he will become drawn and tired before the season ends. The "bigger" the condition at the start of the season, the better, so long as the "bigness" is well developed and hardened muscular tissue, and not soft flabby flesh or fat.

There is one, and only one, way to condition polo ponies, or any other horse, for that matter, and that is by the judicious combination of sufficient good, wholesome food with the proper amount of exercise. Fat and flabby flesh cannot be changed instantly into hard tough muscle, and neither can flesh and muscle be built upon the overly thin and emaciated frame over night. The process in either case cannot be hurried, but must continue systematically over an extended period of time.

Relation Between Feeding and Exercise

Several authorities voice the opinion that most polo ponies are overfed and under exercised, and that more failures among polo ponies are caused by overfeeding than is generally recognized. Such may be the case, but as a result of my own observations, it appears that in most cases, particularly among army teams, the reverse is true, and that ponies are overworked and underfed. That is, that they are given more fast work, at any rate, than their physical condition or the food they assimilate warrants, although the amount of work might well be insufficient for the same horse in better flesh and in good condition.

It is by the judicious combination of work and feed that we make the horse physically fit. In order to develop muscle, harden ligaments, tendons and bones, much exercise is necessary, and the more work he gets the better, providing that the amount and kind is graduated, starting with little and gradually increasing within the limits of the horse's capacity, so that he remains sound and in good health. If the horse gets sufficient work he can safely be given all the food he will eat. Keep good bright hay in front of them at all times except while at work and during the ten or twelve hours immediately preceding the strenuous physical exertion of a game. Feed an ample amount of oats, bran, chop, and grass to keep them "on the mend" and feeling fit all the time. It is poor practice to reduce the amount of feed given the polo pony simply in order to save work for the man, if there is any possibility of giving him the necessary amount of work.

It is true that many horses are disagreeable, and often difficult, to play because they are too "high," and if we continue to play ponies in such condition we risk spoiling or injuring them. The answer lies, not in reducing the amount of feed, other than temporarily, but in increasing the amount of work the pony receives between games. Feed and work go hand in hand; when performing full work the horse should receive full feed. When not performing full work, or none at all, as a result of sickness, injury, or for any other reasons, his feed, or at least the concentrates (oats, bran, corn, etc.) which create the energy that finds its expression in exuberance of spirits.—"highness,"—should be reduced correspondingly.

As Colonel Miller says in *Modern Polo:*

"We have therefore, three good reasons for giving our ponies lots of work, namely, to make them fit, to keep them sound, and to render them comfortable to ride."

Time Required

The time required to condition polo ponies for a season's play depends on many factors, such as his condition to begin with, his age, his size, temperament, and so on. The mature pony from six to twelve years old which has run in pasture during the winter months, and which has been fed a maintenance ration of oats and hay, will be in fair condition to begin with, and he can usually be placed in fit condition in from four to six weeks. The extremely run-down, overly thin horse, usually a poor keeper at best, presents more difficulties because it is necessary to build him up in flesh and he cannot be given the amount of work necessary to develop muscle and harden ligaments, tendons and bones, without affecting the addition of flesh. Such a horse requires from eight to sixteen weeks. The problem of conditioning is further complicated by the presence of infirm and unsound ponies. The time required for their conditioning depends upon the amount of work they can stand; the more they must be favored, the longer the time required to condition them.

The average time lies somewhere in between the two extremes. I like to allow eight or ten weeks for an average string of say 20 ponies. Bringing them in from pasture the 1st of February you may count on having them ready to play the 1st of April. The first four games are used as a sort of progressive test of condition, playing the pony rather than the game and graduating the amount of play according to requirements of the ponies. In this way they approach their top form by the middle of April. As a rule there is some tournament in sight for which it is desired to have the ponies near their peak. Therefore, a reserve should be maintained as it is much easier to fit a horse while he is still on the upgrade than it is to bring him back when he is on the down grade, overworked, and stale.

Exercise

The natural gaits of the horse are the walk, trot and gallop, and the various muscles are in each gait variously exercised. In order to develop every part of the horse's frame, therefore, all three gaits should be employed.

Walking. Walking is the principal exercise in conditioning. It develops muscles, eliminates fat from muscular tissue and hardens legs, tendons, ligaments and bones, thus enabling them to stand the severe strains of play without injury. Walking is excellent for developing and toughening that source of so many polo ills, the foot.

"The principal gait should be walking and then more walking." The time spent in walking should start with periods of one-half to one hour in the first week of work, and be gradually increased until the polo pony is receiving at least two, and better, three or four hours a day. Where possible the route followed during exercise should always be over rolling ground as the work up and down slopes is a valuable aid in developing muscular strength and wind.

The Trot. The trot increases the muscular development, eliminates fat, supples muscles and tendons, and develops wind. Too much fast work runs flesh off horses without changing the soft flesh into muscle. The trot should be used in conditioning to increase physical exertion gradually, developing muscular power and wind, preparatory to faster work. I consider trotting an important exercise and of value for the reasons outlined, and also because a brief period at the trot relieves the monotony of long periods of walking for both the horse and the groom.

Starting during the third or fourth week, the walking periods of one and one-half to two hours should be broken by a period of ten minutes at the trot. This can be gradually increased until near the end of the conditioning period the walking is broken by two such periods, and they can be lengthened to fifteen minutes as required.

The Gallop. Cantering and galloping increase muscular strength and development, remove fat, increase the stride, and by the violent physical exertion of the lungs, clear the lungs and develop wind. Wind means staying power and the physical exertion required of the lungs in galloping is the only way of developing that power.

Beginning in the fourth or fifth week of the conditioning period, the polo pony should get a short gallop daily, and near the end of the conditioning period may well get two periods daily. To begin with the periods should be short, not over five minutes, and the periods gradually lengthened, as conditioning progresses, to ten or fifteen minutes by the end of the training period.

Unless done for the specific purpose of reducing flesh, the polo pony in conditioning should not be galloped to the point where he lathers or sweats excessively. More walking and trotting is a better method of reducing fat, as soft flabby flesh is thereby changed into muscle and not run off in sweat. In the beginning it is well to gallop only until the horse breaks a good sweat, thereafter increasing the lengths of periods gradually until he can gallop ten or fifteen minutes without difficulty.

In addition to developing muscular power, strength, wind, legs, and feet, we must also develop the pony's agility: supple him so that his muscular activity is increased, and he is made willing to render instant and prompt obedience on the field. This is best done during the periods of galloping, though all the work is not by any means done at the gallop. The pony should be put progressively through all his school movements at the various paces. He is thereby suppled as is his mouth, jaw and poll and he is disciplined and made willing to render the obedience required. Schooling hurts no polo pony. The great majority suffer from lack of schooling rather than from an excess.

Ponies should not be allowed to slouch or "dog" through their exercise. The walk should be as brisk as possible without jogging; the trot should be quick and require as much exertion and impulsion as possible consistent with quiet going, and the gallop should be either collected, or extended sufficiently to keep the horse's attention on the business at hand.

(To be concluded in the next issue.)

New Developments in Warfare

General C. P. Summerall

METHODS of welding men and material into combat units change constantly. The fundamental element—man—has remained practically constant throughout the history of warfare; but weapons have varied in accordance with the progress of science. The tendency of the present age is strongly towards an ever increasing application of scientific means. Automotive, aeronautical and chemical developments during recent years have introduced elements that will materially affect the composition of future armies, particularly our own.

The Mechanized Force

A new element foreseen as a development in the armies of the future is the mechanized force.

One of the surprising phenomena of the World War was the great gain in the relative power of the defense, due largely to the increased fire power of automatic weapons combined with obstacles and the absence of exposed flanks. The attack first sought to overcome this disadvantage by huge expenditures of artillery ammunition designed to cover completely the entire area held by the defense and crush the defender on his positions. The long preliminary bombardments, however, eliminated any surprise effects, the defender withdrew his principal forces to a second position *out of* range of the attacker's artillery, and the attack succeeded in gaining only a few kilometers, frequently at the expense of ghastly losses. As a result there developed on the western front a prolonged period of stalemate, during which neither side was capable of gaining a decisive victory. Then the idea of advancing the attack by the aid of armored vehicles took form in the tank, which gained its first great success at the Battle of Cambrai.

The World War tank was a vehicle of such low speed that it could only be employed as an immediate auxiliary to the infantry. The success which was attained with this weapon in its primitive stage of development has led to the expectation that with the improvements certain to take place as the result of more careful design and automotive progress, the tank will become an instrument of sufficient power to break through fortifications, restore mobility to the battle-field, and restore to the offensive its superiority over the defensive power made of combat action. Tanks with a speed of from 20 to 30 miles are now undoubtedly be developed in the near future. Increases of speed will have two important effects: it will render the tank with comparative immunity from direct hits by artillery; and it will facilitate its separation in part from immediate attachment to infantry units in order that advantage may be taken of its superior mobility. From the latter action, it will follow that from being an immediate auxiliary of the infantry, the tank will become a weapon exercising offensive power in its own right.

All of the foregoing leads to the conception of a mechanized force of which tanks form the backbone. Since the tanks have little holding power, such a force must include a highly mobile infantry to hold the ground gained by the tanks. As this infantry must be given great defensive power, its armament will consist for the most part of automatic weapons. In view of the distance from the principal forces at which the mechanized force will operate, it will require the support of artillery immediately at hand and must therefore include in its composition an artillery element having a mobility equal to that of the tanks. It must be self-contained in other respects and receive the necessary quota of chemical warfare weapons, antiaircraft, engineers, signal corps, and transport, all adapted to movement conforming to the tanks and especially equipped for the accomplishment of this particular mission. Its action would be supported by the aviation of the field army to which the mechanized force would normally be attached. The requirement of mobility leads to the adoption of the tank chassis for a large part of the gun mounts and cross-country transport of all elements of the force.

Since the tank forms the basic element of the mechanized force and its chassis will be extensively used by other elements of the force, the progress which has been in development of a suitable tank becomes of especial importance in this connection. It is therefore most unfortunate that no tank satisfactory to the using arm of the service has been produced. Twelve years after the World War we are still dependent upon the war-time model.

In the summer of 1928, an experimental mechanized force was assembled at Fort George G. Meade for the test of matériel and the development of tactics and organization applicable to such a force. This improvised force was equipped with such matériel as was then available. The speed of the tanks was so low, and the matériel was so obsolete, that little knowledge of value was gained. The latest tanks developed by the Ordnance Department were tested and found to be unsatisfactory. A board was appointed to study the results of the experiment and submitted recommendations for the organization and equipment of a mechanized force. The execution of the recommendations depended upon securing funds for the manufacture of modern equipment, assuming that the ordnance tank could be satisfactorily modified. It was found, however, that this tank could not be so improved. There

exist good grounds for belief that the latest tank developed by the inventor, Mr. Christie, may prove satisfactory. In that case funds will be requested for its procurement. The tank board has also a promising project for reengining the war-time tanks and thus obtaining a speed which will permit their provisional use in a mechanized force. Based on this progress, a mechanized force, as recommended by a board which has recently completed a restudy of the organization, was assembled at Fort Eustis on October 1, 1930, equipped with all old and experimental matériel available.

The tendency toward what is generally known as the mechanization of the military forces is now the subject of intensive investigation in all the important armies of the world. It has developed extremes of opinion and much diversity of view as to details of equipment, organization, and tactics. The extreme progressives foresee the army of the future composed solely of air forces of much greater power than those heretofore known and ground forces endowed with high mobility by automotive means, capable of rapid movement both on the road and across country under armored protection, and equipped with high-powered automatic weapons including chemical warfare appliances. Since the vast amount of matériel, supplies, and repair units required for the equipment and upkeep of such a force would preclude the organization of the mass armies of the past wars along these lines, the proponents of this view maintain that the mass army will disappear entirely from the battlefield of the future and that such an army would be helpless to resist the attack of a mechanized force. A more moderate view concedes the value of a mechanized force as a powerful mobile auxiliary, but maintains that mobility and shock action have never been the sole qualities sought in a military force and that a force endowed with high mobility must necessarily make a great sacrifice of fire power in favor of rapidity of movement. As in the past we did not have armies composed exclusively of cavalry, so for the future we do not foresee a completely mechanized army.

We are perhaps in a transitional period, the precise outcome of which no one can foresee. What is certain is that no nation is at present prepared to abandon the mass army as the principal reliance of its national security. It is none the less important that close attention be given to the development of a mechanized force, its organization, tactics and logistics, and to the influence of mechanization upon the composition and operative methods of the other elements of our forces.

Air Corps

The most striking development of the World War was in the air. A new arm came into being through this medium, took its own part in combat, and supplemented and assisted the activities of the other arms.

The Air Corps as a separate arm in the Army of the United States was created by the National Defense Act of June 4, 1920. Developments in the new arm were so rapid as to require individual legislation, and it was increased and reorganized under the act of July 2, 1926. Three annual increments of the 5-year program provided by the act have been completed.

The five-year program was instituted in 1927, and the Budget has been called upon to provide not only the specific elements enumerated in the law, but for extensive costs of operation, research and development, technical construction, housing, grades and ratings, and various other demands not originally contemplated in the scope of the program. All this has been done by curtailment of other activities. The rest of the Army has, moreover, been required to reduce its troop strength to supply the commissioned and enlisted personnel of the annual increments of the Air Corps.

The mission of the Air Corps is to provide a highly mobile combat element, which in tactical and strategical combination with other arms conducts such air operations as are required for carrying out the Army mission. Its essential characteristics are mobility, fire power, and ability to observe and attack surface or air objectives at distant points within enemy territory or off the coast. Its weapons are gas, aerial bombs, and machine guns.

While the Air Corps forms a component part of the Army, it possesses certain characteristics which enable it to conduct separate operations in furtherance of the general army mission. In combat with enemy air forces, in long-distance reconnaissance and destruction, it must frequently conduct its operations apart from other arms. It has probably exercised a greater influence in modifying the postwar organization and operative methods of other branches than any other single factor.

The fact should not be lost from view that a great change has taken place in our air situation during the past four years. In 1926 our greatest weakness in the air was probably to be found in the fact that our aircraft industry was almost nonexistent, that but little production could be expected for more than a year after the outbreak of a war, and that there was no commercial aviation to develop trained flyers from whom an adequate reserve could be drawn. The extraordinary development of commercial aviation during the past four years has brought us to the point where we are now the leading producer of aircraft in the world and where we can actually enter upon the quantity production of military airplanes long before we could reach a similar stage in the manufacture of ammunition. It has made available a reserve of flyers, who, though not trained in the fighting of military airplanes, could be made efficient military pilots in a much shorter period than the totally inexperienced personnel upon which we would have had to rely in 1926.

The completion of the five-year program will bring our Air Corps to a much higher state of relative readiness than any other branch of the service.

Chemical Warfare

Another agency of warfare developed by the World War includes all those means of combat action which are embraced under the term, chemical warfare.

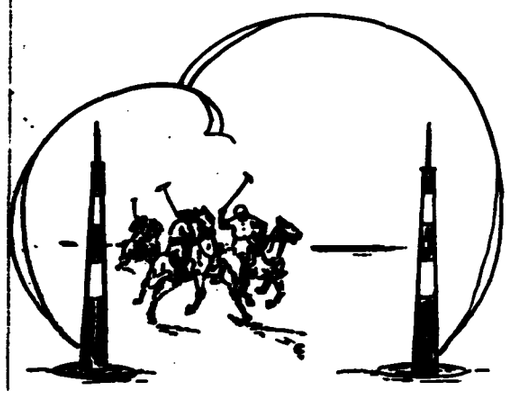
These include toxic and nontoxic gases, smoke, and incendiaries.

It has been the aim of our Government to seek for the international outlawry of the use of toxic gases as a means of combat action. It initiated the prohibition of the use of noxious gases in war which was incorporated in Article V of the treaty concluded by the Conference on the Limitation of Armaments but which has not come into force, due to incomplete ratification by the participating nations. In conformity with the general governmental policy, it has been the policy of the War Department to refrain from training troops in the offensive use of chemical weapons.

Nevertheless, the fact remains that no international agreement restricting the use of chemicals is now in force. It would, moreover, be an extremely hazardous policy to rely on an international agreement as a complete protection against chemical attack. In a death struggle for existence, there would always be the danger that a nation in dire straits would resort to chemical weapons if it saw in that agency the means of escaping defeat and achieving victory.

In the present situation, the most that we can do is to pursue laboratory investigations into chemical developments and train our troops in protective measures against gas attack. In the training of all branches, the conditions of gas warfare must be assumed in order that the troops may be partially prepared to meet the probable conditions of future battle.

The three agencies above discussed—fighting machines for ground troops, aircraft, and chemical means—are the newer forms of military force. They have brought about important modifications in the organization and tactics of the older branches. Within the older branches, a partial substitution of machines for man power is taking place, and motor transport is replacing animal drawn vehicles wherever practicable. The development of new means and the gradual change of older ones should not distort our perspective of the army as a whole. Infantry remains the basic arm. Coast artillery is essential for the defense of our important harbors against naval attack, and for the service of antiaircraft guns. Field artillery continues to be indispensable to the success of the Infantry. Our national situation has repeatedly proven the value of the Cavalry, and our geographic location emphasizes the necessity of Cavalry for the future. New developments should receive constant attention; but they should not be permitted to jeopardize the efficiency of arms that have been subjected to the battle test.



Cavalry Packs and Marches

By Colonel Albert E. Phillips, Cavalry

The following article is the second installment of Colonel Phillips' discussion of this highly important subject. In the January issue of the JOURNAL *he discussed the importance of training in pack transportation, the causes of injuries, conformation and gaits of pack horses and gave a detailed description of the Phillips pack saddle, its fitting and adjustment.—Editor.*

THE necessity for brevity prohibits a general discussion of pack loads in this article. The subject will be discussed later in the JOURNAL. It is a subject that has received but scant thought by the service as a whole, yet its importance cannot be overestimated. Successful pack saddlery at cavalry gaits depends as much on the weight, bulk and "positioning" of loads as upon all other factors.

All the standard cavalry loads but one are "hanger" positioned loads. The ration pack is the one rope hitched load. Hangers often break in the field and loads then must be rope hitched or tied with wire until repairs can be made. Cavalry is often separated from its wagons and supplies then are carried by the troopers' mounts and by such packs as are available. This was the experience of the Pershing Expedition in Mexico.

The Rope Hitched Loads

Rope hitched loads have always been considered a problem for most soldiers principally because the method of the old diamond hitch was difficult to learn and quite easy to forget. And the cavalry pack load must be secured so as to ride at cavalry gaits—not pack train gaits.

The Phillips Pack Saddle was designed to facilitate the use of ropes as well as to carry hangers. Several new hitches were recently developed for use with this saddle. Two of these hitches are considered superior to the regulation diamond hitch. One of the hitches is in use by the 1st Pack Train and this hitch is of particular value for pack trains. It requires, however, specially prepared ropes. The other hitch is of particular value for Cavalry and other units. This latter hitch is considered superior to the regulation diamond; it is simple, easy to learn and not so easy to forget. The hitch is designated "The Phillips Cargo Hitch."

The equipment for rope hitched loads with this hitch consists of:

A canvas manta for each side and top load, whenever a top load is carried.

A "lair" rope for each of these loads (3/8" rope 30 feet long).

A sling rope for each cargo saddle (3/8" rope 30 feet long).

A lash rope for each cargo saddle. The lash rope for the Phillips Cargo Hitch is 60 feet long of 1/2" rope, with a small loop in one end. A lash cinch is not required and should never be used with the Phillips Saddle.

The canvas manta is used for wrapping each load that requires protection. Even box loads should be wrapped to prevent wear of the ropes. The "lair" ropes are used for securing the mantas to the loads. The sling rope holds the loads in place upon the saddle preparatory to lashing. The lash rope secures the load to the saddle.

One of the difficulties of hitch loads was the confusing method of describing and illustrating such loads. The endeavor will be made here to simplify the illustrations and procedure.

To Manta a Load. Let us assume that we have a compact load—a box or tightly sacked supplies. A manta is spread evenly on the ground and the load placed diagonally across its center. A packer picks up the corner of the manta nearest to him, brings it snugly over the load and places one or both knees on top, reaches over and grasps the opposite corner which he folds in and brings the double portion over the top of the load so that the edge will come nearly across. He places his left knee on top to hold the manta in position. The manta is then crimped in at one end and the flap brought over the load. The packer then places his right knee on the flap to hold it in position and the operation is repeated for the other end; the end being folded under so that the folded edge will come to position near the middle and on top. His left knee is placed upon the flap to hold it in position; a lair rope is taken and a loop formed by passing the end thru the eye, the loop then being placed lengthwise around the middle of the load and drawn taut so that the eye comes near the top of one end. A half-hitch is then taken around the load near the end; one in the middle and one around the other end, after which the remainder of the rope is carried around the load lengthwise and tied on top by two half-hitches.

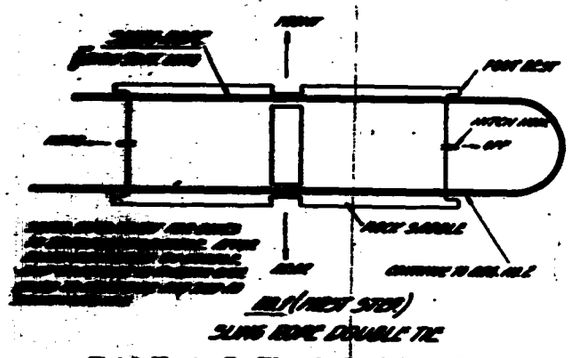
Other Loads. Should the bundle be made up of several small packages the loop is first placed around one end, then around the bundle lengthwise and a half hitch formed around the other end and center; a bight or loop of the rope is then passed about the standing rope just beyond the eye and drawn taut, the remaining rope passed around the bundle lengthwise and made fast on top. This method prevents the packages from buckling as they will do if the first loop is placed lengthwise about the bundle and drawn taut. Packers work singly in lairing mantas on such cargo.

Cargo which is in sacks and not tightly packed should first have the ends squared. This is done by use of small pieces of light rope. There are two methods depending upon whether the goods are single or double sacked.

(1) The First Method (used for single sacked goods such as oats which are loosely sacked). The sack is

stand up on end. A loop is formed in the end of a rope by tying it in a slip knot through which the left hand is passed. The corner of the sack, with a small quantity of oats in it, is then picked up in the left hand, the loop dropped around it and drawn taut. A half hitch is then formed in the rope about the left hand. The other corner is then picked up in the left hand, the half hitch dropped over it and the rope drawn sufficiently taut to take about one-half of the slack out of the sack, after which the rope is given another turn about the corner and secured to itself with two half hitches. The operation is then repeated for the other end, all slack being taken out of the sack in drawing the corners together.

(2) **The Second Method** (used for goods which are double sacked). One corner of the outer sack is lifted and a hole pierced through it. The rope, with a bowline knot tied in one end, is passed through the hole, after which a hole is punched through the other corner, the rope passed through it, brought back through the bowline and secured so that about half of the slack is taken out of the sack. The operation is then repeated



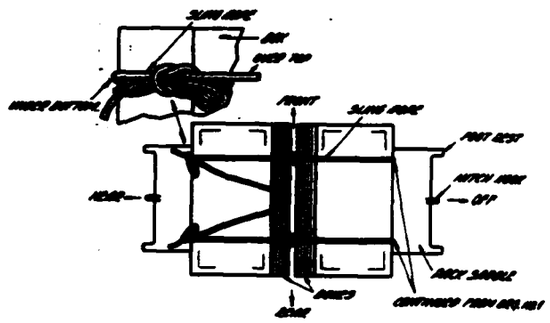
NO. 1 (FIRST STEP)
SLING ROPE DOUBLE TIE

Sketch No. 1. To Sling the Load, First Step

for the other end, all slack being taken out of the sack before securing the rope.

To Sling The Load. The load is slung and double tied in preference to a single tie. Two packers work together. The near packer takes a sling rope and doubles it near the center passing the loop or bight over the saddle to the off side, leaving the ends hang down on the near side, the shorter end in front just touching the ground. He then adjusts the loop by lengthening or shortening the rear end so as to have sufficient loop to pass over the off load and slightly over the near load. He then spreads the ropes apart to about 3 inches [illegible] edge of the saddle. (See Sketch No. 1. [illegible])

The [illegible] then places his load well up on the [illegible] on the sling rope, a flat side of the [illegible] contact with the saddle, and holds the [illegible] left hand. The near packer then picks [illegible] and places it upon the near side of the [illegible] about 4 inches on top of the bundle [illegible] holds with his right hand. The off [illegible] the loop over the top of the load. [illegible] it and passing the forward [illegible] the loop, from top down, takes out



NO. 2 (COMPLETE)
SLING ROPE DOUBLE TIE

Sketch No. 2. To Sling the Load, Completed Sling

the slack and ties a square knot. He then similarly ties another square knot with the rear rope. (See sketch No. 2, for the square knot).

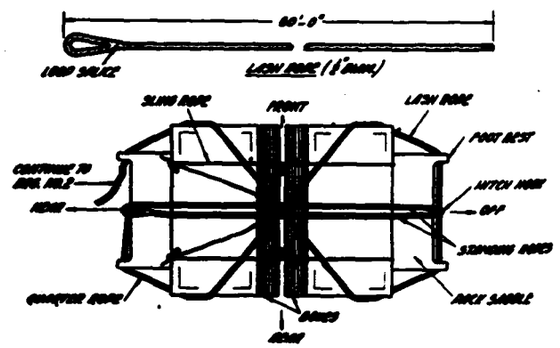
The load is then settled in place as follows: The off packer holds his bundle in position while the near packer lifts upward and outward on the bottom of his bundle so that the top will come down even with the off side bundle, after which he lets go and each packer grasps the top of his bundle and settles the load by pulling down upon it. The off side packer coils the loose rope ends and tucks them under the sling rope on top of the load. The load is now ready to lash. The method of settling here described is for evenly balanced side loads. A heavier load on a side overlaps a lighter load for the required transversal balance.

All loads should be positioned so as to have a slight excess of weight forward.

The Phillips Cargo Hitch

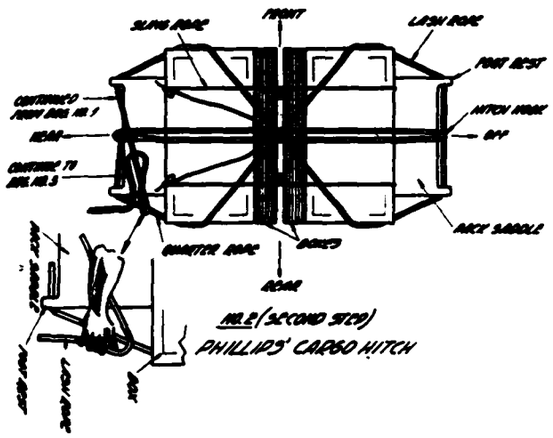
This is a simple but very effective hitch developed for use with the Phillips Saddle. The lash rope consists of a ½ inch Manila rope 60 feet long with a loop in one end. The loads are slung and double tied.

To Form The Hitch—1st Step—(See Drawing No. 3.) With the lash on the near side of the saddle, the loop is placed on the hook and part of the lash is passed



NO. 3 (FIRST STEP)
PHILLIPS' CARGO HITCH

Sketch No. 3. Phillips Cargo Hitch, Completed

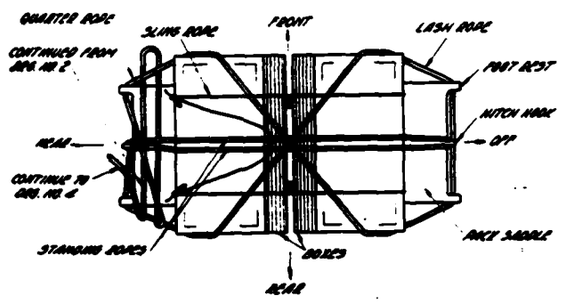


NO. 2 (SECOND STEP)
PHILLIPS' CARGO HITCH

Sketch No. 4. Phillips Cargo Hitch, First Step

over the load to the packer on the off side, who places it under the hook from rear to front. The near packer then places the lash under the hook on his side, from the front, thence under the rear foot-rest and over the rear corner of the load diagonally toward the off front corner. The off packer, taking sufficient lash, places the diagonal over the off front corner of the load, under the front foot-rest, thence under the rear foot-rest and diagonally over the rear corner of the load toward the near front corner. *All slack is now taken up* as follows: The off packer places his left foot against the bottom bar of the saddle and pulls the slack from the rear standing rope, the near packer taking the slack by pulling the front standing rope. The near packer then pulls the slack from the rear quarter rope, the off packer taking it from the front and then from the rear corners. The near packer takes this slack over the front corner of the load and places the lash under the front foot-rest and holds with his left hand.

2nd Step (See Sketch No. 4.) The near packer, with his right hand, back of hand outward, loops the lash around the rear quarter rope from outside to inside, coming out under the lash and leaving the end of the lash rope hanging outside the foot-rest.

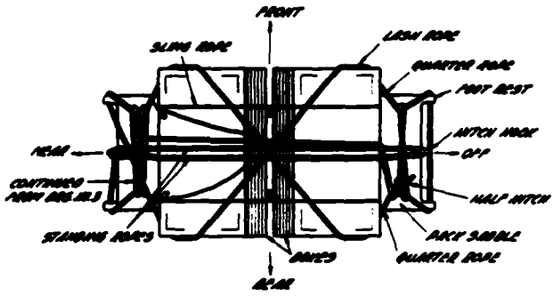


NO. 3 (THIRD STEP)
PHILLIPS' CARGO HITCH

Sketch No. 5. Phillips Cargo Hitch, Second Step

3rd Step (See Sketch No. 5.) The loop is grasped in the left hand and moved forward outside the standing ropes and then around the front quarter rope from the inside.

4th Step (See Sketch No. 6.) The end of the lash is placed thru the formed loop from the inside and drawn tight, the loop remaining in front of the standing ropes. Holding this slack with his left hand, the near packer steps to the rear of the saddle, places his right foot against the rear foot-rest and pulls back. This takes up the slack. He then passes the loose end over to the off side in front of the standing ropes. The off packer takes all slack and then binds it by pulling the lash under the standing ropes towards the rear. He then grasps the lash with his left hand and forms a loop around the rear quarter rope from inside to outside, which he holds. With his right hand he pulls the end of the lash from inside the standing ropes and passes it around the front quarter rope from outside to inside, coming out under the lash, outside the standing ropes and thence thru the loop held by the left hand,



NO. 4 (COMPLETE)
PHILLIPS' CARGO HITCH

Sketch No. 6. Phillips Cargo Hitch, Completed

whence all slack is taken up by drawing the quarter ropes inward. The lash is tied with a half hitch or other convenient type of hitch.

This hitch securely binds the load. As loads settle due to stretching of ropes or the settling of the cargo it will generally be necessary only to untie the lash and tighten the quarter ropes to again secure the load. It is a hitch that may be placed and tied by one man if necessary.

Cavalry Marches

In the pamphlet on "The Phillips Pack Saddle," page 6, the writer states: "The condition of both riding and pack animals will be conserved by regulating gaits on the pack animals. An over extension of gaits may quickly be detected by observing the pack animals."

In Col. Van Voorhis' article in the October, 1930, CAVALRY JOURNAL he states: "the pack animal is the deciding factor in the conduct of Cavalry marches."

Since marching is the most difficult of cavalry functions and constitutes the greater part of the work of Cavalry in the field, should we not pay the greatest

exception to this subject? As we now have both riding and pack elements it is necessary here to consider both elements.

Let us base our discussion on some eleven years experience in command of cavalry machine gun units, plus twenty additional years as an officer of Cavalry, which experience includes the Mexican Punitive Expedition of 1916 in which the writer's machine gun troop of the 10th Cavalry and the squadron to which it was attached marched over 1100 miles and men and horses lived off the country for six long weeks. Also included in these years of service was the supervision of the machine gun squadrons of the Cavalry Division while Division Machine Gun Officer, and as observer during long marches of three division maneuvers. The writer was most fortunate while in command of a machine gun troop to drill and train it independently and in most cases to march it as a separate unit thus being able to work out the most successful methods. All that follows regarding the marching of cavalry pack units is based on this experience.

The first requisite is the selection of the most suitable horses for the packs and next the selection of horses for the men who are to drive (not lead) the pack animals so as to have mated teams. The most suitable horses for packs does not necessarily imply the best horses in the troop. The drilling and training of these teams has an important bearing on marching.

Being a pack unit we naturally gave some thought to the pack train rule of getting over ground and not halting between camps except when and where necessary. In the application of this rule we found the following method of marching a cavalry machine gun unit—troop or squadron—to give the best results:

Careful supervision of saddling by the officers and non-commissioned officers before the march and especially at halts. To carefully saddle the pack animals before saddling the riding horses but to leave the loads on the ground until the last moment. A saddle carrying a dead load should receive close supervision. A signal or command to "pack" or "attention" with sufficient time to "load" before commanding: "Prepare to mount." This is not always done in mixed commands of Cavalry and pack units—and all Cavalry has pack units now.

The first hour of the march at the walk with the usual halt to allow the men to attend to their personal needs and to readjust equipment. As a rule pack saddles needs considerable adjustment at this time. Pack animals frequently "blow" against the cinchas when first climbed and the weight of load shifted thereby so that readjustment of cinchas is necessary at the first halt if the animals have not been properly cinched before starting the march, i. e., to the proper pressure. Usually most of the pack saddles have to be moved rearward away from the withers.

Thereafter the first halt around the command is moved [illegible] with a slow trot predominating, a [illegible] and no leading unless the conditions [illegible] animals, roads, weather, etc., make some leading desirable. Halts are made principally for water at which times the other needs of the command are attended to—there is, however, a minimum of halts. Every suitable opportunity is taken to water the animals.

There isn't anything radical about the method. It is merely an adaptation of the principles of a well-trained pack train marching across country. It gets the command over ground and a march of twenty miles or more may be completed from one to two hours earlier than the *usual* march, with men and animals in better condition.

Why a slow trot and why should it predominate?

Captain J. L. Stokes, 123rd Cavalry Taking a Horse with Full Combat Load Over a 4 Foot, 8 Inch Jump

Slow trot here is meant a trot of approximately seven and one-half miles per hour but never in excess of the regulation eight mile trot. Turn the pack horse with load loose as in herding and it will usually take the canter or gallop when the riders take a fast trot—a trot in excess of eight miles per hour. A few pack horses, if heavily loaded, will gallop occasionally at the eight mile trot.

Walking, while the easiest and a necessary gait, consumes much time, and time under weight of load is an important factor. For the rider, walking has a tendency to cause soldiers to lounge in the saddle. The slow trot makes every soldier sit up in his saddle. The gait may be continued for hours in a command trained to it without excessively tiring either horses or men.

Fast trotting causes all saddles, riding as well as pack, to swing sidewise with the withers as a pivot. For the pack saddle and its dead load there is also a maximum of vertical pounding. The rider minimizes this pounding by posting, but the pack horse gets the full effect of it in addition to the sidewise swinging of the pack saddle. In the slow trot of just under eight miles per hour there is practically no sidewise swinging of the saddle with a minimum of pounding.

The fast trot cannot be continued for any considerable period and when the horses come to the walk they are tired and take a "slow" walk. The average result in time and distance covered between the "fast trot and slow walk" and the fast walk and slow trot is approximately the same with the exception that the slow trot may be continued for longer periods with the animals in better condition.

Short fast walks alternating with short fast trots will, of course, get the command over ground but the combination cannot be used with pack units without causing many pack animals to gallop.

The trot should be regulated on the pack animals. The pack animals will take the walk and the gallop of the riders. In regulating the trot we should avoid any over-extension of the gait with a tendency to cause some of the pack animals to gallop. Watch the pack animals!

There may be some objection at first to slow trotting for longer periods but when the men get used to it and get in camp hours earlier they would not go back to marching hours longer at the walk. Commands may be trained to the fast walk. The fast walk and the slow trot are better than the slow walk and the fast trot.

There will be those who will question this method of marching but the success of the method on the many occasions where it was used proves its worth; that it cannot be applied universally is recognized. No method of marching can be used at all times. The method is an adaptation of the old adage: "Make haste slowly" and an avoidance of Kipling's "It's the hours in the saddle and the 'ammer, 'ammer on the 'ard 'ighway that does the damage."

A few examples might be of interest. The machine gun squadrons of the 1st Cavalry Division found it desirable to march as separate units in order to take the gaits most suitable to the pack animals. The squadrons, tho, were usually required to march in rear of the cavalry brigades. On the return march from the maneuvers of 1923 the writer obtained authority for the 2d M. G. Squadron under Major Richart to move out just ahead of the brigade. This squadron, using the principles outlined but "herding" the pack animals, arrived in camps from one to two hours before the head of the brigade.

In coming out of Mexico in 1917 the fast trotting of the cavalry brigades caused practically all the pack animals to gallop whenever the brigades trotted. In many instances the pack animals had to jump the mesquite bushes while the drivers' horses remained on the trails. Results: several pack animals dropped in their tracks. And this was after all the long hard marches of the campaign.

During the 1927 maneuvers of the 1st Cavalry Division the writer was attached to the 1st M. G. Squadron as an observer. On the return march from the maneuver area to camp near Marfa, the M. G. Squadron commander was forced to take a "slower" trot as practically all his pack animals and some of his riding horses were galloping in the attempt to keep up with the fast trotting of the brigade. When the brigade took the walk the machine gun squadron would soon overtake it and would have passed it had the brigade permitted it to do so.

The writer's machine gun troop of the 10th Cavalry was trained in the method of marching outlined in this paper and used it for years on marches with that regiment.

"The pack animal is the deciding factor in the conduct of cavalry marches."

Pack saddles and loads should be constantly watched on marches by platoon leaders when occasion admits and by a non-commissioned officer of the unit,—squad, platoon, etc., at all times and, when a pack requires attention, the animal should be pulled out of the column immediately if necessary. In most cases of a canted saddle it may be adjusted by the driver of the pack animal without halting. A pack saddle that is canted for more than a few minutes is likely to cause an injury.

Halts and leading. Some cavalry commanders allow only five minutes at the hourly halts. Ten minutes is barely sufficient time for the men to attend to their personal needs and to the adjustment of both riding and pack equipment. When pack loads cannot be removed the loosening of cinchas will greatly relieve the animals.

When the command leads, cinchas should remain loose or tightened just sufficient to hold the pack saddles.

With well fitting saddlery and careful adjustment at the first halt there will be less necessity for frequent halting in a command trained to march long distances at the slow trot.

The trot should be regulated on that of the pack animals. "The pack animal is the deciding factor in the conduct of cavalry marches."

Note: The author has called attention to the omission of a paragraph from the text of the first installment, published in the January JOURNAL. The paragraph, which should appear at the bottom of the first column on page 11, is as follows:

"In removing hair pull small amounts of hair from the back of the pad and push in the contact surface. Thongs must be tied tight after adjustment. Place the contact side of the thong on a small stick or rock when making the tie or have an assistant push the thong in with the handle of the hammer. For minor adjustments where considerable accuracy is desired the hair may be pushed thru one of the tuft holes on the belly side by first removing the tuft. The short stuffing tool in the new tool roll is used for this work. The handle of the hammer is often handy when pushing large amounts of hair thru a handhole."

Editor.

Notes on Marksmanship

Lieutenant **W. E. Pheris, Jr., *45th Infantry* (P. S.)**

WE who spend an appreciable portion of our life-in-service in an effort to obtain better marksmen, often fail to realize just how new the subject really is, and how short a time our standards of shooting have been accepted by the experimental bounds. The annual worry of qualifying our men within the marksmanship season has dimmed our vision of its place in the scheme of training. We therefore become lost in the minutiae of its technique and in the end place it upon our calendar as the culmination of our summer's effort. So the purpose of these notes is to view marksmanship in a different focus and to consider whether or not it has faults in its present practice, and how improvement could be made.

The practical application of our marksmanship training, the range practice, which is the ultimate test of the value of the instruction received in preliminary work, has been accurately described as *known distance firing*. It is that; and even more precisely it is *point to point precision firing*. It is the same kind of marksmanship our ancestors applied in their bow-and-arrow duels, in which several competitors would stake their skill against one another at splitting reeds at a known distance for the king's bounty. Today our range practice amounts to the same thing, only our weapons and their techniques have changed from the days of the bow. And by this method of competitive individual qualification in arms we credit ourselves with having learned to master our weapon, and with having mastered a method of teaching others to use our weapon. Incidentally, of course, we have overcome a number of problems of psychology, leadership, management, discipline, and so on, ad infinitum. So we emerge from the marksmanship season with a feeling of work-well-done, of having reached our training objective and of pride in the possession of a 100 per cent unit qualification record; even though we have little consideration for having just witnessed an event in no wit different from those glorious courtroom witnessed by Guinevere, Launcelot, or any member of King Arthur's court. In consideration of this view of our rifle training it is quite possible more time should be allowed for marksmanship, since we are not fundamentally trying to develop groups of only individual excellence. Indeed, were this basic, we should really progress in our field training. Combat firing, wherein coordinated movement and the results of group effort can be demonstrated, is recommended for on our program, but it is given a limited space of time and is not given any emphasis in training objective. The reason for this is that, being yet young in the matter of training for open warfare combat exercises, we have not developed a measure for such training commensurate with the means at hand for extensive exercises of that sort. We play with squad firing problems, attack the problems of larger units only in theory, and trust that in time of need we may be able to whip our fighting units into coordinated combat teams by inference and induction derived from the basic individual training we have so long undergone. We concentrate upon marksmanship today as a training objective, whereas when an emergency arises it will only be a means to the end—success in battle.

When we coolly meditate in retrospect over the marksmanship seasons we have seen, a great many wrongs, errors and mistakes come to mind. Cases where recruits had to fire a course with insufficient instruction because they enlisted too near the close of the season; where the best ammunition available was too poor to give accurate results; where oversized men, undersized men, struggled to accommodate themselves to the methods of instruction; where old soldiers in their declining years, put up a brave fight to compete against young men in full possession of their physiques. These four cases merely start the list; and were the list extended far into the experience of other comrades in arms, there is little doubt but that it would bring forth much interesting material about marksmanship as it is practiced.

Primarily the subject is a delicate one to approach. For men have spent a lifetime of service in obtaining the excellence of training at which we now stand. The various schools of thought which tend to regulate our direction of progress, have been divested of ponderous shrouds of mysticism and have been clarified unto the comprehension of the simple being. We now have individual marksmanship in a concise comprehensive routine, without ceremony, without variation, without wasted effort. It is efficient, foolproof.

But efficient, foolproof matter ceases to be individual. It is true we get the most shooting out of the least expenditure of time and effort. That is efficiency. At the same time we require all manner of men to do things in exactly the same identical manner whether or no they are physically suited to the evolutions they annually go through. Long arms, short arms, tall men, small men, oddly proportioned men, all men must conform to the system of individual work prescribed. Deviation from the ROTC is illegal. The results obtained seem to justify the means, even though upon occasion a man must fire his piece in a non-regulation position even to simulate following the prescribed course of training. We are becoming dogmatic

about our training. And of course, close to dogmatism follows a habit of blinking at derelictions. Our individual marksmanship is becoming a ritual instead of training, and we annually take the role of true believers whether we like it or not.

This ritualistic development may be traced in part to competition. The competitive spirit has been carried to the ultimate limit in the matter of training. East, west, north, south, everywhere, each unit is competing against the rest of the Service to obtain the best record of the year. Companies report in, that they have qualified 100 per cent of their men. Regiments report, that they have qualified with an 85.6 per cent score per man; more than 90 per cent qualified in all training. Splendid statements appear on paper, and a successful season is celebrated in honor of the sterling record. But way out there beyond the horizon where the scores are being made, the regiment just starting its marksmanship training has decided to better the best record that has yet been made. Pressure is exerted to bend every effort toward qualifying every man in the organization. A 100 per cent score is the objective of the unit, and its members are not allowed to forget it once during the season. Not only must qualifying scores come in, but scores must be had that will bring the average up to a point where the unit as a whole will take its stand in and among the numerous groups of superior shots on record these days. And the objective, at the start, is to head that list of superior-shooting units. So the season, for that unit, becomes a mass qualification season. Individual training in marksmanship is relegated to the limbo of the past, and in its place comes a frantic effort to coerce inept, backward, or deficient shots into firing a score commensurate with the demands of regimental pride. The cool efficiency of thorough training is defeated by the exigency of competition.

The average scores contemplated by our guides and manuals have entirely gone by the board in the necessity for qualifying with a 100 per cent average. For reference note the scores reported in the INFANTRY JOURNALS: page 636 of December 1928, page 80 of January 1929, and on page 522 of November 1929.

The quite tangible consideration of the service affect marksmanship: the army recruiting policy, and the requirement that enlisted men fire the rifle or marksmanship course throughout their entire service. Notwithstanding the prevalent tendency to make high scores, it is not at all infrequently impossible to qualify the recruits given us by our high pressure recruiting system. Men of years join us, men with faulty physiques are admitted into the Service, and these men have to be dragged through the target season. To excuse them is to shift the proof, it is at least unethical, and if they should but do not fire they break the golden 100 per cent record. Should they subsequently transfer to an arm more suited to their ability, the unit which tried to make its target season with them is in no way relieved of its loss. The other classes of unsatisfactory enlistments, those under age, frauds, and the like, eventually discharged, are simply a permanent loss to the organization.

Again, in every outfit a few old soldiers can be found who are on the verge of physical decline. They are men who have long years of faithful service behind them, who have only a few more years left before a physical examination will find them unfit for service in the field, and who still have two or three enlistments to be done before retirement would come to them automatically. These "Old Timers" regularly turn out and make a brave effort to compete with the youngsters in their outfits. Frequently they do obtain exceptional scores; more often not. In the case of officers it is admitted that after fifteen years of service one need not qualify further with the rifle; it would seem the same type of provision for enlisted men would be equally justified.

So much for consideration of the conditions of firing and the personnel to fire. There remains the matter of the equipment in use in the Service. As these words go on the paper one can hear the distant rumble of the remarks of future readers, who will promptly think of the ammunition they have been required to use, and will express themselves softly or profusely on the subject in accordance with their most recent experiences with it. And while it may be a poor carpenter that blames his tools for a botched job, at the same time cases of poor ammunition are sufficiently frequent to warrant speaking of them.

Old lots of ammunition come into the hands of troops for use on the target range. Instances have occurred where a container was opened to discover the cartridges packed loose in the wooden box, with verdigris eating away the cases of more than half of the box. Other instances can be brought to light, but here would only lengthen an already long discussion. It would seem that a first grade ammunition would be required for precision target work, instead of an old stock, as is so many times given to the troops.

A second consideration is the fact that the service rifle is not eminently suited to the precision firing required of it. Ballistically it is quite sound. But its sight equipment, and personal fittings (stock, comb, grip, and so on) leave much to be desired. In using it men have to make adjustments of position or padding to accommodate themselves to the weapon. And the best shots we have developed have almost invariably rearranged their rifles for open or free competitions, though ever so slightly, but nevertheless to the extent that they actually fired something quite different from the issued pieces they were first given.

Argument is rife on every range, each target season, as to the positions now required of a man in firing. Certainly they are definite enough, but at the same time not enough leniency is allowed for men to accommodate themselves to their weapons. However the position one uses in firing is merely a condition of the competition for the pay bounty, and aside from the demonstration that a piece can be fired from positions other than the natural ones (prone or standing), it has

little bearing on combat firing. The conclusion is that the positions should be worked over only with a view to removing the stigma of dogmatism now attached to them.

Criticism is the easiest vice of mankind. Likewise it is an entertaining pastime, for it allows the critic on the floor to indulge in a contemplation of fact in retrospect, adding to it as many negative notions as time and his mental agility will permit. So, after criticising the merits of the existing order, it is fitting to bring out something in the nature of a solution to the errors positive or imagined, something designed to counteract the damnations of the established order of procedure. In this case the solution seems to be a change from considering individual marksmanship as the major work of the target season, so as to include combat firing as a necessary important part of that season. Let us therefore go over a scheme of incorporating this firing into the rated target season.

We start on the hypothesis that marksmanship training should tend towards success in battle as its objective. Its major activity should therefore consist of combat firing, applied in a manner such that team training and coordinated effort could be studied, taught, applied and rated as a result of the target season. Individual marksmanship would be an associated activity, but would dwindle to the position of a preparatory exercise occupying only a part of the target season. All effort would be bent toward qualifying the unit as a whole in a combat exercise. Our present principles of instruction give a ready solution for attaining a systematic solution for such training.

Schematically the target season would be comprised of three parts:

1. Individual Marksmanship, 100 per cent qualification required.
2. Specialist Marksmanship, qualification in special arms, to rating and pay of present sharpshooter.
3. Combat Marksmanship, combined coordinated unit firing, qualified units to be rated and receive pay for same.

In its concept this scheme does not deviate far from the present order of training, but instead places a different value on the phases of training and contemplates a rearranged system of awards for excellence in training. It would involve a number of changes in the order of marksmanship training, and as the length of our article of this kind prohibits an extensive training [illegible] type of explanation, it is hoped the following notes will bring out the thought behind the scheme.

The individual marksmanship instruction should consist of slow fire records at 200 and 300 yards, and rapid fire at 200 and 300 yards. It should present the same problems with all the hazards of position now offered in the target course, but should allow him a considerable latitude in adjusting himself to the fit of his [illegible] position. Telescopic sights should be [illegible] and mooring should be as at present. The course should be placed at about 70 per cent [illegible] course. A unit firing this course should [illegible] qualify 100 per cent of the men with less than 16 years' and more than three weeks' service. Reenlisted men with no former rifle qualification should be classed as recruits of less than three weeks' service, and not rated in the company qualification course, nor allowed to fire the combat course. In drawing compensation men should be paid for only the second and third phases of the training, if they can qualify in them.

Specialist marksmanship should consist of that firing conducted to qualify members of the organization equipped with special arms. Pistol shots, auto-riflemen, grenadiers, should qualify during this period, and upon attaining qualification in their specialties should receive compensation in amount now granted sharpshooters. Riflemen should be allowed to complete 500 yards slow and rapid fire, 600 yards slow fire, and such other course as may be deemed necessary to qualify them further to receive a rating as a sharpshooter. Specialist units should also fire courses with additional position hazards to permit them to qualify for compensation in arms qualification.

Combat marksmanship should consume the major portion of the target season and should mark the culmination of the training season. For fire power units it should include an application of all the principles taught in the year's training cycle, but the results obtained should be especially rated upon the fire power results obtained by the unit upon firing a combat course. Satisfactory results should give the unit as a whole the rating of expert in its arm of the service, and entitle the men who took part in the combat exercise to compensation as experts for the ensuing year. Such combat courses should consist of fire power problems, with other tactical phases incorporated in them, with predetermined values of satisfaction required. The unit firing should not be familiar with the problem.

In computing the rating of a unit 100 per cent qualification in individual marksmanship should be required, and 60 per cent qualification in specialist marksmanship; a satisfactory high score on the combat course should be obtained before the unit could attain the expert rating. Individuals should receive compensation for qualification in specialist marksmanship, and an additional increment for participating in the firing exercises of a unit which achieves a rating of expert. Specialist units, such as transportation, clerical, and communication units, should be required to demonstrate their efficiency under simulated combat conditions to receive qualification and compensation as experts.

In conclusion let it be pointed out that these notes on marksmanship are presented with a view to airing once again a few of the evils current in our present system of marksmanship, and in the hope that the suggestions about new methods of conducting the same will be received with an open, constructively critical mind by those who endure the misfortunes of the difficulties of training, who have ideas on the reorganization of the whole, but who have to date, remained silent.

Southern Grasslands International Steeplechase

By Lieutenant R. E. Ireland, 6th Cavalry

A GROUP of nationally known sportsmen, who for several years have been seeking a location suitable for practically all out door sports, made their selection last year of a tract comprising about twenty-eight square miles between Nashville and Gallatin, Tennessee, for the site of the Southern Grasslands Hunt and Racing Foundation. This particular secter is so bounded that game of all kinds will naturally be held within its limits. The broad beautiful Cumberland River flows for nearly twenty miles along the south; to the east is the village of Gallatin; the wide deep Drake Creek on the west and to the north the L. & N. railroad with an electric interurban and the Andrew Jackson Highway paralleling it. Here it is planned to hold steeplechase and point to point racing, fox hunts, polo and numerous other similar activities.

Of the many famous buildings, the most interesting is the old Southern mansion at Fairview, which will later become Bachelors' Hall. The tall white pillars in front, hugh rooms with high ceilings and enormous windows, old fashioned fireplaces, numerous slave quarters below the slope in rear and immense stabling facilities are a reflection of the days when Andrew Jackson and other southern gentlemen raced horses for the glory of ownership rather than for large purses.

A further word about the stables. There are two of immense size and several smaller ones. The one at Fairview is of stone, the one at Race Horse Tavern is wooden. At these two places there are accommodations for about 200 horses. Nothing but large, roomy, well ventilated box stalls are to be found in either. Each has its covered exercise track around the outside. The footing of both tracks is faultless, all corners are padded to prevent injury and they are respectively about 10 and 12 laps to the mile.

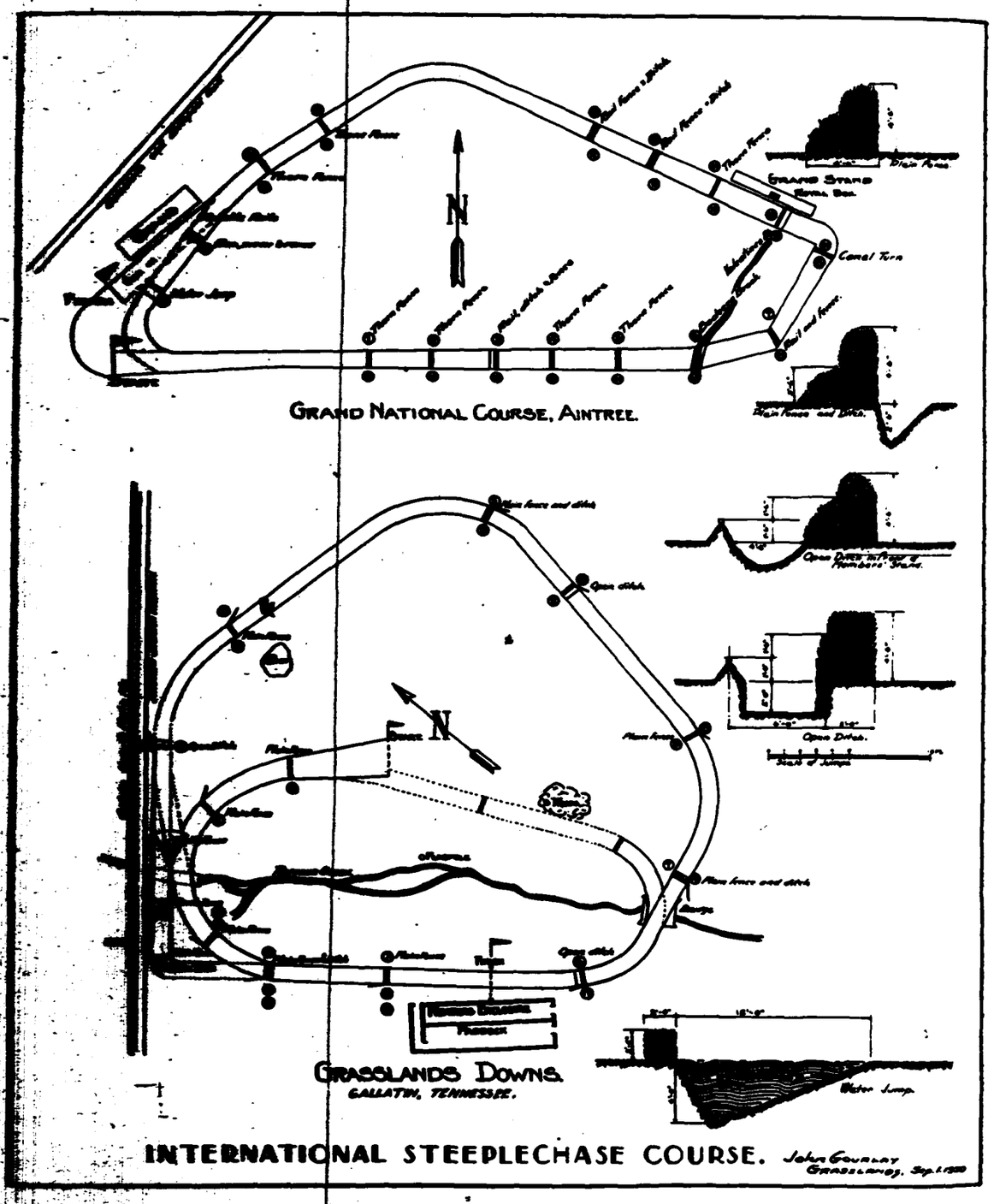
The first steeplechase held at Grasslands Downs took place on May 19th of this year. It was twice around a mile and a quarter course containing seven brush obstacles for the Duke of Beaufort's silver trophy. *Red Gold*, a six year old gelding, by *Ilex* out of *Grace Jackson*, and owned by Mr. Byron Hilliard was the winner. The purpose of the race was to prove to a large number of racing enthusiasts the possibility of developing an American course after the manner of the Aintree course in England.

The success of this test flight was proven in the race of December 6th which was run over the recently completed International course. This beyond question is the stiffest course in America. This gives it many advantages, chief of which is that any horse that can negotiate it at speed should have an exceptionally good chance in the Grand National. American owners and trainers who aspire to win the latter will do well to try their horses here in December as their prospects can be judged by their performance over this course. There is no inference that the course is impossible. It is not, but to finish and win is reserved for horses of speed, indomitable courage and marvelous jumping ability coupled with perfect condition and unquestioned staying powers.

The course is laid around the inside of a natural ampitheatre and all jumps are visible to the spectators along a half mile front on the south side. The start is in the center with two four and a half feet brush fences before reaching the main and outer track and then ever three more jumps to the judges' stand. From here it is twice around the course. The first time around includes the water jump and "Canal Turn," but on the second lap the course comes just inside these two. The distance is four and a half miles with twenty-six obstacles, whereas the Aintree course is four miles 876 yards with thirty obstacles. The rise of ground from jumps 7 and 18 to 10 and 21 being covered twice is more than an added compensation for the four additional fences in the latter course. It is impossible for a horse to drag through the jumps on the International as they have been pressed together by machinery and a man can walk on top of them.

The description in detail of the jumps is as follows:

Fence No.	*Kind*	*Height*	*Landing*
1	Plain fence	4′ 6″	ground level.
2	Plain fence	4′ 6″	drop of 4″ landing.
3 & 24	Plain fence	4′ 8″	level.
4, 15 & 25.	Fence and ditch	4′ 10″	drop of 4″ on landing.
5, 16 & 26	Plain fence	4′ 6″	level.
6 & 17	Open ditch	4′ 6″	drop of 3″ landing. (Paddock Ditch)
7 & 18	Fence and ditch	4′ 10″	rise of 2″landing.
8 & 19	Plain fence	4′ 10″	rise of 3″ landing.
9 & 20	Plain fence	5′ 0″	level.
10 & 21	Fence and ditch	4′ 8″	level.
11 & 22	Open ditch	4′ 10″	drop of 10″ landing (Hilltop Ditch)
12 & 23	Open ditch	4′ 10″	drop of 8″ landing (The Pond Ditch)
13	"The Water" Fence	2′ 6″	water 12′ wide level landing.
14	Plain fence	4′ 10″	rise of 2″ landing. (The Peytona Canal)



The day of the race was raw and cold with frequent drizzling showers which threatened to turn to snow. It had rained steadily for two days but due to the nature of the ground and natural drainage the course was not boggy except in a few places on the back stretch. The top soil was slippery and created danger of grass matted with it balling in a horse's shoes and making his landing over a jump a precarious proposition. This proved true as all horses fell on the far side of their jumps with but one exception. Most horses were shod with rim steel and outside grabs. With this type shoe, the footing was firm enough to hold at the takeoff where the pressure came on the toe and most circular part of the shoe but it was a different story when they landed. It was not exceptional to see a horse slide from one to three yards on one or both front feet after he had cleared a jump. The ground dries rapidly and two hours of sunshine before the entries went to the post would have changed the whole aspect of the race. On a dry day, it seems no far drawn conclusion that at least eight or ten of the seventeen starters would have finished without difficulty.

It is impossible to give exact details of the entire race and the few given may be slightly in error. The usual delay in starting a race in the open without a barrier was missing; one trial start and they were off. The first horse down over-jumped himself at the third fence. The field strung out as they came on to the seventh fence without mishap but from here on the weeding out began in earnest and the number left in the running was rapidly decreased. The backstretch claimed the most of them. Contrary to expectation, neither the water jump nor the Canal Turn caused the horses that reached them any difficulty. At the end there were only three horses to finish; *Alligator* owned by Mrs. M. K. Stevenson, *Bally Yarn* owned by Mrs. W. Plunkett Stewart and *Maitland* owned by Mr. Austin H. Niblack, in the order named, and all had fallen at least once. Rumor has it that the winner fell three times but it is doubtful if he fell twice at the most. His last spill came at the 25th jump when he was leading *Waverly Star* by a length and a half. Charles Plum, Jr., his rider was thrown hard over his right shoulder. *Waverly Star* swung to the left to avoid the fallen horse and as he did so his rider made an error which cost him the race. Instead of letting his horse run on a wide curve to the edge of the course and then straightening him out for the last jump, he snapped the *Star* hard to the right and threw him off his feet. The shock was too great and the horse was not up for several minutes. He was too badly shaken to finish. Meanwhile Plumb had gotten *Alligator* back on his feet, brought him home over the last fence with nothing to spare and won what was beyond question, the most gruelling race of its kind ever held in this country.

It was a badly battered and mudspattered pair that came back to salute the judge but it could be told in a glance that if either was ever beaten it would be through no fault of theirs. The King of Spain's Gold Cup and its small replica were a fitting tribute to a strong hearted horse that refused to accept defeat and a courageous and coolheaded rider who gave his horse every possible advantage.

Mrs. Stevenson, owner of *Alligator*, when asked after the race if she planned to send him to England replied, "no. I don't believe I will ever race him again—you know he has always done every thing that has been asked of him and this, I think is enough." *Alligator* has won numerous high class races but until three weeks prior to this one had never run over brush fences.

Of those deserving honorable mention, one must include the three English horses *Kilbairn*, *St. Roy* and *Manambar* as well as *Silver Dawn II* from Kentucky. Bad luck seemed the ardent pursurer of the British entries. On December 4th, *Kilbairn* developed a bad cough and was sent to the post at the last minute but with doubt that he could stand the grind. Whether his spill at the 14th jump was caused by "choking down" is not known. *Manambar* and *St. Roy* were both cut down on the same jump in the back stretch by a horse which became unmanageable. This horse slammed *Manambar* against the wing and then swung diagonally across the jump and threw *St. Roy* in a pile as he himself went down. Both horses were in good shape and had found no difficulty at any part of the course. Their riders, Lts. Skey and Newell, appeared to be content to stay together and were apparently waiting to make their bid as they came out of the back stretch. Their only remark was, "It could have happened to any one as that is a part of racing, today it was us."

It is to be regretted that some American owners and trainers could not lose with as much graciousness and sportsmanship. Fortunately there were but few who were embittered to the point of expression but it took two British youngsters in their early twenties to show them how to accept the awards of Lady Luck in the racing game.

Many spectators were at a loss to account for so many horses falling after clearing their jumps and for so many riders being thrown. The most apparent reason for the first has already been given. As for the second, it was in some cases a physical impossibility to withstand the continual roll and rock of a horses shoulders caused by the constant slipping and sliding with only a knee grip for support. The extreme short stirrup used by practically all riders denied any other contact. Many, no doubt were loosened by the tremendous contraction of the horses' shoulder muscles in their frantic effort to maintain balance and to regain speed. Whether longer stirrups for firmer grip and saddle skirts flared farther forward to prevent leg displacement by shoulder action would have lessened the number of falls is merely a matter of conjecture.

All in all the first International, as viewed by over 10,000 and run under conditions as they were, was a most remarkable event. It gave every indication of having the possibility of some day being on a par with the English classic which is the incentive of its origination.

Hawaii Nei

Lieutenant G. A. Hadsell, Coast Artillery Corps

TAKING text from Rudyard Kipling, "For to admire-an' for to see," it is the purpose of this paper to present a brief review, chiefly visual, of Hawaii Nei, Beautiful Hawaii. And since the military is most concerned with the island of Oahu, upon which are situated Honolulu and Schofield Barracks, it is Oahu which will principally occupy our attention.

It is our first duty to investigate the rainbow-tinted rumors promulgated to lure tourists to this "Paradise of the Pacific." The officer with orders to join wants to know whether or not the picture is overpainted. Though drawn by the romance of far countries beyond the seas, he views with grave suspicion references to eating delicious native *poi* from a calabash by moonlight on a palm-fringed shore, while dusky maidens sway in rythmic *hulas* to the throb of gourd drums and the beat of surf at Waikiki.

If Hawaii's claim to earthly paradise must rest on *poi*, then romance is doomed. For with this starchy concoction of mashed taro root, only the bold will dally beyond the experimental stage. The historic place of taro along with the cocoanut, pandanus, breadfruit, and yam, in the struggle for existence of the old time Kanakas, will not soothe the qualms of the modern digestive apparatus.

Fortunately, however, the case of Hawaii Nei (Hawaii the Beautiful) rests also with her volcano, Kilauea, her snow peaks, Mauna Loa and Mauna Kea, and the gigantic ancient crater of Haleakala. It rests also on the lush green foliage of her rugged mountains, on headlands of black lava washed by the bluest of oceans, on beaches blazing white in tropical sun. And even the most skeptical must concede palms, moonlight, and surf at Waikiki.

Hawaii's history is also not without glamor. On the exact origin of the brown-skinned peoples called Polynesians whom the British Captain Cook found here in 1778, authorities do not agree. However it is supposed that their remote ancestors came from Tahiti, Samoa, and the Marquesas, voyagers in outrigger canoes which would shame Columbus into obscurity.

Ships from the American Northwest for the China trade first made these islands important to European and Yankee ship shippers. Here the long sea trek to the orient was pleasantly broken and necessary water and provisions were stocked. Later a Captain Kendrick of Boston contracted for several cargoes of sandalwood from the island of Kauai. This trade, also with China, started Hawaii toward western civilization. But by 1810, the year of the unification of the islands by Kamehameha, a chieftain who succeeded in bringing the islands under one rule, the native sandalwood supply was beginning to be exhausted.

About 1820 missionaries from Boston and Yankee whaling ships descended on these islands almost simultaneously. The missionaries converted Hawaiian royalty and gradually extended their influence by schools and good works. They succeeded also in curbing to a certain extent the boisterousness of the whaling skippers and crews. The whaling industry, however, was responsible for great prosperity in the middle of the nineteenth century. Often more than a hundred sailing vessels, and some times a hundred and fifty, crowded Honolulu harbor.

From the beginning American influence was strong, and while sailors and missionaries often disagreed violently, they early veered Hawaii toward the United States. The discovery of petroleum to take the place of sperm oil in 1859, and then the American Civil War, caused the whaling industry to languish. Later, however, occurred an influx of American capital and profitable commerce of the sugar planters with our Pacific Coast. Then in the year of the war with Spain, the Hawaiian Islands were formally annexed to the United States.

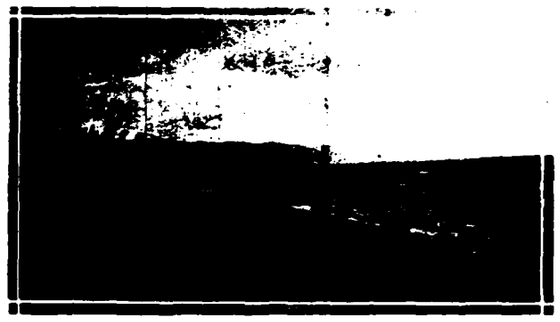
But to return to our skeptic officer, Honolulu bound, we find his appetite and interest in the future quickened now that the choppy seas off Golden Gate are well astern. He scans the chart of Pacific islands and notes Honolulu about twenty degrees above the equator, nearly opposite Yucatan in Mexico and Hongkong in China. His sleep the last night out may be troubled by fancied pronunciations of the seven largest islands, from northwest to southeast, Kauai, Oahu, Molokai, Lanai, Maui, Kahoolawe, and Hawaii. But on learning that early chronicles called Oahu, "Woahoo," and Honolulu, "Hanaroorah," he may feel better.

Oahu Landmark, Diamond Head from Waikiki

Soon after dawn as the transport bow startles the day's first squadrons of flying fish, the misty mountains of Molokai loom off the port rail. A few minutes later green cliffs of windward Oahu and rocks of Makapuu Point rise from the sea on the opposite side. The ship glides past weathered and arid Koko Crater and Koko Head. Then tawny Diamond Head is rounded and Honolulu of turbulent history in the days of sandalwood and whaling ships lies peaceful in her mantle of trees against the background of green mountains.

Near Diamond Head white combers roll up Waikiki and palms of what was once a royal grove for princely diversion cluster around two huge hotels. Directly ahead in the inner harbor is a semicircle of shipping from the seven seas. And as the transport noses into Pier Five the band on the dock below plays Aloha Oe. Friends are waiting with flower *leis* to bedeck the incoming passengers.

From the ship Honolulu appears to occupy a narrow strip along the shore. The rugged green ridges of the Koolau Mountains seem to crowd the city into the sea. The business district and the shops which strongly suggest the Orient as well as the South Seas are but a block or so from the waterfront. But, as much of



A Beach on the North Shore

Hawaii's wealth depends on the sea borne traffic, this is not surprising.

Upon closer inspection it is apparent that this metropolis of the mid-Pacific covers an extensive area. From Red Hill on the northwest to the Kaimuki district behind Diamond Head a blanket of tropical foliage conceals its size. Flame trees, golden shower, red hibiscus, and purple bougainvillea blaze in a riot of color. Palms, monkey pod trees, and banyans help to hide the city's roofs. Residential streets split around Punchbowl, an ancient crater, and reach into the deep mountain valleys.

Driving through the city streets the *malihini*, or newcomer, is perhaps disappointed at the evidence of twentieth century modernity. Panamas and "Palm Beach" suits and the latest mainland fashions have displaced feather cloaks and grass skirts. If further proof of up-to-dateness is required, it may be mentioned that in Honolulu Town, once famed for sailors' revels and the barbaric hula, there are more than twenty "wee golf" courses.

Native Hawaiians are not as conspicuous as might be imagined. Waikiki beach boys, of course, and the big Kanaka cops present no difficulties in identification.

Varieties of Palms Near Honolulu

Lei women at the steamers and workmen with flower wreaths around their hats are easily picked out. Not so easily recognized as members of this genial race are the many city and county officials and the large, portly individuals who step from limousines on Fort Street.

The large oriental element presents a surprise. Driving along North King Street in the direction of Schofield Barracks, crowds with almond eyes, whose faces bear the stamp of the Land of the Dragon and of the Empire of the Rising Sun, throng the sidewalks. Chinese and Japanese form large racial groups. Filipinos are second in numbers only to the Japanese.

Explanation for the many malays and orientals lies in the labor needs of the huge plantations. No machine yet invented can cope with the task of harvesting tangled sugar cane. Hence as early as 1852, due to the decrease in the native population, about two hundred coolies were brought from Hongkong, China. When, later, the Chinese were attracted from the plantations to commerce, Japanese were imported. And now the Philippines have become a source for workers in the fields.

The Schofield Road, called Kamehameha Highway after a famous native king, leaves the city and plunges into dank tropical vendure. It twists through thickets of *algaroba*, cousin to the *mesquite* of the American Southwest, to the top of Red Hill. Here as the car swoops down-grade a panorama spreads.

For miles green seas of sugar cane extend. Aiea Mill, Ewa, and Waipahu are islands in this ocean of jade. The three shining lochs of Pearl Harbor break this monotone of color on the left, and on the right row after row of pineapple plants grow across the foothills of the Koolau Range. Cloud capped peaks of the Waianae Mountains form the backdrop.

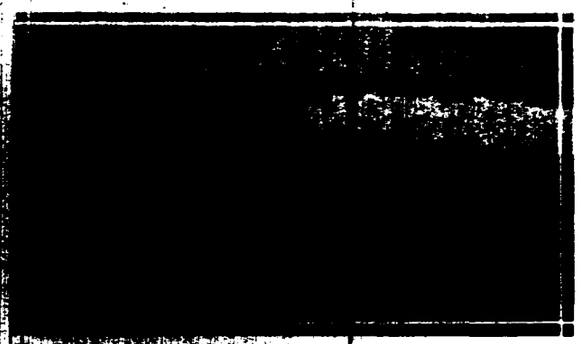
Schofield Barracks is situated on the high Leilehua Plateau just below Kolekole Pass of the Waianae chain.

It is a little more than twenty miles from Honolulu and due to its height is several degrees cooler. Incidentally, while Hawaii's climate comes close to perfection, the comfort of blankets and woolen clothing during cold nights in the rainy season is no tropic dream.

After passing the town of Aiea the Schofield Road runs close to Pearl Harbor. The highway twists and turns as if its builders planned to pass every habitation in rural Oahu. Generally speaking, it climbs. Through descents to gulch bottoms add variety and thrills as well. The sugar cane of the lowlands gives way to pineapple plantations in the red dirt for which Schofield is famous. Finally, as the rim of the second of two deep gulches is reached, the concrete barracks of the Post are in view.

It is not within our present scope to dwell upon the details of military life at this large garrison. However the pleasant contacts with officers of the Infantry and our other arms and services prove most valuable. Merely to take part in a division review is a visual lesson worth many text books.

Recreational facilities are here developed to their



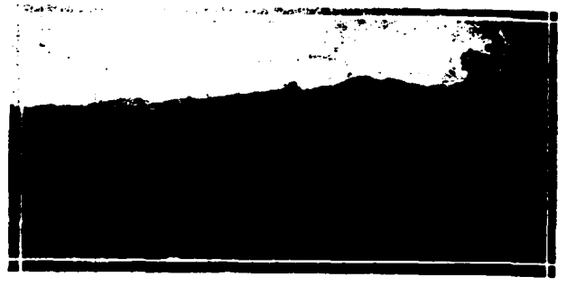
One of the Many Golfers

fullest extent. Hawaiian football may sound as outlandish as the *hula* on the Boston Common, but when neighborhood rivals meet, the bands play, banners wave, and everyone turns out. Considering the numbers that attend, boxing is perhaps the most popular sport. On "fight nights" the bowl whose capacity is ten thousand people, is jammed. In all sports competition is of the keenest.

Individual sports such as golf and tennis are enjoyed without regard to season. In the upper Post the fairways thereof in the shadow of Mount Kaala have their challenging distance. Tennis courts in the regimental areas are freely deserted.

For the "hoss" gentry there are polo and the Hawaiian Polo Club. Rides through the deep pineapple fields, and the guava thickets are well attended. In the Spring the [illegible] is an outstanding event.

[illegible] however, is ocean bathing. [illegible] the hill road down to Waialua and Haleiwa on the north shore carries a peak load. The twenty-foot combers that roll in at Nanakuli tempt many, though they are dangerous for indifferent swimmers. Army members are among the crowds that acquire sun tan at Waikiki. And many take the



The Koolau Range from Waikiki

Nuuanu Valley Road over the Pali cliff to swim at Kailua on the windward shore.

In a tour of Hawaiian duty many officers visit other islands in the group. A few testify to the beauties of Kauai, the "Garden Island;" and some to the wonder of the huge crater at Maui. Haleakala, ten thousand feet above the sea and twenty miles around its rim. Most officers visit the fire pit of world famous Kilauea on the island of Hawaii. On this island also rise the majestic peaks of Mauna Kea and Mauna Loa.

Returning to our skeptic's doubts of Paradise at this cross roads of the world, we fall back on the accepted doctrine, "It all depends on the terrain," and claim that in piling up these rocks of coral and lava the Creator left little ground for complaint. It also may be argued that Hawaii's tourist trade ranks next in importance to the profitable sugar and pineapple industries.

Of the enchantment of these islands, each, of course, must form his own opinion. Here are rainbows in

Palolo Valley in the Koolau Range

the sky, sunsets in the sea, and palms outlined black in silver moonlight. And while in the serious business of living these things hold secondary rank, yet they add to the intangible satisfactions of life.

Industry and National Defense

Major General George Van Horn Moseley, U. S. A.

II[1]

WHEN the United States declared war on April 6, 1917, the authorities realized that a great task lay ahead in organizing the country to support our military effort. Many people were willing, but few were competent, to advise the President what to do. Our fixed determination during the first years of the European war to remain neutral, had been carried to the point of restraining us from making any reasonable preparations, of either a military or an industrial nature. When we found ourselves thrust suddenly into the war, army, navy and other authorities began to estimate our needs, and civilians sought ways and means of supplying these needs.

In an attempt to meet the difficulties which immediately made themselves felt, man after man was called to Washington and board after board was established. Each seemed only to add to the general confusion and, after finding itself powerless to make any progress in the task, usually was succeeded by another equally ineffective board. The long list of committees, boards, and councils formed at the seat of government during the year 1917, is evidence of the confusion which existed in the field of munition production. It would be gross injustice to belittle the accomplishments during this period of the many able men connected with the munition program. What men could do under the existing circumstances, they did. The difficulty lay in the fact that, at that time, in the field of industrial mobilization we were amateurs, further handicapped by our abiding faith in the efficacy of individual endeavor as opposed to governmentally coordinated industrial organizations.

Huge orders for supplies were placed without regard to the possibility of procuring the necessary raw materials and with even less regard for further and possibly more pressing needs of the nation. Prices sky-rocketed to dizzy heights as a result of indiscriminate buying, and industrial organizations received conflicting orders from various purchasing agents of the Government. Although it was early perceived that we were drifting into a condition of industrial chaos, it was difficult, even with the support and cooperation of all classes of citizens, to evolve an effective plan of action. The various steps that finally placed our industrial effort on a reasonably sound basis were taken slowly and tediously. They included the establishment of a civilian organization in Washington which, by virtue of the powers delegated to it by the President and conceded to it by industry itself, was able to centralize and unify the industrial effort of the country. Much effective work was eventually accomplished, both in the production of war munitions and in other uses of the economic resources to further the nation's best interests. Throughout the war we continued to ship great quantities of raw materials to the Allies, and many of our factories were continuously engaged in producing important items of equipment for them. However, though we entered the war as the leading industrial nation of the world, and were actively engaged for nineteen months, not one American-made tank was ever used on the battle front, and not until the Armistice had the most essential types of artillery shells reached quantity production. Such a delay in the future might, under different circumstances, have the most serious consequences for our country.

If industry is to meet the demands made upon it in war, and if the material resources of the country are to be properly organized, it is now generally recognized that they must be subject to the direction of one supreme head who will be responsible for the unified application of the power they develop. Such a conception of business methods is entirely foreign to the prevailing peace-time practice in our country.

The development of American industry in the last century has been accomplished under a doctrine of free competition, which permitted full exploitation of our national characteristics of self-reliance and initiative. The Government has wisely refrained as far as practicable from interfering with the fundamental laws of supply and demand. Governmental control has been limited, in theory, to that necessary to preserve free competition, and to prevent injustice to the mass of our citizens. The trite saying, "The more business in government, the less government in business," expresses epigrammatically the philosophy of our people respecting the individual's control over his own capital and his own efforts.

In war all this changes. Demand becomes not only abnormal but is measured in terms of national self-preservation rather than in capacity to pay. Time is vital. The interests of the individual must be wholly subordinated to the interests of the nation. Supplies must be obtained regardless of expense and effort. To avoid collapse and chaos, the government must assume control. Prompt action will be necessary, but snap judgment decisions should not direct this action. Efficiency can result only from study, from knowledge, and from deliberate preparation.

The board which finally supervised and controlled our industrial organization in the last war was headed by Bernard M. Baruch. In his final report on the activities of the board, submitted to the President in March, 1921, he stated:

(1) The second article of this important series.

"That much of the confusion experienced in collecting the supplies for this war could have been avoided by a more painstaking, thorough, and comprehensive effort on the part of the Government supply bureaus to work out a program of redoubt, even a program tentative in many of its details, there is little doubt. That such a program would have been exceedingly difficult to frame is quite certain.

"The experience of the board in this respect suggests the thought that there should be established a large unit of specially qualified officers of the War Department devoted in time of peace to studies of supply programs for supposititious military undertakings. As these programs would always have to be based upon the obtainability of the supplies outlined, the bureau should be required to go deeply into a study of the industrial resources and possibilities of the country as they relate to war needs. These studies are a military function, but they might have also, as a by-product, a healthy effect upon business."

The essentials of Mr. Baruch's recommendations were incorporated into law by Congress in 1920. The National Defense Act of that year places on the War Department the duty of assuring adequate provision for the mobilization of the national resources essential to war-time needs. The peace-time studies and plans which Mr. Baruch visualized are now demanding the constant efforts of a small group of specially selected officers who receive the voluntary assistance of experienced civilians.

It is necessary to make in peace reasonable estimates of the amounts of munitions essential for war, and they must be listed according to importance. Moreover, in peace we must plan for the distribution of war-time production to the various sections of the country in proportion to the productive capacity of each. It must be assumed, of course, that in war Congress will give the necessary directives which will enable the Executive to accomplish the 'scientific application of the industrial forces.' The necessary requirements in labor, raw materials, facilities, power, fuel, and finance must be foreseen and provided for in detail. Where there promises to be a shortage in any of these, plans must provide for curtailment of certain industries in order to favor those whose activities are vital to the country's needs. There must be no interference during an emergency with the production of essentials for the civilian population. Plans for war-time control of prices must be reasonable, workable, and just. Finally, there must be sound plans for the control of the whole economic war effort through providing for a centralized organization of manufacturers, financiers, miners, farmers, labor leaders, lawyers, doctors, and in fact representatives of every part of our economic life.

Such preparatory work is merely to place our national house in order. It requires little expenditure from the public funds, and the most extreme advocate of total disarmament could scarcely make objection to its consummation. It indicates no attitude on our part unfriendly to any other government. In fact, it indicates nothing more than our determination to avoid the waste and inefficiency that have throughout our history characterized our initial industrial efforts in national emergencies. It seeks merely to apply sane business methods to government business in war, so that every individual will carry his share of the burden and the government will obtain one hundred cents of efficiency for every dollar spent.

Progress in the task is steady, even if slow. Its execution is made possible only by the hearty cooperation of all classes of citizens with the officers of the government. Happily, the modern American has exhibited a patriotism and interest in his nation's welfare which does not limit him to outbursts of wild enthusiasm when the enemy is actually at the gates, but impels him equally to participate in the humdrum work of peace, in order to assure the continued prosperity and security of his country. The work so far done gives reasonable assurance that never again will we have to go through the industrial nightmare of 1917; if we were attacked tomorrow, the work already accomplished would place us far ahead of where we were on April 6, 1917.

The solution before 1917 of the problems I have outlined, would certainly have had marked effect on our war effort. As to the lives it might have saved, and how much it would have hastened the final victory, one man's guess is as good as another's. Certainly it would have reduced the risks we took in entering a great war with scarcely an idea of how to equip and supply our armed forces. Today, we would be paying interest on a much smaller national debt. The most conservative authorities estimate that war expenditures under the assumed conditions would have been twenty-five per cent—about five billion dollars—less than they actually were. Plans that give reasonable promise of effecting such savings to American taxpayers, are worthy of the most serious consideration.

Practical Peace-Time Leadership

The "Case Method" Applied to an All-Important Phase of Military Education

Major O. W. Griswold, Infantry

LEADERSHIP can not be learned from a set of rules. However similar soldiers may be in the mass, individually each man has a distinct personality. In battle, in the face of danger and death, the soldier is stripped of all superficial attributes and reverts to the elemental man. The herd influence then becomes predominant. He ceases to think, and then reacts, as a matter of habit, to the things learned on the training ground.

In peace, such factors as education, previous occupation, race, antecedents, and home training make soldiers more individualistic. There is not present that common danger, as in war, to bring them all together. In peace, too, the application of disciplinary measures to suit the particular case may be efficacious as a deterrent. But in battle no disciplinary punishment, less than death itself, will affect any man who is crazed by fear.

The lives of Napoleon, Scipio, Hannibal, Caesar, Grant, Lee, Stonewall Jackson, and many other great soldiers abound in glorious exploits of leadership on the battle field. Conversely, the student may also find in history many notable examples of its failure. Unfortunately, however, there are few examples in print concerning the practical application of leadership in time of peace. Therefore, and since it is in peace that we should prepare for war, this study concerns itself more with the peace-time aspect of the question.

The following true cases, illustrating some examples of peace-time leadership, are stated from an observation of some twenty-four years' service. They are stated, not in a spirit of criticism or commendation, but in an effort to illustrate what are considered to be certain fundamental principles that underlie the application of peace-time leadership.

Case I. Some years ago, the graduating class at West Point was given opportunity, as a part of its instruction, to witness the usual Saturday inspection of one of the Regular Army detachments at that station. The detachment commander's attitude towards the men was one of extreme severity and faultfinding; any bunk not made up to his satisfaction was pulled roughly apart, and the blankets, sheets, and equipment were scattered upon the floor; noncommissioned officers, as well as privates, were admonished caustically and sarcastically before the assembled cadets; meat cans, knives, forks, and spoons, out of place or in poor condition, were thrown across the room; and several times the detachment commander lost his temper and used profanity. He seemed to take pleasure in finding something wrong, and failed to comment favorably on anything that was right.

The impression made on that graduating class was impressive and lasting. To their inexperienced eyes *this was the approved way to handle enlisted men.* Needless to say, every potential officer in that class was greatly handicapped during the formative years of his earlier service by the experience. It took years for some of them to readjust their ideas. This influence may have caused some of the storm of post war protest against Regular Army methods.

This case illustrates many serious errors in the psychology of troop leadership. First of all, it is an almost criminal illustration of the power of example wrongfully applied. Secondly, it violates every sembalance of dignity, justice, and good practice in the handling of enlisted men. Such treatment lowers their self-respect and exposes them to ridicule. It is unjust and arbitrary. It destroys loyalty and respect for the commander, the organization, and the entire Service. Finally, the tyrannical imposition of authority on subordinates by virtue of military command can never be defended. It is the act of a bully, not that of a leader.

Conversely, analysis of the case by the observant officer will guide him to a fundamental truth, which is that in most situations commendation is more powerful than condemnation. Applied to the case in point, it means that the detachment commander's mental attitude was destructive rather than constructive.

In making an inspection, then, the best method is to find first something satisfactory. Having once found it, make favorable comment thereon. Then point out carefully the unsatisfactory things, emphasizing the idea, at the same time, that only these latter things are holding back the individual or the organization from being uniformly up to the approved standard. Instead of arbitrarily ordering "do this" or "do that," the initiative of the subordinate can be stimulated by such questions as "What do you think about this?" "Have you considered that?" leaving him the working out of the suggestion. The senior has a direct responsibility in checking up on results. This course will almost always bring home to the subordinate that the senior is a friend, not an enemy; that he is trying to build up, not to tear down. Its strength rests upon the fact that any human being is proud to have or to do something above the average. He receives pleasure and incentive from the fact that it is noticed and praised by superiors. It works irrespective of persons, whether they be generals, colonels, majors, junior officers, noncommissioned officers, cooks, or privates. It may be applied to any phase of every day military life, whether it be between line and staff, at a drill, an inspection, a tour of guard, or even in the supervision of a police detail. The application of this principle detracts in no way from what military men call "force." If, after fair trial, good results are not obtained, then

direct orders and direct action are necessary. If these latter measures do not accomplish the desired end, then the individual becomes a proper subject for prompt elimination from the service.

Case III. Immediately after the World War, the then Commandant of Cadets at West Point was impressed with the necessity of developing the latent leadership of cadets while in the Corps. To this end, tactical officers were assigned orderly rooms in the cadet barracks. They were thus brought into direct contact with cadets. Disciplinary matters were handled under policies, exactly as in the Service. Tactical officers were enjoined to be strict but absolutely just, and were not empowered to use arbitrary measures of punishment. The tactical officer became, in truth, the "Old Man" of his cadet company. His daily administration of the business of that company served as a daily object lesson to the cadet throughout his course at the Academy.

A text book "Military Man Power," by Lieutenant Colonel L. C. Andrews, U. S. A., was obtained and a course of instruction was given by the Tactical Department. Initiative and responsibility were developed in members of the First (senior) Class, by requiring each of them to rate every cadet in his company twice each year in certain fundamental qualities of character and appearance. These ratings were resolved by a mathematical formula and incorporated into the cadets' general standing for the year.

Beneficial results were immediate. Cadets began to see that officers were not hereditary enemies. On the other hand, officers began to take more interest in their cadets. They arranged for special coaching for those deficient in studies, and a community of interest developed which resulted in the cadets asking for and receiving advice and help on private, personal, and official matters. This was accomplished without lowering the standard of discipline in the least. It is certain that the relationship between commander and commanded is now much better understood at West Point than formerly.

This case illustrates a fundamental knowledge of human nature, and the power of example rightly employed.

Case IV. Some years ago a young married second lieutenant was ordered on foreign service. On account of a sick child who was unable to travel, he applied for and obtained from The Adjutant General one month's delay in sailing. Upon arrival at his new station he was severely reprimanded by his colonel for the delay in reporting. He was further told in no uncertain terms that his future actions would be governed strictly by "the law." The colonel emphasized the necessity of that law by pounding on a copy of Army Regulations. The child died later from the effects of the delay.

The colonel later apologized, no amends that he could make could remove that subordinate's sense of resentment and injustice, shared in common with other officers of the regiment. The colonel lost the loyalty and respect. Apparently, however, he learned nothing from the incident, for as long as he commanded the regiment his methods were those of a martinet. Officers were being put in arrest and trials of officers and men were frequent. Outwardly, the regiment had every appearance of being an excellent organization; within, loyalty, esprit de corps, and morale were very low.

This case illustrates lack of understanding and sympathy on the part of the superior. It exemplifies also rule by fear. While the power to punish is a necessary attribute of command, it should be resorted to only when necessary. In some cases punishment should and must be given. Too often, however, the rule by fear is applied by all ranks in our Service. Enlisted men are too often tried by their company commanders because it is the easiest and quickest way to dispose of the cases. If a case contains any unjust or unfair elements, irreparable harm to morale is certain to result. Higher commanders sometimes centralize punishment, by policy, so that an enlisted man is tried irrespective of the wishes of his company commander. If the superior is of the martinet type, such a policy is harmful.

In any well disciplined organization, the superior must uphold the authority of the junior. The superior, however, has an equal duty in seeing that the subordinate does not act unjustly.

Case IV. Incident to border trouble, a certain infantry regiment was ordered to Texas some fifteen years ago. Prior to a practice march, a company commander of that regiment, just assigned, gave his company specific orders against drinking water from unauthorized sources. He explained that much of the water in the country was unsafe to drink. As the company had many recruits, he made the necessity for the order clear. In the course of the long march, the company halted, hot and tired, near a stream. Immediately on breaking ranks, one of the outstanding sergeants in the company, a man of long service, was seen drinking from the brook. In the presence of the assembled company, the captain quietly and without resentment cut away the sergeant's chevrons and assigned him to a squad as a private. Upon return of the company to the post, the regimental commander confirmed in orders the reduction of the sergeant to the grade of private.

This case illustrates a fundamental principle of command—an order once given must be strictly enforced. The sergeant's usefulness as a leader was destroyed by his own action. Since he himself did not obey, how could he expect obedience from others? Had this offense been left unpunished, the discipline in that company would have been nil. The fact that the punishment immediately followed the delinquency is an important point to note. This case also illustrates a very human trait of soldiers, which is to try out a new commander.

Case V. A new tactical officer was assigned to and joined a cadet company at West Point on the day that it completed a week's practice march in inclement weather. At Saturday inspection the following day, many rifles were found dirty and rusty. The tactical officer immediately ordered a special inspection in one hour's time for those cadets whose equipment was not in satisfactory condition. Some rifles were again found to be unsatisfactory. Two supplementary inspections were held during the day for those cadets who had failed to come up to the required standard of the previous inspection. The few who had unsatisfactory rifles or equipment at the fourth inspection were at once awarded five demerits and ten confinements[1] or punishment tours. In addition thereto, they were confined to barracks until such time as their cadet captains had passed their equipment as satisfactory. On subsequent Saturday inspections, appropriate punishment was invariably awarded without any second opportunity to make good. Needless to say that particular tactical officer had no further trouble with the care of equipment.

This case is selected as illustrating two points.

First of all, class punishment should not be employed where individuals are at fault. While the entire company was generally unsatisfactory, there were individuals who did have excellent equipment at the first inspection. It would have been basically unsound to hold them further because others had failed to come up to the required standard. The course adopted put a premium on good work, but was absolutely inflexible as to poor work.

Secondly, sincerity of purpose will always produce results. The easiest way to have handled this situation would have been to punish all delinquencies at the first inspection. However, this would not have changed the condition of equipment for that particular Saturday. Moreover, such a course might have been unfair to certain individuals, on account of the short time available to prepare. The tactical officer wished to stress cleanliness of equipment rather than punishment. The series of inspections took all day, and sacrificed the leisure of all concerned. It impressed the fact that the equipment *must* be in a satisfactory condition. It gave the necessary time and opportunity, and only those cadets who were not playing the game received punishment in the end.

The action was designed as an object lesson, that no matter how disagreeable the task, poor performance would not be tolerated. This principle is susceptible of extensive application in ordinary every day military life. It is based on firmness rather than unnecessary harshness. Certain methods by one type of leader will not secure the same results when applied by another. The principle therefor is fixed, but the method of application often varies.

Case VI. A general officer was once visiting a large post. Part of the troops were out in a model camp erected to help with the instruction of students. Accompanied by the post commander, the colonel of the regiment, and other officers, the general made an inspection of the camp. The party came finally to the camp latrine, in the construction of which a certain corporal had displayed great interest, energy, and initiative. The corporal was present at the inspection, full of pride in the consciousness of work well done. The general turned to the post commander and complimented *him* highly on the installations, saying that it was the best field construction that he had ever seen. The corporal who had done the work, stood by unnoticed by the general as the party passed on, but the wise post commander himself complimented the corporal as he left.

Passing later to the picket line, everything was found in excellent condition. Somewhat perfunctory comments were made by the general until he spied a man nearby grooming a horse. He stopped and gave a long dissertation in the hearing of the men on the general *unsatisfactory methods of grooming animals, not only* in all branches of our Service, but in that organization in particular, and called attention to that man as an example. The man was so humiliated by the gibes of the other men, and by the fact that he had brought adverse criticism on the company that he later attempted to desert the Service.

This case should hold some valuable lessons for the observant officer. First, men always respond to interest in themselves and their work. It would have cost the general nothing to have asked the corporal a few questions about himself, and to add a quiet word of commendation.

Another striking point is the readiness of the post commander to give due credit to the man actually responsible. Selfishness is a rock upon which so many promising military careers are wrecked.

Humiliation of a junior can never be condoned. It is probable that the incident about grooming the horse passed from the general's mind within the following five minutes. He simply took that means to drive home a lesson. Yet he unwittingly humiliated one man who probably will never forgive or forget, and lowered the morale of an entire organization.

To summarize, two authorities analyze and evaluate alike the inherent qualities which they consider essential to leadership. Too often, discussion on these points obscures the essence of what leadership should accomplish. The purpose of leadership is to secure the whole-hearted physical and moral cooperation. When such cooperation is spontaneous and free, and not until then, has true leadership been established.

Without attempting to state specifically all the principles of leadership, it may be said that they are the basis for all that a commander does to secure for himself the sincere, loyal, and voluntary cooperation.

In the analysis of cases lies the key to the practical application of troop psychology. Any officer of experience can state many examples, both good and bad, from his own observation. The inexperienced officer, however, can only observe and benefit from the methods of others.

Granted that instruction in troop psychology is necessary, the next consideration is to determine the best method of laying foundation. The applicatory method, supplemented by study and lectures, is preferable to all others.

[1] Required to remain in their rooms during leisure time on ten Wednesdays, Saturdays, and Sundays.

Antiaircraft Instruction for Cavalry Machine Gunners

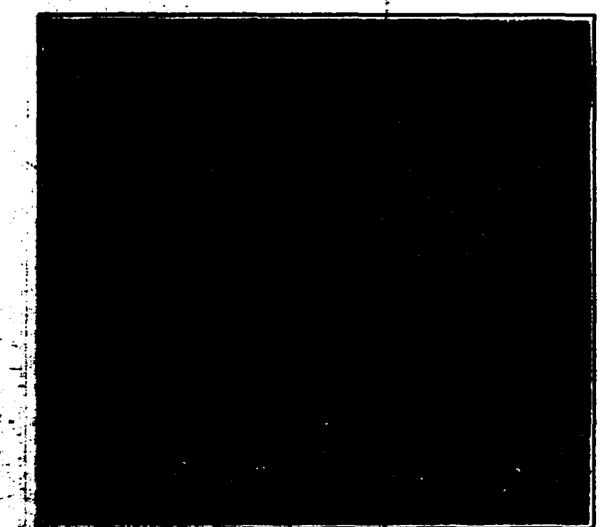
By Captain Thomas J. Heavey, 2nd Cavalry

THE Cavalry Board at Fort Riley has recently completed a test of the Tentative TR 300-5 Antiaircraft Combat. It fell to the lot of the writer to construct the range for this test, and being by inclination and fortunate circumstances a cavalry machine gunner for the major portion of the last twelve years, the machine gun phase of this test firing was to me of particular interest.

Training Regulations No. 300-5 (Tentative) seem to have executed a "glissando" on this subject. Par. 12, *b*, thereof tells us that the machine gun mount as now issued is not suitable for antiaircraft fire. And again in sub-paragraph *c*, of the same paragraph, we are told that the outline of training as given in TR 300-5 is applicable to the training of machine gunners. Such remarks remind one of the old wrapper of Mother Hubbard, they cover everything in general, but nothing in particular.

Our problem in the Cavalry is different from that of the Infantry in that we are even worse handicapped as to a suitable mount. But we must at least do the best that we can.

Specifically, the issue tripod is not an antiaircraft machine gun mount, but the gun itself may be simply, cheaply, and quickly modified, so that it may be mounted on the issue tripod, and be used as an antiaircraft weapon. Naturally it is not an ideal weapon, when so mounted, but it is considerably better than nothing. The modification referred to is illustrated. Two holes through the side plates, just in rear of the trunnion block permit the securing of the gun to the elevating screw, by means of the elevating screw pin, and this mounting acts as a universal joint. Both elevation and traverse are permitted, within reasonable limits. The gun will never be effective unless mounted and ready to fire when the hostile target appears, but it is hardly fair to assume that this condition will never exist. When time permits the mounting of the gun, comparative results of the test are of interest.



Browning Machine Gun Mounted on Issue Tripod for Antiaircraft Fire

However, I have to differ from the general statement that rifle methods of training for antiaircraft fire apply as well to machine gunners. The ultimate objective of this training, regardless of the weapon employed, is the same, but the principles involved are entirely at odds.

A simple illustration I hope will bring out this. Assume a machine gun tuned up to a cyclic rate of 600 shots per minute, firing on a plane crossing the front at a reasonable slant range of 500 feet. If the plane is moving at 150 miles per hour, it will move 22 feet every tenth of a second. The machine gun, let us assume, fires a burst of five shots. The lead is such that the first shot of the group is a hit at the forward part of the prop of the plane. Assume also that the machine gunner is using "rifle methods." that is. he has swung his line of sight through the plane from rear to front, and pulled the trigger when he had the ordered lead. Where does the second shot of the burst go? It leaves the muzzle one-tenth of a second after shot number one, and passes the same point on the course of the plane that the first shot does. An artificial assumption, because there will be dispersion, but sufficient for the argument. The plane is now 22 feet further along its course. The second shot is wasted, for the vulnerable part of the plane is only 11 feet in length. Also the third shot, and all others.

The machine gunner will get just as great effect on the plane by firing single shots as he will by firing bursts. The same condition exists when the machine gunner gets "clever" and lays down a cone of fire for the plane to fly through. Assuming everything is ideally set, he can not get more than one hit. and the probability of that is only ½, the vulnerable length of the plane in proportion to the distance traveled between shots, 11 feet to 22 feet.

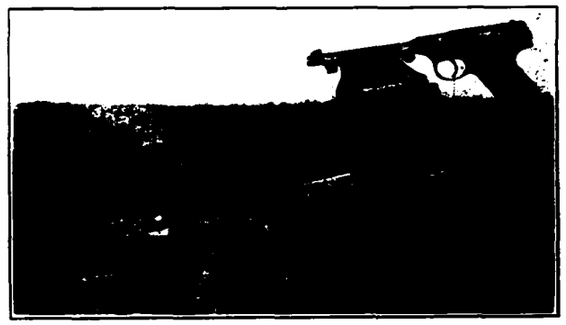
However, if we can train our gunners to *maintain* the ordered lead, and fire continuously whenever he can get and keep his sights laid at this ordered lead the situation is different. Theoretically, if the lead is correct,

our hits are dependent upon the proportion of the size of the cone to the size of the target, as the cone is moving along with the target, and covers it. Actually, a different result appears, because the correct lead is constantly changing, varying with the slant range. But at some time. it is possible that the ordered lead is correct, and though it be for only a second or two, the result on the plane is obvious, or in combat, would be.

The problem before us is to give the machine gunner training along this general principle, namely, *continuing fire at the ordered lead,* and *maintaining the lead.*

The moving targets designed in the Training Regulations, can be used just as well for machine gunners as for riflemen. And the issue tripod, mounting the modified gun, gives the gunner practice in manipulation, which is quite a problem at best. A Colt .22 Cal. Automatic Pistol may be clamped on to the receiver of the machine gun, and we now get basically sound training for the gunner. In all the courses of firing at the moving targets, he fires as many shots as he can, by simply pulling the trigger on the pistol, and he tries to maintain the ordered lead. In actual practice, none of the gunners were able to empty the magazine, ten shots, at one course of the target, but seven and eight shots to the rifleman's one, was not uncommon. The actual scores obtained with the automatic pistol were not, as a matter of fact, as high as the individual shots fired by the riflemen. Possibly the pistol is not quite as accurate as the gallery rifle at this range, 1,000'. But this practice in manipulation of the machine gun, and the practice in maintaining the ordered lead, in conjunction with firing as quick as possible, brought forth results on the towed targets that, when impartially analyzed, are worthy of most respectful consideration.

The machine guns proved to be equivalent to ten riflemen. in firing at the towed targets at mid ranges. But in all the firing. due to having no ammunition to spare for the test. the machine guns were limited to fifteen rounds for each course of the towed target. In my opinion, they could have easily fired three times as much as this. and in most cases five times as much. Had the percentage of hits per number of rounds fired remained the same, no conclusion could be reached other than that the rifle equivalent for a machine gun was from thirty to fifty. The amount of ammunition expended on an emergency mission such as this actually would be, is immaterial. If the machine gunner could get the plane or inflict morale damage to the hostile



.22 Cal. Colt Automatic Pistol Mounted on Browning Machine Gun for Preliminary Instructions in Antiaircraft Firing

aviator, any amount of ammunition would be justified. The riflemen do not conserve ammunition in such a situation, for the very sound reason that they are out to get the plane, regardless of anything else. And surely one machine gun will not give the plane such a target as thirty to fifty riflemen.

I have seen numerous reports of firing of ground machine guns against towed targets, with invariably the tabulated figures to prove that the rifle is the most efficient weapon for this type of combat. And I have as consistently believed that the author of the particular article was not a machine gunner, but a rifleman. All of us are human, and it makes a world of difference whose baby has the measles, when we pass judgment. But let us not be misled by results obtained by machine gunners that have had "rifle methods" of preliminary instruction crammed down their throat. There is little doubt left in any one's mind as to the relative effectiveness of rifle and machine gun fire in every imaginable situation of combat on the ground. Why the reporting officers have "discovered" the rifle superior to the machine gun in antiaircraft combat is, to me, an anomaly. Perhaps it would be well for us all to dig in and find out *why* the discovery, and be sure that we have not overlooked something in the training of our machine gunners.

The use of this .22 cal. pistol on the gun, modified to permit antiaircraft fire, is submitted to these "discoverers." It is not the answer, admittedly, but I hope it will serve to direct our research along lines that will bring us all, Cavalryman, Infantryman, or layman, to the frame of mind that will let us be impartial toward the automatic weapon, and see some value in having them with us when menaced by attack aviation.

Reservist Field Training

Lieutenant Colonel H. E. Finch, Corps of Engineers

IT WILL be generally conceded that the primary duty of the Regular Army is to keep itself prepared for efficient service in the field, and it is reasonable to assume that its next most urgent duty is to aid in the training of the National Guard and the Officers Reserve Corps—those vitally necessary components of the Army of the United States.

As is well understood, this training involves inactive instruction at the home station of the Guardsman or Reservist as well as active field training at summer camps. This discussion is designed to cover certain points of the administration of reserve encampments and the nature of the instruction presented during these 14-day periods. For convenience these points are discussed under separate headings.

Circulation of Advance Information. No emphasis need be laid on the fact that the Regular, detailed for reservist field training, wants to provide as efficient an encampment as possible. One aid in that direction is to send to each prospective trainee (on receipt of his orders) a form letter giving full information concerning the camp, how to get there, what to bring with him, what not to bring, where to report first, accommodations at his disposal, whether or not he can procure items of uniform equipment after arrival, advance procurement of longevity pay statement, and the like. These letters are of value since they can be drafted to answer a multitude of questions before they are asked. In addition, it is an excellent plan for the senior instructor to send to the commander of each unit that is to attend the camp, in advance, a letter of information about camp policies on administration and training, accompanied by a sample instruction schedule.

Time of Arrival. The federal expenditure on Reserve training, ranges around three million dollars a year. In order that the greatest dividend may be secured on this investment it stands to reason that the largest possible amount of training time should be secured from every bit of the 14-day period. One excellent method of doing this is to organize the camp so that all physical examinations are completed on the first day of arrival. The form letter referred to should carry a paragraph requesting the Reservist's cooperation to the extent of arriving on Sunday and early enough in the day to enable the medical personnel to examine him physically during daylight hours. This point does not require a great deal of [illegible], but it is frequently overlooked with the result that half of the trainees loaf around during the [illegible] of the first Monday forenoon while the [illegible] being looked over by the doctors. If [illegible] Regular Army Medical Corps officers are [illegible] enough to carry out the Sunday "contract" it is usually easy to secure, by action through corps area headquarters, the detail of Medical Corps Reservists, care being taken to see that the time of their arrival is advanced one day so that they will be available for a prompt start on Sunday morning. During a recent encampment an organization of one dental and three medical officers of the Regular Army, assisted by one dental and three medical Reservists, made 130 thorough physical examinations on one Sunday between 9:00 A. M. and 7:00 P. M., with time out for luncheon and dinner. This total could have been raised to 150 without undue exertion.

It is sometimes alleged that reserve officers will not cooperate in the matter of timing their arrivals for Sunday, if this involves travel during any time whatever, even an hour or two, for which they do not receive federal pay. This apprehension has been thoroughly discredited in experience extending over five years. Something depends upon the manner in which the "approach" is made in the form letter, but it may be stated as a fact that the great majority of reserve officers will take the broad rather than the narrow view of the obligations assumed by them with their military commissions and will cooperate even at some inconvenience to themselves in the matter of timing their arrivals at the encampment.

Registration. Upon arrival the trainee (according to the directions in the form letter) should report at once to the registration office, located preferably in the same building or tent where the physical examinations are to be made. At this office he records his arrival and furnishes to the regular personnel the data required for his active duty report and for the preparation of his pay voucher. At this time the Reservist settles a number of points about his pending period as Uncle Sam's "guest." For example, he turns over the data (secured in advance from corps area headquarters) entitling him to longevity pay, he receives his room or tent assignment, he arranges with the transportation officer for the hauling of any baggage left at the railway station, and so on.

Physical Examination. The physical examinations should follow immediately after the trainee has registered his arrival and has talked to the clerks who handle the pay and baggage arrangements. Seats should be provided for those awaiting examination. The instructors will find this period of waiting a profitable one in which to meet the Reservists personally and to discuss training matters with them.

Equipment Issue. On account of the small amount of individual equipment that has to be furnished to each trainee, it has been found to be practicable to make this issue late in the afternoon or early in the evening of the Sunday of arrival. This removes one

of the most fruitful sources of delay. If the issue is deferred until the following morning there is bound to be interference with what should be a full forenoon of training.

Mess and Quarters. A well conducted mess is a great agency for maintaining a high morale wherever men are grouped together. It has been found that a satisfactory field mess feeding from 50 to 150 men can be conducted at a cost of not more than one dollar and a quarter per day per individual. Many messes have run far beyond this figure—with consequent dissatisfaction. There is sometimes a tendency to be too parsimonious in supplying equipment for camp messes, but no excuse can be seen for this practice in view of the present cheapness of enamelware dishes and plated cutlery.

In the matter of quarters, there is a tendency to employ the camp janitors or mess attendant, to make beds, sweep floors, polish leather, and the like. In the writer's experience this practice has not been satisfactory. Ordinarily the men employed will neglect some of their work in order to serve those who are generous with gratuities. It is a particularly bad practice to permit the employment of table waiters and kitchen police as strikers. After considerable experimenting the writer is prepared to recommend that all janitor and orderly service be dispensed with at encampments except that needed to keep the company streets, bathrooms, and toilets in good condition. This implies that each Reservist should be called upon to cooperate to the extent of making his own bed once a day, sweeping his tent floor, and "dragging" his own water. There will be few cases where this cooperation will not be cheerfully extended—particularly when the Reservist finds that the practice is an economical one for himself.

Solicitation for Contributions. It will be found to be an excellent rule to have it understood that the trainees are not to be solicited for any contributions for any purpose whatsoever. This rule is frequently violated in the interest of some more or less worthy cause, but the practice is one to be rigorously avoided. A levy of no more than twenty-five cents per capita has frequently produced a twenty-five-dollar grouch. But aside from all adverse reactions, it is sound policy to avoid all contacts that involve money between the instructor and the trainees. After the Reservist has paid his mess bill and his laundry and camp exchange accounts, he should be free of all financial obligations whatsoever, so far as the encampment is concerned.

Camp Exchange and Quartermaster Sales Service. If the encampment is held at a regular army post it is very desirable to secure the cooperation of the post quartermaster and the exchange officer in order that a sales service on the afternoon of the Sunday of arrival may be provided for the trainees. It frequently happens that an individual will report to the encampment with incomplete uniform equipment, and this service gives him an opportunity to remedy the deficiency without interference with the training, which should begin promptly on Monday morning.

In this connection it should be noted that young R. O. T. C. graduates, attending their first reserve encampment, are often in no financial position to supply themselves with the complete uniform equipment. It is very desirable to encourage these young officers, both before and during the encampment, by aiding them in securing government issue items.

Motor Transportation. To carry out practical field training through terrain exercises and tactical rides, it is necessary to have a certain amount of motor car and truck transportation. There is often a great deficiency in these items and instruction is consequently much handicapped. Where this situation exists the only practicable solution that the writer has found is to designate (with the consent of the owners) certain privately owned cars as "official," thus, under a liberal interpretation of the regulations, entitling the camp quartermaster to supply them with the gas and oil consumed while on the government business of transporting trainees.

Daily Sick Call. If the camp is held at a regular army station the normal 8:00 or 8:30 A.M. sick call does not fit in conveniently with the field training day. It is feasible, however, to have a daily sick call in the camp, say, at 7:00 A.M., supervised by a medical Reservist if one is available.

Exemption from Administrative Work. A tendency is sometimes noted to require reserve organizations in camp to handle a large amount of routine administrative work, the usual excuse being that it gives the units experience. This practice has little to commend it because such experience as is gained is offset many times by the fact that the field work missed by the officers engaged on administrative duty is of far greater value to them professionally. This is not to argue for neglecting administrative work, but for taking the emphasis off of routine office procedure and placing it on field training. It is altogether unlikely that the adjutants and supply officers of the present day will act as such in future emergencies.

Daily Schedule. The schedule of hours will vary with the locality and the climate. The following setup of hours is recommended as being applicable to a wide range of situations:

Calisthenics	6:00 A. M.
Breakfast	6:15 A. M.
First Training Period (command drill, infantry close order, etc.)	7:15— 7:45 A. M.
Second Training Period (terrain exercises, demonstrations, etc.)	8:00—11:45 A. M.
Luncheon	12:00 Noon
Third Training Period (terrain exercises, demonstrations, etc.)	1:00— 5:00 P. M.
Dinner	6:00 P. M.

Types of Training. Considering the small instructional value of lectures, it is astonishing that so many instructors still rely on them so largely in reservist field training. Lectures are certainly one of the least efficient instructional agencies, and even the limited value that they possess is further reduced when they are used under the conditions that prevail in the average summer training camp. It has been demonstrated repeatedly that practically all lectures and classroom

work can be eliminated in connection with encampment training, and the instructors who have eliminated these agencies in favor of terrain exercises, tactical walks, and other forms of field instruction will never be persuaded to return to them. There is no question but that terrain exercises, designed to employ the reservist organization *as a unit*, have the greatest value as instructional agencies, particularly when the exercise places some responsibility upon each headquarters as well as on the individual reservist, and at the same time is under the supervision of a regular army instructor. It is difficult enough to simulate war conditions in peace-time training, but well formulated terrain exercises approach this goal closer than any other form of training.

To secure the maximum efficiency the terrain exercises should be coordinated with the map problems given during the preceding inactive training season.

Unit Integrity. Wherever possible it is an excellent policy to preserve the integrity of reserve units in an encampment, it being understood, of course, that individuals and small groups will have to be attached to regimental organizations represented by larger numbers. In this connection it may be said that where an excess of field officers exists, it is not necessary to over-staff the regimental and battalion headquarters; the experiment has been tried successfully of utilizing junior majors as company commanders, in the absence of captains for these posts.

Along with unit integrity should go unit responsibility, without, however, going to the point of requiring organizations to conduct their own training throughout. Always there should be regular army supervision, with the understanding that the terrain exercises are to be so drafted that each echelon of the organization will be employed on its own responsibility.

Amount of Training Time. The large federal investment in reserve training places the responsibility upon the instructor of securing the maximum amount of training time out of the 14-day encampment period. It has been found that 10½ days can be devoted to training without undue hardship on anyone, the subdivision being as follows:

First Sunday	Arrival, registration, physical examination, issue of equipment.
5½ days of 1st week	Training time.
Afternoon of 1st Saturday	No duties.
Second Sunday	No duties.
5 days of 2d week	Training time.
1 day (last Saturday)	Traveling.
14 days, including 10½ training days.	

Under the above arrangement, it will be noted that the afternoon of the first Saturday and all of the final Friday are allotted to training purposes. This allotment is based on practical experience extending over many years, and it has always met with the full cooperation of the officers, even where the student officers had been accustomed to easier schedules at preceding camps. It appears that some instructors are content with less than the 10½-day maximum, and it is always true that in such cases only a lighter schedule should be allotted. The fact remains, however, that 10½ full training days can be secured from the 14-day period without imposing undue hardship on instructor or trainees.

With the cooperation of the representative of the Finance Department, any individuals or groups that wish to leave camp on the evening of the final Friday, instead of the following Saturday morning, may be paid at the close of the Friday training period.

Demonstration Troops. Demonstration troops are not absolutely essential to successful encampment training but they add tremendously to the interest. It has been shown that a single regular army company can serve a large reservist encampment very efficiently. Take the subject of wire entanglements. Nothing satisfies the average reservist more than to have some practical work mixed with theory. In demonstrating the practical points of entanglement construction, it is an excellent idea, first, to have a 50-yard belt of wire erected by a trained regular army team, the individuals bearing numbered placards and the work being done in slow motion so that the reservist observers will have ample opportunity to follow the sequence of steps. The operation can then be repeated at normal speed. The third step is to have the reserve officers pair off with the regular army workers and carry through the operation. The fourth, and final, step is to withdraw the regular personnel and have reservist teams go "on their own." This procedure has been found to produce excellent results, particularly where competition is aroused among the reservist groups, based on the time required and the quality of the results. The third step, having the reservist pair off with the regular army worker, may be omitted if time is limited. Note that the only equipment needed for this exercise is a supply of barbed wire and pickets, together with gloves and overalls for the trainees.

In connection with the use of demonstration troops, a word should be spoken against requiring regular army platoons and companies to be subjected, over long periods of infantry drill, to the commands of inexperienced reserve officers. This practice has been found to make the men in the ranks sullen and unresponsive; it is hard on both regular and reservist. A much better method, where the reservists are inexperienced, is to have them devote most of their infantry drill periods to working on each other, leaving the periods of the last few days of camp for exercising command of regular organizations at drill.

Amount of Close Order Drill. It is easy to overdo the amount of close order drill, since it is something that everyone knows more or less about and can carry on more or less creditably. However, considering the far greater training value of field problems, it is hard to justify more than half an hour per day of close order work during the exceedingly brief training period.

Practical Work. Some instructors have commented upon the danger of subjecting reservist trainees to too much practical work or manual labor. But the writer has yet to encounter a camp where the reservists have ever complained of such a situation, and some of these camps have included the hardest kind of practical work. The reservist's reaction appears to be that, since work goes along with war, he might as well sample it. The average man's intelligence tells him that a knowledge on the part of the officer of the difficulties connected with practical operations may well be invaluable to him when the time comes for him to take men through these operations. Considering that terrain exercises are necessarily mostly theoretical, it is hard to find time to put in enough practical work in a reserve training schedule.

Employment of Instructors. The policy has been followed, in some cases, of requiring the reservists to take the field and work out problems which they, themselves, have prepared. Aside from the fact that this policy evades responsibility that should be assumed by the regular, it stands to reason that it is not a *uniformly* efficient method of training. Experiments where this has been tried have often proven this point. It has also been demonstrated that, in order to conduct terrain exercises properly, there must be provided a group of competent instructors. When the unit instructor attends the encampment, the method is sometimes followed of having him conduct his unit through all phases of the training program. A much better method, employed successfully in many camps, is to "specialize" the instruction by assigning an individual instructor to each of the major terrain exercises around which the encampment training is centered. Under this arrangement, a designated instructor remains on each exercise and conducts each regimental group through the exercise in turn. With repetition he becomes very expert in the presentation of his instruction. In addition to such assignments, the instructors, if necessary, may be allotted secondary duties as assistants to other instructors or as supervisors of demonstrations during the days when they are not on duty with their own terrain exercises.

It is no easy task to supervise a reserve training camp efficiently. The handicaps of inclement weather, shortage in time, inadequate preparation on the part of the trainees, and deficiencies in terrain and equipment are always present. The physical exertion and nerve strain imposed upon instructors are often very fatiguing. But these undoubted drawbacks are offset by the satisfaction derived from the response that properly handled field training infallibly generates in the trainees. Reserve officers under real leadership *will* work, and work hard, at military tasks even in time of peace, and it is the duty of the regular, the leader, to furnish the inspiration.

The 1930 Leadership Test

By Major Clark P. Chandler, 1st Cavalry Brigade

THE Leadership Test for Small Cavalry Units, held this year at Fort Clark, Texas, between the 20th and 28th of November, was won by a platoon from Troop E, 5th Cavalry. Other platoons competing were from the 1st Cavalry and the 12th Cavalry. The Chief of Cavalry, in his letter of instructions, stated that the test was held this year at Fort Clark to allow an entry from a regiment, the 12th, which had not yet had an opportunity to compete.

The platoons from the 1st Cavalry, Fort D. A. Russell, and the 12th Cavalry, Fort Ringgold, were transported to and from Fort Clark by motor trucks. Both platoons started from their home stations so as to arrive at Fort Clark November 9th but heavy rains delayed them so that the last platoon, from the 1st Cavalry, arrived on November 12th after herculean efforts on the part of men and animals in hauling the trucks thru the mud. Portee Cavalry is hardly practicable in this country except in dry weather.

As in past years, the test consisted of two phases, the Individual and the Leadership Phases with, this year, a value of 25 per cent and 75 per cent respectively. The final standing of the three platoons follows:

Platoon	*Individual Phase*	*Leadership Phase*	*Total*
1st. 5th Cavalry .. 1st Lieut. C. A. Thorp	18.3183%	62.8316%	87.1500%
2nd. 1st Cavalry .. 2nd Lieut. S. L. Myers	16.4741%	64.3816%	80.8557%
3rd. 12th Cavalry . 1st Lt. C. G. Claussen	16.3123%	62.0483%	78.3606%

Individual Phase

The Individual Phase embraced a five and one-half mile ride around country with thirteen obstacles, five pistol targets, and seven saber heads along the course, and ended with five shots with the rifle at bobbing targets. The obstacles were not serious ones, none over three feet, and the pistol targets were placed at unexpected locations along the route. The saber heads were hardly at jumps but three were so close together as to require very good swordsmanship to pierce them while galloping at not less than twelve miles per hour. Enlisted men were required to complete the course in a time limit based on a rate of ten miles per hour while the officers' rate was twelve miles per hour.

The course (and time limit) ended at the three hundred yard firing point on the target range where each man was required to dismount, advance with his horse directly to the firing point (his horse being held by an orderly) and examined by a veterinarian, load, and fire five shots, one at each exposure of the bobbing figure of which there were five distributed across the width of the target butts. Exposure of each target was for three seconds with five seconds interval between exposures. It is believed that this was an excellent test of a man's physical condition, nerve, and disciplinary and marksmanship training.

The scores in the Individual Phase were remarkably close, with the 5th Cavalry Platoon slightly in the lead, but the great differences shown in the final score of this phase was caused by both the 1st and 12th Cavalry platoons having eight men take overtime varying from one to eight minutes. The animals of all platoons were in excellent condition.

It was very interesting to observe the different reactions by the men in the rifle firing. Many were cool and business-like, lying down to their job and "potting" each target as it showed—soldiers that any person felt he could trust in a pinch, while others showed indecision, "buck-fever," and failed to get in more than one or two shots. One might think that the former were the old soldiers and that the latter were recruits but such was not the case. There was as large a percentage of old soldiers as of recruits amongst the "bolo-men."

Leadership Phase

The Leadership Phase called for each platoon to make a two day march of about sixty-one miles, thirty-eight and one-half of which was on the first day and twenty-two and one-half was a forced march, at six miles per hour, on the second day. The platoons were reconnoitering detachments, in a friendly country, operating against raiding parties of irregular, poorly organized and disciplined, mounted troops with improvised armored cars and airplanes.

Their initial orders, requiring departure from the post at 6:00 A. M. on successive days, gave them an offensive mission and a march of about eight miles in two days. The forced march was occasioned by a message, received at 7:00 A. M. on the second day, requiring their return to the post by a direct route and to arrive by a certain hour.

On the first day's march the platoons met a variety of tactical situations upon which they were graded, according to a scale of values furnished by the Test Board, by neutral cavalry field officers. These situations included various tactical problems, such as marching, encounter with an armored car, and concealment from airplane observation. As a matter of fact the platoons were not actually graded on their actions upon the arrival of an airplane on the scene, since on the first day the airplane failed to appear due to weather conditions. The weather however did not interfere with the functioning of the cavalry platoon.

The rating of the platoons in each situation is shown in the following table:

Situations	*Possible Score* %	*Platoon Scores* 1st Cav. %	5th Cav. %	12th Cav. %
Attack on ranch	13	11.0000	13.0000	11.9200
Watering horses	3	2.4900	3.0000	3.0000
Armored car	5	4.6000	4.2000	3.0000
Passage thru a town	2	1.5000	2.0000	.8000
Conduct of march ...	7	6.9100	6.8400	6.4500
Defense against air observation	5	4.3750	5.0000	4.7500
Attack of dismounted position and M. G.	13	11.6900	12.0400	10.2900
Camp for night	10	8.2500	9.7250	8.9350
Passage thru a town	2	1.4000	1.4000	.8000
Forced march	7	4.4000	4.5000	4.2000
1st Veterinarian inspection	4	3.8900	3.5633	3.9633
2nd Veterinarian inspection	4	3.8766	3.5633	3.9200
TOTAL	75	64.3816	68.8316	62.0483

The first situation (Situation A) was inaugurated by the platoon's meeting with a rancher who informed the platoon leader of the presence of twenty-five or thirty hostile men at his ranch. Each platoon leader questioned the rancher intelligently and, quite properly, impressed him as guide. All platoons showed excellent training in this situation. They all attacked, mounted, with decision and fair rapidity, but the most notable defect—and that not to an alarming degree—was a tendency of the men to bunch and a failure to take full advantage of cover. One platoon was given a maximum rating by the Special Umpire who stated to the writer, "I really can't find a thing to cut them on. It was a perfect attack."

Situation B consisted of watering the platoon at a small stream at which not more than a squad could be watered at the same time. This was very well done, under cover of march outposts and with suitable precautions against air observation and attack, by all platoons.

Situation C was an encounter with an armored car. It is still a much discussed question as to the proper action of small cavalry units against armored cars. This car was encountered on an open plain absolutely devoid of cover. The Test Board believes that there is one essential—that the platoon should scatter quickly, widely, and with organization.

One platoon solved the situation by having the advance guard move rapidly a hundred yards to the flank and dismounting two men who fired at the car with rifles. Two of the advance guard remained mounted on opposite sides of the road and made direct hits on the car with hand grenades at a range of five feet. The main body broke to the right and left of the road, one squad to the left and two squads to the right. One of the two squads on the right of the road dismounted and fired on the car from a hundred yards distance, the other squad moved further out with the lead horses while the squad on the left of the road did some mounted firing. All firing continued until the car had passed.

The probabilities are that the grenadiers would have been disabled by fire from the car before they could have thrown their missiles. The platoon would probably have suffered losses due to their exposed position but, on the other hand, the dismounted men might well have disabled the car by rifle fire. Certainly the car could not stop to deliver accurate fire, for to do so would expose it to mounted attack by the squad only one hundred yards in its rear; and fire from a rapidly moving car cannot be well directed. Everything considered this seems to have been an excellent solution.

On the other hand, another platoon dismounted the whole main body at the edge of very low scattered mesquite about a hundred yards from the road, the advance guard having also dismounted a hundred yards to the same flank. In this case the car had practically nothing to fear from its rear. It could have halted and done serious damage, at mid or long range, to the exposed dismounted line and to the fully exposed led horses which were not at all dispersed.

The third platoon had still another solution—it avoided the car. The platoon was marching about two hundred yards to the left of the road, as it had been marching for the last five miles, with three or four men on the right of the road. When the armored car appeared the platoon dispersed and moved at a gallop to its left front to increase its distance from the road and at the same time to gain the shelter of the mesquite on the opposite side of the wide grassy plain. The armored car moved off the road to intercept the platoon and succeeded, when four hundred yards from the road, in gaining a position about three hundred yards to the platoon's right rear where it stopped to deliver aimed fire. The platoon was well dispersed but might very probably have suffered a few casualties.

This, also, is believed to have been an excellent solution for, while the platoon had an offensive mission, its orders were not to jeopardize its main mission of discovering and reporting large hostile raiding parties.

Situation D was the passage thru a small friendly town. One of the platoons boldly entered the town without sufficient reconnaissance and then passed thru it slowly. While the town was friendly it was well known that numerous hostile parties were abroad and the town might well have been occupied. Full precaution must be taken by small cavalry bodies before entering any town. Ambush is too simple under such circumstances. The other two platoons did not enter the town until it had been thoroughly reconnoitered in a systematic manner by the advance guard and then they passed thru quickly and in open formation.

Situation E was the judging of the conduct of the platoon's march over a distance of about eleven miles. All the platoons were excellent in their march conduct, discipline, and security.

At some time during this march an airplane (Situation F) was supposed to appear. Since it failed to arrive on the first day the platoons were not rated on their actions upon the actual sighting of the plane. All of the platoons were well trained in the use of air scouts and in precautionary measures against observation while on the march and while halted.

Situation G consisted in the attack of a machine gun supported by a half dozen riflemen. This hostile force

was posted on the edge of a ravine covering the road to a gate in a fence about eight hundred yards distance. Since we were not allowed to cut this fence, the represented enemy did not open fire until each platoon had cleared the gate. A very pretty problem here presented itself to the platoon leader. The ground, sparsely covered with low mesquite and cactus, sloped gently to a dry water-course below the machine gun position. About one hundred yards on the platoon leader's right was a shallow gully which was deceptive in that, to a hasty glance, it looked like cover but, in reality, was completely exposed, thruout its entire length, to the fire of the hostile machine gun. On the other flank, however, there actually was good cover from observation within seventy-five yards of the road, but this fact was apparent only to a keen, well trained, eye,—or an eye which had been examining the terrain with a view to cover in case of need. The ground to the front was negotiable by mounted men at speed but offered no cover. Beyond the gully on the right there was no cover whatever while on the left the cover mentioned above led to several small valleys and ravines which offered fair cover to within a couple of hundred yards of the machine gun position. It is apparent that an envelopment of either flank would require a small pivot of maneuver to hold the machine gun in place and to prevent its displacement laterally to meet the threatened envelopment.

As might be expected, this situation was solved differently by the three platoons. One platoon was marching with five yards distance between pairs of troopers. Because of the road space involved, the head of this platoon was less than seven hundred yards distant when the machine gun opened fire. The lieutenant immediately formed foragers at a gallop and, simultaneously with the completion of the movement, a member of his advance guard arrived, at full gallop, to point out the machine gun's position. The platoon charged at once, with raised pistols, at full speed. To quote from the "Remarks" on the Special Umpire's score sheet, "Attack under 2.11½ P. M.—1½ minutes after first shot was fired; very smooth, pretty work."

Considering that the head of the platoon was conditionally past the available cover, this was, perhaps, the best solution under the circumstances. Certainly the attack showed quick thinking and a high degree of platoon training. The effect was somewhat marred, however, by the lieutenant's failure to continue on, with at least part of his force, against the hostile led horses which must have been, and were, somewhere in rear.

Another platoon leader was deceived by the apparent cover on his right flank and broke for that cover. His men he immediately broke for the other flank, ordering a squad to dismount and start a dismounted attack. Those led horses would have been sacrificed. However, with the rest of his platoon the lieutenant executed a fine covered approach march and delivered a well executed mounted attack on the hostile right. The work of this platoon was of very high order as to [illegible] compliance with orders [illegible] in an emergency.

The third platoon leader had the eye for terrain to see the cover on his left and he took immediate advantage of it. However, he then started a dismounted attack with two squads and sent only one squad around to attack, mounted, the hostile right. Had he left only one squad as the pivot of maneuver and attacked mounted with the rest of his platoon he would have had a practical perfect solution of the situation.

This was a difficult situation because of the deceptive quality of the terrain and the Board feels that all platoons functioned very well.

Situation H was a halt for the night, with the multitude of details of administration and tactical security incident thereto. All platoons showed a familiarity with camping and camp expedients that is only natural in troops that spend so much of their time in the field.

Situation K was a forced march. While the platoon's original orders required them, on the second day, to continue their reconnaissance for another forty miles, a message was received at 7:00 A. M. at their camp to return to the post by 10:45 A. M. because of the departure of the regiment at 11:00 A. M. The distance involved was twenty-two and one half miles. During this march the platoons had to pass again thru a small town (Situation I).

The forced march was well conducted by all three platoons but the road, for the last ten miles, was very much cut up from rains and truck travel, making the footing very uneven and causing leg weary horses to interfere and turn fetlock joints. This was especially noticeable in the last two days and both platoons concerned had several lame horses.

Platoons were closely examined by veterinarians upon arrival at Post Headquarters and again at 9:00 A. M. the following day. In all three platoons there were four sore backs characterized by the veterinarian as "slight." The horses were uniformly in good physical condition and fit to march with the regiment at eleven o'clock, fifteen minutes after arrival. The few cases of lameness were due, as stated before, to the terribly rutted condition of the ground, but none were bad enough to prevent the animals from continuing the march.

At the veterinary inspection at 9:00 A. M. the next day conditions were substantially the same—all animals fit to march.

Looking at the test from all angles, it was a most interesting and instructive affair. The best trained platoon won,—but the other two platoons are a credit to any regiment. Just from an instructional point of view it would seem to be a valuable test to give every platoon in a regiment at some time during the Field Training Season. The test element provides a competitive spirit.

It is to be earnestly hoped that, in future years, all of our cavalry regiments will have an opportunity to take part in this valuable competition, made possible by the Cavalry Spirit of a cavalry officer of an associate component of the Army of the United States.

The British Army Exercises of 1930

Captain B. H. Liddell Hart

IF any general increased his reputation in the exercises of 1930 it was General Rain. He showed a genius for striking at the crucial moment, a malevolently inspired *coup d'oeil* which other generals might justly envy. And unfortunately, like certain famous generals of the past, he seemed to have a jealousy of possible rivals, which made him uncannily alert to forestall and frustrate other generals.

This year he was unique in the decisiveness of his strokes. He even performed the "hat-trick". For, by curious coincidence, he submerged in turn the final exercise of the 4th Guard Brigade, of the 2d Division, and of the combined Aldershot and Southern Command troops on "the Plain". The consequences were the more disastrous because each of these exercises gave promise of being the most interesting of its series, a promise that was never fulfilled. In the first the South Downs were metamorphosed into foot hills of the Himalayas for the purpose of trying out new methods in frontier fighting. There was also the exhilaratingly original spectacle of Guardsmen turning themselves into guerrillas and applying Lawrence's axiom that for such warfare the normal principles of war should be inverted. One has long been convinced that a periodical course in guerrilla tactics might do much to develop the present rather drab standard of infantry tactics in the British army.

In the 2d Division exercise, General Rain's night attack forestalled a night attack by the ground force. This was the more unfortunate because the project of such a stroke was a refreshing change from the usual dawn attack and it would have been interesting to see, or at least to hear, its upsetting effect. The consistency of the British army is both its strength and its weakness. If we try a new thing as a surprise, we are apt in our delight to continue it as a custom—and so to strip it of surprise. Dawn attacks themselves were originally a means of taking the opponent off his guard. Now they have the popularity and publicity of a film star. And unwind themselves with the regularity of a film. Indeed, it is a real surprise, and relief, to the onlooker if any exercise does not work up to an attack at dawn.

Even more untimely was the fate of the final exercise on Salisbury Plain, for it seemed almost certain that here we should at last see the improvised Medium Armored Brigade used as a whole, and used in a way suitable to its qualities. Thus we might have enjoyed one positive example of the test which this year's chief innovation was devised to produce. Previously the tanks had been launched so regularly against prepared positions, in nullification of their mobility, that one might almost conclude that, like driven game, they were meant to be shot. If the idea was to produce a battle, it really produced a battue. And if they were not thrown against the strong front of an enemy position, direct along the all too certain line of expectation, they were reserved to throw at the opposing tanks, apparently on the subconscious theory—"Let the tanks kill each other, then we can get on with the war."

It was reserved for General Rain to punish these slips. And he allowed no chance of redemption. Through his intervention, the training season was shorn of the ultimately positive lessons in the art of generalship and in mechanised maneuver that it might have yielded. To the cultivation of generalship the loss was specially unfortunate, because each of these three schemes put a premium on unconventional methods and incited the commanders to elasticity of plan and execution. To the development of mechanisation, the abandonment of the last exercise, especially, means that we are left for 1930 to reflect chiefly on examples of how armored forces should not be used and the power of mobility abused.

Negative examples are not helpful to clear deductions. They impose a heavy demand on the imagination, and require the ability to distinguish between the main currents and the surface ripples. Observers are liable to let their judgment be deflected by minor details, and to focus on incidents produced by the artificial conditions of peace, whereas they should be trying to gauge the general trend in the light of real war conditions.

To do so is not easy when exercises have to be carried out on the government ground at Aldershot and on Salisbury Plain, areas absurdly narrow in comparison with even the present range of mechanised forces, and further cramped by wire fences and innumerable "out-of-bounds" patches. To see a battalion of tanks advancing in a long string over open downland because they were confined to the road by a few strands of wire was a ridiculous sight. It violated the essential nature of tank action, which on cross-country movement and wide frontages. Care for such restrictions is often carried to a pitch of both tactical and financial absurdity. One has seen tanks waiting to pass in turn through a gate, rather than break through a fence that would have cost a few shillings to repair. Yet, besides offering a bunched target and delaying their maneuver, they were consuming pounds' worth of petrol and oil meanwhile.

The Army at home has no training ground which offers scope for realistic test of, and practice for, the new mechanised forces. Perhaps the only remedy might be to move these mechanised forces to the vast

and sparsely populated areas of central Wales for an annual period of training.

The worst danger of the present limits is psychological. It lies in the difficulty of shaking off such artificial habits, and the cramped ideas they induce, when war comes.

In this connection there is an amusing story in General Spears' "Liaison", just published. On arrival near Mons, with the shadow of the German masses creeping perilously close, a message was received from the cavalry to ask if they were "justified in loopholing the walls of a farmhouse." Evidently they thought they were still at maneuvers.

In another place the author particularly remarks: "In war . . . the soldier is either too tired or has no time to think; he will only do what comes to him naturally and instinctively, through long usage." One fears that if war came much of the value of mechanised troops, and of the new mobility, would be forfeited through the shackles of peace-training habits. It is all too probable, also, that they would themselves be offered up as a mass sacrifice before their crews and the higher commander could acquire a new habit of applying mobility freely.

Moreover, another aspect of peace-time exercises deserves emphasis. Because this executive acts and umpiring decisions are made under artificial conditions, any deduction from them, especially in detail, is largely a matter of individual opinion, of guess work even. Thus it runs more risk of missing truth than does an analytical pursuit of general tendencies and effects. History attests this. Lessons learned from peace exercises have, indeed, far more often proved false than those of pure theory developed from logical reasoning and historical analysis.

It would be unfair, however, to argue that the past season's practice yielded no value. A number of points were certainly brought out by actual experience as they could not have been so well in any other way. One was the relative increase of mechanical endurance. This is the more significant because the machines have been growing older, and so inherently more liable to breakdown. The fact that increase of age has been accompanied by a decrease of casualties, despite an acceleration of marching pace, is a tribute to training. And it is a vindication of those who argued that it was unwise to base calculations on early performances, who prophesied that as commanders became more mechanically understanding, and their men more mechanically trained, standards would rise and difficulties grow less.

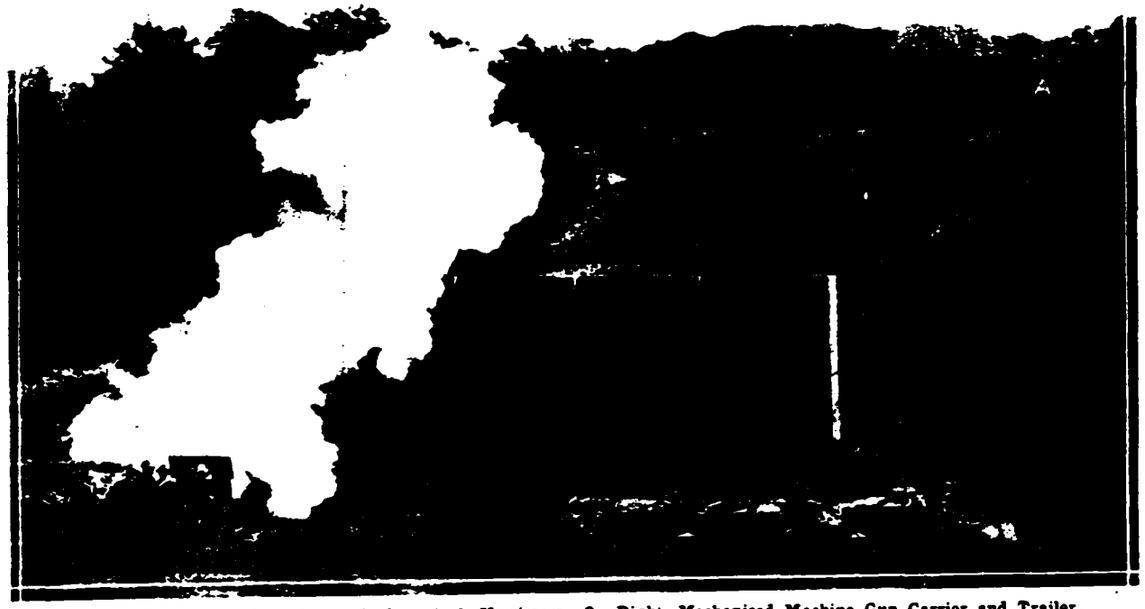
There was an illuminating illustration of this truth, and of the difference made by experience, in one exercise. A light tank company commanded by an officer who had enjoyed three years' experience in handling [illegible] attained a remarkably high average pace without incurring casualties, whereas another company under an officer who had just come fresh to the [illegible] suffered numerous casualties although moving at [illegible] the former's average. Of the general improvement [illegible] has been recently an even more striking example in Egypt, where five medium tanks travelled 130 miles across the desert from Cairo to Alexandria in 30 hours, and eventually, after taking part in exercises, returned to their base through a sandstorm that stopped all other forms of transport. They had covered 320 miles within a period of six days.

Among other mechanical impressions of the season has been that of a marked improvement in the work of the armored cars, and also of the remarkable influence they have sometimes exerted on the opposing command, an influence not perhaps consciously appreciated, yet none the less dominating. Another significant reflection concerns the visibility of the various arms. One often feels that it is a pity that practical tests of comparative visibility, both for means of movement and formations, are not carried out. A medium tank, for example, can be easily mistaken, particularly on a misty morning, for a clump of bushes. And on most types of ground the visibility of a Carden-Loyd light tank is much less than that of a man on a horse, and of several Carden-Loyds astonishingly less than that of several men on horseback. The former not only merge with the background more easily, but attract the eye less in movement. Unfortunately, by a peculiar absurdity, this asset was dissipated by decorating the tiny machines with red and white distinguishing signs of disproportionate size.

This "advertisement" at least helped to mitigate a danger to the infantry which was significantly emphasized this year by the attempts to protect the march of an infantry column with antitank guns. Against a mobile opponent their own peril might outweigh their value. For they can so easily be "netted" by light tanks or cavalry patrols—cavalrymen either horsed or mechanized. Such mobile adversaries may catch them unawares from a close-up fire position or, alternatively, dismount and stalk them on foot. Thereby an infantry force which relies on antitank guns to picket its march might be stripped of protection without becoming aware of its nakedness.

This consideration brings us to the question of cavalry, a question that is the more difficult because cavalry has become so mechanical with Austin reconnaissance cars, Carden-Loyds, and sixwheelers, that it might almost be termed a framework of steel with merely a filling of horse-flesh. Viewed logically, such an amalgam would seem to have the defects that a compromise always has in war. If old style cavalry has still a role, it should remain horsed; otherwise, it should be mechanically converted to war style cavalry. I imagine that those who are really convinced of the horsemen's value would prefer to stand on their own hoofs. Then at least they would be able to prove whether they could move and fight where mechanised troops could not.

But one finds more and more, that cavalrymen recognized that their fighting days are over; ended by their own excessive vulnerability to modern fire weapons. The argument for their retention seems to focus purely on their value in reconnaissance and on their short-range power to move over certain tracts



On Left, One of the New Mechanised 3.7-inch Howitzers. On Right, Mechanised Machine Gun Carrier and Trailer. The Gun Has Been Dismounted and is Firing from the Top of the Slope

of ground where vehicles are "stymied." In this case it seems that the most reasonable way of assessing the issue would be mathematically. The value of information depends first on its exactness and secondly on the quickness with which it is gained and got back. Which is quicker to travel nine and three-fourth miles on a horse and one-four mile on foot, or to travel nine and one-half miles in a swift machine and one-half mile on foot? The answer is unmistakeable, and the conclusion surely unanswerable. And it is well to remember that as the range of a reconnaissance increases, so does the advantage of the swifter moving means of transport—to the point where the final stage must be made on foot.

It is characteristic of human nature to shrink from pitiless logic, and characteristic also to cling to an old friend which may have an occasional value for an exceptional purpose. But even if we concede the fullest claim now made by enthusiasts for the horse, it is clear, indeed all the clearer, that we do not need large units of horsed cavalry, but merely a few score picked men in each division to furnish patrols.

The best excuse, though not a reasonable justification, for maintaining cavalry brigades is that they provide practice for leaders in applying mobility. A younger generation is likely to arise, bred up with mechanised vehicles, who will be imbued with mobility of thought and action. But at present it is unhappily obvious that few commanders have been able to shake off trench-warfare deliberation. Some commanders have a natural gift for mobility, or in their war service missed the danger of developing immobility. But, otherwise, cavalry-bred commanders seem the most free.

In this year's exercises realism was obscured, and the broader issues confused by misdirection of the "armored" strokes. One is not referring merely to the neglect of strategic objectives, such as communications and depots. This potential aim is certainly underrated, because British soldiers know too much about that rather overrated cavalry leader "Jeb" Stuart, and far too little about the effect achieved by Forrest and Morgan. The "romance" of Stonewall Jackson has blinded them to the deeper lessons of the campaign in the West, where Grant turned and Sherman decided the issue of the Civil War, and where the exiguous mobile forces of Forrest and Morgan went far closer than the main Confederate armies to frustrating their purpose.

Even so, mobile forces must often aid the general plan by closer action against tactical objectives. But these should be apt targets. Unfortunately, in peace exercises much unreality exists and false lessons are drawn because the administrative services, the second-line transport, and the various headquarters have such puny proportions compared with their war scale. They are peculiarly difficult to cover against the thrusts of armored mobility, but because they are small in peace exercises, they are difficult to strike and their assailants are rarely accorded full and real value for striking at them. Perhaps this is the reason why, instead of striking at the enemy's immediate rear, the armored units are still habitually aimed at a front which he has had time to prepare for antitank defense. An armored brigade should be given full latitude to avoid the enemy's antitank defenses. Its line of approach should be as indirect as possible—and mobility gives it a wide range of possibility. A blow at the enemy's headquarters, signal centers, transport lines, and supply columns, would be likely to paralyse all the combatant

The Largest Type of Medium Tank (16-ton) Going Through a Ditch Well. The Speed on Fairly Level Ground is 30 Miles Per Hour

troops that are dependent on those vital organs. In contrast, infantry disposed and dispursed for defense is a difficult target to hit—although in actual war it might not stand the sight of an oncoming swarm of modern high speed tanks.

Again, the habit of launching tanks, or keeping them to launch, at the enemy's tanks is an unconscious tribute to the power of armored fighting vehicles, a proof of the instinctive fear they increasingly develop in the minds of commanders. But it is not generalship. A general should employ his tools in the way that produces the maximum profit, not merely to cancel his opponent's assets.

Moreover, this direct use, and misuse, of tanks not only confuses the essential issues of today, but confuses the battle picture. Thus it confounds umpiring and makes peace exercises more than ever unrealistic. Mr. Rudyard Kipling was present at one of the exercises on Salisbury Plain, and the story is going round that he was asked his impression of modern war as there presented. He is said to have replied: "It smells like a garage, and looks like a circus." An apt and witty gust, and the circus element was certainly prominent on the "battlefield" as well as on the road. But it was due mainly to misguided choice of objectives, and the tendency to seek in unreal battle what could never been better attained by indirect paralysis.

Of course the misuse of tanks may be read as a tacit admission of their potency, a recognition that a battle without them is unthinkable, and that the other arms without them are powerless. It is a backhanded compliment. Because they are so few in proportion to the infantry, and yet so essential, they are called upon disproportionately. The infantry are often saved loss and casualties by their very immobility; the cavalry by their mobility, and because all soldiers are horse-lovers, when in command, gauge generously the needs of the horse for rest and water. In contrast, the less they value machines the more do they commonly expect of them. This tendency entails not only undue wear and tear, but tactical waste. We have come to count on tanks out of all proportion to the number that we can count in our present organization.

Gropingly, yet definitely, the British army has taken a lead in mechanisation. By comparison with other armies its situation is favorable. By comparison, however, with the need, its state is not merely unsatisfying, but unready. All armies have made more progress in the past decade than in any previous decade of peace. Yet, relatively to the changed conditions, the change is less than it has ever been. And so is utterly inadequate. Armies as at present are not an insurance; they are a petition in bankruptcy.

Expressed mathematically, change in armies has usually moved at the same pace as change in the conditions of war, but several marches in rear. In the last decade the pace of armies has quickened to a run. But the pace of scientific and mechanical progress has been revolutionised, not merely accelerated. Thereby the armies of today are as helpless and their prospects as hopeless, as a portly policeman trying to catch a motorthief—the thief of time.

The consequences may be even more simply expressed. The armies of 1914 had over two months of grace before they lapsed into the stagnation of trench warfare. Nowadays the proportion of machine guns and other automatic firearms has increased enormously. No army has any scale of artillery approaching the proportion which in the later stages of the war could make a gradual advance possible by plastering whole areas with shells. The number of serviceable tanks is but a trifle of the infantry strength of any army. As the habit is still to use them for bolstering up the infantry, and so to throw them against the positions best furnished with counter means, the existing few would soon be used up.

It is thus a safe deduction, and prediction, that the armies of today would sink into trenches within a week—if they ever got to grips. For there is more than a possibility that these infantry bodies would be dispersed by air attack or hamstrung by the bombing of their transport while they were still groping forward.

Six years ago I produced a little book called "Paris, or the Future of War." Since then I have dwelt mainly on the immediate future of armies and on the ways of modernizing them. Some have assumed that this shortening of the horizon meant that "Paris" was merely a bomb to liberate thought, or an indulgence in extreme vision as a refreshing prelude to more practical concerns. On the contrary, the more one meditates on the increasing data provided by war history and peace exercises, the more sure do the original conclusions seem. They even sound less extreme than then, so marked has been the change in general military opinion.

This change owes as much to the cumulative effect on annual maneuver impressions as to the gradual surrender of prejudice to logic. Every effort has been made to prop up the infantry, and to ensure them a rôle befitting their normal dignity as the principal arm. Yet their attempt to simulate virility has been no more convincing than that of the "principal boy" in a pantomime. They have been endowed with green and white flags to represent antitank guns and these most versatile weapons have been allowed to score a percentage of hits such as no weapon has ever approached under war conditions. They might well be christened the "Marksman's Dream." On the other hand, the tanks have been heavily handicapped by the narrowness and artificiality of maneuver areas, by their own fewness and obsolescence, and not least by the way commanders have employed them—too often to the negation of their mobility.

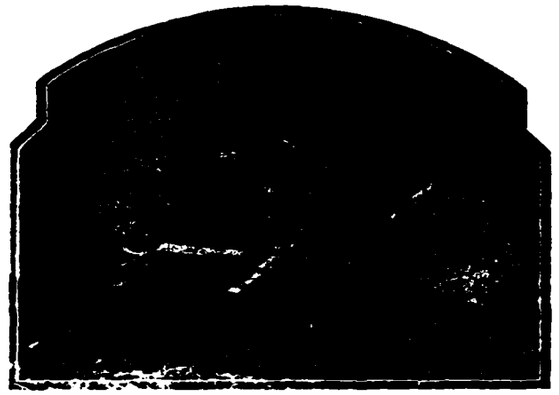
Yet infantry padding and tank slimming have alike failed to disguise the natural outlines of these trials. In exercise after exercise the tank forces, so slender compared with the infantry bulk, have dominated the situation. Dominated it more each year, and most of all this year.

It is not merely by their mobility, for this has been restricted, that their influence has been exerted, but their subtle moral effect. Any commander of a large infantry force who knows that the other side has a small armored force is subject to this. All his ideas and movements are governed by his concern as to its whereabouts and its latent menace. It cramps him at every turn, and he is compelled to take such care for his own security that his offensive purpose becomes a secondary and flickering impulse. It is often amusing to see those who have been most disparaging of mechanisation become most concerned when they have to command.

If the self-protective instinct become so predominant in peace, it is likely to spell paralysis in war. No commander will ever feel safe in executing a plan. If he is about to take the offensive, and hears of a hostile armored force in the offing, what will be the effect on his purpose? If he has actually begun an attack, will he continue it? Perhaps it would be not all loss if his resolution falters, for, as we have already pointed out, there is not the least ground for expecting that an infantry attack could succeed against a modern enemy in a position that he has had a few hours to prepare.

Thus the problem of today is not merely what tanks can do, but what mental and moral effect they can have. And here lies the ground for declaring that talk about "gradual mechanisation" is merely a soothing syrup, which though innocuous in itself, is indirectly perilous to administer to a grave case. The need for thorough conversion is urgent. And if anything could accentuate its urgency it is the knowledge of the vulnerability of all unarmored columns to air attack.

The significance and effect of the bombing attacks on bus columns was clear to any reflective mind. In many cases, such a mobile column would probably have remained as an immobile heap of wreckage, far behind the place where and time when it was wanted. Marching columns may be less easily blocked than bus columns, but are more easily dispersed—an equally powerful brake on effective advance. Only when using pure armored formations is this danger lessened.



One of the New British Mechanised 3-inch Stokes Mortars, With Trailer, Being Rafted Across a River

Otherwise, the commander's strategic plan may suffer a paralytic stroke.

Let us, however, for the sake of argument take up the most moderate ground, and concede the claims, whether logical or not, made for the preservation of the other arms. On this basis, and in the light of this year's exercises, let us put a simple question. If any commander who took part was offered a division comprising the usual three infantry brigades or one comprising one infantry brigade and one armored brigade —which would he choose? One cannot believe that even the most conservative general would still prefer the former if he had to bear the responsibility of command. And if this be the conclusion from Salisbury Plain and Aldershot, how much stronger would it be in a theatre of war where there were no red patches or inviolate fences to cover his flanks, and where he could not so easily gauge the whereabouts and approach of an enemy armored brigade?

Hence what justification is there for preserving even for a time the present infantry pattern of divisions? Once we have read the writing on the wall, it does not diminish the danger to remain gazing at the wall.

Only perhaps at one point can one detect a silver lining to the cloud that hangs overhead. It is in the cultivation of generalship. For the first time since the era of Waterloo, continental armies have their eyes on the British and are being influenced by its experimental lead. The pre-war army, splendidly efficient as it was in many ways, did not draw such a tribute.

While British pioneering work in mechanisation is generally realized, it may seem more surprising to refer thus to its generalship. I was greatly struck by the remark of an acute-minded foreign attache that its exercises contrast with those abroad in the scope they give for strategy—particularly in its original sense of "the art of the general." Relatively, this is true, even though one deplores the limitations of ground, the limitations of the administrative services which

are the basis of strategy, and the excessively tactical outlook of the manuals. But looking back, one can see how we have progressed. A few years ago most schemes dealt with forces which were acting "conjoint"—fighting side by side in a series of narrow compartments. These reduced the commander to the level of a machine-tender instead of an artist.

This year nearly all schemes, whether they dealt with battalions or divisions, were devised to encourage free manoeuvre and strategic judgment. Superficially it may seem a paradox that mechanisation should be making war less mechanical. But its effect is perfectly natural. For by restoring mobility and fluidity it is breaking the shackles of trench warfare, the most mind-deadening form of war. The new freedom given by mechanical power of movement, combined with unmechanical schemes, must ultimately bear fruit, however depressing the uniform dead level of execution in many of this year's exercises.

Where there is scope for the art of war there is hope that this art will revive.

It is still a question of hope, rather than fulfillment. This year, as each year, one has seen the same familiar mistakes. One does not refer to, nor would one lay stress on, mistakes of execution. These are inevitable, and the critic should be charitable, if he appreciates the fog of war. But errors of conception are in a different category, especially where they come from a disregard of time-proved essentials. This year one has again seen commanders following a preconceived idea as rigidly as the commanders of 1914, with no attempt to give their plan and dispositions the elasticity which would allow them to be varied to meet the enemy's action. One has seen them neglect the chance of taking alternative objectives even when the scheme provided this essential chance of perplexing their opponent. One has seen them launch attacks which could have no possible hope of success even in the light of their limited information, lunging at the point where the opponent could surely parry.

Perhaps the most significant defect lies in the normal appreciation. Never does this seem to consider what course would be the least likely to be expected. "Soundness" is our bugbear, and our mental burden. It is well known that Moltke in 1870 jeopardized his success by giving his opponents credit for taking the sound course, the plan that he would himself have adopted in their position. Because the French were outrageously foolish, they badly upset his calculations. This might seem an argument for foolishness in a general, if it were not for the fact that, being foolish, they were unable to take advantage of his miscalculations. But one fears that in most present commanders Moltke would have found his ideal opponents. For he could have relied on them always to do the sound thing, so that they would have fitted perfectly into his plan—for their defeat.

In the nineteenth century a cloud spread over the armies of Europe and has lain over them since. Like a sound-proof curtain it shut out the still small voice of the old masters. Like a smoke-cloud it might have been patterned to spell the catchwords "Soundness" and "Uniformity." Inverting the order of nature, that cloud is the cause of the general depression which lies over Europe today. For the ruinous drain of the last war can be traced to the futility of armies which, since 1870, had become mechanical in mind without being sufficiently mechanical in form.

No wonder it is declared that another such war would mean the bankruptcy of Europe. If so, it would be due to the bankruptcy of intelligence. At present there are portents of recovery: hardly the promise, still less the achievement.

The National Guard Recruiting Problem

First Lieutenant Wilbur H. Rose, Infantry,

West Virginia National Guard Reserve

WITH no recruiting service to supply his needs and with no tree in the back yard from which he may pluck recruits as needed, the national guard unit commander has a problem all his own. It is to keep his organization above the minimum maintenance enlisted strength, and incidentally below that which may be ordered by regimental authority.

This work falls to the company commander and usually to one or two enlisted men who have established a record as good recruiters. Often these men are promoted to the noncommissioned officer staff on this basis instead of their ability as instructors or leaders.

With most organizations it is noticeable that recruiting is practically at a standstill for a few drills after the annual armory inspection and the field training period. This is desirable in some respects as it gives the company clerk a brief rest from opening service records and filling out enlistment papers. The supply sergeant also gets a rest which permits him to do work necessary after the field training period or the annual inspection. During this time no new equipment has to be issued to recruits, or any individual equipment taken in, as in most cases there are no men up for discharge.

These periods of "depression" usually last only about a month, and then recruiting picks up to normal again. For the field training period and the inspection, the organization has generally been recruited to full strength and "dead-heads" have been discharged. For a month or so after these events there are no losses; consequently no new men are needed.

Allowing a two-week vacation period at Christmas, two weeks for camp, one month after the inspection, and one month after the annual encampment, there is a nine-month period in which to secure recruits for the organization. The month prior to camp will usually take care of itself, as in this month news of the coming encampment is spreading and a few men will join the organization in order to make the trip. This leaves an eight-month period in which an effort will have to be made to secure new men.

There are almost as many plans and theories of recruiting as there are unit commanders. The national guard officer who leaves recruiting to chance and makes no effort to work the "lean" months will find himself on a three year "hump," with about fifteen or twenty men slated for discharge before the next drill night.

To eliminate this hump and to keep the company at the authorized strength requires, for the eight-month period of securing new men, that an average of one recruit must be secured on each drill night and one "dead-head" discharged.

Men who cannot attend drills because they have secured new employment, and those who have removed from the locality, should be discharged. Authority to discharge these men should be obtained between the first and the fifteenth of the month, so that the necessary papers may be filled out and transmitted through channels in time to avoid delaying the preparation of the monthly strength return (Form 100).

One good way to get recruits is to use the organization scheme; in which the platoon leaders assisted by their noncommissioned officers have charge of recruiting in their platoons. It has been the writer's experience that a large percentage of the men brought to a company are interested through the direct or indirect influence of noncommissioned officers.

In preparing articles for newspapers, mention the fact that there is a vacancy in the company and specify the nature of the vacancy, such as a scout in Corporal John J. Smith's squad, a cook in the headquarters platoon, an automatic rifleman in Corporal H. E. Brown's squad, or whatever opening may exist.

Prepare small slips of paper and give these to the enlisted men at the first formation on a drill night, with the request that they nominate an eligible young man or two and write the names on the paper. When these slips are collected at the close of the drill period, it will be found that several young men have each received a number of nominations.

From this group of slips, a list of eligible young men can be made and letters sent advising them of being honored and inviting them to call at the armory on the coming drill night. Before the next drill night junior officers and noncommissioned officers may visit these young men and talk with them about the value of national guard training.

An annual recruiting prize can be given to the enlisted man who secures the most recruits in a calendar year. An up to date notice of this contest should be kept posted on the bulletin board, giving the number of men secured by each individual.

A contest can be arranged between platoons, with the losing platoon to tender the winner a banquet. This type of contest will usually bring quick results, but care must be taken to cull out the undesirables and refuse them enlistment. Any additional men secured through this method may be placed on a waiting list and taken into the company as vacancies occur.

Holidays such as Memorial Day, the Fourth of July, or Armistice Day, when the organization makes a public appearance, are favorable for getting new men. The appearance of the unit on the street will attract indi-

viduals to the armory, where the value of army training and the advantages of membership in the Guard, can be explained to them.

Stations of a city or a suburb may be worked from time to time. For a year or so a selected territory may produce a good quality of men and then lose its value as a station from which to draw recruits. When drawing from such a locality, it is best to work the territory thoroughly and get as many recruits as possible. When that district proves unfruitful, abandon it and open up a new section, giving the worked out place a rest until a new group of young men grows up.

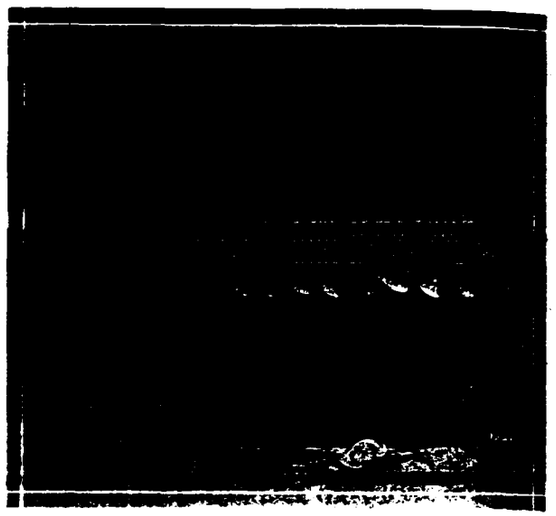
Cooperation with the county chairman of the Citizens Military Training Camp, Association will gain his good will and possible assistance. It is recorded that, on the return of a group of C. M. T. C. trainees, one company commander met them at the train and on that evening had a dinner for them at the armory. Before the affair was over, the entire group had enlisted in the Guard. Parents of the boys and city officials were in attendance at the dinner.[1]

High school boys who are of age make good guardsmen, as they attend drill very faithfully. Basketball or baseball activities will help to attract these young men to the armory. Once the leaders of this group have been enlisted, it is not difficult to get a representative selection from the school.

Cooperating with Boy Scout officials has been known to secure recruits. While this source is not as fruitful as others, the quality of enlisted men from it is usually high, and scout trained youths as a rule develop into excellent noncommissioned officers.

A "stunt" that attracted public attention and which resulted in a known gain of three men was consummated through cooperation with the advertising manager of the local theatre. A war picture was on the program and at the entrance of the theatre an attractive display of Guard equipment was made, along with advertising posters and pictures concerning the entertainment for the evening.

The company, under arms, met the train and escorted the film to the theatre. As a prologue to the picture a squad of riflemen demonstrated the manual



A Display to Attract Recruits

of arms, the company bugler blew several service calls, and the company commander explained what they mean. The members of the unit were guests of the theatre, and needless to say the house was "sold out."

Each national guard company has to meet different conditions, but in the long run the same general type of individuals make up the National Guard whether it be on the Atlantic or the Pacific Coast. A recruiting plan that would show results in one city might be a total failure in another, yet a careful study of the situation will suggest a plan, and possibly one or more of the methods given herein will prove of value.

[1] The national guard authorities of one state publish in the state national guard magazine lists of R. O. T. C. graduates, with address and arm, grade and specialty for which qualified.—Ed.

Current Events Overseas

Edited by Lieut. Col. Herman Beukema, Professor, U. S. Military Academy

IN THE annual crop of critical surveys covering a dismal 1930, commentators agree on two points: first, that this world has so far deflated the extravagant hopes entertained as late as August, 1929, that the year ahead of us is almost certain to be one of improvement; secondly, the world condition of political and economic flux, proceeding from the events of 1914, shows no prospect of early crystallization. In short, stability is still remote.

Among the constructive steps during 1930, looking toward maintenance of world peace and economic stability, we note in chief, the London Naval Conference, the preparations for a World Arms Parley in 1932, the inauguration of the Young Plan, the highly auspicious initial success of the International Bank, recession of the revolutionary fever in China, and various world-wide agreements to curb overproduction of commodities. Revolutions, poverty, disillusionment, the reverse side of the picture—make up the present cosmic headache. Where the basic causes of these troubles are economic, remedies are now being applied or are in preparation. The political causes, notably the refusal of Italy and the defeated Central Powers to accept the decisions of the Versailles Treaty, offer the more serious threats of another world convulsion. History will check the balance and determine whether 1930 marks advance or retrogression in the march of civilization. It is too early for that now. But we can observe the trend of major movements as 1931 opens, and the questions they pose.

Above all, what of Russia? Unsocial, unwilling to cooperate with the capitalistic powers, happy in fact over the disruptive effects of their productive efforts on world economic machinery, these hard-bitten communists are forcing every nation to ask itself "What if the Russian program succeeds?" The elimination of Rykov and his followers, perfecting at last the dictatorship of the proletariat (with Stalin in the single role of "proletariat" in this instance), and the launching of a program to give military training by 1935 to 23,000,000 men annually, give ample proof that Russian leadership will carry through its iron purpose with all the means at its command. For the problems which he presents to rival powers, Stalin blandly proposes two solutions, war or adoption of communism. It may be too early to think seriously of these, but it is not too early to think.

British Empire

United Kingdom. Labor's hold on power weakened further in the past month, as evidenced by its several compromises in the session which recessed December 19. With the left wing radicals refusing to follow MacDonald's leadership, Labor is now wholly dependent on liberal support to remain in office. Out of that situation the Liberals feel certain of the early passage of a law granting proportional representation, a measure which should more than double the present strength in Commons.

No party wants a general election now, least of all Labor, even though it carries the brunt of criticism for these dolorous days in Britain. And Labor must pay the Liberals for the support which postpones that election. Meanwhile, the tide of local and by-elections swings steadily toward the Conservatives.

Sir Oswald Mosley has created a new issue in his demand for a temporary suspension of normal representative government by placing plenary powers in the hands of a super-cabinet of five. Parliaments cannot pull Britain out of her doldrums, according to Mosley, and, unwilling to suggest dictatorship, he still feels that a modified oligarchy may combine the courage, efficiency, and readiness to open again the doors of national prosperity. The country's initial reaction consisted chiefly of invective. But now industrialists and leading Conservatives rally to his support.

In the military field, a development of interest is the reduction of recruiting standards for the crack infantry and cavalry regiments, after it had become clear that no other measure could hold these units to strength. A logical aftermath of the R-101 disaster is a growing demand for a return of military, naval, and commercial air matters to separate administration, and an end of the present Air Ministry.

India. Due largely to the secrecy of the Round Table Conference's deliberations, the exact state of its progress is obscure. Winston Churchill's blistering denunciation of the proceedings gave evidence that results must be satisfactory to Labor and to the Indian representatives. It grows clear that the British government will insist on retaining control for at least ten years of matters of defense, foreign relations, and finance. A difficult problem arises from the inability to determine thus far a satisfactory basis of Hindu and Moslem representation. Only by some proportional method can the Moslems secure representation worth having. Succeeding Lord Irwin, Viscount Willingdon, present governor general of Canada, has been designated Viceroy.

Burma's demand for separation from the new Indian government was acceptable to both the British and the Indians. Scarcely had that step been decided upon when "King Golden Crow," or Saya San, a native backwoods chieftain, started on a campaign of pillage and slaughter which wiped out local and colonial administration over several hundred square miles in the initial onset. A surprise attack on January 2 by col-

onial troops resulted in the capture of Saya San's stronghold and the death of that leader.

The Dominions. Economic crises in Australia and Canada, with a somewhat similar set of conditions in each case, have produced unpleasant threats of separation from the western, commodity-producing areas. In neither case has the situation proceeded beyond the point of verbal explosions. Canada's position, from all points of view, is the happier in that her fiscal position is sound. Australia has followed a spendthrift socialistic policy so long that national bankruptcy is at the door, and may be avoided only if the government is supported in its policy of retrenchment.

Meanwhile, no little hard feeling has developed between Britain and Australia out of the blunt nomination by Premier Scullin of Sir Isaac Isaacs, native Australian, for governor general of that dominion. King George accepted the choice with marked asperity.

ROBERT B. RANSOM,
Captain, Infantry.

Western Europe

League of Nations. Budgetary limitation of armaments won in December the final acceptance forecast by its November victories in the parley of the League Preparatory Disarmament Commission. Ambassador Gibson, representing the United States, fought the thesis to the end, crystallizing his objections in the statement, "We honestly believe that it is far easier to control the application of a dollar than the existence of a rifle."

The completion of a draft proposal for the World Conference on Disarmament, which is expected to meet in 1932, marks the end of four years of intermittent effort to that end. No European power has labored harder to secure prompt and sweeping action toward this goal than has Germany. Only by scaling down the defenses of her rivals can she hope for an early approximation of parity in armaments. However, the strenuous efforts of Count Bernstorff, German delegate, to secure a date in 1931 for the final conference, was rowed down by Lord Cecil, speaking for Great Britain, and voicing the majority sentiment of the council.

To an impartial observer it appears that the Disarmament Conference might well take a lesson in cooperation from the success of the Bank for international Settlements, which has released its report on its first half year's operations. It has apparently operated much more smoothly than the Disarmament Conference. Originally, formed for the ostensible purpose of collecting and distributing German reparation payments, this now constitutes less than 20 per cent of the bank's business. Although it may not deal in a foreign currency if the central bank of the country concerned offers an objection, more than twenty transactions in foreign exchanges have been consummated without a single protest. Predictions are already being made in international banking circles that eventually the Bank for International Settlements will solve the question of world gold shortage by acting as a depositary for the gold reserves of the central banks.

France. The overthrow of a French cabinet is ordinarily a matter of small moment in that country. Such was the case when Tardieu's second cabinet fell December 4, after an adverse vote in the Senate. Notwithstanding the small weight of that body in the French political system and the existence of a solid majority for his policies in the chamber of deputies, Tardieu chose to resign. Two premiers designate, Louis Barthou and Pierre Laval, proved unable to form a ministry. President Doumergue finally turned to Theodore Steeg, who appeared before the Chamber with a left ministry just before the holidays, and secured a vote of confidence by a majority of seven. Steeg's cabinet remains obviously as a stop-gap, until Tardieu is ready to take the reigns again. Widespread agitation in the past two months for the return of Poincare to active politics ended when the serious illness of that veteran reinforced his refusals.

The death of Marshal Joffre on January 4, after an illness of three weeks, produced a flood of condolences from every quarter of the globe, in which his country's former enemies give full evidence of not only respect, but even affection. None of the great figures of 1914 had a stronger hold on men's feelings than did this gentle, imperturbable soldier who could fight to victory when his whole world was falling about him.

A military development of interest occurred in French laboratories with the production of a new smoke agent in which the principal ingredients are chalk, sulphuric acid, and tar products. Early tests were highly successful.

Spain. The long-heralded revolt burst out in a manner both furious and futile with a series of explosions, from the little Pyrenees garrison town of Jaca to Madrid. The Jaca affair with its proclamation of a Republic December 13, was obviously premature. It proved of real service to the government, which promptly forestalled most of the other scheduled outbursts. The extraordinary mutiny at Cuatro Vientos, Madrid's great military airport, December 15, was the only additional incident of importance. In all cases these sporadic outbreaks were put down with a promptness and thoroughness which suggested nothing of temporizing. The loyalty of most of the regular army, the happy warning given by the Jaca revolt, the indifference of the populace to republicanism, especially so in the case of the peasantry, and above all the native ineptitude of the Spanish for concerted action, were responsible for the failure of the rebellion. However, King Alfonso XIII has promised early restoration of constitutional government, with elections in March.

DONALD A. FAY.
First Lieutenant, Infantry.

Central and Southern Europe

Germany. Socialist support enabled the Breuning ministry to score a major victory at the very outset of the session which opened December 3. True to his promise, Chancellor Breuning placed before the new Reichstag, the issue of complete acceptance or rejection of his fiscal measures, which had precipitated the political crisis last July. Piece meal debate of the twenty-five major reforms involved was avoided through the previous enactment of the bill by decree, under Article 48 of the constitution. Some of the provisions were most unpalatable to the Socialists, but they had to choose between acceptance or a reversion to the political chaos of recent months, with fascist control a strong possibility. Their grumbling support enabled the government to win in this critical test by a vote of 292 to 254.

However, the government remains weak. Fascists, Nationalists, and Communists will stand solidly against it on every vote. Only by constant compromise of party principles can the moderate parties of the center maintain a majority. And compromise is something new in German politics.

Government and general opinion grows increasingly cool to suggestions of a moratorium on reparation payments. German commercial credit would suffer from further agitation of the question, and that at a time when a substantial and growing balance of exports is one of the few bright spots in German economy. With unemployment figures nearing the four million mark, government revenue receipts falling steadily, and serious communist strikes and riots breaking out in the Ruhr district with the opening of the New Year, Germany faces its hardest winter since 1923.

Italy. *Military training approaches Mussolini's goal* of 100 per cent application in two decree laws issued by the Council of Ministers. The more important of these provides that youths over 18 are to receive two courses in pre-military training, unless physically disabled or residing more than ten kilometers from the nearest training center. Local fascist militia takes charge of instruction, which will be given on Sundays and holidays.

Mussolinic oratory of last month was marked by a singular outburst in which Il Duce, admitting a budgetary deficit of $45,000,000 to date, placed the blame for the Italian, European, and world economic plights on Wall Street's shoulders. He waxed bitter in his denial that Italy had sought loans in the world markets, attempting thereby to dispose of current news to the effect that the refusal of such loans had clipped his aggressive claws.

Drastic retrenchment in state expenditures appears in recent decrees. Salary cuts of 12 to 30 per cent for government employees, reduction in outlays for all executive departments, are among the measures taken to meet the financial pinch. At best, they are insufficient.

RICHARD P. OVENSHINE,
First Lieutenant, Infantry.

Eastern Europe

Russia. The Moscow trial of technicians for sabotage attained the ultimate in publicity. Radio carried the proceedings to every corner of the world willing to tune in. A cinema record, will shortly present the high lights of the "confessions" and of State Prosecutor Krylenko's thunder. And hungry, shivering Russia gets momentary diversion from its misery. The sabotage carried on by the prisoners, at the instance of Russia's foreign enemies if we are to believe the "confessions," received the expected heavy penalties, ranging from death to long terms in prison. And, as also expected, those sentences were commuted and reduced, eliminating all death penalties.

Stalin has achieved the pinnacle of complete dictatorship by elimination of Alexis I. Rykov, premier since Lenin's death. Viacheslav M. Molotoff, one of Stalin's subservient tools, gets the vacant post, while the "man of steel" himself finally takes an office, ordinary membership on the Council of Labor and Defense. Of all the coterie who held key positions under Lenin, less than twenty per cent remain today, and those in minor positions. The furious pace of the five-year plan, and the savage disregard of the nation's simplest needs shown by its pilots in the pursuit of their ends, appears in new decrees, limiting maximum temperatures in all buildings this winter to 48 degrees Fahrenheit; eliminating the individual kitchen and substituting mass feeding, with the additional proviso that only those "accredited" by the State will eat at all; and drafting 2,000,000 women for heavy masculine tasks to supplement the inadequate labor supply.

Poland. Marshal Pilsudski, the Polish dictator, has resigned as premier and has accepted the position as minister of war in the new cabinet. Colonel Walery Slawek, a strong Pilsudski aide, has been appointed to the office of prime minister. It is evident that the old Marshal will continue to control the affairs of state from behind the scenes.

A reverberation of the recent Polish elections appears in startling disclosures of brutal treatment suffered by leading Poles who, opposing Pilsudski candidates in the November elections, were thrust into the Brest-Litovsk prison some weeks before the election day. Meanwhile, Germany appeals to the League of Nations, protesting against Polish methods employed against native Germans in Upper-Silesia for the same object, to secure the election of Pilsudski's candidates.

GEORGE M. BADGER,
First Lieutenant, Coast Artillery.

The Balkans and the Near East

Balkans. An interesting project, inaugurated in 1930, is the formation by Albania, Bulgaria, Greece, Jugoslavia, and Turkey of the Balkan Union. It means an attempt at real cooperation among these states, along the lines envisaged by Briand for the whole of Europe. There are to be a diet which meets annually (this year in Constantinople), a postal union which goes into effect on April 1, a trade council, and a Union flag.

Turkey. Last month witnessed the fall of the three-months old party system in Turkey. In August Fethi Bey undertook, with the approval of President Kemal Pasha, to organize a Liberal party in opposition to the government Popular party, whose leader was Prime Minister Ismet Pasha and whose President was Kemal. It was expected by observers that the Ghazi would

divorce himself from the Popular party, and, as the republic's president, preserve a benevolent neutrality in the inter-party squabbles. This, however, he failed to do. On the other hand, Fethi Bey's strong denunciations of existing governmental policies soon produced him great support from the discontented. During the liberal leader's first political speech in Smyrna, serious disorders broke out. Kemal may have approved an opposition party, but not of opposition. He "gave commands" and all the smiles of the Liberal party, like those of Browning's "Last Duchess," stopped together. Fethi Bey, shunning martyrdom, hastily announced the dissolution of the party.

Financial embarrassment grows acute for the Turkish government, with the failure to meet the latest interest payment due on her foreign obligations, and she is now sounding out London and Paris on a proposition of a charitable reduction of the principal.

Rumania. The death of ex-Prime minister Vintila Bratianu, December 22, disposes of King Carol's most active foe. The dead man is not to be confused with his brother, the potent Ion Bratianu, who died in 1927. Vintila was toppled from power by a peasant revolt in 1930, but until his death maintained his leadership of the Liberal party and opposed the return of Carol to power.

DONALD H. GALLOWAY,
First Lieutenant, Cavalry.

Far East

The winter months have witnessed a cessation of major warfare and a continuation of political and economic difficulties in China. However, the communists or bandits still hold sway in the Upper Yangtze Valley. Frequent reports appear to the effect that President Chiang Kai-Shek is assembling a large army to eliminate them, but kidnappings, attacks on foreign vessels, and massacres of villagers continue. A more serious report concerns the revolt of Mohammedans in Kausu Province of far west China, involving destruction of many villages and the murder of some 30,000 Chinese.

Plans for railroad construction, and the new Chinese tariffs dominate the economic field at present. Information appears that Mukden and Nanking have agreed to permit the Nationalists government to construct two lines paralleling the South Manchuria Railway. Japan, foreseeing ruinous competition for the South Manchuria, which is her property, insists that the new construction is a first step of the Nationalists in their attempt to oust Japan from Manchuria. At most, the construction plan is in the talking stage.

Over the vigorous and unavailing protests of all foreign governments, Nanking has established a well-conceived tariff schedule, designed to foster Chinese industry as well as to raise revenue. Wines, liquors, cigarettes, and in general all luxuries are hit hard, making certain a substantial boost in the cost of living of resident foreigners. Necessities, and especially raw materials required by Chinese industry, bear little or no increase in rates, and in some cases are reduced. A partially compensatory measure is the abolition of the age-old "likin," internal transit tax. Manchuria, however will retain "likin" for another three to six months.

ROBERT E. BLAIR,
First Lieutenant, Infantry.

SPORTS

The Army Polo Team in Argentina

By Colonel W. V. Morris, G. S. (Cav)

THE recent visit of an Army Polo Team to Argentina is of special interest by reason of the fact that it was the first foreign polo team to visit that country and the first polo team from North America or Europe to visit any South American Country.

The Army Polo Team for this year was assembled at the Army Polo Center, Mitchel Field, Long Island, for participation in the Junior Championship matches. It consisted of Captain C. A. Wilkinson, QMC (Cav.), Captain P. P. Rodes, 16th Field Artillery, 1st Lieut. M. McD. Jones, Cavalry, and 1st Lieut. H. W. Kiefer, Field Artillery. Its winning of the 1930 Junior Championship is a matter of polo history.

Early in July an invitation from the Argentine Polo Association was received by the United States Polo Association for the visit of an Army Polo Team to Argentina. After approval by the War Department the invitation was accepted. With a view to strengthening the team Major C. C. Smith, 14th Cavalry, was added to it as back.

The team, with Lieut. H. W. Kiefer as substitute and Colonel W. V. Morris in charge, sailed from New York September 12th. Horse equipment was taken, but no mounts, as the arrangement with the Argentine Polo Association provided for ponies to be furnished by them.

On arrival at Rio de Janeiro, Brazil, on September 25th, the party was met by Captain E. C. Fleming, Military Attache at Buenos Aires, who had come to Rio for that purpose, and by members of our Naval Mission to Brazil. A very enjoyable day was spent including a trip to the top of the celebrated Sugar Loaf by aerial cable car, and a visit to the Polo and Golf Club.

Arriving the next morning at Santos, the great coffee port, the party motored about 50 miles over a most picturesque route, resembling the Baguio road in its steep and long ascent, to Sao Paulo, the headquarters of the coffee industry of Brazil, and a finely built, enterprising city of 585,000 people. Sao Paulo resembles a North American city more than any other of those we visited in South America. While Rio is the political capital, Sao Paulo is the economic and financial center of Brazil.

We returned to Santos over a railroad (partially cable) that is a marvel of engineering skill, most of a drop of 3,000 feet being made within six miles, and reputed to be the best equipped and most profitable railroad in the world.

After a short stop at Montevideo we arrived at Buenos Aires, September 30th, where the party was met by a reception committee consisting of officials of the Polo Association, officers from the Ministry of War and the Cavalry School, and many others, some forty-in all.

On October 3rd the Team visited the Los Nanducces Polo Club, about thirty kilometers from the city, which was to be its polo headquarters for the first month of its stay. Here it was received by the officials of the Club and after a luncheon attended by forty-five polo enthusiasts all proceeded to the stables to inspect 48 polo ponies with their Gaucho attendants.

The ponies, which were in charge of Mr. Ernest Grant, a fine horseman and trainer, were made available through the generosity of some twenty-three Argentine sportsmen and polo players who were kind enough to place them at our disposal. On the day of our visit a practice game resulting in a score of 12 to 3 in our favor was played against a cut-in team of 14 to 15 goals handicap.

While the Club had provided comfortable sleeping accommodations for six, with a very good mess, a number of considerations, especially the many functions given for us in the City, made it desirable for members of the team to habitually live in Buenos Aires and go to Los Nanducces by automobile or train for practice games and working ponies.

While the visit of Argentine polo teams to the United States had made us acquainted with the quality of polo played there, the extent to which the game was played was not realized. It was a surprise to learn that there are fifty-four active polo clubs in the country, and the interest in polo is increasing every year. It is also not generally known that polo was introduced into Argentina in 1875, one year before it was introduced into this country.

Practice games were played on October 7th, 9th, 11th, 16th, 18th, 21st and 27th. These games were against various neighboring clubs with teams of handicaps varying from 11 to 20 goals; we won all of these preliminary games.

Throughout our practice games the team labored under the disadvantage of having no high goal teams against which to play. This was due to the attendance of all the strong teams at the tournaments at Hurlingham, the big Polo and Country Club of Argentina. Our team was not entered in any of these tournaments and it is perhaps just as well, for the ponies were not ready for tournament polo, many of them being in need of considerable conditioning. For this reason the practice games against low goal teams was also probably a good thing.

On October 28th the ponies were brought into Buenos Aires by road and lodged at the stables of the Live Stock Association, in readiness for the beginning of the Open Championship on November 1st.

During this month's practice and conditioning of

pation the members of the party were well occupied with many official and social functions, Ambassador and Mrs. Robert Woods Bliss taking the lead in this respect with a luncheon in our honor on October 1st.

Upon our arrival we had been informed that the principal clubs in the city, about eighteen, and a number of polo clubs, had either made us honorary members or had extended privileges for the duration of our stay. Soon after our arrival the team was received by Lieut. General Jose Francisco Uriburu, the President of the Republic, and by Major General Francisco Medina, the Minister of War.

Outstanding among the many semi-official and social functions attended were a luncheon by the Minister of War, a banquet given by the Circulo Militar and attended by about 100 officers and civilians, an outdoor luncheon by the Los Indios Polo Club to about 65 guests, on which occasion a club membership medal was presented to each member of the team, a reception and tea dance by Ambassador and Mrs. Bliss at the American Club, a dinner dance by the American Club, and a polo dinner at the Hurlingham Club.

On October 12th the party was privileged to witness from the official stand a parade through the streets of Buenos Aires of about 12,000 troops, including the cadets of the Military and Naval Colleges, in honor of El Dia de la Raza (The Day of the Race). It was an interesting demonstration of well uniformed and equipped and excellently marching soldiers of all arms. At night the members of the party were guests of the Minister of War at a gala opera performance at the Teatro Colon.

The visit to the Military College on October 30th was also an interesting occasion. After a luncheon attended by about 85, the entire afternoon was devoted to a tour of the college under the guidance of Colonel Francisco Reynolds, the Commandant, and witnessing special exercises held in honor of the party, culminating in the ceremonies of "Escort of the Color" and "Evening Parade."

Going back to polo, the teams entered in the Open Championship were as follows:

	Santa Ines			Los Pinguinos	
1	Daniel Kenny	6	1	Oscar Braun Menendez	3
2	Andres Gonzetti	5	2	Alejandro Braun Menendez	4
3	Ricardo Barrau	4	3	Carlos Braun Menendez	5
4	Juan Kenny	5	4	E. Braun Menendez	4
		20			16
	Hurlingham			Venado Tuerto	
1	Luis E. Nelson	5	1	Tomas Moore	4
2	Luis Duggan	4	2	Roberto H. Lambert	4
3	Reginaldo Kenny	4	3	Arturo Kenny	6
4	Luis L. Lacey	10	4	Diego Cavanagh	6
		23			20
	Las Rosas			Santa Paula	
1	Gonzalo Tanoo	3	1	Alfredo Harrington	6
2	Eduardo Heguy	4	2	Juan C. Reynal	6
3	Horacio Tanoo	7	3	Jose Reynal	8
4	Manuel Lynch	6	4	Manuel Andrada	8
		25			28

	Los Indios			Hurlingham B.	
1	Damaso Del Campo	4	1	Alfredo Benitz	4
2	Audilio Bonadeo Ayrolo	4	2	Luis T. Nelson	5
3	Jose Luis Giribone	4	3	Carlos Uranga	4
4	Juan Carlos Giribone	4	4	Vicente Kenny	4
		16			17

	U. S. Army	
1	Lt. Morton McD. Jones	5
2	Capt. C. A. Wilkinson	5
3	Capt. Peter P. Rodes	6
4	Major Charles C. Smith	5
		21

The results of the various games are given below:

Nov. 1—U. S. Army won from Los Pinguinos 13—5.
Nov. 2—Santa Paula won from Venado Tuerto 19—7.
Nov. 3—Hurlingham B won from Los Indios 9—8.
Nov. 3—Santa Ines won from Hurlingham A. Default.
Nov. 7—Las Rosas won from Hurlingham B 17—2.
Nov. 8—Santa Paula won from Santa Ines 8—5.
Nov. 9—U. S. Army won from Las Rosas 8—4.
Nov. 11—Santa Paula won from U. S. Army 9—8.

These games were played on the Military polo fields in the Palermo District of Buenos Aires and opposite the celebrated Hippodrome of the Jockey Club. The fields were excellent. Games in Argentina are of seven periods of 8 minutes each.

The Pinguinos Team against which we played in our first game, November 1st, is composed of four brothers, with three other polo playing brothers available as substitutes. One of them, Armando Braun Menendez, went in when Alejandro was painfully injured in the third period by his horse's falling and rolling on him. This team was regarded as being about as well mounted as any in the tournament and as its rating was 16 goals, the score of 13 to 5 in our favor was very satisfactory.

Our second game which we won 8 to 4 against Las Rosas, a 25 goal team, with three players of international reputation, was remarkable in that our opponents earned but one goal, three of the four having been made from free shots from the 40 yard line as penalties for fouls called against members of our team.

The final of the Open Championship was played against Santa Paulo, a 28 goal team, on November 11th, and was won by the latter by a score of 9 to 8. This is the same team that visited California last winter and departed with a clean score of victories.

In the fifth period the score was 8 to 3 in our favor but three free shots from the 40 yard line in the next two and a fraction periods, added to three earned goals without our scoring enabled Santa Paula to win.

President Uriburu attended this game and Mrs. Robert Woods Bliss presented the trophies.

For the series of games with a team representing the Argentine Army, Ambassador Robert Woods Bliss offered a very handsome cup as a permanent trophy to be contested for each year or as often as possible by teams representing the United States and the Argentine Armies.

Following the Open Championship our first match against the Argentine Army Team, which we won by a score of 10 to 7, was played November 15th. The line up of the Argentine team was as follows:

No. 1	Sub. Lt. Matias Casares	3
2	Capt. Juan Carlos Balbastro	3
3	1st Lt. Pedro Cremona	4
Back	1st Lt. Manuel G. Molinuevo	5
		15

In the 6th period, Captain Balbastro suffered a fractured hand as a result of a blow by a mallet and had to withdraw, his place being taken by 1st Lieut. Alberto Paz.

On the morning of November 18th the party attended the graduating exercises at the Military College and in the afternoon played the final of the Military Matches which we won by a score of 16 to 1. Our team struck its stride at once and dominated the play from start to finish. Its hitting, passing and team play were excellent.

The trophy and individual cups were presented by President Uriburu.

In these military matches, as in the others, the best of feeling existed between the two rival teams on and off the field. The Military Matches in this respect were somewhat like a match between two squadrons of the same regiment, and the rival players almost walked off arm in arm.

The attendance at all games in which our Army team took part was exceptionally large—from 10,000 to 12,000. Ambassador and Mrs. Robert Woods Bliss attended all of our games as also did General Medina, the Minister of War. The President of the Republic attended the final game of the Open Championship and both of the Military Matches.

On the night of November 18th after the last Military Match the Polo Association gave its annual Polo Dinner to about 100 guests and at which the members of our team were guests of honor. This was a very enjoyable occasion.

On November 21st we gave a banquet to about 100 guests. Unfortunately Ambassador Bliss was unable to attend on account of a previous engagement. The Minister of War was the guest of honor.

Lieut. Kiefer having left on November 9th and Major Smith and Captain Rodes on November 21st, the balance of the party left Buenos Aires on November 23rd by train, crossing the Argentine Pampas and the Andes to Santiago, Chile, where we were most hospitably received by the Army and officials of the Chilean Polo Association. An enjoyable two days was spent at Santiago and Vina del Mar including visits to two Cavalry regiments and one Field Artillery regiment, and a dinner at the Cavalry School. The party sailed from Valparaiso on November 26th, regretting that more time could not be spent with our Chilean friends.

From the arrival of the Team in Buenos Aires until its departure nearly two months later, everyone, including the President of the Republic and members of the Government, appeared to be actuated by the desire to make our visit as pleasant and agreeable as possible. Through our close association with officers of the Army and those interested in polo, many valued friendships were made and it was with much regret that we said farewell to the hospitable people of Argentina.

The attitude of the President of the Republic, Lieut. General Jose Francisco Uriburu was most cordial. His interest was shown by his attendance at as many of our games as his official duties would permit. His example was followed by various members of his cabinet.

Mr. Francisco Ceballos, President, and the other officials of the Argentine Polo Association were at all times solicitous for our comfort and did everything in their power to comply with our wishes regarding mounts, play, etc.

We are especially indebted to Dr. Ricardo Fisch, President, and the other officials of Los Nanduces Polo Club for their generosity in placing the facilities of their Club at the disposal of the Team as its polo headquarters.

In the interests of international understanding and friendship it is hoped that arrangements can be made for an interchange of visits by Army Polo Teams between Argentina and the United States as contemplated by Ambassador Robert Woods Bliss in his offering of a permanent trophy.

Results at Toronto Horse Show—a Correction

DUE to a misunderstanding of the classification of events in the Royal Winter Horse Show at Toronto, the JOURNAL (January issue) listed but four of the events there as International Classes. The events so listed were understood to have been those limited to teams or individuals of teams of the various nations officially represented at the show. Major R. S. Timmis, Royal Canadian Dragoons, calls to our attention the omission of three military events at the Toronto show, which should be considered as International Military Events, in which representatives of the international teams competed. These were: Class 122, Military Performance Class won by Canada, *Bucephalus*, Major Timmis; Class 119 "Royal York" Military Jumping Stake, won by Germany, *Elan*, Lieutenant Hasse; Class 118, Military Touch and Out Stake, won by Hungary, *Ibolya*, Colonel Malanotte.

There were other classes open to members of the international teams, which are classed therefore as "international," though not military events. Such were Class 116, Knock Down and Out, won by America; Class 107, Pair Jumping, won by Ireland, and Class 115, Open Jumping, won by Germany.

The JOURNAL is very glad to correct the listing as previously given and thanks Major Timmis for calling attention to the proper classification of the events in the Toronto show.

Horse Show Dates for 1931 Announced

AT THE annual meeting of the Association of American Horse Shows, Inc., held in New York January 8, 1931, the schedule of horse shows for the year 1931 was approved. The dates assigned the various shows are listed below. The dates for the shows of certain recognized members of the association will be assigned at a later date.

Horse Show Dates, 1931

Jan. 31st, Feb. 7th—Oakland National, Calif.
April 7th—The Riding Club, New York City.
April 21st-25th—Brooklyn Horse Show.
April 29th, May 1st—Essex Troop Horse Show (Newark.)
May 6th-9th—Philadelphia Indoor Horse Show.
May 6th-9th—Hartford Cavalry Horse Show (Conn.)
May 9th—Front Royal Remount Depot Horse Show (Va.)
May 9th—Soldiers and Sailors Club (Long Island.)
May 13th-16th—National Capitol Horse Show.
May 14th-16th—New Haven Horse Show Assn. (Conn.)
May 16th—Lawridge Horse Show, Porchester, N. Y.
May 16th—Meadow Lark Horse Show, Stelton, N. J.
May 19th-23rd—Worthington Valley Horse Show.
May 21st-23rd—Atlanta Horse Show.
May 22nd-23rd—Reading Country Club Horse Show. (Penna.)
May 23rd—Millburn Horse Show. (New Jersey.)
May 23rd—Roosevelle Riding Club. (New York.)
May 26th-30th—Devon Horse Show.
May 28-30th—Fort Riley Cavalry School, Kansas.
May 29-30th—Boulder Brook Club, Scarsdale, N. Y.
May 30th—Kenilworth Riding Club, Kenilworth, N. J.
June 2nd-3rd—West Point Horse Show.
June 4th-6th—Allegheny Country Club Horse Show. (Penna.)
June 5th-6th—Tuxedo Horse Show, Tuxedo Park, N. Y.
June 8th-13th—South Shore Country Club, Chicago.
June 12th-13th—Upperville Colt and Horse Show. (Va.)
June 13th-18th—Westchester Co. Horse Show. (N. Y.)
June 15th-20th—Troy Horse Show. (New York.)
June 16th-20th—Huntington Bay Horse Show. (L. I.)
June 16th-20th—Toledo Horse Show. (Ohio.)
June 16th-20th—112th Field Artillery, Trenton, N. J.
June 16th—Harford County Horse Show, Wilma, Md.
June 16th-20th—Babylon Horse Show. (Long Island.)
June 16th-20th—Oconomowoc Horse Show. (Wis.)
June 16th-20th—Watertown Riding Club. (Conn.)
June 16th—Wheaton Horse Show. (Ill.)
July 6th-9th—Madison Barracks Horse Show. (N. Y.)
July 7th-11th—Milwaukee Horse Show, Wisconsin.
July 8th-10th—Fairfield County Hunt Club. (Conn.)
July 9th-11th—Stamford Horse Show. (Conn.)
July 10th—Erie Saddle Club, Erie, Pa.
July 11th—Huntington Riding and Hunt Club. (L. I.)
July 14th—Monmouth Co. Horse Show. (N. J.)
July 15th—Westbrook Horse Show. (L. I.)
July 16th-18th—Newport Horse Show.
Aug. 14th-15th—Bath County Horse Show, Hot Springs, Va.
Aug. 15th—Easthampton Riding Club. (Long Island.)
Aug. 15th—Litchfield Horse Show. (Conn.)
Aug. 18th-21st—Malone Horse Show. (N. Y.)
Aug. 19th-22nd—Derby Horse Show. (N. Y.)
Aug. 20th-21st—Clarke County Horse Show, Berryville, Va.
Aug. 20th-22nd—Cohasset Horse Show. (Mass.)
Aug. 21st-22nd—Southold Horse Show. (Long Island.)
Aug. 24th-29th—Erie Co. Horse Show, Hamburg, N. Y.
Aug. 29th—Fishers Island Horse Show. (N. Y.)
Aug. 29th—Oxridge Hunt Club, Darien, Conn.
Aug. 31st-Sept. 5th—Canadian National, Toronto.
Aug. 31st-Sept. 5th—Ohio State Fair, Columbus, Ohio.
Sept. 4th-5th—Mill Creek Riding Club, Youngstown, O.
Sept. 7th-12th—Rochester Horse Show. (New York.)
Sept. 11th-12th—Chatham Horse Show. (New York.)
Sept. 11th-12th—Fort Sheridan Horse Show. (Ill.)
Sept. 11th-12th—Far Hills Horse Show. (New Jersey.)
Sept. 16th-18th—Mineola Horse Show. (Long Island.)
Sept. 16th-19th—Philadelphia Riders and Drivers, Wissahickon, Pa.
Sept. 18th-19th—Natl. Polo Society, Westbury, (L. I.)
Sept. 19th—Greenwich Horse Show. (Conn.)
Sept. 21st-26th—Springfield Horse Show. (Mass.)
Sept. 23rd-26th—Bryn Mawr Horse Show. (Penna.)
Oct. 1st-3rd—Piping Rock Horse Show. (Long Island.)
Oct. 2nd-3rd—Gloucester, Va., Horse Show.
Oct. 8th-9th—Danbury Fair Horse Show. (Conn.)
Oct. 9th-10th—Orange Horse Show. (New Jersey.)
Oct. 12th—17th—St. Louis Horse Show.
Oct. 15th-18th—Brockton Fair Horse Show. (Mass.)
Oct. 16th-17th—Westfield Troop Horse Show. (N. J.)
Oct. 21st-24th—Cleveland Horse Show.
Oct. 23rd—Montelair Horse Show. (New Jersey.)
Oct. 27th-31st—Boston Horse Show.
Oct. 29th-31st—Cincinnati Riding Club Horse Show.
Nov. 5th-11th—National Horse Show, New York City.
Nov. 16th-21st—American Royal Horse Show, Kansas City, Mo.
Nov. 28th-Dec. 5th—International, Chicago.

Recognized Members A. A. H. S. —Dates Not Yet Assigned

Averill Park Horse Show, New York.
Charles Town Horse Show, W. Va.
Hamilton County Horse Show, Cincinnati.
Orange County Horse Show, Tustin, Cal.
San Joaquin County Fair, Stockton, Cal.
Warrenton Horse Show, Va.
Woodhill Country Club, Minneapolis.
116th Cavalry Horse Show.
Abington Hills Hunt Club, Clark's Summit, Pa.
Chicago Riding Club.
Los Angeles County Fair.
New England Fair, Worcester, Mass.
Montpelier Horse Show.
Pacific International, Portland, Oregon.
Seattle International Horse Show.
Sleepy Hollow Country Club, Scarborough, N. Y.
Fort Bliss Horse Show. (Texas.)
Royal Winter Fair Horse Show, Toronto.
Toronto Horse Show.
Dutchess County Horse Show, Rhinebeck, N. Y.
Cortland County Horse Show, Cortland, N. Y.
Fort Snelling Horse Show. (Minn.)
Gulf Hills Horse Show, Ocean Springs, Miss.
Lake Placid Horse Show. (N. Y.)
North Shore Horse Show, Smithtown, L. I.
Los Angeles National Horse Show.
Pinehurst Jockey Club.
Fort Sill Field Artillery School.
Columbus Riding Club. (Ohio.)
Benefit Horse Show. (Louisville.)
Lake Forest Horse Show. (Ill.)

CURRENT TOPICS

The Basic Cavalry Manual

THE Basic Cavalry Manual has, according to all comments received, met a long standing want in the service. So great has been the demand that the first edition has been sold out. The publishers have been instructed to go to print with the second edition at the earliest possible moment. We however anticipate that it will be at least a month before it can be off the press, as certain additional material is being incorporated in the second edition.

Pending the time that the new edition comes off the press, we shall be glad to receive and hold orders to be filled immediately when the books are available.

No Change in Uniform Contemplated

IT was stated informally at the War Department that those who have approached General MacArthur, the new Chief of Staff, with various recommendations looking to changes in the uniform, have been told that there will be no changes during his tour as Chief of Staff; that he feels that the younger officers especially, who are struggling along with inadequate pay, should be relieved of any anxiety which comes from the thought that they may be called upon to fit themselves out with blue uniforms or further changes in the olive drab uniform.

The 6th Cavalry Visits Nashville

AFTER a seven days hike from Ft. Oglethorps, mostly over hard surfaced roads and over two mountain ranges, the 6th Cavalry arrived in Nashville, Tennessee, early in November for an eight day stay. The command included approximately five hundred men and horses.

The regiment quickly made camp on a high hill in the State Fair Grounds, where electric lights were provided, watering facilities convenient and the buildings of the Fair Association available in case of inclement weather. Within a very short time the officers and men were ready to participate in the entertainment offered by the citizens of the town through the good offices of Colonel Henry Dickinson, commanding the 109th Cavalry, and in the Fall Horse Show and Gymkana of the 109th Cavalry Association.

Mr. E. L. Spain, President of the Y. M. C. A., gave the visiting cavalrymen free admission to the Y. M. C. A. baths and swimming pool. The Commercial Club and Hermitage Club extended privileges to the officers which they availed themselves of at every opportunity. The citizens of Nashville soon became accustomed to the sight of the cavalrymen along the streets of Nashville and they were accepted as a part of the population of the city.

The first night of the Horse Show started off with a fine exhibition with the 6th Cavalry Machine Gun Troop firing blanks while being charged on by one platoon of Cavalry, which was very exciting and which the audience thoroughly enjoyed. Jumping classes were run off to the enthusiastic applause of the audience. The 6th Cavalry took a large portion of the prizes yet Nashville and members of the local troop of the 109th Cavalry were represented among the prize winners. There were a great many classes which were exclusive to enlisted men and others exclusive to ladies. However, ladies entered all classes where officers and civilians were entrants and took their full share of prizes. The hunt teams were a particularly interesting event, inasmuch as there were eleven teams entered and the first prize in this class was taken by Mr. Dudley Gale, Mrs. Albert Sullivan and MacGavock Dickinson, the ten year old son of Colonel Henry Dickinson, Commanding Officer of the 109th Cavalry.

The second afternoon and second evening of the Horse Show were filled with good entertainment for the large audiences which filled the boxes and seats.

On Saturday evening, Troop F put on a musical ride and cavalry charge that would have been called excellent by any troop anywhere.

The Cavalrymen spent Sunday and Monday after the Horse Shows resting and Tuesday morning, although it was raining, Colonel Humphrey and his men joined in the Armistice Day Parade, of which Colonel Dickinson was the Grand Marshall.

This regiment has endeared itself to the hearts of the people of Nashville and along its line of march and it is sincerely hoped by the people of Nashville that they will make this visit an annual event.

Laced Boots to be Issued

After a thorough test in various mounted organizations, the War Department announces that laced boots are to be issued to enlisted personnel of the Regular Army mounted units as a part of their clothing allowance, effective July 1, 1931. The desirability of this article of clothing has long been admitted, but funds have heretofore been lacking for the change. Troops of the mounted arms in the United States will be given priority of issue.

The boots will be made on standard U. S. Army lasts, the color of the upper leather being as prescribed by the purchasing officer, but within the range of color between mahogany and russett. Rubber heels will be provided and cotton laces.

Professional Notes and Discussion

The 1000" Record Machine Gun Target

(By Captain "A. M. G.")

THE discussion herein is admittedly "hair-splitting," but even so, machine gun troop Commanders are invited to bear with me, and peruse it carefully.

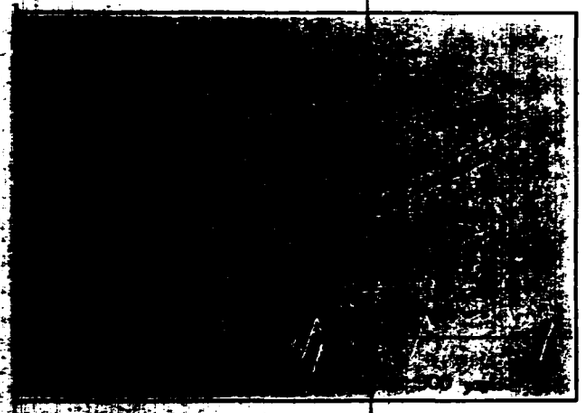
The premises under discussion are directly based on Training Regulations and other official documents, and to begin with, I desire to state that no issue is taken with the contents of these documents.

Paragraph 114, of TR 150-35 prescribes that an officer check each machine gun target "E" prior to record firing on this target, to see that it conforms to specifications. And a dimensioned drawing, Plate 13, on page 57 of this TR, is offered as a guide. At first glance, this seems simple, and not at all mysterious.

But the old school of experience has made me think that it would be advisable to amplify this plate, and I offer the additional dimensions of the drawing below for most careful consideration.

As we all know, this target is now the only record firing the machine gunner does, hence the advisability of knowing the method of constructing it. Briefly it amounts to nothing more or less than a graphical representation of the BMG fire control tables. Instead of mils in the fire control tables, we are able to handle inches on the 1000" screen.

To begin with, if we wish the center of impact to be at the actual point of aim, since the line of sight of this machine gun is some few inches above the axis of the bore, we have to elevate the bore until the line of sight, and the axis of the bore meet at the 1000" screen. For the normal gun, this elevation corresponds to a sight setting of 450 yards, or 4 mils. Working backwards, if we actually measure the vertical distance between the front sight and the center of the muzzle,



[illegible], TR 150-35, with Suggested Modifications

it should be approximately 4 inches. Try it and see what the answer is.

Now if we wish to find out where the center of impact on the 1000" screen should be for a sight setting of 1300 yards, with respect to an aiming point, we merely have to subtract from the angle of elevation

Press for Printing 1000" Targets

for this range, the angle of elevation that places the center of impact at the point of aim, and lay this numerical value off in inches on the 1000" inch screen, above the point of aim. Specifically:

(From Table I, Col. 2, Fire Control Tables, B. M. G.)
Angle of elevation, Range 1300 25.3 mils.
Angle of elevation, Range 450 4.0 mils.

Subtracting, our C. I. should be 21.3 inches above the point of aim.

If a two inch square be described around this point, its lower edge will be 20.3 inches above the aiming point. Examing Plate 13, we find that the vertical dimension for the application target is 20.4 inches, the bottom of the scoring space being this distance above the bottom of the aiming spotter. Why the difference of one tenth inch? Not a mystery at all. The rate of change of angles of elevation is not uniform. We assumed such when we interpolated for the angle of elevation of 450 yards. Proof firing evidently shows that 3.9 mils is the accurate angle of elevation that places the point of aim at the center of impact instead of the approximate value of 4.0 mils we obtained by interpolation.

(Continued on page 60)

Organization Activities

1st Cavalry, Fort D. A. Russell, Texas

THE most important bit of news at this post is contained in the radiogram, received here January 9, 1931, ordering Colonel John S. Fair to duty as Chief of Staff of the Hawaiian Department, to sail from San Francisco on February 5. Colonel Fair was ordered to command the First Cavalry July 1, 1929. During his tenure of command, he has accomplished a great deal in improvement of the garrison. Better known, perhaps, are his efforts toward establishing friendly relations with the Mexican Army.

The new grass polo field is assuming recognizable proportions. This field is to furnish a site for athletics and polo, and some of the young men of Marfa are trying to organize a polo team to play on this field with teams from this regiment.

Major J. D. Derrick has left to go to the Philippines for his new station.

Two of the new quarters for officers will soon be ready for occupancy. With the completion of the five sets authorized, we hope we will be relieved of the embarrassment this station has suffered from in the matter of accommodations. Visitors to the post have learned from experience that we have been hard-pressed for room, and consequently have been unable to entertain them in the manner we desire.

2d Cavalry, Fort Riley, Kansas

THREE hunts with hounds enlivened the Christmas Holidays for the officers and enlisted personnel of the Second Cavalry, Fort Riley, Kansas. Capt. William H. Dean, acting master of fox hounds, led more than three hundred members of the Second Dragoons and guests from the Post on all hunts, in spite of the large number of Christmas furloughs that were in effect.

The Regiment has settled down to the winter program of individual and mechanical refresher training for men, mounts and small units concurrent with training of recruits, remounts and jumpers.

Capt. Manly F. Meador, arriving from the Philippine Islands, joined the Regiment January 5, and has been assigned as Assistant to the Plans and Training and Intelligence Officer.

3d Cavalry (less 1st Squadron), Fort Myer, Virginia

SECRETARY of War and Mrs. Hurley were honored at the first exhibition ride of the winter season held on January 16th. The regiment (less 1st Sq.) formed an escort of honor to conduct the Secretary and his party to the riding hall where the demonstrations are staged.

These Friday rides and the tea dances which follow, annually attract a large attendance from official and civilian circles in Washington. Admission is free but the popularity of the exhibitions necessitates advance reservations to insure obtaining seats.

6th Cavalry, Ft. Oglethorpe. Ga.

TROOP and Squadron training and schools resumed on January 3, 1931, following the Christmas holiday period.

Special equitation classes for the training of olympic and polo prospects have been organized and work daily each afternoon in the riding pens.

Ladies and childrens riding classes meet three days a week.

The Reserve Officers of the 63d Cavalry Division ride each Sunday morning in Chickamauga Park under the direction of Captain H. V. Scanlan, Cavalry (DOL).

Combined Cavalry and Infantry tactical exercises will be held twice each week during the month of February. During the period, planes from Maxwell Field will be present to operate with the ground troops.

Orders have been received relieving Colonel E. H. Humphrey from command of the regiment on August 4, 1931, and his assignment to duty as Chief of Staff, 1st Cavalry Division, Fort Bliss, Texas.

7th Cavalry, Fort Bliss, Texas

THE regiment was delighted to welcome Colonel O. W. Bell, as a new Regimental Commander. Colonel Bell comes to us from Reserve duty in St. Louis.

The regiment is fortunate in receiving Captain Hugh G. Culton. Captain Culton was aide to the late General George C. Barnhardt. He has been assigned to command Machine Gun Troop.

The troops are busy with active training for the coming spring maneuvers. It is reported that the maneuvers are to be held in a mountainous region. This kind of country, being strange to most of us, should add many new and interesting features to the maneuver period.

Polo has started again with new faces and new horses predominating.

8th Cavalry, Fort Bliss, Texas

IN preparation for possible maneuvers in the Sacramento Mountains, New Mexico, during May, the regiment is experimenting with various types of pack equipment. The scope of this work includes a school in packing for selected officers and men, tests of existing packs, and experiments with improvised equipment. So far, the outdoor training of the regiment has not been interrupted by inclement weather.

On January 19th, the Second Squadron, with machine guns and radio pack set attached, marched to the vicinity of Yoakum, Texas, for tactical training and test of pack equipment.

Experimental tests are also being conducted with the new Browning Air Cooled Machine Gun, which, according to present plans, will replace the machine rifles in cavalry regiments. This endeavor to increase the fire power of cavalry is looked upon with great favor in the regiment.

9th Cavalry, Fort Riley, Kansas

THE regiment, in general, performed the regular routine duties pertaining to the Cavalry School.

The new club building for the enlisted personnel of the regiment is just about completed, and is a very pleasing structure both inside and outside. The club consists of auditorium with stage and dressing rooms, lobby and bar, ladies rest room, cloak room, storeroom and office. The furniture consists of numerous settees, leather rockers, rugs and a radio. The building was constructed by enlisted men of the regiment, at the expense of the regimental fund.

Captain Murray H. Ellis, joined on October 20, 1930, from Poland, where he attended the Polish Cavalry School. Captain Ellis is an instructor in the Horsemanship Department of the Academic Division.

Captain Rufus S. Ramey, joined on November 10, 1930, from France, where he attended the French Cavalry School. Captain Ramey is an instructor in the Horsemanship Department of the Academic Division.

Captain Frank Nelson who was transferred from the 1st Cavalry, Fort D. A. Russell, Texas, to the 9th Cavalry, joined on December 8, 1930. Captain Nelson is assigned to duty in connection with the training of mounts for the Olympic Equestrian team.

Second Lieutenant John G. Merrick, Cavalry, who was relieved from assignment and duty as a student at the Cavalry School and assigned to the 9th Cavalry, joined on December 2, 1930.

10th Cavalry, Pt. Huachuca, Arizona

[illegible] period, December 24th to January 1st inclusive, was designated as the Regimental Holiday Period and was welcomed by all after a strenuous and successful year. As a result the entire Garrison found itself "on the sick pile" on January 2nd; the Old North Range, infested with rocks and sunken but exposed [illegible] have caused many accidents during [illegible] been divested of its rocks until it has the [illegible] of a real parade ground.

[illegible] December arrival was 1st Lieutenant D. [illegible], coming here from duty with the Organized [illegible] Chicago. The only departure was 1st [illegible] M. L. Shockley, who has gone to the detail [illegible] Lieutenant Buckland.

[illegible] work which was suspended during cold [illegible] start in a few weeks. The first show will [illegible] the latter part of February. Every [illegible] is being made by Colonel Sherburne to arrange a few Polo games with other Regimental Teams; the Tenth is many miles from Polo competition.

11th Cavalry, Presidio of Monterey, California

THE regiment has been glad to greet its new Commanding Officer, Colonel and Mrs. Ben Lear, arrived January 3, 1931 after a motor trip across the continent. On January 7th Colonel Lear saw his command for the first time when a parade and review of the entire garrison was held.

The polo team is faced with the task of rebuilding the first team. Major D. S. Wood and Lieut. T. T. Thornburgh are available to play from last year's successful lineup but Captain W. A. Falck and Lieut. John Hines have been lost by transfer. However, plenty of new material is available and the prospect is very hopeful.

The regiment has recently become the proud possessors of the nucleus of a drag hunt pack. Seven hounds have been received of the Maryland or East Shore type, presented to the regiment by Mr. John McEntee Bowman of the Golden's Bridge Hunt.

12th Cavalry, Fort Brown, Texas

THE Annual Mid-Winter Polo Tournament at Fort Brown, Texas, came to a close on December 21, 1930, with the Fort Sam Houston Team as the winner of the tournament and the Reynosa, Mexico Team as the runner-up.

The trophies were presented to the victors by Colonel Francis W. Glover, Commanding the 12th Cavalry, at a banquet, in honor of the visiting teams, on the night of December 21st. Among the honor guests were General Samuel D. Rockenbach, instrumental in sending down the Fort Sam Houston team, Honorable R. B. Creager, National Republican Committeeman, and Mr. W. S. West and Mr. G. C. Richardson, representing the Chamber of Commerce of Brownsville.

2d Squadron, 12th Cavalry, Fort Ringgold, Texas

THE 2d Squadron, 12th Cavalry, started the annual target season on January 2, 1931, and it is contemplated that by March 31st, record practice with all weapons will have been completed.

The Squadron spent half of the time during the month of December on maintenance and repair projects. A great deal of progress has been made and the Post is in excellent condition.

Major W. F. Hamilton, M. C., was relieved by Major F. E. Winter in December. Major Hamilton had been at this Post for over four years and his departure was greatly regretted by all.

13th Cavalry, Fort Riley, Kansas

THE regiment completed its annual two weeks practice march on October 10, 1930. The first four days of October were spent at Salina, Kansas, Participating in the Salina Horseshow and Fair. Each troop made an individual demonstration and a number of officers, ladies and men entered into the jumping competitions.

The regimental combat exercises were held in conjunction with the Air Corps, Field Artillery and Troop A, 1st Armored Car Squadron, at this post. On December 22 the regimental commander completed his training test of the troops of the regiment. This test was of the training accomplished since the beginning of the training year and the results were highly satisfactory.

Major William E. Shipp, Captain Anderson H. Norton, 2nd Lieutenants Woodbury M. Burgess and Paul A. Disney have been assigned to the regiment but have not joined. Captain Charles E. Dissinger joined the regiment from the Philippines and was assigned to command Machine Gun Troop. First Lieutenant William L. Barriger was relieved from assignment on December 1st and ordered to the New York General Depot. Captain Nicholas W. Lisle replaced Lieutenant Barriger as Regimental Supply Officer.

14th Cavalry (less 1st Squadron), Fort Des Moines, Iowa

DURING the months of November and December the troops carried out the usual program of winter instruction.

The riding hall is kept in constant use from early morning until late each afternoon.

Colonel Edgar A. Sirmyer, commanding the 14th Cavalry, has inaugurated a training system among the troops of this Post which combines theoretical training with practical training.

Using the Corps Area Objective, certain subjects are allotted the organizations each month, and at the end of the month the Regimental Commander questions each man, in every organization, on the allotted subjects. The men are then required to put into practice that which they have explained. This method teaches a man how to explain different subjects as well as how to do them.

Captain F. M. Harshberger, 14th Cavalry, gave an interesting talk on January 5, 1931 to the officers, choosing as a subject "Implements used in an Organization."

1st Squadron, 14th Cavalry, Fort Sheridan, Ill.

THE Squadron is at present participating in a program of winter training and is trying out a scheme of rotation in special duty, post and troop, which is planned to bring each member of the Squadron to the high standard of excellence required of a Cavalry Soldier.

Major Charles C. C. Smith has just returned to duty after a very interesting and successful tour in Argentine, as a member of the Army Polo Team. He is now in charge of Polo and is Polo Representative for the Post. He is also conducting the Special Squadron Course for the development of horsemasters among the enlisted personnel.

103d Cavalry, P. N. G.

IN December the first small bore rifle match was held by the regiment for the season. Troop F won the match, Troop C second and Troop B came in third. This is the fore runner of intensive rifle work that is getting under way. Several matches are scheduled for the first quarter of the new year, for individuals, troops and squadrons.

Our Indoor Polo Team is fast rounding into form and is on the road to a successful season. The new heating plant that has been installed at the armory at Philadelphia is helping the public to appreciate indoor polo more than in previous years.

Captain Charles Wharton, D.O.L. assigned to the First Squadron as instructor has been transferred to active duty at Fort Ethan Allen; the officers and men on the squadron deeply regret to see Captain Wharton leave Philadelphia.

Federal Inspection for the Philadelphia Units comes in March and the troops are hard at it to polish off the rough edges in preparation for the event that means so much to them this year.

104th Cavalry, P. N. G.

THE Troops of the First Squadron, plus Troop L and Machine Gun Troop, are engaged in an exciting Small Bore Rifle competition. To date Troop A of Clearfield is in the lead. Sergeant Leo P. Franks of Troop C, Altoona, is high individual scorer.

155 officers and men of the First Squadron are enrolled in correspondence courses.

The Inaugural Ball in honor of Governor Gifford Pinchot was held in Zembo Temple, Harrisburg, Pa., under the auspices of the officers of the Regiment Tuesday evening, January 20th. Vincent Lopez and his orchestra alternated with the Regimental Band in furnishing dance music. The committee in charge was composed of officers of the Regiment located in Harrisburg.

The Governor's Troop, Troop I, Harrisburg, escorted the Governor from the Mansion to the reviewing stand, in accordance with an old custom, prior to the Inaugural Parade.

306th Cavalry, Baltimore, Md.

THE Reserve Officers riding class at Fort Hoyle, Md., was discontinued after the middle of December. Fortunately the weather remained fine up until that time and outdoor work could be carried on with comfort, but the weather then became too severe and no more rides will be attempted until spring.

The monthly conferences are being conducted by Reserve Officers and those officers acting as instructors are learning that it requires a great deal of work to instruct efficiently in even the simplest subjects. However, they are enthusiastically giving their time to the work.

THE NEW RECORD MACHINE GUN TARGET

(Continued from page 56)

In a similar manner, the other vertical dimensions on Plate B are determined.

However in this discussion so far, we have omitted entirely one condition and this omission is really the crux of the 'hair-splitting.'

Referring to paragraph 6, of TR 320-35, may I quote, "*The rear sight is adjustable for windage, and drift is offset automatically by the construction of the rear sight leaf.*" Surely no mystery to us, but how does this affect the 1000" target? Falling back to the Fire Control Tables, we find listed under col. 7, of table I, the "drift right." At 1000", *there is no drift*, But when we set our sight at 1300 yards elevation, we automatically set off a *drift correction* of .8 mil. What result on the target? We are bound to place the center of impact of our burst a corresponding amount off in the direction of this drift correction. Will it be the full amount off, that is .8 inch? No, because when we determine the point of aim to be coincident with the center of impact for our normal gun, we use a sight setting of 450 yards. And when our sight is set at this range, we automatically set off a *drift correction* of .1 mil. Therefore our center of impact will be but .7 inch off the vertical line through the point of aim, when firing with a sight setting of 1300 yards.

And following the same course of reasoning the other offsets on the 1000" target are:—for 800 yards elevation, 1 inch; for 1000 yards elevation .3 inch; and for 900 yards elevation .2 inch.

Are these measurements of any real importance? Examine your last record targets, and, I think you will find your shot groups to the left of the scoring spaces if your targets were made up with the scoring spaces directly over the aiming points—unless your corporals have learned to favor the right edge of the aiming spotter.

As to checking these targets before record firing. Our name TH recommends the printing of them, when means are available to do it. If printed targets are issued before 1950, I, for one will be surprised.

So we have built a "gadget" to accomplish this out of mahogany lumber which functions very nicely. The guides for the scoring spaces and spotters are of commercial rubber sole, commercially known as "Good-year Windsor," and ordinary black printer's ink used thereon, gives excellent results. Two men can turn out targets at the rate of two per minute. They are better and more accurate than the stenciled targets. Regardless of inaccuracies in the grid lines of the issued targets, once the plate is checked, the target is exactly right.

Sergeant MacAdoo, of the Department of Cavalry Weapons, The Cavalry School, has this press in charge. The finished blank targets cost $2.00 per hundred to cover cost of ink. Dimensions for the "gadget" can be obtained upon request from him. Needless to say the [illegible] just mine "hair-splitting targets."

BOOK REVIEWS

THE REMINISCENCES OF A MARINE, by Major General John A. Lejeune, U. S. Marine Corps. Illustrated with Official and Personal Photographs. 488 pp. Dorrance & Co., Philadelphia. $4.00.

Written in clear, simple English, this is an interesting account of a particularly colorful and comprehensive career in the Naval Service of the United States.

The brief account of the writer's early youth in Louisiana in the period immediately following the Civil War is an arresting story of the tragic era of the Southland that is rapidly fading from our national consciousness. The many episodes in the active life of a Marine, serving under the American flag in Samoa, Cuba, Porto-Rico, Panama, the Philippine Islands, Mexico, France, Germany, Haiti, Santo Domingo, and Nicaragua, are told in an unassuming manner, but never fail to hold the interest of the reader. Particularly dramatic is the account of the wreck of the U. S. S. Vandalia at Apia, in which the author almost lost his life.

The frequent personal allusions to his numerous relatives, which are scattered throughout the book, while revealing his strong, clannish trend and a deep sense of kinship, detract somewhat from its literary merit.

Although the book was written for the general public, real gems for the military student will be found in the chapters dealing with the Battle of Saint Mihiel, the Battle of Blanc Mont Ridge, the 2nd Division in the Meuse Argonne, the March to Germany, and the occupation of the Rhineland. Not only are they historically accurate but they cover these actions from the viewpoint of a division commander who presents some of the actual problems confronting a commander in battle, and indicate his successful solution of these problems.

Any military student of American participation in the World War will suffer a real loss if he fails to read the four chapters covering the period in General Lejeune's career during which he commanded the 2nd Division in action.

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NORTHCLIFFE, An Intimate Biography, by Hamilton Fyfe. 357 pages, illustrated. Published by the Macmillan Company. Price $4.00.

Alfred Harmsworth, publisher, later Lord Northcliffe of the British peerage, lives again in the skillfully written pages of this excellent biography. It tells the story of Northcliffe's rise to power through hard work and the application of revolutionary methods in popularizing his newspapers. The use that he made of this power before, during, and after the war is related in a way that sheds fresh light on matters of absorbing interest. The chapters devoted to his activities as head of the British mission in United States, his rejection of cabinet office, and his handling of propaganda to undermine morale in the Austrian and German armies, give intimate details of Northcliffe's life at the turning point of his career. From them we can get a better appreciation of how well Northcliffe served his country and the Allied cause. His failure to grasp opportunities for greater usefulness, and the episodes that foreshadowed his tragic end, are given with keen insight and sympathy which arouse great admiration for the author.

The book should appeal strongly to American readers, not only because Northcliffe was widely known and admired in the United States, but also because the story of his life is a fascinating record of a self-made man who achieved great success in his particular field. Twenty years of association with Northcliffe, sympathetic understanding of his personality, and masterly skill as a writer, have enabled Hamilton Fyfe to produce a book which we unhesitatingly recommend to our readers.

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KAISER AND CHANCELLOR, by Karl Friedrich Nowak: Translation by E. W. Dickes. 290 pages. The MacMillan Company, New York. $3.50.

The author presents in this volume a biographical sketch of the German ex-Emperor based upon official documents, confidential memoranda, and other material placed at his disposal by the Kaiser himself. The major portion of the book is devoted to the relations between Emperor William II and his chancellor, Prince Bismarck, and culminates in the latter's dismissal as pilot of the ship of state.

The author states that the ex-Emperor examined the manuscript before publication, but refrained from any sort of objection to its contents. Although the spotlight focussed upon the Kaiser frequently shows him up to disadvantage, the book, on the whole, seeks to vindicate his reign. The appendix contains a number of interesting documents and excerpts of press references to Emperor William during the first two years of his reign. The numerous illustrations are reproductions of photographs and portraits from the Kaiser's private collection, with descriptive titles in his own handwriting.

The book is well written and should appeal to those who are interested in the personalities discussed. It throws an interesting sidelight upon the history of the period which it covers.

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THE ORIGINS OF THE WORLD WAR, by Sidney Bradshaw Fay, Second Revised Edition; two volumes in one. 577 pages. The MacMillan Company, New York. $4.00.

The second edition of Professor Fay's scholarly study is a revision of the original text done in the light of the wealth of documentary material on the origins of the World War made available to the public since the publication of the first edition. The author states that he did not find it necessary to modify the chief thread of his narrative or his general conclusions. The evidence now available, the author holds, compels abandonment of the Treaty of Versailles

dictum that Germany and her allies bear the sole responsibility for bringing about the war. In Professor Fay's opinion, Austria was more responsible for the immediate origin of the war than any other power. Germany, he believes, was a victim of her alliance with Austria. Nevertheless, Germany, the author holds, did honestly endeavor to avert the conflict. Russia was responsible because of the encouragement she gave to Serbian agitation. In the case of France, the author gives a Scotch verdict—not proven. The guilt of England is one of nonfeasance rather than malfeasance. By taking a definite stand early in the crisis for either neutrality or alignment with the Entente in case of war, the British government, in Dr. Fay's opinion, might have prevented the war. Belgium and Italy are completely exonerated.

The book is a detached, impartial, judicial investigation of a highly controversial subject and is an invaluable scientific contribution to the literature of World War history. Although one may not agree with Professor Fay in all of his conclusions, the book should be read by everyone interested in the question of war guilt and the immediate origins of the World War.

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THE GENESIS OF THE WORLD WAR, by Harry Elmer Barnes, PhD., Third Completely Revised Edition; 754 pages. Alfred A. Knopf, New York.

The author presents an introduction to the study of the problem of war guilt on the basis of documentary evidence published by the various governments since 1917. Believing that the truth about the causes of the World War is one of the livest and most vital issues of the day, the author approaches his theme in a frankly controversial spirit and challenges current misconceptions which owe their origin to wartime propaganda and falsehoods.

Dr. Barnes sees the chief roots of the war in Alsace-Lorraine, the French revenge aspirations, the Near East, and Morocco. He charges that a plot was hatched by Poincaré and Iswolski, the Russian ambassador in Paris, and traces its development from 1912 to the assassination of the Archduke Franz Ferdinand. He produces a mass of documentary evidence in support of his charge that this atrocity was planned by the chief of the intelligence division of the Serbian general staff, working in collusion with the Russian military attaché at Belgrade, to furnish the necessary spark to kindle the fire in the Balkans, which, it was hoped would lead to the goal of the Franco-Russian conspiracy.

The chapter that deals with America's entry into the war contains some startling revelations. The author points out that President Wilson, by permitting England but not Germany to violate international law promiscuously, not only invited the very reprisals which inevitably followed, but actually failed to observe himself that neutrality which he had enjoined upon his country. By a mass of cumulative evidence, the author shows that President Wilson was actually intent upon entering the war on the Entente side as soon as public sentiment in the United States would support such action.

The author severely criticizes the conduct of Ambassadors Page and Gerard and charges them with having contributed materially toward the entry of the United States into the conflict. Professor Barnes' scholarly book must be read by every serious student of the causes of the World War.

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EUROPE SINCE 1914, by F. Lee Benns. 671 pages. F. S. Croft & Co., New York.

Aiming to provide the general reader and the student of history with an introduction to the events and changes which have taken place in Europe since 1914, the author devotes the initial chapter of his comprehensive work to the origins of the World War. Three succeeding chapters contain a sketchy outline of the progress of the war; and two more, which complete Part I, cover the period of the Armistice, the disintegration of the Austro-Hungarian Monarchy, and the German Revolution. Part II details the work of the Peace Conference and the liquidation of the problems presented by the war, while Part III devotes ten chapters to the national reconstruction of the New Europe.

The author's contention that entangling alliances were probably the most important underlying cause of the World War disregards the fact that these alliances were but the outward expression of still more profound and deeper-lying economic and political causes. His charge that "militarism" and the "terrible time-tables of European general staffs had far more to do with the actual outbreak of the World War than the deliberate decision of any one government," merely reiterates the fallacious argument of pacifists.

The author has undertaken a sizeable task and, on the whole, has acquitted himself creditably. He presents a vast array of facts, and strives to be fair and impartial. He is generally accurate and always interesting. The book is recommended to those interested in recent developments in Europe.

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SAINT JOHNSON, by W. R. Burnett. Lincoln MacVeagh, The Dial Press, New York. 305 pages. $2.00.

Cattlemen, cowboys, miners, gambles, plenty of liquor and gun play, are the materials from which the author has made a story based on frontier conditions in the Arizona of fifty years ago. The central figure, Wayt Johnson, self-made law and order officer, imposes his notions of place on the unruly cow-town of Alkali. His methods are both forceful and effective, and when at last the murder of his younger brother goads him into violent action, he handles his guns with no mean skill. Swift action and sudden death. Good for an evening's reading.

The United States Cavalry Association

Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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Membership shall be of three classes, which, together with the conditions of eligibility therefor, are as follows:

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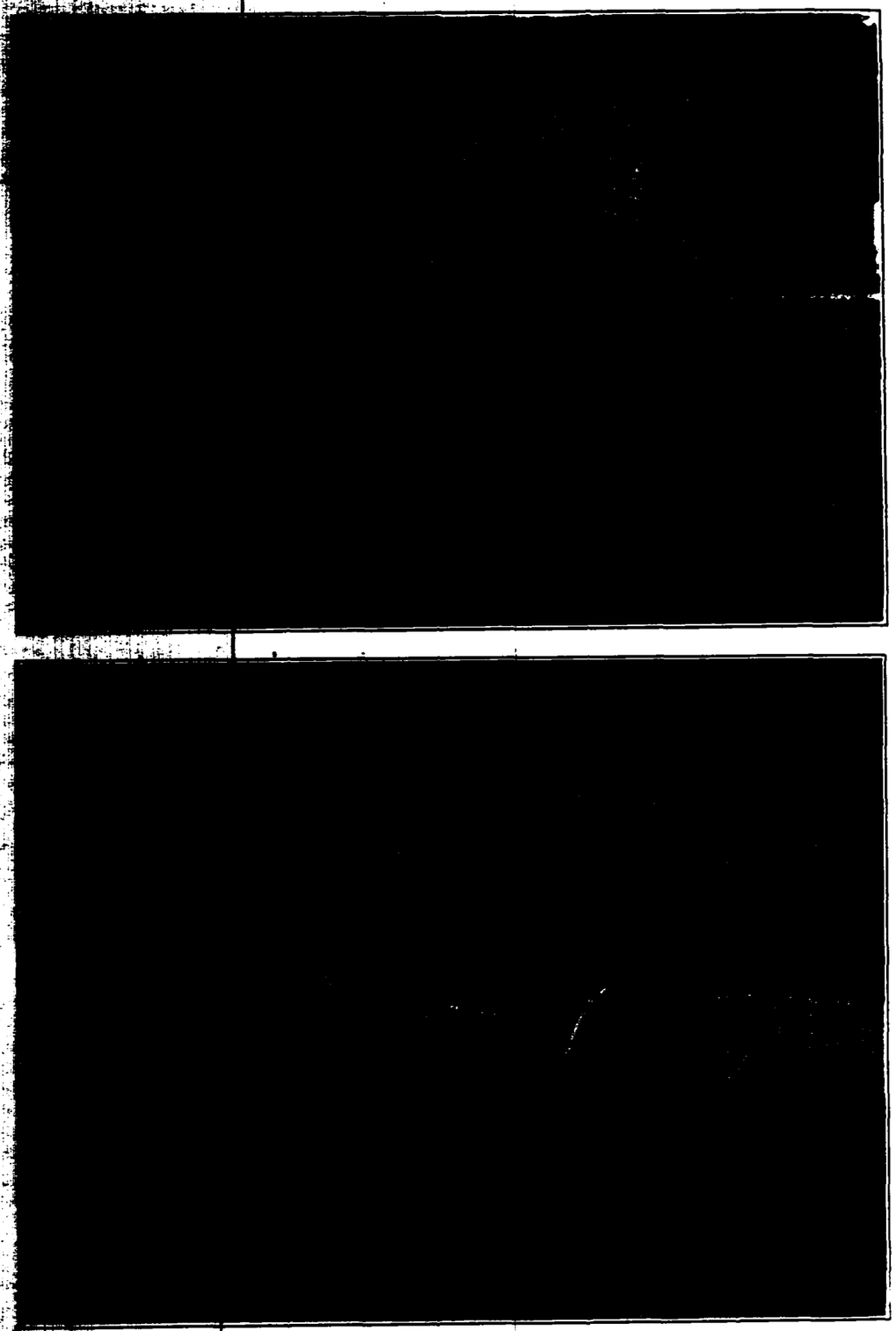

WEAPONS OF THE MODERN CAVALRY TROOP.
Upper—Cavalry Line Trooper with Full Pack.
Lower—The Air-cooled Machine Gun in Pack.
These machine guns have now replaced the machine rifle in the line troop.

THE CAVALRY JOURNAL

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Authors alone are responsible for statements contained in their articles.

Cavalry Now and to Come

By Major A. D. Surles, 3d Cavalry

This article was prepared as a result of an informal discussion between the author and the Chief of Staff, General MacArthur, which took place during the aftermath of one of Washington's more or less official dinners. Fresh from the inspiration of this conversation, the author endeavored to set forth the views as to the future of Cavalry expressed by General MacArthur. He feels assured that this is the case and that he has reflected the sympathetic desire on the part of the Chief of Staff to restore the Cavalry Branch by the reconstructive processes outlined herein to a position commensurate with its past history and its immortal traditions.

IT IS a matter of vital concern to all cavalrymen, one of keen interest to all military students, to determine what the role of the horsed soldier is to be in the next real conflict. Where does he stand under the scrutiny of the various High Commands, each occupied solely with the problem of placing in the field the most effective military machine its budget, its national psychology, and its intelligent ingenuity can fashion?

Sentiment is applicable only in the execution of a plan drawn in cold reason; it is something to be disregarded utterly here. No surgeon ever approached his task with more intellectual precision than that which actuates these same High Commands, in altering, reforming, and strengthening the military bodies they control. Much of this same sentiment is bred in the bone of the cavalryman. It is a part and parcel of his fighting equipment which he knows has stood to his stead as *élan*, as winning dash in desperate encounters, since the time of Ghengis Khan. But while it is a part of his fighting equipment, a soldierly attribute so valuable, it is true, that no High Command can disregard the means of its dissemination in its Army, it cannot be carried into organization and planning except as an asset to be used along with others.

So let us, in our survey, trample with utter disregard on whatever sensibilities obtrude, close our ears to anguished and outraged traditions, and determine in cold blood what we have and what we must do to come before this glare of dollars-and-cents reorganization with assurance and merit as our right.

We will start with the positive assumption that the Civil War Cavalry, the Indian fighting methods, and even World War tactics have gone irrevocably. Great as their feats were and large as their exploits loom in the military history we study so carefully, the future is what we must prepare for. From the gallant figure on the front of this JOURNAL, not a thing will serve us except the horse and the peculiar fighting qualities that are under the skin of its rider.

But therein lies our future and our military importance. Just so long as the footsoldier remains for open warfare conditions and is not superseded by marvelous, yet-to-be-invented machines that substitute completely for his legs, the horse is going to be present in those future campaigns as that footsoldier's superior in mobility. Mounted upon him there will be a new and formidable power. While the animal itself has ceased to be a weapon in the charge except in the most isolated and fortunate instances, his is still the only power yet devised that, throughout the twenty-four hours of the day, in fair weather and foul, through forest and stream and over mountains, can outmarch and outmaneuver the foot soldier four and five to one. His is still the best power to cross obstacles that are impassable to mechanized contrivances. While his picturesque role of the past, the mad dash to close with the enemy, has shifted to a minor one, he has gained the ability to carry across country better and faster than any other means, a paralysing, thoroughly elusive volume of fire which will be a new and future terror for the enemy.

Out of the foregoing comes the natural challenge to the statement that the mounted man has retained his mobility over the mechanized forces. And that he will arrive with power, and that he will harm. The statement is true, but only because it is couched in the future tense. It is not true now. Bald as it seems and difficult to swallow, Cavalry prior to the far reaching changes in armament, to its own special plans for mechanization, and its radical step-up in speed of tactical execution, all of which are now being perfected by the Chief of Cavalry, was from end to end of the theater of operations, just about the slowest thing in it. There is no use denying it; the fact remains. Other troops by the use of trucks, automotive vehicles and armored contrivances, have, when the total mileage is computed, gone faster and carried more proportionate lethal weight.

Certainly such an organization as we were is vulnerable to the cutting influence of practicability. With each arm striving to better its product demanding its share of budgeted funds to accomplish its improvement—none can stand still—we must trade with tangible assets. And we have them to a degree that until recently we have barely appreciated, assets that until now we have not shown to our other arms. The criticisms that have been levelled against Cavalry since

the World War have been largely justified. No one, except perhaps the more hysterical exponents of mechanization, gentlemen who already are clawing their way back to a sound foundation, has been malicious in his observation.

On the following counts we were deficient. We were sadly lacking in fire power. The unconvincing, inadequate fire pivots we were putting down as able to counter-balance their weight and over of a more heavily armed force did not and should not have registered. Both in maneuver and in the schools the claims were not getting by save through sufferance.

Our supply transportation was antiquated. Even our regiments and squadrons, flying columns on the battle-ground, were tied to mule-drawn escort wagons for feed and ammunition. It was a complete anomaly, that of a unit prepared to move at a rate of twelve miles an hour tied to transportation that could follow only at five.

Our communications were intrinsically unsuitable. Except in the rear echelons of large bodies, with Cavalry operating in its proper role, wire is useless. Synchronized radio set-ups were good only up to the point where comparatively slow movement merged into the speed preceding final and decisive tactics. Then radio went out and providence and the mounted messenger bridged the gap. Aerial communication has been intermittent and unreliable due to lack of training.

And finally, and the most vital of all, we ourselves—the troops and the accompanying artillery—were too slow. We hadn't taken the big jump, the mental leap, that would project us into future theaters of operation as part and parcel of part-man, part-horse, and part-engine that is the makeup of future armies. In all our estimations, we tended to place ourselves well up into actual contact, under conditions that favored our role, and with probable solutions colored by historical records.

What have we done and what are we going to have to do, not only to remedy these real deficiencies, but to repair them so constructively that we will arrive at this modernity with no unusual demand on the funds that must carry along the whole team?

First the fire-power. By one of the most singular circumstances in military economics, the engine that was supposedly threatening the Cavalry's existence is now one of the principal *raisons d' etre* for Cavalry. The instrument of destruction which came out of the World War with the greatest reputation for concentrated and economical disabling power is the machine gun. It is mass and economy of force in its own deadly right. In pack with Cavalry it is that plus mobility and surprise. With the light, air-cooled flexible gun in place of each of its old machine rifles and with ability to carry these weapons without effort, sixty-four*-to each war strength regiment, over any and all terrain at speeds up to twelve and fifteen miles per hour under natural cover, what commander wants that increase in his vicinity? The streams, woods and rough terrain that stifle his mechanical vehicles are the assets of this fast moving and unreachable adversary. The only weapon that will beat off this constant threat that deploys and immobilizes him is one of similar construction, his own Cavalry. This radical increase in effective and concentrated fire power places, in one stroke, the Cavalry as a dangerous and formidable opponent and a needed ally. With these sixty-four machine guns per regiment supplemented by one thousand and forty-eight rifles, the packed light cannon and fifty caliber machine guns that are now being perfected, and by the supporting artillery and chemical mortars already attached, the fire-power defect has dissipated.

There is only one solution to the communications problem and that, in its perfected form, is a continuous two-way radio telephone and telegraphic set to be operated by one trooper. This also is susceptible of inexpensive, probable attainment. A set has already been developed which receives telegraphic code at a walk and trot. Commercial companies are rapidly nearing a solution of the two-way telephone for use in the air. Our own signal agencies are working on and will probably soon provide a set which satisfies the military requirements given above. The tactical value of this one improvement is too apparent to discuss. A practical scheme for making gold out of the base metals wouldn't even attract the notice of a cavalry commander when a solution of his communication problem is under discussion. It is just the difference between victory and defeat.

Transportation is more complicated and is dependent in many instances on the terrain to be considered in the campaigns. But some fundamental changes can and should be made at once. Except for the pack trains, held against duty over terrain requiring them, the mule should bid us good-bye. A four-horse drawn light wagon is still necessary in the forward echelons, tied to the tail of the troops, and loaded with emergency supply. Automotive trucks with bodies designed for both animal and supply transport, and provided with arrangements for the easy and efficient attachment of teams to aid them in tough going, will handle the remainder except in the roughest and most trackless wastes, where the pack-trains would lend their aid. There is no expense here, the change benefits the budget.

And now we come to the most important need—the step-up in our mobility. It has two main aspects, the long and the short march. The former is the one that has been lacking in our tactical and logistical consideration. It is hardly conceivable that, in a major operation, Cavalry will again make marches of any length on the backs of its horses. We are now in the third echelon. Ahead of us will always be the Air Service in the front line. Behind the Air Service but yet ahead of the horse elements of the Cavalry will be deployed its line of armored cars and probably a purely mechanical force moving at far greater speed than the horse can command. This conception should change our ideas regarding the seizure of advanced points and of reconnaissance. It should and will

(Continued on Page 64)

*Sixty-four air cooled machine guns in the line troops plus eight water cooled guns in the Machine Gun Troop of the regimental headquarters.

Preparing Horses for Competition

By *Brigadier General Walter C. Short*

The following article was written by General Short for the benefit of officers of the 1st Cavalry Division in preparing for the Equestrian Championship (three day event) in the El Paso-Fort Bliss Horse Show. The sound practical advice will be found generally applicable in the preparation for any work requiring condition and readiness for sustained effort.—EDITOR.

IN order that others can take advantage of my experience in the preparation for the Equestrian Championship (three day Olympic event), I am passing along a few basic principles that may be of use to contestants and which may not only make it a better event but make it easier for our good friend the horse.

The cross country phase is the hard part for the horse and rider. Fifty per cent of the result depends on the condition of both and the other fifty per cent on judgment on the part of the rider. In order to win a team event like the Equestrian Championship it is better to have three level headed riders and three average performing horses in *good* condition than to have two brilliant riders and horses and one horse which will be eliminated.

Good judgment is necessary first in selecting the riders and the horses for this event and then more judgment in conditioning and riding the horses in the difficult phases. This event takes a cool head, physical soundness, a brave heart and condition for both man and horse.

My experience is that most horses go well if there is nothing hurting them either in a physical way or in the equipment. For this event the horse must necessarily be sound to start with and his feet must be in excellent condition, with light shoeing. The equipment should be very comfortable, the bitting to suit the individual and above all things, the rider must be in perfect balance on the back and "ride light." It takes a wonderful horse to keep up a long period of effort with a "dead weight" rider sitting on his loins.

Shoeing

For an effort like this the condition of the feet is very important. A horse with dry hard feet cannot jump because the elasticity of the cartilages is almost nil. You must treat the feet with "white rock" until the frog can be moved laterally with the fingers. You must have an expert shoer set the foot at the proper angle with the pastern so that the heels will not be too low, which puts too much strain on the tendons, and you must have the toe short enough so that the horse can break over without effort. There should not be any heavier iron on the feet than is necessary. If there is any danger of the horse grabbing the front shoe or striking the forequarters with the hind feet in jumping, the horse should wear rubber bell boots in front. For a small footed horse order medium size and for a large footed horse order large size. If your horse starts any quarter cracks have him shod with a bar shoe and take the pressure of the horn on the shoe off the part of the hoof in rear of the crack so that it will have an opportunity to grow together again. After this is done the horse can continue jumping.

The Saddle

The greatest care must be taken in the fit of the saddle. Above all it should not be too long so that the rider sits in rear of the center of gravity of the horse. Care must be taken that no pressure is carried back on the horse's loins. The front of the saddle should be placed so that the shoulder blade of the horse has room to work without interference with the saddle. If there is a hollow at the side of the withers just behind the shoulder blades the padding of the saddle should be arranged so that it will fill up that hollow and still have space clear between the withers and the pommel of the saddle. The saddle should have enough soft padding so that it will sit on the horse's back parallel with the ground and that light will show through when one looks from the pommel to the cantle along the backbone even when it is pressed down with the weight of the rider. The padding should bear equally on every curve of the horse's back and the softer the better. The low place in the seat should be well towards the girth and never towards the cantle because that will bore the weight of the rider into the loins. It is easy to arrange the padding to suit your horse's back by getting soft felt and trimming the edges and then inserting it between the saddle tree and the permanent padding. You will find the opening by stretching the permanent padding at the middle of the saddle. Great care should be taken so that the bearing will be uniform over the whole bearing surface of the saddle in conformity to the shape of the horse's back. No horse will go willingly at his jumps if his saddle does not fit. If it does not the back will be bruised by repeated landing on inequalities of the back. If your padding is not soft, then it is best to put a very carefully folded saddle blanket under the saddle to prevent getting a bruised back.

The Bit

The mildest bit that a horse can be ridden in and still keep him from going too fast is the best one. A bit that is too severe and hurts the horse makes him pull harder and often become unmanageable. Severe bits make refusers. The ideal jumping bit is the snaffle. Should the horse get the habit of throwing up its head in the snaffle, the long running martingale

will prevent it. Arrange the rings on the reins so that there will be no downward pressure on the reins when the horse keeps his head in the natural position. The running martingale should never be so short that there is an angle in the reins when the horse's head is in a natural position. Never jump a horse in a standing martingale because the horse needs his free neck to catch his balance and place himself in position to jump. Very few horses need more than the above bitting and some need leather or rubber snaffles to give them confidence that they will not be hit in the mouth by bad hands when they land over a jump. I train all my horses in soft rubber snaffles and am glad to get them to pull down on them because I know then that they are moving up their hind legs where they belong.

If you do have to use the double bridle to control your horse for speed, the adjustment and fit of the bridle means much to the performance of the horse. The bridoon should be placed up in the corners of the lips as high as possible without stretching the lips. The bit should rest just under the bridoon, as high as possible without crowding the bridoon. The milder the part of the bit the better. The bit should not be too wide or too narrow; in fact the bit should just clear the lips and have no lateral play, but care must be taken that the upper branches do not touch the molars. The curb chain should be adjusted so that the links lie smooth and when the pressure to the rear is placed on the reins the branches of the bit should make an angle of 45 degrees with the jaw. Never more or less.

In slowing up your horse for a jump it is better to use the "half step" than to employ a steady pull, because that deadens the mouth. Be sure that you give with your hand on landing because if you hurt the horse's mouth with the bit when he lands he will probably refuse the next jump. When you are jumping in the ring and you have a turn to make and your horse has the wrong lead to make it, it is best to pull down to a couple of strides of the trot in order to change your lead (but only for a couple of steps or the judges will cut you) because you must get your horse straight before he goes to a jump. When you have room to maneuver your horse before he goes to a jump use all the ground you can so that the horse will be balanced and straight before he arrives at the jump, because few horses can jump well while on a curve. Remember to keep cool yourself and your horse will keep cool also, if you get excited your horse will know it and act accordingly.

Remember that you ride your horses with your legs and not with the reins. You have found out by now what gait your horse jumps best at and you must try to get that gait regulated before you get to your jump, because after you get there all you can do is to give your horse enough freedom of rein to stretch his neck and keep on your legs enough to prevent him stopping. The horse must jump that is choked down so that he cannot extend his neck to raise his fore quarters.

Bandages

I have seen a good many Jersey bandages in use without cotton or anything under them. This is a dangerous practice because if they are pulled too tight they stop the circulation and serious results are liable to happen. Even by putting cotton under Jersey bandages you may get bad results by getting a bunch under the bandage and only skillful attendants should attempt it. The only foolproof tendon support that I know which anybody can put on and which is really a great help to the horse that has to take many jumps, is made by using a piece of *soft* felt the length of the cannon bone and wide enough so that the edges will scarcely meet on the front of the cannon bone. The two edges of the felt where they meet should be thinned so that there will be no hard edges. Then take half a Jersey bandage and sew one end around the upper edge of the felt; you can then wrap it around the felt as tightly as you please and tie it with the strings without fear of stopping the circulation. To make it safe it is best to put in a couple of safety pins so that there will be no danger of it coming untied enroute. This support is a real one and will not injure a horse.

Conditioning

Now we come to the question of putting your horse in condition and it is almost as necessary that your Prix de Nations horse shall be in condition as your Equestrian Championship horse, because it takes real condition for a horse to jump twelve difficult obstacles in close succession, as every jump is a great effort and takes a lot out of a horse. All you have to remember when you are conditioning a horse is that what is good for a man under like conditions is also good for a horse, the only difference being that a horse can't tell you how he feels. Therefore you must use your power of observation and common sense more than when dealing with a man.

Proper stable management to keep the horse in good health and vigor is probably more than fifty per cent of the task.

Have a veterinarian examine your horse's teeth very carefully and see if all the back teeth are just right so that he can masticate his feed comfortably. See that the horse has a comfortable box stall with plenty of fresh air and that he has fresh water in front of him all the time, that he has salt available at all times, that the floor of his stall is even and has no bumps to interfere with his rest, that he has a leather fringe to wear over his eyes and a fly net or fly sheet to keep him from spending his energy fighting flies. See that he has plenty of clean bedding. See that your horse is not annoyed by the horse next to him; if so, put chicken wire or some sort of screening above the stall between the horses.

The next thing to determine is whether your horse's digestive apparatus is in good condition. Observe the droppings always and every day during training. They should form balls that will disintegrate when you kick them with your foot. If the droppings are loose there is some intestinal irritation and if it smells bad the irritation is serious. If the loose droppings are dark green the horse is probably getting too much alfalfa and a sloppy bran mash, followed with less alfalfa, will probably be a corrective. If the soft droppings are yellowish and smell bad it indicates usually too much grain and the bran mash, followed by less grain, will probably correct it; if not, see your veterinarian. The passage of whole oats in the dropping usually indicates too much oats or else the bolting of the oats with out proper mastication. You can determine if it is bolting by observing your horse while eating. If the horse bolts his feed or throws it out of the box while eating, build a shallow feed box about two feet square and scatter the feed over the broad surface. This should stop it. After this if the oats come through whole, cut down the quantity of oats. If the balls of the droppings are hard or too small it means constipation which should be corrected by a bran mash or a little more alfalfa.

You must observe constantly whether your horse has a good appetite and if he has not, either you have overfed him or he is overworked and too fatigued to eat. It is obvious that you must reduce his feed in either case until he gets hungry again and you certainly can not work a horse hard that does not eat. It may even be necessary for you to get your veterinarian to give him a tonic before you get him back, but it is best to resort to medicines only as a last resort. A tired-out horse looks like a fatigued man and the symtoms should be easily recognized. Watch your horse's eyes as they are indicative of health or sickness. A bright eyed horse is usually not in distress.

Putting on muscle and building up good wind with a horse is the same as training a prize fighter. It is done gradually and the final trial of that condition is made during the event for which the training is done, not before. The trainer must commence very gradually and be a close observer and always keep the horse willing to do more and never keep on until the horse is fatigued. Don't begin your conditioning exercise until at least an hour after feeding and even then, commence at a walk or slow trot until the horse's bowels are evacuated.

Treat the horse the same as you would yourself on a full stomach. Muscle can not be built any way other than using it, therefore the slow trot over soft footing for increasingly long periods is a safe muscle builder. Also walking up reasonable grades is both a muscle and wind builder, but too much walking down steep grades is hard on tendons and heels. In order to loosen up the lung cells and accustom the horse to breathe freely, it is well to give the horse a fast gallop on good ground for a short distance every day or so and then watch his breathing. If the horse does not take one long breath and then breathe naturally, you have made the gallop too long and you must cut it down until the wind is improved. After the horse gets vigor as indicated by his willingness and desire to push out, faster trots and easy gallops can be combined with the walk and slow trot. Remember to change your lead or diagonal so that you will not tire one side of your horse, because a horse is like the proverbial chain.

Nobody can tell you how far to go on this training at first, because it varies with the condition of the horse when you begin, but it should be enough to say that you never carry your horse on until he gets tired and that will depend on the weather, ground and health of the animal on that day. The fast gallop should only be a few hundred yards at first and later on not more than a thousand yards. You can watch the muscles as they build and when your horse really gets hard, you can strike the muscles with your fist and they will not give to it.

Do not work your horse in a temperature that will take a lot out of you, because it is doing the same to your horse; better work him in the cool of the early morning. If your horse sweats that is natural and as long as you keep plenty of water in front of him after he cools out, he will drink enough to get the necessary amount of water back in his system and it will do him good.

After the horse hardens up he will not sweat as much as he did when he was soft, but it is healthy for horses to sweat. Care must be taken to wash out the sweat in the hollow just above the heels or you are liable to have scratches develop and scratches are serious.

Before starting out in the morning for conditioning exercise be sure to examine all four of your horse's legs and feet for temperature, because protracted pounding on hard spots in the road is liable to start up irritation. If it is discovered in time, you can usually repair the damage with cold packs on the feet and legs after exercise, and this will prevent the trouble becoming serious.

Watch to see if your horse urinates freely. If not, carefully wash out the sheath with luke warm water and castile soap. If the horse strains and does not succeed in urinating sufficiently or the urine is cloudy, best see your veterinarian about it.

During your training it is necessary to keep your horse in good flesh and robust without being fat, because fat inside prevents good breathing the same as in man.

No amount of hay will hurt a horse, but a great hay eater will stuff himself up inside so that it takes a long time for him to unload the droppings and you can not get any real work out of that kind of a horse until the waste from that hay is out. If I want to work a horse in the morning, I do not want him to have any hay after midnight of the night before. It is best to feed your long forage after the days work is over and in the first part of the night. If your horse eats its bedding, then the only recourse is to bed down with sand or put a muzzle on after the hay is finished. Sand is dangerous as bedding, because sometimes horses lick up some of it hunting for some of the oats that might have dropped and any quantity might cause internal derangements. The muzzle is the best and it should have plenty of breathing spaces between the straps. Alfalfa fed with judgment is excellent, but the bowels have to be watched carefully to see how the horse digests it and the quantity should be cut down upon the least sign of looseness of the bowels.

Hay and alfalfa and all forage for horses in train-

ing should be thoroughly dusted before feeding, because the dust materially effects the breathing of the animal. There are many things that effect the amount of oats that you should feed a horse while in training. It is reasonable that a horse can eat and digest more feed the harder he works, but it is very easy to give him too much and thus throw his digestion out of kilter. When once out it is hard to bring back. The horse's stomach is small and big feeds have a hard time being properly digested in the stomach before some is pushed into the intestines before it is ready. Therefore it is reasonable to feed small feeds and oftener. Three quarts at a time is the largest feed of oats that I ever feed my horses.

Early in the morning at least an hour before work should be the first feed and at least an hour after the horse has been thoroughly cooled out, inside and out, can be the next feed and then divide the feeds according to the time, up to eight o'clock at night. Nine pounds of oats a day, five pounds of alfalfa and fourteen pounds of hay with a bran mash when needed is sufficient for an ordinary horse in the beginning of his training. If the horse keeps his droppings in good shape and seems hungry and keen for his feed the oats can be gradually pushed up to twelve quarts a day, but the droppings must be watched carefully to see that the horse is digesting that quantity. It is exceptional to go beyond the twelve quarts and when you do you are taking risks of setting your training back by indigestion. If your horse carries too much paunch you should not cut the long forage too much, but must work off the stomach, because a horse must have a reasonable amount of long forage to keep him in vigorous health.

Don't expect a horse to jump well or do any fast work with his intestines full of long forage nor should you expect your horse to make a great effort if he has not had his regular feed. Therefore you must arrange your feedings and time for evacuation to suit your effort.

After a great effort the same thing that is good for a man who has made a great effort is good for a horse. A sponge bath with water that has had the chill taken off followed by a good rub down and massage is a great restorer. Rubbing alcohol on all tendons and the big muscles after the massage will remove the soreness and Jersey bandages on all four legs will help him to rest. A few sips of water while cooling the horse will not hurt him and a sponge of water on his pull will refresh him materially.

After a great effort the first feed should be a warm bran mash, because that is easily digested and at that time the internal organs are too tired to make an effort. Throughout your training make every effort to give your horse a little green grass, because that is an appetizer and aids digestion.

Before going into the jumping ring you will get much results if you move your horse briskly enough to get him hot, but enough to get him to evacuate his bowels, this will also limber up his muscles. But do not sit on his back while waiting your turn as nothing tires a horse so much as standing with weight on him.

As the time for a horse show approaches, your horse is either a made jumper or not and if you continue to jump him constantly you are liable to sour him and then you will have nothing. You must use good judgment in this matter and jump him just as little as possible to keep him in practice and certainly not much at any one time. A couple of jumps just before entering the ring is often a good practice, but should be done with judgment.

Remember that horses, like men, have their good and bad days and it is good judgment during your training not to demand much on a bad day. You are liable to undo a lot of good days and you will do better to try and find out the cause of the horse's bad days. Remember that a man with a good head on an average horse usually wins over a man with poor judgment, even though he is mounted on a splendid horse.

I would advise all contestants in the three day event to make a careful study of the conditions of the Endurance phase in order that you can ride the course intelligently. In order to ride it intelligently, you must learn to recognize by the gait of your horse at what rate of speed you are traveling. You must know the penalties and gains of arriving at the end of each phase in order to judge whether you can afford to ease up on your horse under the conditions in which you find your progress.

The eighteen miles is divided into five phases so that a level headed man of good judgment with a conditioned horse can take him through with almost no distress to man or rider. But the rider who does not make a study of the ground, the conditions of the event and give his horse a chance to rest and come back after an exhausting effort will not have much horse left at the end of the eighteen miles.

The finish of each phase will be clearly marked and since you will be given the time you start, you will be able to figure out the time you should arrive at the end of each phase. You should make yourself out a schedule and pin it securely on your left sleeve where you can see it and have your wrist watch set with the starter. You can thus see at a glance if you are keeping up to your allowance of time.

It is necessary that the team veterinarian should make a study of each horse of the team that is being put in condition and that he should watch them daily and advise the team captain as to the improvement or lowering of condition and to help along with the conditioning in every way possible. At the finish of the Endurance phase he should be present and see that he is equipped to give emergency first aid to any horse in distress and to see that the horse gets the most intelligent care after this effort. This is not only humane, but the horse has still a great effort to make in the Jumping phase and his care at the end of the Endurance phase means much to his future condition.

Indoor Instruction in Indirect Laying, Browning Machine Guns[1]

First Lieutenant W. H. Schaefer

At many stations protracted rainy seasons or long, severe winters limit the amount of outdoor instruction during a portion of the year; at others terrain for field firing by indirect laying is not available. It is, therefore desirable to have some method, either indoor or involving short ranges, for carrying on indirect laying instruction. The 1000-inch landscape target firing described in the INFANTRY JOURNAL for October, 1929, is an excellent scheme for training machine gunners in battery drill and in some phases of indirect laying. However it involves firing caliber .30 ammunition, not often possible indoors, and, due to the number of artificial conditions imposed, does not constitute an entirely adequate system of instruction in indirect laying. In an effort to devise indoor instruction in indirect laying which follows closely the ground or TOG method of obtaining data in the field and of applying the computed firing data to the guns, and which permits checking for accuracy, the method described herein was developed.

The Setup

The targets used are the standard Series A landscape targets issued by the Ordnance Department. They are set up in target frames with wide wooden bases, or, are fixed to a wall. Additional landscape targets in frames are used for mask and friendly troops, usually one panel being sufficient to represent either the mask or the troops. The guns may be mounted with or without T-bases, as there is no firing, and sand bags are not necessary. The intervals between guns are small. The aiming circle, protractor, plotting materials, and fire control tables are used as in the field, but a tape measure is employed instead of the range finder to secure ranges. In general, this substitution of a tape measure for the range finder constitutes the only artificiality in this method. Base and aiming stakes are mounted on wooden bases so that they can be set up on hard floors. No ammunition is required as the guns are not fired.

The officer in charge of the instruction selects the target, wide or narrow as he desires, and places the mask and troop panels in position. In the early stages of instruction he may disregard mask or troops. He may check to see whether or not mask and troop clearance exist, when the problem involves clearance, before having the problem solved. A method of checking follows. Move the mask and troops out of the way. Place the quadrant elevation to hit the target on one of the guns by setting off the range to the target (range in inches multiplied by whatever factor he selects to give appropriate outdoor indirect laying ranges) on the rear sight and laying on the target. Replace the mask and troops, and, without disturbing the laying, set off on the rear sight the corresponding range for clearance of mask or troops as shown in Tables 2 and 3, Fire Control Tables. If this line of sighting clears the mask or troops, the mask will be cleared or the troops safe.

The Conduct of a Problem

Preliminary arrangements and tasks assignments. Having placed in position the landscape target and the panels representing mask and troops, and the guns being mounted, the instructor makes the following assignments to tasks. He details a battery commander, a corporal, and No. 1 for each gun, instructing them that they are to establish base and aiming stakes, lay the guns, and otherwise handle the battery as they would in a field problem; they are not informed as to what constitutes the target. He details two men for plotting and figuring firing data, one man for the aiming circle, and two men to handle the tape measure, explaining to the entire group that in the field the ranges would be obtained by means of a range finder. He designates the target, the mask, and troop positions to this detail for obtaining and plotting preliminary data, and designates the position of the OP. He announces to the entire group that the OP is also the IAP. (If desired an IAP other than the OP may be designated; an aiming stake mounted on a wooden base makes a satisfactory IAP). He announces to the men handling the tape measure that for all ranges one inch is equal to an appropriate number of yards,

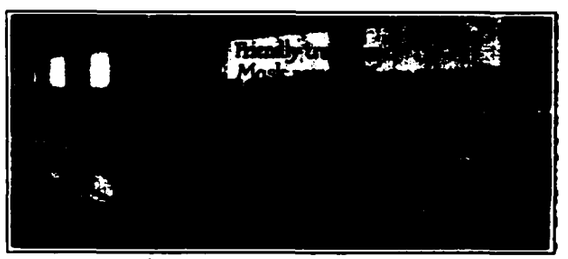


Fig. 1.—Setup for Indoor Instruction, Indirect Laying

the range factor being previously determined to give reasonable outdoor or field ranges.

Obtaining preliminary data. The man operating the aiming circles sets it up at the OP, orients it, and measures and records the magnetic azimuths and angles of site from the OP to the target flanks, to the

[1] This system of indoor instruction in indirect laying of machine guns was developed and used with success in Company D, 31st Infantry, to overcome the limitations imposed on training by the protracted rainy season of the Philippine Islands.

mask, to the troops, and to the flank guns. In measuring azimuths to the guns, he sights on the pintles; and in obtaining angles of site to the guns, he sights on the bolt handles or to a point approximately the height of the bullet in the chamber if the guns were loaded. The two men with the measuring tape measure the distances in inches from the OP to the target flanks, to the mask, to the troops, and to the flank guns; they convert these ranges to yards, using the range factor designated by the instructor, and record them. It will be noted that preliminary data are obtained exactly as in the field except that a tape measure is used in place of a range finder.

Plotting the data. The two men detailed for plotting now plot the rays representing the magnetic azimuths OP to target flanks, OP to troops, OP to mask, and OP to flank guns, having received the necessary data from the operator of the aiming circle. Using any appropriate scale they scale off the correct ranges on these rays as furnished by the detail handling the tape measure. Having located on the plotting the target and the flank guns, they draw lines connecting the guns with their flanks of the target. They now measure the magnetic azimuth of the base lines and send this information, together with the data relative to the azimuths, aiming circle to guns, and the battery angle of convergence or distribution, to the detail at the battery. They also measure the ranges of the flank guns to their parts of the target, and to mask and troops, using the same scale as used in the plotting. Using the mil formula and the angles of sight furnished by the aiming circle operator, and obtaining the required ranges from the plotting, they compute the vertical intervals guns—target, guns—mask, guns—troops. Then by means of the trajectory and safety chart, tables 4a and 4b, or tables 1, 2, and 3, Fire Control Tables, they compute the quadrant elevations to target, troops, and mask, and figure clearance and safety. If clearance and safety exist, they transmit the elevation data to the detail at the battery.

Applying the data to the guns. The battery commander has all guns lay on the OP as an IAP. As soon as he receives data relative to the magnetic azimuths of the base lines and of the lines aiming circle to flank guns, he figures the azimuths, guns to aiming circle, interpolates for the interior guns, computes the gun angles of parallax, combines them with the base angle, and establishes base stakes. Using the battery angle of convergence or distribution furnished by the plotting detail, he figures the gun angles of convergence or distribution and establishes aiming stakes. As soon as he receives the quadrant elevations of the flank guns from the plotting detail, he interpolates for the interior guns and lays the guns for elevation by means of the clinometers. It is apparent that the procedure at the battery is exactly the same as it would be for a problem in the field.

Checking the laying. The guns having been laid for direction by means of the aiming stakes and for elevation by clinometer, the instructor checks the laying. Without disturbing the laying, he runs up the rear sights of each gun to its range, gun to target, ranges of the interior guns being obtained by interpolating between the flank gun ranges. If the problem has been figured accurately and the guns have been laid correctly, the lines of sighting of all guns will be directed on their respective parts of the target. It is obvious that the lines of sighting check the laying for direction, and it is apparent that they also check for accuracy of elevation data if the following points are considered. Quadrant elevations are found by adding algebraically the angles of elevation and the angles of site. The angles of elevation for the ranges of the various guns to the target are checked by running up the rear sights to these ranges. The angles of site, guns to target, as figured using long ranges obtained by applying the range factor designated by the instructor, are exactly the same as the actual angles of site on the indoor range, due to the operation of the principle regarding corresponding parts of similar triangles. Consequently the lines of sighting established by running up the rear sights to the ranges, guns to target, are actually on the lines of site, guns to target, if all work has been done correctly.

It will be seen from this brief description of the method, that it covers all of the points involved in the solution of an indirect laying problem in the field, except practice in the use of the range finder; that the training may be conducted during inclement weather; that a larger number of men can be trained than would be possible in the field in the same length of time; that almost any type of terrain can be simulated by ingenuity in the placing of targets, panels representing mask or troops, and the OP; and that interest can be maintained because results can be checked even though there is no firing. It is believed that this method of instruction can be further developed to permit firing the problems by the preparation of trajectory charts for sub-caliber ammunition and the construction of the necessary devices for firing the smaller ammunition.

The Modern Pentathlon

Major General Guy V. Henry, U. S. A.

The Modern Pentathlon appeared on the Olympic Program for the first time in the Vth Olympiad at Stockholm in 1912, and resulted from the desire of the International Olympic Committee to include in the Games a competition especially suitable to the modern sportsman. The event as introduced and as it still exists represents the Committee's conception of the modern Knight. This 20th Century cavalier must be able to overcome all obstacles that may confront him in carrying out his knightly mission. With the pistol or dueling sword he engages in personal combat; with any available horse he swiftly rides across country; the unfordable stream he swims; and he finishes the journey on foot.

All American and foreign competitors have been drawn from the military services though there appears to be no particular reason why this should be so in the United States, since a great many of the larger universities and colleges have ample facilities for the training of undergraduate competitors. To other civilian athletes there are available the facilities afforded by athletic clubs and fencing organizations. Revolver and pistol practice is possible in most National Guard armories and at various civilian and military outdoor target ranges. A good hunter hack ridden by a rider with a knowledge of pace is all that is necessary for the riding event.

The 1932 Olympic Games are to be held at Los Angeles, California, and to the end that the representatives of America at this Olympiad may be the best possible, the special committee appointed by the American Olympic Association to select the three American pentathlon competitors is appealing to every athletic organization, collegiate or otherwise, to assist in securing candidates for this competition. Particularly is this committee interested in possible competitors at universities having mounted military units and fencing facilities, not only for 1932 but for future Olympiads. Plans have already been perfected for securing the best available competitors in the Army, the Navy, and the National Guard.

QUALIFICATIONS AND PREPARATION FOR THE MODERN PENTATHLON

The qualifications required by a competitor may be best understood from the following information as to the conditions under which the competition is held:

Competition

The competition consists of:

Shooting. Pistol or revolver, 20 shots at 25 meters in four series of five each.

Swimming. Free style, 300 meters.

Fencing. Dueling sword (Epée).

Running. Cross-country, 4000 meters.

Riding. Cross-country, 5000 meters, over changing ground and obstacles.

One event per day on successive days.

Special Regulations

Shooting rapid fire, 25 meters.

Arms. Revolver or pistol of any make or caliber with open sights. (Special stocks forbidden.)

Number of Shots. Two sighting shots and 20 record shots in four series of five each.

Target. Silhouette figure, divided into zones, 5 feet, 6 inches in height, 20 inches wide, as illustrated.

Initial Position. Arm down, the muzzle of the weapon pointed at the ground, the stock of the gun touching the thigh.

Firing. Two sighting shots are desired by the competitor.

Record shooting commences at the command of **Fire.** The use of two hands is forbidden. When the command is given, the target appears for three seconds, then disappears for ten seconds, one shot at each appearance of the target. The shooting continues in this manner for five shots, except that the initial position is required for only the first shot of each series. The target is marked after each series. Scoring rules of the International Shooting Federation govern, which are the same as the American except that all competitors with 20 hits are rated higher than those with 19, competitors with 19 hits rate higher than 18, and so on. In case of ties in total hits and score, the greatest number of 10's decides; if the tie persists, then the number of 10's in the last series; then the number of points in the last series; then the 10's in the next to last series; then the points in the next to last series; and so on. Should the tie persist through the entire score, the points are halved.

Good score, 170. Excellent score, 190.

Swimming (300 meter course, free style). The usual swimming regulations, except that the competition is by heats without finals, with the result determined by time alone. In case of a tie in time, the place is divided.

Good time, 6 minutes, 20 seconds. Excellent time, 5 minutes, 20 seconds.

Fencing. The dueling sword. The usual fencing rules with the following exception:

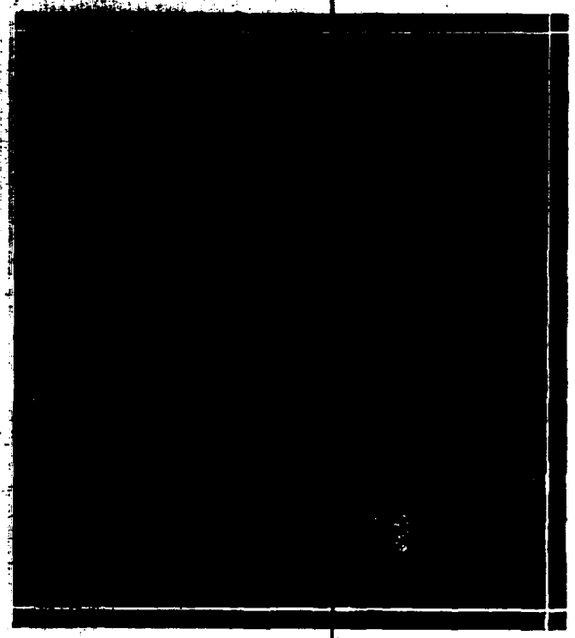
The fencers eliminated in any round, and having the same position in their respective pools, for instance, Numbers 6, 7, etc., will fence a barrage until they have been classified. The general classification of the eliminated fencers is arrived at by placing the

Numbers 6 of the various pools before those having the Number 7, the Numbers 7 before the Numbers 8, and so forth.

Example. For example, assume that there are 60 fencers.

1st Round: Six pools and ten fencers.

Those having the numbers 1 to 5 in each pool pass on the next round. The Numbers 6 in each pool fence



Lieutenant A. S. Bowman Hopes that He Can Repeat This Score in Los Angeles. The Sighting Shots are Encircled

together, as well as the Numbers 7, 8, 9, and 10, until a classification is obtained.

In the general classification, the Numbers 10 will have the Numbers 55 to 60, the Numbers 9, 49 to 54, and so on.

In this way, 50 per cent of the fencers are definitely classified.

2nd Round: Three pools and ten fencers.

Numbers 1 to 5 of each pool are qualified for the final. Numbers 6 to 10 fence together in the same manner as the same numbers of the first round.

After this barrage, they obtain successively the numbers 16 to 30 in the general classification.

Cross-country (running). *Course.* Over broken ground, 4000 meters, the way being unknown to the competitors.

Starts. Individual and one minute apart. Time alone to determine the relative place. Ties in time to be disposed of as provided for swimming, above. Order of starting by lot.

Good time, 15 minutes. Excellent time, 13 minutes.

Equipment. Starting order by lot.

Habits. For officers, undress uniform. For gentlemen, bathing costume.

Weight. The weight will be 165 pounds, exclusive of saddlery.

Horses. Good strong hunters hack, supplied by the Committee; flat saddles. Drawn by lot.

Course. The course will not be more than 5000 meters in length. It will be shown not later than the day before the event. The obstacles (natural and artificial) will be marked by flags between which the rider must pass. The obstacles will be not more than 3 feet, 6 inches in height, nor 12 feet in width.

Start. The start will be individual and five minutes apart.

Speed. The speed will be 450 meters per minute. All exceeding the required time will be penalized a half a point for each two seconds lost. During the event the rider may not receive aid from anyone nor wait to make a jump with another rider.

Points. Each competitor receives at the start 100 points, from which, in addition to the time penalties above, will be subtracted the following:

3 points for the first refusal, or breaking out;
6 points for the second refusal, or breaking out;
50 points for the third refusal, or breaking out, after which the rider, without having taken the obstacles in question, has the right to continue to the next obstacle, without disqualification;
5 points for the fall of the horse or of the horse and rider;
10 points for the fall of the rider alone.

The faults mentioned above—refusal, fall of the horse, fall of the rider—will not be counted except within a radius of 25 meters from both sides of the obstacles as marked.

If the rider does not take the obstacles in the indicated order, or if he does not jump or attempt to jump between the two flags, he must recommence his course at the place where the fault occurred. Other-

The Dueling Swordsmen Work Out

wise, he is subject to disqualification for leaving course.

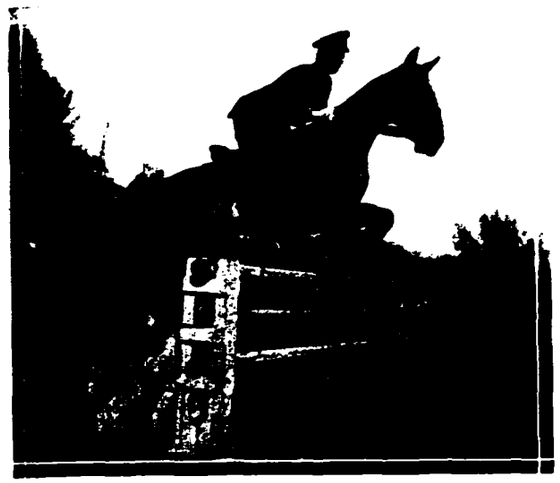
In case of a *tie* in *points*, the result will be determined by the *time*.

Tips, going through or knocking over obstacles *are not* faults.

Score. A properly handled hunter can easily make 5000 meters in less than the required time of 11 minutes.

Final Standing

The final standing of each competitor is determined by the total of the five places secured in each of the events. For example, competitor "A" is sixth in shooting, third in swimming, third in fencing, fifth in



Training for the Mounted Events, Lieutenant T. J. Sands Up

running, and second in riding; his final score is 19. The competitor with the *lowest* aggregate number is first, the next lowest is second, and so on.

THE CONDITIONS FOR THE MODERN PENTATHLON

Records of the Modern Pentathlon competition in the Olympiads since 1912 show conclusively that it is truly an all-round event. Many competitors have done extremely well in one or two of the five events but their showing in the other three or four has placed them far down in the final standing. The experience of American competitors training for the team bears this out. It has been found, for example, that a man who starts out with better than average proficiency in three or four of the five events proves a better candidate than one with exceptional ability in one or two of the events only. So firmly does the Committee believe this, that it would hesitate to advise a candidate who is an exceptional swimmer or runner and with no other experience in any one of the various events to try for the team, whereas a natural athlete with above average ability as a runner, fencer, or swimmer, and a good knowledge of two or three of the other events is considered to be the ideal type, *provided* that training is started for considerable time prior to the competition.

The above conclusion is corroborated by the experience of the only civilian to try for the American team in 1928, Mr. Harry Lewis, then a member of the graduating class of Rutgers University. Mr. Lewis, a natural athlete, was a former intercollegiate swimming champion. As a member of the military unit at Rutgers he developed into a fair pistol shot. In fencing and running, while little more than a novice, he showed marked promise. However, in riding he had no experience except for a short time prior to the competition and then with no trained supervision or suitable mounts. Mr. Lewis did not start training for the event until late in March, 1928, and, while his progress was gratifyingly rapid, he was unable to place high enough in the final tryouts in May to justify his being named for the team. The 1928 Committee felt however that, had Mr. Lewis started his training in the summer or early fall of 1927, he probably would have made the team and proven one of our best competitors at Amsterdam.

Since its introduction on the Olympic program in their native Stockholm, the Swedes have apparently considered the Modern Pentathlon as their own particular event, for they have won the individual and team competition every time, with the other nations constituting the "field." In 1912 America had one representative, Lieutenant, now Major, George S. Patton of the Cavalry, who finished fifth. In 1920, at Antwerp (there was no Olympiad in 1916 due to the World War) Majors H. M. Rayner of the Cavalry and Robert Sears of the Ordnance, who finished sixth and seventh respectively, represented the United States. Our highest competitor at Paris four years later was Lieutenant George H. Bare, Infantry, who finished tenth. In Amsterdam no American representative made the first ten.

It looks from these results as though our representatives have grown progressively weaker. This is not so. Rather, the real explanation lies in the fact that the competition has materially increased. Lieutenant Bare's performance in the VIIIth Olympiad in Paris

Lieutenant Lermond Ready for Start on a Practice Cross Country Run.

would have placed him in the first five at Antwerp. In 1928, this same officer, though he performed quite as well as in 1924, was unable to make the American team.

Lieutenant Lindman of Sweden, the individual winner at Paris with a performance that set a new low score for the event, could place no better than third in Amsterdam. Lieutenants A. S. Newman, B. W. Brady, and G. W. Lemmond of the Infantry, C. J. Mansfield and W. R. Johns of the Cavalry, R. W. Mayo, T. J. Smith, C. R. Burrett of the Field Artillery, and M. I. Carter of the Air Corps, have already entered for the final try-outs, and it is hoped that there will be additional candidates from the Regular Army. The National Guard and the Navy are being canvassed and, through the professors of military science and tactics at R. O. T. C. units, the Committee expects to interest promising candidates from these institutions. In short, our Committee proposes to cover the ground so thoroughly and in such detail that no athlete whose ability warrants his consideration for the 1932 team will be overlooked. Assistance will be extended to any candidate in arranging for training facilities should none exist at the university, college, or organization with which he may be affiliated.

For any additional information, including details of the national try-outs, interested organizations or persons should write the Committee through its Secretary, Major Wm. C. Rose, War Department, Washington, D. C.

1932 Modern Pentathlon Games Committee

Major General Guy V. Henry, *Chairman*,
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Washington, D. C.

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New Orleans, La.

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War Department,
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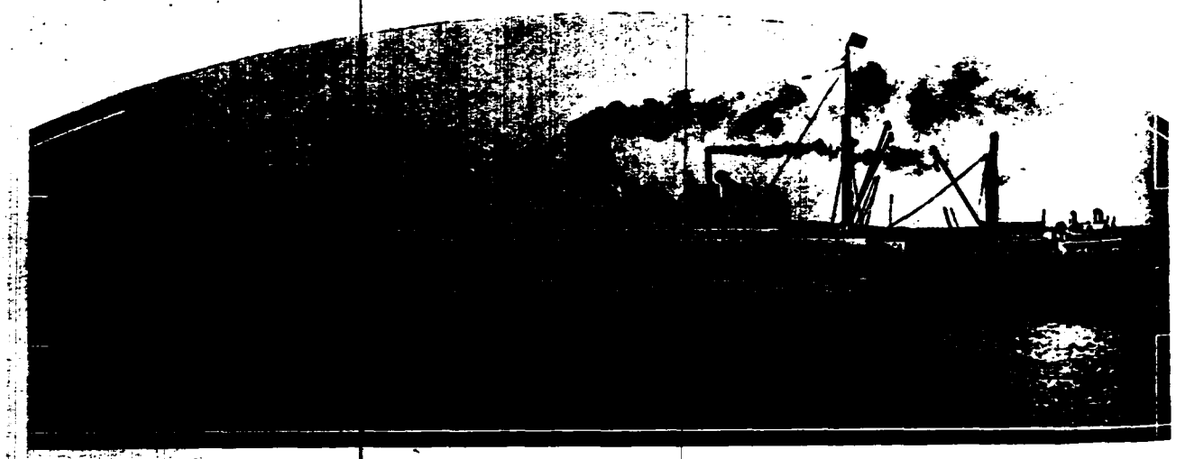


American Olympic Teams Arrive at Amsterdam

Some Hints for Judging Hunters

By Lieutenant Colonel C. L. Scott, Cavalry

In order to judge a class of hunters properly you must have firmly fixed in your mind the following points: (a) the *conditions* of the class to be judged; (b) the way in which a hunter should perform; (c) the accepted type and conformation of a hunter; (d) a plan to record accurately, completely and quickly your observation of each horse in the class.

Know Conditions of the Class to Be Judged

It is surprising that some judges and a large number of observers who are attempting from the side lines to pick the winner fail to read and understand the conditions of the class prescribed by the management of the show. For example, you find in some classes that performance will count 75% and conformation 25%, while in another, performance will count 50% and conformation 50%. This material difference in the conditions of the classes makes considerable difference in judging. I frequently have heard from spectators criticisms of judging in a class where the conditions required the elimination of a horse for being overtime, or for one refusal regardless of how he looked or performed otherwise—none of which had been noted by the critic. How can you expect to judge, or to pick a winner unless you know the rules governing your action? These rules or conditions are always printed on the score card furnished you by the management and in the show program. In order not to make this error, get to your class in time to read over and thoroughly understand the conditions of the class you are to judge before the first horse comes in the ring.

Performance

Now as to the second important requirement "the way a hunter should perform," the place to note this is provided on the score card under two headings, i. e. "Performance" and "Manners, and way of going." In determining what to put under these headings, let us ask ourselves the question "how would I like a horse to go with me in the hunting field?" You certainly want a horse that is sensible and level headed; one that doesn't pull and that you can control; one that can stride along easily and tirelessly; and particularly one that has his eyes and mind on his jumps and takes these jumps in a safe uniform way. Ticks are of minor consideration. One would certainly rather ride a horse in a hunt that moves along, takes his jumps safely and uniformly, even though he ticks all of them, than a horse who goes clean but in doing so, gets in too close to one jump, then stands back and takes a "chancy" jump at the next, and so on. The first horse is a safe, pleasant ride; the second horse is a gamble, keeps you on edge at every jump, and sooner or later will get you and himself into trouble.

Now let us consider two other horses in the ring. One takes his jumps easily, smoothly and under control all the time. The next horse jumps easily and smoothly, but when committed to a jump is apparently difficult to control and also hard to bring around on his turns. Of course, the first horse is the better in manner and way of going.

Go on still to a comparison of two other horses for performance. Both jump well, are easy to handle throughout the course, but the first horse moves along smoothly, easily, and has a stride that goes somewhere and gives you the impression of power and endurance. The second horse gallops on his heels or up and down in one place too long. No. 1 undoubtedly has it over No. 2 in "way of going."

All of these *points* and many others must be considered in a hunter class. In judging you must catch the good and poor points instantly and record them rapidly, as well as ticks made by poor take-offs, knock-downs, refusals, etc. Ticks, knock-downs, etc., in strictly jumping classes are apparent to any observer and can be scored by any child or attendant.

Conformation

Now as to *type* or conformation, the generally accepted *type* of horse for a hunter is the thoroughbred type, or a type showing many of the best characteristics of a thoroughbred. We all know that we want lots of front, good shoulders, bone, substance and quality — above all, the horse must be put together right. It will do him no good to have a good long neck if it is set on his shoulders wrong. To get type and conformation fixed in your mind requires much study, careful observation of many good horses and experience. In order to judge successfully, type must be instantly recognized and defects in conformation must stand out at a glance. You have not the time to go over in detail all the horses in a class, neither should it be necessary. Know what you like and want in both type and conformation, pick it out quickly, and eliminate at once what you dislike. Nothing will spoil a show as quickly as a slow judge—exhibitors and spectators become impatient or get disgusted with slow, hesitating, uncertain judging.

A Way of Recording Details

It is most important to have a quick accurate system of recording what you see of the performance of each entry when you are handling a large class of good hunters, and then to base your decisions on what occurred. There is no uniform method among hunter judges of scoring all *details* of performance. Each one devises his own method of recording such details and still the final result is surprisingly uniform. For example, I judged several years ago in a large eastern show with two well known hunter judges. We kept well separated in all classes, scored individually all entries and at the end of the class met to compare notes on performances. The show lasted four days and included many hunter classes. In practically every class we unanimously agreed on the *best* performance and usually had the same horses for 2d, 3d and 4th places.

although they were not arranged in exactly the same order by all of us in every instance. During the show we discussed our methods of scoring details and found each of us had a different way of doing it but that *in principle* the methods were identical. We could tell just what a horse did throughout the course with respect to ticks, bad jumps, way of going and manners, etc.

There is a copyrighted card for scoring hunters known as "The Palmer System" which is an excellent method—concise and well designed. It is in use at The Cavalry School for instructing in judging. However, it has not been adopted at many hunter shows in the United States. The usual form of score card for hunters is shown here and it is necessary for you to make your notes to fit this card.

Now let us refer to the score card above which is in general use and I'll try to indicate what system I have for scoring as shown thereon and what the notes mean.

The first horse that comes in we will say is No. 10. He gets in too close and ticks at No. 1 jump in front. I score two (2) against him and note that he was too close by putting an "x" *just above* this figure. At No. 2 jump he is O. K.—score off 0; at No. 3 he stands too far back and ticks behind. I score off 1 and note that he took off too far back by putting an "x" in *front* of this figure; at No. 4 he is O. K., score off 0; at No. 5 O. K., score off 0; at No. 6 he is clean but too close up. I put an "0" to show he didn't tick but I also put in an "x" above the "0" to record the too close in jump; No. 7 and 8 are O. K., so score off 0. Now what is the result? Two ticks resulting from bad take-offs and three bad jumps out of eight jumps. These are too many errors to warrant us giving him a good way of going, so under "manners and way of going" we note "F" to indicate "fair only," and under remarks we put "erratic jumper."

No. 16 comes next, jumps well and regularly but pulls and is hard to control on the turns. At the jumps we score as indicated. Manners and way of going are poor so we note it with a "P" in the column under this heading.

No. 20 next. He jumps well and regularly, but he gallops too high. Over jumps "0" is his score off. Under manners and way of going we give him very good by noting a "V. G." in this column. Also in column of remarks we note "gallops high." Now this horse is way above the average. We don't want to lose him or overlook him or have to search through a card of 50 to 100 entries to find him. How do we

Class No. 10—Light-Weight Hunters

Conditions. Horses up to carrying 160 lbs. to hounds. Performance 60%. Conformation 40%. Over jumps not exceeding 4 feet in height—course A. 1st Prize, Plate. 2d, 3d, 4th Prizes. Ribbons.

AWARDS
1 — No. 40 3 — No. 20
2 — No. 30 4 — No. 38

No. of entry	Performance 1	2	3	4	5	6	7	8	Total	Manner & way of going	Conformation	Total	Remarks.
10	X 2	0	x1	0	0	X 0	0	0	3	F	----------	----------	Erratic Jumper.
16	0	0	0	0	0	0	0	1	1	P	----------	----------	Pulls. Hard to control on turns.
20	0	0	0	0	0	c	0	0	0	V. G.	35	90	Gallops high and on heels.
25	0	0	R 2	0	0	0	0	0	2	P	----------	----------	Unwilling Jumper.
30	0	0	0	0	0	0	0	0	0	V. G.+	37	93	Sticky at jumps.
60	0	0	0	3 R		Out	on	3d	refusal.	----------	----------	----------	
40	0	0	0	0	0	0	0	0	0	E	36	96	
21	0	0	0	0	0	0	0	0	0	V. G.—	36	86	Good mover but hangs a front leg.
26	0	4	0	x2	0	0	X 4	0	10	P	----------	----------	No hunter.
38	0	0	0	0	0	0	x1	0	1	G	----------	----------	Yaws out on turns.
22	0	x2	0	RO 2	0	0	0	0	4	P	----------	----------	Common—poor mover.
27	0	0	0	0	0	0	0	0	0	V. G.—	38	98	A little too hot.

(Best performers noted on back of card.) (40 (30 (20 (21 (26

Symbols:
X = A bad jump. If *over* score off it means too Close. If in front of score off it means horse stood back too far.
R = Refusal. RO = Run out.
P = Poor, F = Fair, G = Good.
VG = Very good and can be made + or —
E = Excellent and can be made + or —
HF = Horse fell; RF = Rider fell.
HRF = Horse and rider fell.

separate him from the average? I was shown how to best accomplish this by a well known hunter judge, i. e., turn your score card over and write his number (20) on the back thereof about the middle of the card. You put this number in the middle of the card so you can record better performances that may follow above and ones not so good below it.

No. 25 next. First jump O. K., second jump O. K., third jump refuses. Score off 2 and note it is a refusal by putting "R" above the fault. The rest of the jumps are O. K. but throughout the course the horse needs driving at all jumps, so note under remarks "unwilling jumper." We think his manners and way of going are poor and note it with a "P" in this column.

No. 30 next. Makes a clean score over jumps. Gallops better than No. 20. We score him "very good *plus*" as shown and put his number on the back of our card *above* No. 20.

No. 60 next. Goes over first, second and third jumps O. K. but refuses three times at No. 4. Three refusals recorded and the horse eliminated.

No. 40 next. Makes the best performance yet made. Recorded with an "E" for excellent. Also put his number (40) on back of card *near the top.*

Now having completed the jumping, all horses are brought into the ring stripped. say sixty of them—to be judged for conformation. Do we want to score all of them for conformation? I'd say surely not. we'd never get through the class. We want the 8 or 10 best performers and can find them on the back of our card without wasting time searching through sixty numbers for them. We send these top performers up front and then walk quickly through the remaining horses to see that we haven't missed an exceptionally good type with a good performance. Having picked out the best we can clear the ring of the other horses.

Judging for Conformation

Our next step is to determine the conformation and soundness of the horses left in the ring. Is our top performer sound? Is he good enough to win over the others after adding conformation to his performance? The only advice on conformation I could give in a short article of this kind is "do not get involved in details." Stand well off from your horse to judge conformation—take him in as a whole—together with the other horse or horses with which you are comparing him. His defects will show up quicker at a reasonable distance, whereas he might be put together all wrong and you'd never notice it if right up under him. Examine him from front to rear. Trot him out to see if he is going sound. Also examine him close up for soundness. Then complete your card as shown for this entry and for the other prize winners and initial it.

Now this card may look like a Chinese puzzle to you, particularly until you study it and know the meaning of the symbols used. From it I could answer any and all reasonable questions and support my final decision with my record of the class.

Conduct as a Judge

As a beginner try to start judging with experienced horsemen. Keep your eyes open, ask them questions at the right time. Make your own decisions and notes and compare them with those of the other judges. State frankly that you are just starting on such work and ask help. Don't try to conceal your ignorance by arguing. Even after becoming an experienced judge always be polite and considerate of your fellow judges in the show. Listen to their point of view and state your own clearly and concisely, *never in an antagonistic manner.* Don't consume time quibbling over details but under no conditions sacrifice a *principle.* Do not let your decisions be influenced unduly by the past performance or reputation of a horse or by the standing of the exhibitor. Be careful of your conduct in and out of the ring and don't subject yourself and the management to criticism by becoming too closely associated with any particular exhibitor. Get to your classes ahead of time. Have a good word for the hard working manager and ring attendants.

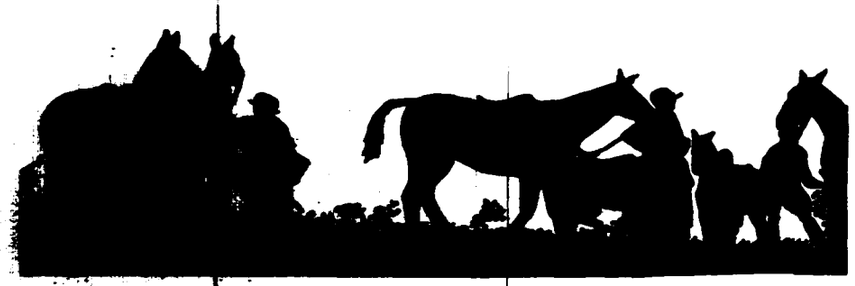
Compare above two horses. The one at the left (*Proctor.* a great Army Hunter) has the better head, better throatlatch, more neck, more heart girth, more bone, substance and quality, than the one at the right. Is also closer to the ground, and is in every way better put together. All this is distinguishable at a glance so it is not necessary to score conformation of the one on the right or to further consider him in a class of hunters unless all horses in the class of the type of *Proctor* have miserable performances.

When in the ring keep your mind on the job and do your work quickly. Nothing spoils a show like a slow, indifferent judge.

Do not be too loud in your criticism of horses in the class. The owner or riders hear you and it only hurts their feelings and in no way helps you to judge the class. Be civil to exhibitors and answer politely any proper questions they ask. Don't try to alibi a decision by blaming your co-judges. Go out of your way to assist the press representatives that try to get proper information of you concerning classes. They are there to help the show and horse activities in general. It is your duty to assist them.

When you are a judge or even a spectator at a horse show or any gathering of horsemen, it is well to keep your criticism of all classes and the way participants perform in them to yourself, or at most only criticise them to your friends and in such a way that you will not be overheard. You may not like a certain class, or certain horses and riders in it, yet there may be people sitting right next to you who have horses, friends, or relatives in the class. To hear criticism directed at them is certain to cause resentment and will do you and the show which you attend no good.

In conclusion, I repeat that the system described for detailed work herein is the one I personally use. I have obtained many of the most useful ideas therein from experienced hunter judges. I know that there are other ways of accomplishing the same results which may be simpler and better. My main object in this article is to impress the beginner that in judging he must have prepared himself for the work in many ways by hard study, or else he should be content to learn by working with experienced judges to whom he should defer final judgment as to the winners. Hit or miss methods will give no satisfaction to the horse show management, to the exhibitor or to yourself.



Industry and National Defense

III[1]

Major General George Van Horn Moseley, U. S. A.

OUR business men, like all other American citizens, have a vital interest in preventing any unusual upheaval in the normal economic life of the nation. The philosophy of modern industry is that earnings are increased through sound and far-seeing management, continuity of progressive policy, and national prosperity. Large scale production for future use must be based on accurate calculations as to future demand. War disrupts foreign trade, upsets the best conceived production and sales programs, and eventually saps the purchasing power of the country. Certainly industry as a whole—and by industry I mean all actually productive units of our country—has no more desire for a repetition of its World War experience than have our other citizen groups. Proof of this is furnished by the voluntary cooperation of industrial associations with government officials in efforts to devise a reasonable plan for the control and efficient utilization of the nation's industries and other resources in any future emergency. Such a plan contemplates almost the exact opposite of what happened in 1917.

In the development of a plan for industrial mobilization, our first concern must be that all measures proposed will be workable in war. The plan must contemplate the most efficient use of existing assets, and take advantage of the industrial methods we have developed during years of peace. In war every man must do the job for which he is suited, but he must do it for the nation rather than for himself. This axiom applies to organizations and groups as well as to individuals. The primary business of armed forces is to fight; the primary business of industry is to produce.

The problem of mobilizing industry in war divides itself into four logical steps. These are: (1) Proper distribution of initial war orders; (2) Analysis of the anticipated effect of emergency conditions and the munitions program on the normal business processes of the nation; (3) Preparation of a broad plan designed to lessen these effects where they are detrimental to the nation's interests; (4) Making provision to set up an organization which can administer this great undertaking.

The first and most pressing need of the country in material things, in an emergency, would be munitions to equip and supply the men called to the colors. Both land and sea forces would have urgent need of the weapons, ammunition, and other combat appliances which alone can enable them to meet an enemy on equal terms.

The munitions problems of the Army would differ somewhat in essential details from those of the Navy. One of the chief reasons for this difference is that the peace time strength of the Navy is necessarily nearer its actual combat strength than is that of the Army. If the Navy were called upon to meet an enemy in a decisive engagement in the first year of a war, its strength in big ships could not be more than that of the peace time establishment. On the other hand, the Army would begin to expand immediately upon the declaration of war, and its strength in actual fighting units within eight to ten months would in general be limited only by the ability of the nation to furnish the necessary munitions. Nevertheless, the major principles applicable to the problems in both services are identical, and no attempt is here made to differentiate between the general methods proposed for their solution.

The National Defense Act of 1920 charges the Assistant Secretary of War with the "assurance of adequate provision for the mobilization of matériel and industrial organizations essential to war time needs." While it may appear that because of his official position his inclination would be to treat the question solely from the viewpoint of the Army, in actual practice this can never be the case. In other words, the Assistant Secretary of War has not fulfilled his public function when he has made arrangements for the procurement of Army supplies. Rather, he must consider all phases of the whole industrial mobilization problem.

An examination of the procedure under which the Assistant Secretary of War is carrying out his assigned mission will demonstrate the exactness of detail characterizing his plans for army procurement, and the comprehensive scope of the program for meeting the other essential phases of industrial mobilization.

Rock bottom of the procurement plan is, of course, the estimate of the amounts and types of munitions needed by the nation in a major emergency. This estimate is prepared by military staffs, based on the military operations we would undertake under given conditions. After the amounts and types of essential munitions have been determined, the next step is that of making detailed arrangements for their production. Due to the great number of different items involved, the size of this country, and the thousands of industrial activities in it, this step demands some decentralization in execution.

For this reason, the United States has been divided into fourteen districts and, in these, resident business men—called district chiefs—have been selected to represent the army procurement services. Tentative

(1) The first and second articles of this series appeared in the CAVALRY JOURNALS for January and February, 1931.

orders for the production of munitions in war are being apportioned by the supply services to the various districts in accordance with their productive capacity. This process of distribution is continued on down the line to individual establishments. In each case the district chief, or his representative, and one of the factory executives cooperatively determine the suitability and capacity of the factory for a specific kind of production. The final step in the process is the consummation of a "gentleman's agreement" that in the event of an emergency the particular facility would undertake the manufacture of certain amounts of the specified item. The agreement never involves more than 50 per cent of the normal capacity of the plant. This makes the task of passing from peace to war activity, and vice versa at the close of the war, much simpler for the factory. The unused capacity of the factory is also an advance guarantee of a factor of safety for war production. In peace no mention of prices is made in these agreements. In the event it becomes necessary to begin emergency production, that question will be settled by negotiation or by legally constituted agencies, under such directives as may be given by Congress.

In the aggregate these agreements make up the army program for initiating munitions production. There is no need to discuss the manifold administrative and technical details. Above all it must be understood that the plan does not contemplate the taking over and operating of industrial facilities by the government. Responsibility for actual operation remains with the plant executives. Any other system would fail to take advantage of their demonstrated efficiency.

A few figures may indicate the amount of detail involved in the program outlined above. We have calculated that the army would need 26 million pairs of shoes in the first twelve months of a general mobilization. Similar calculations have been made for 16,868 other classes of equipment. The capacity and suitability of 14,854 factories and other facilities have been determined, and 10,398 specific agreements have been made with industrial plants. I cannot overemphasize what these accomplishments, performed at a relatively trifling cost, may some day mean to the nation. They have been made possible by the cooperation of civilian associations and various government departments with the officials legally charged with the work. The orderly procedure here contemplated is a far cry from the confusion, interference, and misunderstanding that characterized our efforts to procure munitions during the early months of our participation in the World War.

Were all these detailed and specific arrangements the complete story of an efficient industrial program, the whole problem would be a comparatively simple one. But no matter how efficiently the war load is apportioned to industry, waves of interference in succeeding requirements are created. Take two such apparently different essentials as wool and surgeon's sutures. This country imports over 50 per cent of its wool, and in the eyes of war, a strict conservation program to prevent waste of wool and slaughter of sheep would be necessary to insure an adequate supply. On the other hand, surgeons' sutures, an equally essential item, are procured from the entrails of sheep. These requirements, involving conflicting programs in the livestock industry, are but a minor example of the many cross currents in secondary requirements set up in case the production of munitions is begun.

Here, then, we leave the relatively narrow field of planning for the actual procurement of finished military supplies and begin to deal with those broader questions which, in war, concern the industrial and economic factors of the whole country.

Interferences become most serious at those points where there will probably be a shortage in labor, money, manufacturing capacity, power, raw materials, or transportation. Each essential element must be at the proper place at the proper time. Analyses must be made and plans perfected to guarantee that this condition will actually obtain. These analyses, coupled with the lessons gained from past experience, indicate some of the broad controls the government would have to exercise in war. Let us briefly consider a few of them.

The detailed industrial survey made in each district discloses, among other things, the additional amounts of labor necessary to place in operation the tentative agreement with each factory. Upon the outbreak of a war, we should avoid the shifting of large numbers of workmen from one section to another; the shifting of labor would entail additional housing and construction programs. The munition plan must be studied with this in view and, when necessary, revised to throw a greater part of the load into those procurement districts where labor is plentiful. Many other serious questions involving labor are bound to arise in a grave emergency. Some of the angles of the labor problem being studied are the probable availability of skilled workmen for greatly enlarged or new activities, regulations to prevent the stripping of labor from essential facilities, methods for concentrating labor at necessary points, and so on. During these studies labor leaders are consulted and their views are incorporated into the plans dealing with this subject.

Another essential study is that dealing with raw materials. It is one thing to place a huge order with a large manufacturer; it is quite another to show that he can be assured a continuous flow of the necessary raw materials to fill that order. In many cases there would be no difficulty because of our wealth of natural resources. But manganese, tin, rubber, iodine, wool, and others—making a list of over twenty in all—would be extremely difficult to obtain should the enemy seriously interfere with our overseas commerce.

Thus, we find the Assistant Secretary of War interested in measures to insure an adequate supply of these critical raw materials in war. These measures include conservation programs, plans to insure the arrival at our ports of essential raw materials, and the development of satisfactory substitutes.

A conservation program may include the use of reclaimed and salvaged material, and the reduction of general consumption by the public. Rubber is one item in which conservation would be particularly effective. Manufacturers are now using reclaimed rubber in many articles. This practice would be greatly extended under the pressure of emergency conditions. Use of rubber on pleasure cars could be considerably reduced through patriotic appeals to the public. Such measures would go a long way toward conserving rubber to meet war time needs. In addition, practical experiments are being made within the United States in the growing of various plants and shrubs from which rubber can be extracted.

Certain amounts of essential raw materials might be secured by governmental purchases through neutral countries. Embargoes could be placed on certain exports either to effect a direct saving in materials or to withhold necessary items from some neutral until she could be forced to furnish us with some item we desired in exchange. To determine in war what is essential in the lives of our people and what is not, to arrange for certain imports and to place embargoes on certain exports—these and other complicated questions are part of the industrial mobilization problem.

The Assistant Secretary of War, in view of the mission assigned him by law, must work out plans and methods, and keep them ready to turn over to such agency as may be set up in war by Congress and the President to handle these matters. He must keep in touch with scientific developments, particularly those that tend to diminish our dependency upon imported raw materials. Above all he must maintain contact with other governmental agencies and with industry as a whole. Their cooperation is most helpful in devising plans, and should the execution of these plans become necessary, their coordinated efforts would be essential.

American Troops in China—Their Mission

With Illustrations From Photographs Taken in China in Recent Years

Captain Jesse D. Cope, 65th Infantry

THE United States, along with other powers, maintains a small body of troops in China. This we all know. But many of us do not know how our troops happened to go to China or why they remain there. Opinions on this vary from the idea that our troops are there to protect foreign lives, to the conviction that they are sojourning in the orient for the protection of American business interests.

Both opinions are, in the main, incorrect.

Back in 1900, after the diplomats of the world accredited to China had spent about eight weeks cooped up in the legation quarter of Peking (now Peiping) subjected to constant assaults by the Boxers and Chinese Imperial troops, they were all keen for some provision against a recurrence of that harrowing episode.

Accordingly, in the protocol signed at Peking on September 7, 1901, which provided indemnities, punishments, apologies, erection of expiatory monuments, arms importation prohibitions, destruction of the Taku forts, and other measures intended to secure full retribution from China for her midsummer madness, there was included an article which had for its purpose the safeguarding of the means of exit of the envoys from Peking to the sea.

It will be remembered, very vividly by some, that the siege of the legations in Peking was the culmination of a period of anti-foreignism that had its inception in 1896 with the riots against the missions and other forms of hostility to foreign aggression.

Throughout almost the whole of the year 1899, and continuing into 1900, there were unrest, riots, and rebellion in almost every province of the Empire, and mission stations were attacked everywhere. The assembling of several Italian war vessels in Chinese waters in March of 1899 caused an order to be issued to the viceroys of the important provinces to put their forces on a war footing, and in June an order was issued to resist by force any landing of armed foreign troops. Preparations for resistance continued throughout the year, and the country, already aflame with anti-foreign riots, was fanned into a blaze of hostility to foreign aggression. The foreign garrisons were able at this time to protect themselves, and the foreign merchants were secure in the shelter of the treaty ports, but the native converts to Christianity, who were reputed to bear the taint of foreignism, received the full fury of a hostility that could find no other outlet.

The enmity toward foreigners and everything foreign continued unabated, and in September there came into notice a sect whose only reason for existence was its hatred for foreigners and Christianity.

This society was known as "Boxers" and had as a motto on its flag the characters *Pao Ch'ing Mieh Yang*, meaning, "Protect the dynasty, exterminate the foreigners." Its members were required to undergo very impressive initiation ceremonies, passing through various mystic rites. There was a belief among them that they were invulnerable to sword, spear, or bullet through the protection afforded by the spirits of the dead hovering over them.

The Boxers had a free hand in most localities, the local officials seeming to be in sympathy with them or at least indifferent, and their depredations continued unabated. The native Christians were forced to burn incense, prostrate themselves in the temples, and indicate in other ways the renunciation of their foreign religious teachings.

The "Red Fists," as the Boxers were sometimes known, continued their atrocities, which were always anti-Christian, until the end of the year. Many battles between Boxers and converts took place, the Chinese troops looking on inactive. Christians were tortured and forced to recant and their houses were plundered. The movement spread far into Chihli, the province in which Peking, the capital then, is located.

Later on in 1900 it became the belief of foreigners that it was the Empress Dowager's plan to drive all the foreigners into the sea and that she considered the Boxers as serviceable allies to that end. The foreign envoys, becoming really alarmed at the condition of affairs, entered protests at the laxity apparent in the Chinese government's dealing with the disorders in the South.

On January 27, 1900, the American, British, French, German and Italian legations sent identical notes to the Chinese government asking that a decree be issued ordering the complete suppression of the unlawful societies. A month later the legations were informed that the viceroy of Chihli province and the governor of Shantung province to the south had been ordered to suppress the societies; and, on March 1, that the viceroy of Chihli had issued a proclamation in conformity with the orders he had received. The next day there was a conference of the legations and another note was presented asking that the decree be given general publication in the Peking Gazette, but, on March 7, this was refused as being contrary to precedent. The legations' demand was repeated, with more insistence, on March 9. The American envoy expressed his opinion that "the Chinese government

have, either purposely or through fear of a general uprising, flagrantly trifled with this matter from the beginning and have grossly violated their treaty obligations." All five envoys then agreed in advising their

Chang-Tso-Lin Reviewing a Guard of Honor, United States Army Headquarters, Tientsin, 1924

respective governments that a naval demonstration be made in the Gulf of Pechihli, the waters giving access to Cheefoo and Tientsin.

Early in May armed Boxers raided villages of Christian converts near Paotingfu, 80 miles from Peking, killing and burning alive some 70 of them. Two days later they attacked in the same way another village only 40 miles from Peking. About this time the public in Peking was warned of a great secret scheme to crush all foreigners in China and to wrest back the cessions made to foreign powers. The principal leaders in the project were reputed to be the Empress Dowager, Prince Ching and Prince Twan, the armed force behind the movement being Prince Ching's force of 50,000. Prince Twan's force of 10,000, and the Imperial Guard of 12,000—the Boxers being counted as auxiliaries.

All of the Chinese of the upper classes knew of this project and had warned their foreign friends but had been laughed at. The foreign legations had demanded the suppression of the Boxers and had had dust thrown in their eyes.

Warnings of the impending attack on the legations were so abundant that foreigners, as a rule, ceased to regard them, while those who took them seriously thought the outbreak would be deferred. Several of the envoys were reluctant to summon additional legation guards, fearing to consolidate the anti-foreign element.

On May 28 word came to Peking that the railway was attacked and two bridges and two stations burned on the Paotingfu line, and that Fengtai, on the Tientsin line, only ten miles from Peking, was burned with all the machine shops, and that no trains were running between Tientsin and Peking. A remarkable and somewhat amusing illustration of the reasoning capacity of these fanatics was their announced plan to kill the railway station agent and burn the tickets to prevent the escape of the foreigners from Peking by train.

In the meantime, each legation had, on its own initiative, asked for marines to be sent to Tientsin, and so at a diplomatic meeting May 28 it was decided to order them up to Peking.

After some discussion permission was given May 31 for 30 guards for each legation to proceed to Peking. The guards arrived at Peking the same day at 6:45 p. m.—53 Americans, 79 British, 79 Russians, 75 French, 39 Italian and 24 Japanese. These were joined on June 3 by 51 Germans and 32 Austrians. Together with the 19 officers, the entire force amounted to 451. The American, British, Austrian, and Italian detachments each had a machine gun, and the Russians took along machine gun ammunition but left the gun itself in Tientsin!

The French and British had had 100 men each to entrain for Peking, but as the Russians had only 79 men, diplomatic exigencies required that the excess of each of the other two be left behind.

The alarm which led to the summoning of the guards was well founded. The foreign envoys now saw more clearly into the situation and were much perturbed. Accordingly, on the proposal of the French envoy, the home governments were simultaneously informed by cable of the situation and were asked to instruct their naval authorities to take concerted action for their relief. The cutting of communications was imminent.

The admirals of the foreign fleets lying off Taku Bar were ready for any eventuality, but as yet had received no explicit orders from their home governments. On

Types of Russian Soldiers in the Chinese Forces

June 9 the British admiral, Sir Edward Seymour, then with the other admirals off Taku, received a telegram from the British envoy in Peking: "Situation extremely grave. Unless arrangements are made for immediate advance to Peking it will be too late."

Within two hours Admiral Seymour, in good old British fashion, went ashore with his landing force and left Tientsin, about 30 miles up the river from Taku, at 9:30 a. m., June 10, with a mixed naval force. The next day at Yangtsun, a few miles from Tientsin, in the direction of Peking, he was joined by other foreign detachments, bringing his total force up to 2157, consisting of 112 Americans, 916 British, 540 Germans, 312 Russians, 158 French, 54 Japanese, 40 Italians, and 25 Austrians, with Admiral Seymour, as senior officer present, in supreme command.

In the meantime the Boxers, with their long hair tied up in red cloths, red ribbons around their wrists and ankles, and wearing flaming red girdles, were much in evidence in Peking. The shops of the dealers in foreign goods and valuable commodities were destroyed and plundered. Cemeteries of the foreign community were desecrated, bodies being disinterred and tombstones broken. At Tientsin the Boxers continued their devastation and slaughter, and bodies of Chinese sympathizers with the foreigners, who had been killed and thrown into the river, were often seen floating by.

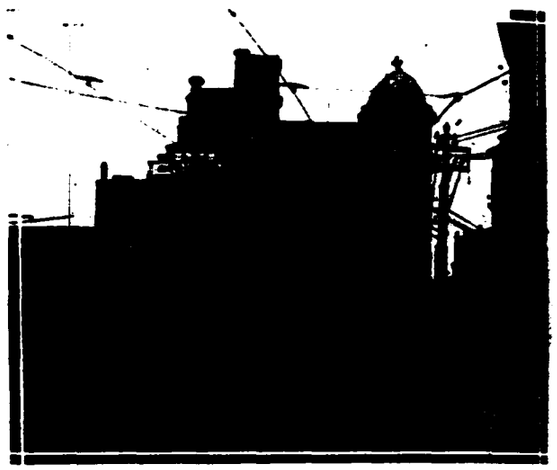
There was no railway communication between Peking and Tientsin, the outlet to the sea, after June 5. The consuls at Tientsin and the admirals of the fleets lying off Taku Bar, 30 miles away, had had conferences but no definite action had been decided upon. On June 16, at a council of the admirals, it was resolved to take steps to preserve the railway and protect the Tientsin community.

On June 17 the Taku forts, guarding the entrance to the Hai Ho, were captured with a loss on the side of the allies of 64 killed and 89 wounded.

Admiral Kempff, the American admiral, took no part in the decisions and proceedings, and on June 14 had

Gen. Li Ping-heng Issuing an Attack Order

informed the British admiral that he was not authorized to initiate any act of war with a country with which his country was at peace, and refused to join in taking possession of the Tangku railway station near the mouth of the river. This action was later approved by President McKinley on the ground that we were not at war with China and that a hostile demonstration might consolidate the anti-foreign ele-



Li Ching-lin's Retreat From Tientsin. The March Discipline is Good

ments and strengthen the Boxers to oppose the relieving column.

The Chinese government took the seizure of the Taku forts as a declaration of war by the united foreign powers and at once opened hostilities. Thereafter, for the first time, armed Chinese troops in uniform openly attacked foreigners; but the question arises whether the taking of the forts was a ground for hostilities, or merely an eagerly awaited pretext.

In the meantime Admiral Seymour's column crossed the Pei Ho on the bridge at Yangtsun, 20 miles north of Tientsin, which was still intact. Here he met General Nieh's troops and, exchanging friendly greetings, passed on. He did not get far, however, for the Boxers had damaged railway tracks and bridges, and the relief troops had constantly to make repairs before they could move forward.

On June 12 they managed to reach Langfang, 40 miles north of Tientsin and about half way between that city and Peking. From there the line was too badly damaged to admit of repairs and the advance was brought to a standstill.

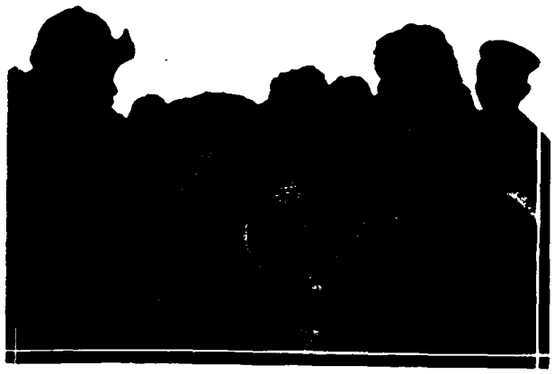
However, the expedition was valuable in one respect. It upset the fallacy that almost any well organized foreign force, no matter how small, could march through China from end to end without effective opposition by the Chinese.

Admiral Seymour's expedition being helplessly blocked at Langfang, it was decided to repair the railway to the rear and withdraw to Tientsin for a reorganization and an advance by river. At Yangtsun, on the return, it was found that the railway bridge had been destroyed and enough native boats to transport the wounded and essential baggage had to be seized.

It seems worthy of note in passing, that just 25

years later an international passenger train, guarded by soldiers of the United States, Great Britain, France, Italy, and Japan, found itself on this same bridge at Yangtsun, between two opposing Chinese armies, with bombs aimed at it from modern airplanes exploding all around.

Meantime (to get back to Admiral Seymour's expedition as a result of the seizure of the Taku forts



Machine Gun in Action in China

the rear guard at Langfang was attacked on June 18 by a force of about 5,000.

Eventually a strong column proceeded from Tientsin to the relief of Admiral Seymour's expedition and brought it in on June 26.

The Peking community, now in a state of seige, was much disheartened at Admiral Seymour's inability to advance and reasoned that if Chinese imperial troops were employed against his column there was a very good chance that they would be let loose against the legations.

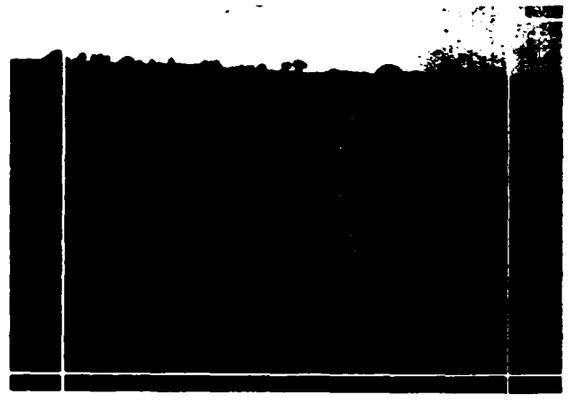
On June 19 the members of the diplomatic body in Peking received identical dispatches from the Chinese government requiring the envoys, with their families, their staffs, the guards, and all foreigners, to leave Peking for Tientsin within 24 hours, and stating that troops would be furnished for an escort. The diplomatic body drew up a note expressing their astonishment at the sudden demand, and pointing out the necessity of a conference in order to settle the details of the march, the form of escort, and the means of transport. The note included a request for an interview with the Chinese officials at 9:00 a. m. the next day.

At 9:00 the next morning no reply had been received and the German envoy, Baron von Kettler, indignantly announced his intention to proceed to the yamen. On his way there he was assassinated by a Chinese soldier in uniform.

This murder struck with horror the envoys and the foreign community in Peking, already shut in their defenses and expectant only of the worst. There was no thought now of leaving Peking under any kind of Chinese escort. Every thought was turned to defense, and every man and woman was determined to continue the defense to the last.

During the day there were no signs of hostility but punctually at 4:00 p. m., 24 hours after the request to leave Peking, the legations were swept by a storm of rifle fire. From this time the foreign community of 473 civilians (245 men, 149 women, and 79 children), the 451 foreign guards, and some thousands of Chinese converts, were subjected to constant assaults by the Boxers and Chinese imperial troops, until the final relief on the 14th of August.

The story of the relief of Peking is more or less familiar to everybody—how the combined foreign forces finally started their advance from Tientsin on August 4; how the Chinese troops were met and decisively defeated at Yangtsun on the 6th; how they were steadily driven back toward Peking; how the foreign troops staggered along for days through the intense heat and finally arrived at the east wall of the city and the besieged heard the joyful boom of heavy guns and the tap, tap, tap of the Maxims; how a battalion of one of the allied forces prematurely advanced in spite of the general plan to concentrate outside the wall and attack in force the next day, and how this caused a general rush forward by all the troops, each group "on its own" and intent only on entering the city first; how the American troops boldly climbed the wall of the Tartar city and how their flag was the first planted on the wall; how the British were the first to enter the beleaguered legations, with the Americans close behind; how the Emperor and the Empress Dowager, disguised as peasants; left the palace in common carts and fled to the Summer Palace and thence to Kalgan and on into Shensi province; how the foreign contingents, 3,000 strong, made a



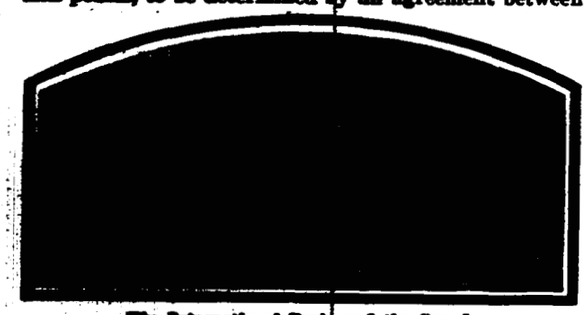
A Chinese Officer Making a Reconnaissance, Accompanied by the Ever Present Bodyguard

triumphal entry into the Forbidden City, cheering one another as they marched past.

The negotiations which ultimately led to the signing of the protocol were not so much with the Chinese government as between the Allied Powers. Eventually, however, the protocol was signed and, among other items, Article IX was included to provide for the safeguarding of the railway for the exit of future harassed envoys.

This article reads, in part, as follows:

"Article IX—The Chinese government has conceded the right to the Powers in the protocol annexed to the letter of the 16th January, 1901, to occupy certain points, to be determined by an agreement between



The International Train and the Guards

them, for the maintenance of open communication between the capital and the sea * * *."

Desiring, however, to avoid as far as possible occasions of collision between the foreign troops and those of China, it was further proposed that the Chinese government should undertake not to march any troops within 20 Chinese *li* (6 2/3 miles) of the city or of the troops stationed at Tientsin, and that the jurisdiction of the commanders of the foreign posts to be established along the line of communications should extend to a distance of two miles on either side of the railway.

These proposals were all accepted and agreed to by the Chinese government in a communication from Prince Ching under date of July 18, 1902.

During the revolution of 1911-1912 the representatives of the Powers found it advisable to exercise the right of military control over the Peking-Mukden Railway from Peking to Shanhaikuan. This latter point is near Chingwangtao, at which port American transports now call. Accordingly American, British, French, German, Italian, and Japanese occupied allotted sections of the railway.

The allotment to sectors was in accordance with resolutions adopted by the diplomatic body at Peking which also provided that:

"Troops should be placed at important stations, bridges, etc., along the line of the railway.

"Both Chinese Imperial and Revolutionist troops are at liberty to utilise the railway line and adjoining piers and wharfage for the purposes of transportation, landing or embarking and will not be interfered with.

"Both parties will be notified to avoid any interference with the railway and to refrain from damaging it in any way. The Board of the Imperial Railways of North China will be requested to maintain at both Shanhaikuan and Tientsin a repair train loaded with suitable materials for repairing damages.

"Any attempt to permanently damage important parts of the line, such as stations, depots, machinery, bridges, etc., will be resisted by the combined forces of the six powers cooperating in the defense of the railway.

"The Board of the Imperial Railways of North China will be requested to always keep ready at Shanhaikuan and Tientsin sufficient rolling stock to transport 250 infantry in order that reinforcements can rapidly be dispatched.

"The telegraph offices are to be protected and telegraphic communication maintained. Chinese troops of either side may use the line.

"Officers commanding posts and patrols should be informed of the conditions and told to do their best, with the forces at their disposal, to carry them out."

Unfortunately it is seldom convenient for Chinese armies moving over the railway to abide by the conditions set forth, and there have been many gross violations, even to the extent of firing upon foreign trains with artillery.

There came into being what are now termed International trains, or Allied trains, which are run during times of railway traffic interruptions.

It has been the policy of most of the foreign governments, more especially that of the United States, to effect the passage of the trains by peaceful means, such as persuasion, expostulation, and bluff, rather than by any show of force. This latter item would in most cases be ineffective anyway because of the small size of military units available.

The trains are made up of a locomotive, a buffet or dining car, a coach for each of the five nationalities composing the train guard (since the World War these are American, British, French, Italian, and Japanese), and a combination baggage car and caboose, all operated by the regular Chinese staff of the railway. Usually several cars of maintenance of way material and equipment are included with the train.

Each of the five nations furnishes a small detachment—usually about 12 men under a lieutenant—and the entire train is commanded by a captain as train commander, who has full responsibility for the guard of all nations and the train and its passengers. The five nations, from their garrisons at Tientsin, take turns at furnishing the train commander, who operates under orders of the senior military commandant—usually the Japanese commander at Tientsin.

On the front of the locomotive are hung the national flags of the guard, that of the train commander's country in the center, and on both sides of each detachment car are hung the flags of the guard occupying it. Passengers ride in the car of the detachment representing their country.

The railway lines are usually blocked with Chinese troop trains endeavoring to get to the front or, as is not infrequently the case, to the rear. The train commander must search out the ranking Chinese officer present and remind him of the "open communications to the sea" provisions of the protocol, and *after* several cups of tea and much talk the track will be cleared—if convenient.

So then, American troops are in China by virtue of the protocol signed 30 years ago, and their mission is to keep the railway open from Peking to the sea.

Conditioning Polo Ponies

By *Captain L. K. Truscott, Jr., Cavalry*

II

This is the second of two articles by Captain Truscott on this subject. In the first installment the author described "condition" and how to recognize it, and discussed the steps to be taken to prepare a string after the winter's rest for the season's play.

Feeding

The principles and methods of correct feeding are generally well known throughout the service, if not so generally well observed. Detailed discussions are available in various service school publications, notably in the Cavalry School publication, *Animal Management*, and in various books relating to the horse. I shall say little on the subject other than to express some opinions of my own and indicate some methods I have used.

The constant aim in feeding should be to increase weight and at the same time keep the horse feeling always fit and healthy. Digestive disturbances should be avoided. Too much freshness—"highness"—is nearly always due to too large a proportion of concentrates, i. e., oats, bran, corn, etc., in his feed and too little work. The more hay the horse gets the better, and ponies are probably at their best when they eat from six to eight pounds of concentrates and twenty-five or thirty pounds of hay per day.

Few ponies require more than ten pounds of oats daily, although I have known two or three that were at their best only when getting as much as sixteen pounds.

Grazing is most important. Grass is one of Nature's best tonics and during most of the conditioning period twenty or thirty minutes grazing each day is most beneficial. It is always good practice to graze for short periods throughout the playing season.

Regular hours for feeding are important as the horse soon accustoms himself to routine and expects feeding at regular intervals. The hours should be adjusted from the beginning to provide regular hours and avoid changes two or three times weekly for games and exercise. The principle of feeding frequently is correct; polo ponies should be fed at least four times a day. For poor feeders, horses that do not eat as much as they should, and for horses suffering from lack of appetite the number of feeds should be increased and the amount given at each feed decreased. Feeding by hand will often entice delicate feeders to eat, when nothing else will.

As previously stated, I do not believe in reducing the horse's feed to save the work of giving him the exercise he needs. At the same time, the feed must be in proportion to the work the horse is performing in order to avoid the danger of injury. Feeding is an art which requires much study and close observation. The best feeders I have known have been enlisted men who loved to feed horses, and who watched them carefully, adjusting amounts and kinds of feed to the requirements of the individual animal.

In general, it is advisable for the owner, or player responsible for conditioning, to indicate generally the amounts and kinds of forage the horse is to receive. But best results are obtained when one man, the stable sergeant, stable orderly, head groom, or a groom specially selected for his aptitude and fitness, is left free, within limits of course, to do the feeding and vary the amounts to meet the requirements of the individual. I have followed this practice for several years with great success. By talking over with the feeder frequently the problems of feeding, I have found that while in some cases I have been able to help him with advice, in most cases he has known more about the requirements of individuals than I could possibly know without actually doing the feeding myself for a long period of time.

Water

Water has a most important place in the conditioning of polo ponies. Thinness in horses,—failure to gain in weight,—is more often than not due simply to a lack of sufficient good, fresh water. Good, clean, fresh water should be kept in the stall and accessible to the horse at all times. Even with water in the stall at all times some horses will not drink as much as they should. I have, therefore, adopted the practice of watering at a trough before feeding hours in addition to keeping water in the stalls and have found this most effective in enticing backward horses to drink.

Stabling

In most cases, particularly in the army, we can have little to do with the planning and construction of stables, but must make the best of what we have.

If possible every horse should have a good sized box stall, high enough to prevent fighting or annoyance between horses in adjoining stalls. Cleanliness, plenty of light, and plenty of good fresh air are the principal considerations. There should be a good thick mat of bedding spread over an even surface. Bedding can easily be too thin, but rarely will it be too thick.

The horse is a gregarious animal and if observed at pasture it will be noted that horses form attachments and usually pair off. It is a good plan to stand horses that are attached to each other in adjoining stalls, and in any case, horses that are not compatible should never be stalled next to each other.

Grooms

Needless to say, grooms should be men who love horses and who like to be around stables. In a cavalry regiment such men are not difficult to find. While the hours are long and the work hard and fatiguing, men who like the work will make real sacrifices to stay

around a polo stable. I have had men who refused promotion to stay, and had one man who gave up a much easier job which paid him fifteen dollars a month extra pay, in order to return to the polo stable. His sacrifice is appreciated when a private's small pay is considered.

Ponies should be groomed twice daily. Grooming should be done either with the hands or a soft brush. A fiber brush of the "Dandy" type is excellent. The comb should be used only to clean the brush, or if the hoof pick is attached, to clean the feet. Hand rubbing is the best method of suppling the skin, and maintaining a fine, smooth, glossy coat.

One groom can successfully care for and exercise three ponies. Except under exceptional circumstances more should not be required of him. The stable should be in charge of a selected man whose duties are those of supervision and administration.

Grooms should be shown every possible consideration. It should be remembered that they are the men who live with the horses, and if properly approached and drawn out will frequently give the rider valuable information concerning individual horses.

Care of Feet. Shoeing

Probably more troubles affecting polo ponies arise from conditions of the feet than from all other causes. It is of the utmost importance that the feet be as healthy and as near normal as possible at the beginning of the season. Feet should be given attention at the end of the season, and should be inspected, trimmed and levelled at least once a month during the winter months.

At the beginning of work for conditioning, the feet should be levelled, but shoeing should be deferred as long as the necessities of work permit. Shoeing with rim steel and light polo shoes of that kind, is the source of much trouble because the light construction affords the minimum of protection, and under the best of conditions damages the foot. We should not shoe with rim steel, therefore, until necessary for play.

Shoeing the polo pony presents a different problem from that of shoeing the general purpose horse. Few horseshoers, even the good ones, will turn out a good job of polo shoeing unless they are closely watched. The habitual tendency is to leave the heels and toes too long, with too much expansion in the shoe, and with the heels of the shoe too long. The first is due either to ignorance or laziness. It results in lifting the frog so that contact with the ground is impossible and when it is remembered that the polo pony does a large part of his work on hard ground, it is readily apparent that such shoeing is bound to result in contracted heels, diseased frogs, and perhaps lameness. If too much expansion is left in the shoe at the quarters, or the shoe is left as long as in the normal shoe, many pulled shoes are the result, and every pulled shoe results in damage to the hoof that time only can repair. Polo ponies must be shod more frequently than hunters and hacks, because a lighter shoe is used and the shoe is fitted more closely. Individuals vary, but generally not less than three, nor more than four weeks, is about the average period between shoeings.

Feet should be kept moist, the horn springy and pliable. Exercise on wet ground, or when dew is on the grass is excellent. Painting the heel, frog, and sole with pine tar, or packing with white rock, or other good sticky clay is excellent, and good results have been obtained in stubborn cases by doing both. The soak stall is useful, and particularly beneficial when feet are feverish.

Too much attention cannot be paid to the feet of the polo pony, and the care given will pay big dividends in performance.

Care of Legs and Tendons

Next to the feet, injuries to legs and tendons cause more trouble in polo ponies than anything else. The first essential is to harden legs, tendons, bones and ligaments, by plenty of slow work. The next essential is to eliminate as far as possible the danger of injury to legs and tendons from banging with the stick, excessive concussion by stopping them short when not in condition, and dangers resulting from poor bandaging. A great many more filled tendons are the result of working in boots and bandages that are too tight than is generally realized.

Boots and bandages should never be left on longer than necessary. After play, the legs should be rubbed down thoroughly. I have used cold packs, and packing all legs in white rock, as a rest and to reduce inflammation, with great success. Packing them all cannot hurt them, and after fifteen or twenty minutes jamming about on hard ground most ponies legs are tender and sore and need such treatment. This procedure should be a matter of routine.

Mouthing. Suppling

Too often when thinking of condition we neglect the mouth. Inasmuch as the mouth gets as much battering as any other part of the playing pony, and probably in most cases more, it should receive attention just as other parts of the animal.

It is advisable to have walking and trotting exercise done in snaffle bridles. Galloping and schooling should be done in a playing bit. When galloping and schooling for suppleness is begun, the mouth and jaw can be brought gradually into condition. Needless, to add, bitting is most important. Not only should the bit fit the horse's mouth, but it should be the lightest and mildest bit in which the pony will play.

Conclusion

I have outlined generally, and rather hurriedly, some of the points important in conditioning mature polo ponies, and have tried to indicate the manner in which I solve the problem. Infirm and unsound horses have not been considered, it being assumed that horses continue in good health throughout. Infirm and unsound ponies present a special problem, which differs with the individual and the degree of the infirmity. Suffice it to say, that they should be given as much work as they can stand, fed proportionately, and the time allowed increased accordingly.

I do not pretend to be an expert, and realize that there are many men far better qualified to discuss this subject than I am. If the ideas expressed are of any value to polo players I shall feel amply repaid for my labor.

Outline of Illustrative and Suggestive Schedule

This outline is intended to be suggestive only. Work must be graduated according to the needs of the individual horse. Observation of individual horses and their response to diet and exercise determine the amount given, some will require more, some less than the amounts indicated. Horses conditioned along lines indicated should be fit for play at the end of the eighth week, and if the first few games are utilized as a further test and an additional conditioning, the pony should play on through the season with about 1½ to 2 hours walking daily, and an occasional period of schooling, between games.

1st Week. Bringing in from pasture. Clipping. Trimming and levelling feet. Accustoming to stable routine, etc.
Feed: 3-4 pounds oats bran and chop in four feeds. All the hay they will eat. Hot bran mash every night.

2nd Week. *Exercise:* 30 minutes to 1 hour gentle walking outdoors. Grooming twice daily.
Feed: 4-6 pounds oats, bran and chop in four feeds. All the hay they will eat. Hot bran mash at end of week. (From this time on feed hot bran mash once a week except in special cases.)

3rd Week. *Exercise:* 1 to 1½ hours walking out doors. Grooming twice daily. Attention to feet, beginning shoeing if necessary.
Feed: 6-8 pounds oats, bran and chop in four feeds. All the hay they will eat. As soon as grass is available, graze 20-30 minutes daily throughout conditioning period, except in special cases.

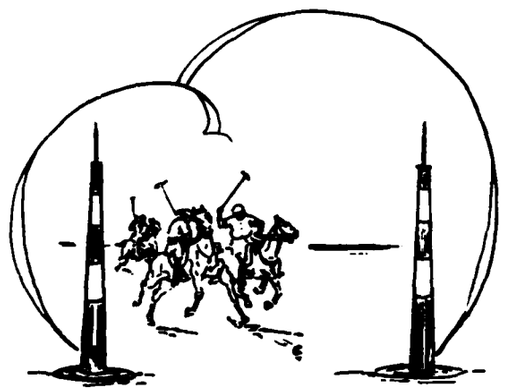
4th Week. *Exercise:* 1½ to 2 hours walking daily, broken by one 10 minute trotting period. Grooming twice daily, as matter of routine.
Feed: 7-10 pounds oats, bran and chop in four feeds. All the hay they will eat. This approaches normal feed during remainder of conditioning period and playing season, and from this time on feed is varied in accordance with needs of the individual animal only.

5th Week. *Exercise:* 2 to 2½ hours at the walk, with two periods at the trot, 10 minutes each. Begin schooling, including gallop of 5 minutes.
Feed: As before.

6th Week. *Exercise:* 2 hours walking broken by two periods of 10 minutes at trot. Gallop 5 minutes. Schooling under saddle for suppling and condition every other day, including walk, trot and canter, 20 to 30 minutes, of which at least 5 minutes is at the canter, with short burst of speed.
Feed: As before.

7th Week. *Exercise:* 2 hours walking broken by two periods of trotting 10 to 15 minutes. Gallop 5-10 minutes. School under saddle every other day 20-30 minutes with 10 or 15 minutes at the gallop. Short burst of speed.
Feed: As before.

8th Week. *Exercise:* 2 hours walking broken by two periods of trotting 15 minutes each. Gallop. 10 minutes. Schooling under saddle daily, 20 to 30 minutes. several bursts of speed.
Feed: As before.



Militarist or Pacifist?

Lieutenant Colonel John W. Lang, Infantry

ON July 23, 1929, Mr. Hoover issued to the Press a statement which brought forth millions of words of news and editorial comment. Almost unanimously, editors applauded the idea of economy and retrenchment. Some few writers saw in the announcement only an order for a meticulous and destructive survey of the Army with a view to wiping out some branches and reducing it in strength; but the majority read more than the headlines and saw those significant words, "At the same time maintain completely adequate preparedness; Such an investigation to be constructive and not destructive."

The keynote of the President's statement was economy, but of far more importance to the nation was his insistence that the United States maintain a completely adequate defense. In this he is no different from that Arch Priest of economy, Mr. Coolidge, who, too, is a firm advocate of adequate national defense.

In its 1928 platform, the Republican Party renounced "war as an instrument of national policy," and pledged the maintenance of a Navy in the ratio provided in the Washington treaty; the Democrats declared for outlawry of war, protection of American lives and rights, "abhorrence of militarism, conquest and imperialism," and maintenance of an Army and a Navy adequate for national defense.

Here is a confusion of ideas and of terms. The Republicans insist on a big Navy, but renounce using it. The Democrats outlaw war, yet will protect American lives and rights; they abhor militarism, yet favor maintaining an Army and a Navy adequate for national defense.

One wonders how American lives and rights are to be protected. Why keep an Army and a Navy adequate for national defense unless they are intended to be used for defense in the event of an attack? How do these square up with the outlawry of war? What do they mean by militarism?

Mr. Hoover is not so ambiguous. In the language of the street, he says, in effect, "We are a peaceful, easy-going family. We abhor fights and want to avoid them. But if anyone imposes on us or on our children, or seeks to trespass on our rights, he will have to answer to us. We maintain watch dogs, lock our doors, bar our windows, and keep a loaded gun in the house. We want peace and we are willing, if necessary, to fight for it."

The numerous public utterances of our chief executives with reference to preparedness are unmistakably plain and sure to bring forth accusations of "militarism" from those citizens who refuse to admit the fact that the prime object of government is the protection of the people who set it up. Certain organizations can prove to paste the label "militarist" on anyone who favors the maintenance of an Army and a Navy.

The careless misuse of these terms *militarism* and *militaristic* to describe the spirit of nationalism, as opposed to the socialistic, or the internationalistic and the individualistic viewpoints, is becoming more common. The individualist refuses to recognize the necessity of the struggle between classes and the struggle between nations, even though these struggles be for their very existence. The socialist fails to recognize the importance of competition within groups and sees little but the united forces of one class facing those of another. He believes that the mutual interest of classes throughout the world are or should be powerful enough to break down national boundaries and to make struggles between nations impossible in the future. He is an internationalist. In his effort to wipe out national boundaries he blinds himself to the dangers of civil wars and other domestic disturbances. The conception of history held by the individualist and the socialist has been bluntly expressed by a brilliant economist as "all history is either a struggle for the feeding ground or a struggle for a share of the fodder." The nationalist, on the other hand, reads history as a record of struggle between political groups, races or nations, and looks upon the problem of national existence, expansion, and supremacy as the vital concern of mankind.

Each of these views has its element of truth and its utter disregard of the significance of the others. Their adherents hurl the epithets Pacifist, Red, Militarist, Jingo, and Slacker at one another with self-righteous zeal.

Back in the "Days of the Empire" in Manila, the writer was arguing with a 100 per cent Spaniard on the relative merits of the Spanish and English languages. After much skirmishing back and forth the Don, who was Professor of Spanish in the Manila High Schools, brought up his shock troops in the form of this statement: "Ah señor, but your English is constantly changing, the word of the last century, or even of last year, means a different thing to-day. 'Let' used to mean 'to hinder', and now it means just the opposite. The Spanish of Cervantes is the Spanish of to-day."

There was no real answer to be made to that, but the flippant reply: "Yes, that shows conclusively that English is a live language and that Spanish belongs with Latin and Greek, among the dead languages," so filled the Castillian with sputtering rage that the argument ended then and there.

There is much in what the Professor said. In the United States the noun "loan" has become a verb, almost supplanting the perfectly good and adequate

"lend." Many words which formerly bore no derogatory inference, have become epithets to be hurled at the head of anyone who differs from our viewpoint.

Green shades off imperceptably into blue at one side of the spectrum and yellow at the opposite. Green is neither blue nor yellow, though it is both. Blue has many symbolic connotations which vary from low in spirits to the poetical symbol of freedom. Yellow applies to richness as well as to cowardice.

So, too, have Pacifism and Militarism many connotations. Like propaganda, through loose usage they have become terms of reproach. Each has many shades and combined they produce many variations of thought.

The statesman should have a bit of both. He should be an advocate of arbitration as a means of settling international misunderstandings, yet he should be disposed to provide for the strength and safety of the country by maintaining adequate military force. He should heed the words of John Adams, who in his Fourth Annual Address to Congress on November 22, 1800, said, "We cannot, without committing a dangerous imprudence, abandon these measures of self-protection which are adapted to our situation and to which, notwithstanding our pacific policy, the violence and injustice of others may again compel us to resort." The statesman should weigh the costs of war and preparation against it in the balance against the probable costs of defeat and the loss of our hard-won liberty and prosperity, just as the business man weighs the costs of insurance premiums against the value of his property and the risks to which it is subjected. He must remember that the friend of to-day may be the adversary of tomorrow.

Thus we see that the ideal statesman has in his mental make-up the thoughts and qualities which will prompt one group of extremists to call him "Pacifist," and another group to hurl at his head the opprobrious name "Militarist."

Thus is indicated how, in our living language, the contradictory terms pacifism and militarism are loosely used, even to the extent of being applied to the same person for an identical act. To Webster the terms are antonyms.

It may be well to analyze Webster's definitions of militarism and militarist. He says, "Militarism. 1. A military state or condition; disposition to provide for the strength and safety of a nation or government by maintaining strong military forces. 2. The spirit and temper which exalts the military virtues and ideals and minimizes the defects of military training and the cost of war and preparation for it, often used derogatorily of the spirit which tends to confer undue privilege or prominence on the military class:" and, "Militarist. 1. An expert in military matters. 2. One who is imbued with the spirit of Militarism."

In the first part of this definition of militarism, everything seems to hinge on the adjective *Strong*. By what standard does one measure the strength of a military force? Is it a matter of numbers, of training, of armament, or of a combination of these? In the matter of numbers, is it numbers in relation to the size of other armies, or in relation to population, national wealth, national expenditures, or territorial expanse?

Our Regular Army is as well-trained, armed, and equipped as any other army. In point of numerical strength, the official figures for the year 1927, at the bottom of this page, show how it stands.

An intelligent analysis of this table shows that the United States has a relatively small army—smaller in actual numbers than that of any other world power except Germany, and smaller in relation to wealth, population, area, and cost than any other. Its cost is less than one-third that of Germany's in proportion to national wealth.

Our small Regular Army is spread over the continental limits of the United States and in our far-flung outpost line in the Pacific and in the Caribbean. Our troops are stationed in Alaska, Hawaii, China, the Philippines, Porto Rico, and the Panama Canal Zone.

As to costs, over 60 per cent of the 1927 War Department budget expenditures went for the pay of the Army and the salaries of the great number of civilians employed by the Army in river and harbor work, on the Panama Canal, in the administrative and supply services, in production, and in other lines. A considerable part of the remainder went for food, forage, shelter, transportation, fuel, clothing, and equipment. The total sum of 310 millions went back into circulation and increased our national prosperity. The money was spent by the United States for operations managed by public authority, rather than for operations managed by private enterprises. The importance of army expenditures in the business of the country is indicated by the fact that any attempt on the part of the War Department to remove our troops

Country	No. in Regular Army	Soldiers per 1000 population	Soldiers per 1000 sq. mi., U. S. proper	Soldiers per 1000 sq. mi., including dependencies	Soldiers per billion of natl. wealth	Cost in % of natl. wealth	Cost in % of total Govt. expenditures
United States	126,308	1.06	42	36	299	.06	7.1
Great Britain	213,919	4.78	2,261	39	1,945	.23	8.2
France	517,230	12.69	2,432	145	8,397	.36	11.5
Italy	236,286	5.62	1,974	195	7,876	.36	27.2
Germany*	100,000	1.60	550	550	1,818	.20	5.2
Japan	180,000	2.88	1,219	806	4,186	.25	12.3
Russia	596,100	4.07	73	73	18,821		

*Germany is limited to 100,000 by the Versailles Treaty.

from any locality is immediately and vigorously opposed by the business men of that locality.

Under the second part of the definition of militarism I may be accused of being militarist for what may appear to be an attempt to minimize the cost of preparation against war. Actually, the costs of preparedness are not costs of preparation *for* war; the costs are premiums on insurance *against* war, as effective an insurance as it is possible to attain, certainly more effective than a reputation for weakness. Our Army has always been the vanguard and pioneer of civilization; it carried not only order but the framework of civilized living, such as roads, bridges, and safety, far out across the plains. It carries on many activities which are of great value in peace, and which would not be developed save for the Army. The money we spend on our military establishment is not only well invested as insurance against aggression, but returns us profits for peace.

In this analysis of the definition of the term militarism, we must take cognizance of the fact that the War Department is performing the task given it in the National Defense Act of 1920, namely, to perfect plans for industrial mobilization and plans for meeting every conceivable military situation which might confront us in the event of a national emergency. Consequently, the Army is training in offensive as well as defensive warfare—not as an aggressive asset, but as an effective means of defense. The soldier and the civilian realize that the best defense is an effective offensive. The defensive attitude is assumed only as a makeshift and always with the assumption of the offensive in view. Only in that sense is the Army preparing *for* war. The main idea is to have a military strength sufficiently powerful to discourage any nation with whom we may be in dispute from resorting to force or threat of force in its dealings with us, for "A defenseless position and a distinguished love of peace are the surest invitations to war."

The amount of money we have spent on our past wars is colossal. More than $6,000,000,000 have been paid in pensions to Civil War veterans and their widows. Preparedness did not cause the Civil War, nor could it have caused it, but unpreparedness was a contributory cause and an important factor in its duration, and, therefore, its ultimate cost in lives and treasure. These $6,000,000,000 and many others are chargeable to our system of government and to our lack of a definite and supported military policy—to unpreparedness. But, after all, regardless of to what they are charged, were not the preservation of the Union and the numerous by-products worth many times the money?

Military training, like everything else, has its defects, but it has its virtues too. The motto of West Point, "Duty-Honor-Country," is the motto of the Army. These are its ideals, and history shows that the American Army has always lived up to them. Army men are proud to exalt these ideals and are justly proud of such virtues as they possess. They are proud of the fact that when any job out of the ordinary, one requiring skill and integrity, for which there is no established agency, has to be done by the Government, the Chief Executive usually calls on the Army. In flood, in disaster, in exploration, in building the Panama Canal, and even in diplomacy, it has been the Army. Possibly the duty has not always been performed as efficiently as others might have performed it, but the stern fact remains that the job has always been well and honestly done.

Professor William James of Harvard, a self-styled pacifist and anti-militarist, in his "Moral Equivalents" published in February, 1910, in *The Documents of the American Association for International Conciliation*, said:

"We must make new energies and hardihoods continue the manliness to which the military mind so faithfully clings. Martial virtues must be the enduring cement; intrepidity, contempt of softness, surrender of private interests, obedience to command, must still remain the rock upon which states are built—unless, indeed, we wish for dangerous reactions against commonwealths fit only for contempt, and liable to invite attack whenever a center of crystallization for military enterprise gets formed anywhere in their neighborhood.

"The war-party is assuredly right in affirming and reaffirming that the martial virtues, originally gained by the race through war, are absolute and permanent human goods. • • • Men now are proud of belonging to a conquering nation, and without a murmur they lay down their persons and their wealth, if by so doing they may fend off subjection."

Except, perhaps, during war, undue privilege and prominence have never been conferred on the military class in the United States. The army officer lives what Mr. Taft is reputed to have called "a life of genteel poverty."

Webster's definition of militarist covers much ground. Every army officer would be pleased were he to merit the term under the first definition. The second definition strikes the same snags as does the definition of militarism.

According to Webster every efficient officer may be called a militarist; and Switzerland, one of the most peaceful and respected countries in the world, may be termed a militaristic nation, for the Swiss have a disposition to provide for the safety of their nation by maintaining a strong military force. Every Swiss, unless physically disqualified, receives military training. The Swiss federal army comprises all men from the age of 20 to 32 who are able to bear arms. The militia is made up of those from 32 to 44. In addition, every citizen between the ages of 17 and 50, not otherwise serving, is liable to call in time of war. Though she is completely surrounded, Switzerland has not been forced to call upon her military power for her defense since the end of the 15th Century, though her troops were mobilized during the World War for possible use.

Through an abhorrence of what they term militarism, and without any actual conception of just how

it affects a proper consideration of adequate preparedness, the eyes of many are blinded to fact and their minds are closed to reason. Military autocracy is their bogey man. We are all agreed that the placing of military authority over civil authority, or the subordination of the ordinary processes of government to military authority or influence, is not only highly undesirable anywhere, but in this country is absolutely impossible. On the other hand, reasonable, sensible precaution of a military nature is a preventive of that autocracy which was popularly associated with the Prussian military caste, and which some call militarism.

The victory of the Allies in 1918 saved the world from Prussian domination, from military autocracy—militarism, if you prefer the term. Those who fear that type of rule should be the strongest supporters of the policy of an adequate state of defense, for our only danger from military autocracy comes from without. Lord Bryce, who knew the United States, wrote:

"There is in America no military caste thinking of war and regarding war as its natural occupation. The officers of the Army and the Navy keep themselves strictly apart from politics. They are professional in spirit, highly trained, proud of their training, many of them men of great ability and technical competence, respected and trusted by the nation. They do not desire war, nor long, as soldiers and sailors did in Prussia and Austria • • • for opportunities of displaying their capacity in action. *America is the only great country in which the fighting services are exempt from all that is expressed in the single word 'militarist.'*"

Some profess to see in the Citizens' Military Training Camps and in the Reserve Officers' Training Corps a "blue menace" and an effort on the part of the War Department to promote a hated "militarism." Their imaginations have usurped the functions of judgment. They ignore the fact that a fundamental purpose of the training received in the Citizens' Military Training Camps and the Reserve Officers' Training Corps is to discipline mind and body. Discipline is the enemy of broils and a preventive of quarreling. The Citizens' Military Training Camps and the Reserve Officers' Training Corps teach respect for proper authority, strengthen self-respect, develop alertness and self-reliance, increase patriotism and regard for the rights of others, promote physical and moral courage, teach observation and prompt decision, break down caste and make for true democracy, give stamina and virility to the manhood of the country, make the individual healthier and more efficient, and thus increase the collective wealth of the country. Mr. Hoover, on October 13, 1928, said, "They [the C. M. T. C.] offer an exceptional opportunity to the young men of the country for a training which leads to vigorous health, physically, mentally and morally. • • • I look with hope and confidence to their continued and increasing usefulness." Can any clear-thinking, rightminded American citizen seriously question the benefits to be derived by the nation from this military training?

The Defense Tests were derided as being a scheme to make us a nation in arms! The author of a text book on American history used in many of our high schools and colleges, wrote, in an article entitled "The Menace of Patriotism" in *The Standard* of February 1915:

"What an irreparable calamity for the cause of human progress if just at the moment when the nations were chastened by unparalleled misfortune to a point where they might listen to the entreaties for disarmament, our country should be found absorbed in the business of increasing its battalions, its fleets, and its guns! • • •

"Our danger from a foreign foe is hypothetical.

"I for one say: Better go down to defeat with the flag of American idealism flying, if invasion should come, than win under a banner besmirched with the blood of men sacrificed to the ambition of a defiant nationalism."

What is a "defiant nationalism?" Is it not that love of country which impels men to fight for the flag.—is it not that spirit of providing for the national defense which some call militarism? What is meant by "American idealism" is not clear.

Just five months after Dr. Muzzey's "The Menace of Patriotism" appeared in *The Standard*, Colonel E. M. House wrote to President Wilson: "I wonder, too, whether we did not make a mistake in not preparing actively when this war first broke loose. If we had, by now we would have been in a position almost to enforce peace. *If War comes with Germany, it will be because of our unpreparedness and her belief that we are more or less impotent to do her harm.*" To-day thinking Germans admit the truth of this statement.

Let us look at the other extreme. Pacifism, as defined by Webster, is that spirit or temper which is opposed to the employment of force as a national policy in any and *all* circumstances. Those who support a policy of non-resistance, the advocates of such a pacifism, conveniently forget that the Prince of Peace used force on the memorable occasion when He drove the traders from the temple and violently upset the tables of the money changers. Those who do not forget this instance adopt the specious argument that this was the only instance in which Christ resorted to force. The fact that this is the only record of an instance in which He employed force does not weaken its lesson. There was but one Sermon on the Mount and but one Crucifixion, yet the fact that they are single instances does not weaken their lesson.

Militarism, in the sense used by advocates of the non-resistance type of pacifism, is a state of mind. Mr. Coolidge rightly said on Armistice Day, "We can have military preparation without assuming a military spirit." The size of the military force of a nation, in proportion to its population, or in other respects, does not make that nation combative and overbearing—or Switzerland would be one of the most aggressively pugnacious countries of the world. The United States, no matter how big our Army and our Navy, could never be militaristic—the temperament of our people and our ideals forbid.

Most of us love our country, we are devoted to its welfare, we want to serve it—not only because it is our bounden duty as members of the body politic, but because we deem it a high privilege to give our personal service in return for the benefits and blessings we receive as citizens. We consider ourselves honored when we are called patriots, even though some of the selfstyled cognoscenti ridicule the term.

Most of us are not internationalists because we realize that world peace can not be guaranteed merely by the friendly association of all nations on a basis of equality and without sacrifice of national character. We know that all men are not equal, mentally, morally, or physically; nor are all nations equal. In any conference of nations, is the same importance given to the statement of the Andorran delegate as to the statement of the French delegate? In the League of Nations, have all nations equal voice and influence? To come closer home—are the statements of John Doe, bank messenger, received with the same attention as those of J. Pierpont Morgan? Certainly not!

We are all pacifists—in that we all want peace. We differ among ourselves only as to the means whereby peace may be preserved. Having seen enough of war and wanting no more of it for ourselves or for succeeding generations, we are heartily in favor of any workable scheme which promises an enduring peace—as long as it is a sane scheme which takes into consideration human frailties and human ambitions. The citizen who is worthy of the name desires peace and abhors war as much as does the professional pacifist, but he insists that we face conditions as they exist.

Between the two extremes—non-resistance, called "pacifism," and defiant aggressiveness, called "militarism," both of which are absurd and pernicious—lies the great middle ground on which we find ourselves. As a people, we are peaceful; we have no inclination to exert armed force against others, and yet are ready and willing to resort to force if necessary to retain our honor, our liberty, and those institutions which are our heritage from a virile ancestry.

Perhaps, some day, when the prophecies of Isaiah and Micah come to pass, when men and nations are actually equal in fact as well as in theory, we may safely beat our swords into plowshares, abandon our pride in race and in country, and really love our alien neighbor as ourselves. But unfortunately that day is not to be in this generation; stern realities prevent. As Mr. Coolidge said, "It is equally plain that reason and conscience are as yet by no means supreme in human affairs. The inherited instinct of selfishness is very far from being eliminated: the forces of evil are exceedingly powerful."

Wisdom and the hard learned lessons of history prompt us to heed Joel's admonition and beat a few of our plowshares into swords and some of our pruning hooks into spears, at least enough to insure completely adequate preparedness. For we believe with the Saviour that "when a strong man armed keepeth his palace, his goods are in peace"—his material goods, his ideals, and his institutions.

Some Experiences and Impressions of a 2nd Lieutenant of Cavalry in the Santiago Campaign

By Brigadier General S. D. Rockenbach, U. S. Army

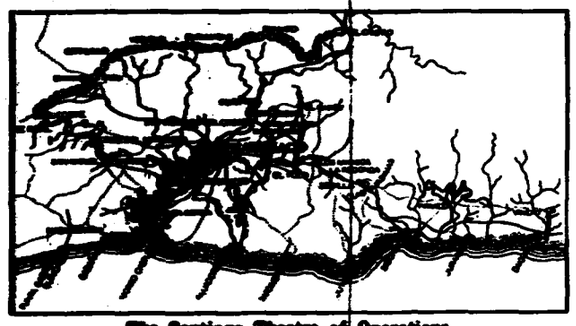
ON the declaration of war with Spain my regiment, the 10th U. S. Cavalry, commanded by Colonel Guy V. Henry was stationed at Fort Assinaboine, Montana. The order came promptly for the regiment to proceed to Chickamauga Park, where we arrived early in May. At that time only regular Cavalry and Artillery were in the Park. The friendships and animosities formed and engendered during the Civil War and subsequent days in the west, were very pronounced and evident. The senior colonel of Cavalry, Colonel Arnold, commanded the division, and our brigade was commanded by Colonel Noyes of the 2nd Cavalry. I recall very vividly while riding one day with Colonel Henry, seeing Colonel Noyes thrown from his horse and on getting to the scene of the accident, Colonel Henry dryly remarked, that "Noyesy Boy" was out of the war and he would assume command of the brigade. However, the brilliant group of staff officers with Colonel Noyes held him in command of the brigade and Colonel Henry remained in command of the regiment for some days longer, when he was made brigadier general of Volunteers and I was appointed aide, being relieved as quartermaster of the regiment by First Lieutenant John J. Pershing, who had just reported for duty from the Military Academy.

Early in May General Henry and I arrived at Tampa where he was assigned to an infantry brigade. The confusion and turmoil around the Tampa Bay Hotel, had not infected the troops, but the scramble for jobs to get into Shafter's Expenditionary Force was very lively. It soon became evident that there was a surplus of general officers and I was sent by General Henry to see General Sam Sumner and see if it could be arranged for General Henry to get a brigade composed of the 10th Cavalry and the Rough Riders. Before this arrangement could be effected, Shafter issued an order assigning general officers to their brigades and divisions, in which Henry was left out of the 5th Corps and assigned to command the First Division of the 7th Army Corps, with headquarters at Ybor City. The effort was continued to get into the 5th Corps which at that time was destined to go to Tunas, on the south coast of Cuba, with the object of establishing a base, arming and equipping Garcia's 10,000 men and preparing the way for the major operations which were planned to take place in October. Some five hundred Cubans were being trained by our officers. Colonel Dorst and Captains Carter and P. Johnson were sent with expeditions to Cuba to get in touch with the Cubans' organized forces and gather information. General Nelson A. Miles had also sent Captain Rowan to Cuba and Lieutenant Whitney to Puerto Rico to get information on which to base plans.

It was estimated that the available transports could carry some 25,000 men and Henry succeeded in having the First Division of the 7th Army Corps attached to the 5th Corps as the provisional division of that corps and was ordered to hold itself in readiness to accompany General Shafter's force. However Schley's report of the arrival of Cervera's fleet in Santiago Harbor changed the plan of campaign and Shafter was ordered to proceed at once to Santiago, capture the garrison there and assist the Navy in capturing the Spanish fleet, with a minimum force of ten thousand. It was then found that the transports available at Tampa could not accommodate the provisional division and it was ordered to remain at Tampa.

The horses and orderlies of the Division had been put on board the *Florida* and I was ordered to get them off. With considerable difficulty I got authority from Colonel Humphrey to bring the *Florida* into the dock and take our horses and baggage off. She was brought in and just after tying up at the end of the dock, the *Miami* which was attempting to enter the canal, became uncontrollable and cut the *Florida* down to the water-line, thus knocking her out of the expedition at a critical time. The 5th Corps, reinforced by Bates' Brigade which had arrived on transports from Mobile, departed with a total of less than 17,000 officers and men.

No sooner had General Shafter got on board his transport than General Henry got busy to get into the expedition. After the passage of several telegrams between him and the White House, he left Tampa, without authority, as General Comppinger who succeeded to the command of the United States troops at Tampa informed me, and went to Washington. I felt very much relieved the next day to read in the paper that on the day of his arrival he dined with the President. The following day I got orders to proceed with headquarters, the adjutant, Captain George B. Duncan, U. S. V., horses and baggage to Newport News, where he, General Henry, would receive a division from the troops at Falls Church, Virginia and then proceed to the scene of activities. At that time we did not know whether our destination would be Santiago, or Puerto Rico. General Miles had received on the 6th of June a telegram calling for a report as to the earliest moment he could have an expeditionary force ready to go to Puerto Rico, large enough to take and hold the island, without using any of the force under General Shafter. Shortly after arrival at Newport News troops began to arrive from the camp at Falls Church, Virginia, and I was instructed to communicate with the Navy and have them placed on board the *Mississippi* and the cruiser *Columbia*. On



The Santiago Theatre of Operations

July 4th we received reliable information as to the destruction of Cervera's fleet. Shafter's cablegram of the 3rd of July to the Secretary of War urged that Sampson force the entrance to the harbor of Santiago and proceed to the upper bay, stating that if this was done he could take the place in a few hours but "if the Army is to take the place, I want fifteen thousand additional troops speedily." This decided the War Department to send General Miles to Santiago, Cuba, and he embarked at Charleston on the *Yale* on the 7th, accompanied by the cruiser *Columbia*, and proceeded to Santiago.

I remember the 4th of July very vividly in Newport News. In my supervision of the embarkation of the troops I lost touch with General Henry's other operations and that night was astonished to learn that we would proceed to Norfolk, thence on the Old Dominion steamer to New York City, where we would find the 8th Ohio (The President's Own) on board the *St. Paul* and would proceed at once to Santiago. I got aboard the *St. Paul* feeling very much like the center of a defeated football team and cursing the politics and questioning the judgment of the men in my regiment who had advised that I had the best chances of experience in the war with General Guy V. Henry.

We found the *St. Paul* commanded by Captain Sigsbee, with Lieutenant Gilmore as Navigating Officer.

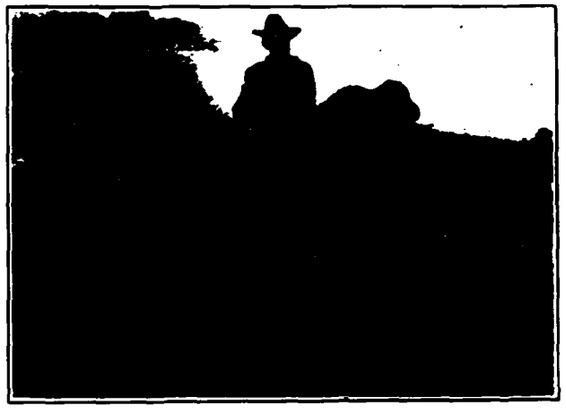
At New York First Lieutenant E. L. Patterson, Squadron A, New York National Guard, who proved a very valuable officer, and Major Mills, Adjutant General Department, Texas National Guard joined.

The 8th Ohio, which we found on board the *St. Paul*, commanded by Colonel Charles Dick, was the best National Guard or volunteer regiment that I came in contact with during the war. Its personnel had been carefully selected, it was well trained, and its discipline and morale were high. General Henry was enthusiastic over it and repeatedly told his staff that if the war developed beyond the ability of the small regular army to handle it would have to be won by such troops as the 8th Ohio. "Learn them," he urged, "and as soon as you know them and get their confidence and support, you have the finest troops in the world." As a consequence, when I thought of "my regiment," it was my old regiment and the 8th Ohio. Our relations were always cordial.

The *St. Paul* was not able to get away until about dusk and gave us plenty of thrills in the zigzagging through our mine field at the entrance of the New York Harbor. We steamed at the maximum rate of the good ship, with accommodations that equalled the best ocean liners had at that time. The *St. Paul* was heavily armed and her crew was proud of the fact that in an engagement off San Juan, Puerto Rico, her guns had sunk a Spanish torpedo boat. Our trip was uneventful except for encountering a German tramp which delayed displaying her colors until the *St. Paul* manned her guns and fired a shell across her bow. From the naval officers and the ship's charts we obtained much valuable information of Cuba and Puerto Rico. We arrived off Santiago before daylight the morning of July 10th. The spectacle presented to us was magnificent. Sampson's squadron, probably the most powerful in the world at that time was slowly steaming from about three miles east of the entrance of Santiago Harbor to about three miles west with its scout ships off Guantanamo and Cabo Cruz and to the south for the purpose of warning neutral ships to keep away.

Captain Sigsbee reported to the flag ship, the *New York*, Commanded by Admiral Sampson. On the request of General Henry, Captain Sigsbee moved off Siboney and set me ashore to communicate with General Shafter. I wired the arrival of General Henry and the 8th Ohio with 1300 men and requested instructions. In a short time I received the following telegram; "General Guy V. Henry, Siboney—Commanding General directs you to disembark your division as rapidly as possible and send your troops forward by regiment, supplied with three days rations in haversacks. 100 rounds of ammunition and blanket roll shelter half. Your troops are much needed at the front." I returned to the *St. Paul* delivered the order and was directed to get headquarters and baggage ashore. We had acquired two orderlies from the 8th Ohio, nephew of President McKinley, Privates McKinley and Barber. Thanks to the courtesy and assistance of the ship officers, I got headquarters and baggage in small boats very promptly and got ashore about 1 p. m. On my first landing I had located our saddle horses and they were awaiting us. General Henry then directed me to proceed to General Shafter's headquarters and get information as to the route and location of his command. I reached headquarters of the 5th Corps and after getting my information which was that we would make our first camp near Redondo, and that on the next day we would proceed and report to General Lawton's division, so as to enable him to extend his right flank which then rested on the Santiago—El Cristo Railroad, I made the trip to General Wheeler's headquarters following General Shafter in his buckboard, driving the famous *Mollie*. Clara Barton and I arrived together at the front for the first time. I, of course, was anxious to see my old regiment which was commanded by my prospective father-in-law Colonel T. A. Baldwin. The regiment was to the north of the Siboney—Santiago Road and in the direction of Lawton's command and after hearing of its combats and casualties which included my dear friends Lieutenants Smith and Shipp, dead, and

Colonel Baldwin's son, a volunteer, badly wounded and in the hospital at Siboney. I proceeded on my way and reported to General Lawton. He pointed out to me the limits of his lines and urged that we make all haste in coming up. Just as I started back a violent cannonading came from the Spaniards and our smoke powder batteries replied. General Lawton called to me and said, "While up here you better get the location of our left flank. I do not want Henry firing into Bates." I proceeded along the side hill in rear of our trenches to the Camino de Las Lagunas, there while opposite a little depression in the ridge there was a terrific explosion in my front and I saw the last of one who I afterwards learned was Captain Rowell. I got back to General Shafter's headquarters between eight and nine p. m. and spent some half hour in getting information as to supplies, and probable action. I pulled out rather quickly when I got some pertinent and disturbing inquiries as to the sturdy Montana polo pony that I was riding. From Shafter's headquarters to Siboney, at night in the rain and mud, required some three hours. It was twelve o'clock when I reported to General Henry, who suggested that I had probably taken much time in visiting my regiment. He directed that I get out right away to see how the debarkation of the 8th Ohio was coming on and notify the Colonel to be ready to advance at daylight. On the 11th we preceded the 8th Ohio to the camp site that I had selected across the road and a little to the southeast of Shafter's headquarters. General Henry reported to General Shafter and found General Miles there. He had arrived on the morning of the 11th and prior to landing had communicated to Admiral Sampson his desire to land troops from the *Yale*, *Columbia* and *Duschesse* to the west of the entrance of Santiago Harbor and follow it up with additional troops moving north and east against the Spanish troops defending Santiago on the west and asked Admiral Sampson to determine the most feasible point for disembarking the troops and to render all assistance practicable to the troops with his guns when they moved east. He acquainted General Shafter with these instructions and informed him that General Henry would be reinforced with a battalion of Artillery that would arrive on the *Comanche* and that Henry would command the troops landed to the west of Santiago Bay. He turned to General Henry and directed that he send an officer to communicate with Admiral Sampson and get his assistance in making a reconnaissance of the roads and country to the west that would be used by Henry's command, to select a position for a small force to contain the Spaniards at Socapa and artillery positions to shell Santiago from the west. General Henry turned to me and said, "You have heard General Miles' instructions, proceed to carry them out." It was then after dark and as I started out, General Shafter yelled to me, "You communicate with Randolph at Daquiri and inform him if he does not get his siege howitzers up here tomorrow I will hang him." Again there was the incessant rain and mud. I struggled along and when I reached Sevilla, I was challenged and found General Randolph and staff on the trail. I delivered my message. He remarked, "The old man

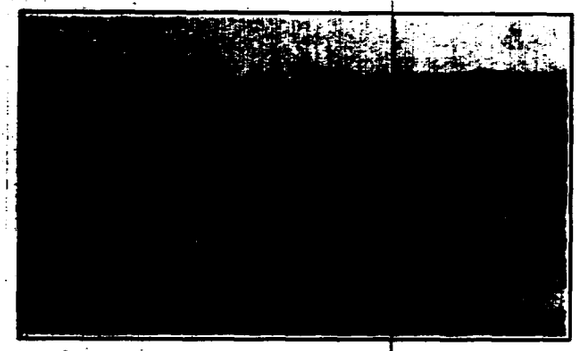


General Miles at Santiago. General Joe Wheeler, Cavalry Commander, on the Left

must be excited," and that he would see him and tell him the situation. General Shafter had made such an impression on me that I felt that I must repeat his exact words, with the damns and God damns, to which Randolph replied, "More reason than ever that I see him." I heard afterwards that General Randolph, when he arrived at Shafter's headquarters told him a story and the time of the arrival of the siege howitzers was not expedited. Rumors were that the breach blocks for the howitzers were still on the dock at Tampa. That was not a fact, but the howitzers did not get up in time to be of use.

Up to this time a perverse fate seemed to be intent on starving me to death. The rare opportunities I had to get a meal were usually interrupted by an order from General Henry that took me away at once. I remembered that I had in my saddle bags twelve cubes of beef extract, each one of which was said to be equal in food value to a pound of beef. I put one in my mouth and, occupied with steering my horse through the clicking swarms of land crabs, mud and mesquite, I repeatedly put in another, so that when I arrived at Siboney, on the early morning of the 12th, I had according to advertisements, consumed twelve pounds of beef, but I was still very hungry. I saw General Weston and inquired of him as to what, if any, means were available to get to the flag ship off the mouth of Santiago Harbor and deliver my message to Admiral Sampson. He stated that there was none, that they had no tugs or boats, but that possibly one of the writer chaps would take me. I went to the cable office and there met Mr. Fox who stated that he would take me down at daylight if I could get him aboard the flag ship. I reached the flag ship about ten a. m., delivered my message to Admiral Sampson, who promptly ordered the *Prairie* to be put at my disposal and Lieutenants Hobson and Blue of the Navy to accompany me. We landed at Cabanas and were met by several hundred of Garcia's ragged troops armed with various and sundry makes of rifles and a more varied assortment of ammunition. They very ceremoniously conducted us to General Sebreco's headquarters, four poles supporting a palm roof. Sebreco stated that Garcia had closed

in on Santiago and occupied a position along the trail extending from Cabanas to the El Cobre railway and thence in touch with Lawton's right near Dos Caminos. He gave me a report which he received from Major Seward Webb of Lawton's staff for delivery by way of the fleet to Siboney and thence to Shafter. We decided first to reconnoitre and select the position for troops to contain the Spanish troops at Socapa, on the west side of the harbor entrance. We had moved only a short



American Soldiers in the Trenches Before Santiago During the Truce

distance in the direction of the Socapa to a small elevation from which we could see the bay, when there was a fusillade from rifles in our front and our Cuban escort took to their heels. We laid down and marked the features of the terrain on our maps and then withdrew and were proceeding north when our Cuban escort rallied and valiantly led the way. About a mile south of the El Cobre railway we reached a small rise of the ground from which the city of Santiago and the bay were in full view and saw that the hospitals at the highest portion of the town and which confronted Shafter's lines, were flying white flags. Hobson stated that a truce was on and that under the circumstances he could go no further. I replied that I had had a hell of a time getting that far and that I could not go back, that under the terms of the truce either side making a hostile movement would be fired on and I would have to continue and take my chances. Blue agreed that those were his sentiments. A short time before this a Cuban had come up with a message stating that a movement was on foot from Socapa to cut us off from the coast. Hobson, as he left agreed with us as to the signals he would use in case any such scheme was discovered. Blue and myself continued on our way and reached the El Cobre railroad from the embankments of which we were able to get a clear view of the terrain and noted its features on our maps. We were signaled from the west and upon going up the railway about one-half a mile we met Major Webb who gave us the result of the reconnaissance that he was making with a view to extending Lawton's right. We then started back to the coast and upon arriving about a mile from Cabanas we heard the siren signal from the *Prairie*, which we had agreed upon to show that the Spaniards had blocked the trail. We crept cautiously forward and in a little time were halted by Cubans who said that there was a party of Spaniards ahead of us. We moved off the trail through the Cat Claw and the bejuca and through the jungle over coral rock. We struggled for an hour and finally reached the coast and were taken aboard the *Prairie*. When we asked Hobson what Spaniards he had seen, he stated none, but that he had gotten anxious about us and had concluded it was time we were coming back. We were too fatigued to properly express ourselves. The sea had the usual afternoon Caribbean swell on it, which is not exceeded anywhere else in the world and it was decidedly emphasized by the little rolling *Prairie*. Supper was just being served and the Captain and other officers wanted to know whether I could eat anything. I had noticed that the leg of the table was in front of the place assigned to me and I told them that just as soon as I could wrap my legs around the leg of the table, I wanted all the food they could spare. After dinner we went aboard the *New York* and I had a very interesting talk with Admiral Sampson, in which he explained that owing to the Spaniards still having a fleet which they might start to the west to attack our Atlantic Coast, he was not allowed to expose any of his ships to destruction by land batteries and therefore he could not comply with General Shafter's request that he force the harbor entrance. I was put ashore at Siboney and reached General Henry's headquarters shortly after midnight of the 12th. I found that General Henry had an order from the 5th Corps Headquarters the night of July 12th, to take when ready, his division (8th Ohio) to the front and report to General Lawton. "however you may as well remain where you are in camp. The streams in front of you are high and it is thought that nothing will be gained by getting your men wet." I delivered this order to Colonel Dick early morning of 13th whom I found under a shelter tent too short for him so that his bare legs from his knees down were projecting and were being washed by the warm tropic rain.

General Henry himself had orders from General Miles to re-embark and take command of the forces destined for operations west of Santiago Bay and to debark at Cabanas at twelve noon on the 14th in case the Spaniards did not surrender. He reached Siboney late in the afternoon of the 13th and received the following: "Headqnarters of the Army, Camp near Santiago, July 13th, 1898, to General Henry, Siboney, Cuba. Major General commanding directs me to inform you that all movements against the enemy are suspended until twelve noon tomorrow." On the 14th General Henry was informed that Santiago had surrendered and also that the 5th Army Corps was quarantined against Siboney. I was sent to inform the Captain of the *Yale* that General Henry and his staff, by order of General Miles, were to come aboard the *Yale*. The reply from the *Yale* was that she was quarantined against Siboney and would not receive us. I returned to Siboney and begged the correspondents' tug, went to the flag ship, got an order from Admiral Sampson to the Captain of the *Yale* that General Henry and his staff would be taken aboard. This message was signaled to the *Yale*. The Captain steamed down to the flag

ship and as a result of his presentation of the case, the order for us to go on board the *Yale* was countermanded and our war record appeared ended with confinement in a yellow fever camp at Siboney. However, my good friend General Humphrey came to the rescue and gave General Henry an order for himself and staff to be taken on board the transport *Santiago de Cuba* and taken to Daquiri where we transferred to the *Comanche* which contained the artillery battalion of Henry's command. Thence we proceeded to Guantanamo Bay and on the 18th of July became part of the Puerto Rican Expedition.

Comment

There appears to be no room for doubt as to General Miles' position in the Santiago Campaign. He did not supersede General Shafter in command of the 5th Corps and the troops ashore on the 11th of July, but on that date and subsequently he issued the orders and instructions for the troops that had not debarked. He also conducted the negotiations with the Spanish Commander of Santiago and by his forcefulness, backed by the display of Henry's division on transports off Santiago convinced the Spaniards of the futility of further resistance.

Had the Spaniards not agreed to surrender on the 14th (formal surrender on the 17th) Henry's division would have landed and operated on the west of Santiago Bay and the combined operations of Henry and Shafter would have been coordinated and directed by General Miles, Commanding the Army.

General Henry reported to General Shafter on the 10th of July and was under his command until relieved by the order of General Miles on the 13th, directing Henry to return to Siboney, embark and command the forces assigned to operations west of the bay.

The arrival of Henry and his troops off Santiago had a demoralizing effect on the Spaniards and a most elevating one on the 5th Corps. General Henry and the 8th Ohio were most cordially welcomed ashore by General Shafter and his staff. When General Henry informed General Shafter that he was ordered by the President to cable him direct full particulars of the situation and condition of the 5th Corps, Shafter did not conceal his disgust and indignation. When Henry investigated the situation, prepared his cablegram and showed it to Shafter, which could not contain anything but praise of the operations of the 5th Corps, and expressed the opinion that Shafter, with the additional troops, could handle the situation, Shafter was much relieved and expressed his gratitude in very forcible language. The Spaniards might have surrendered without the assistance of General Miles and General Henry and Henry's troops, but I doubt it.

A comparison of the forces engaged is very striking. Linares with his 36,582 Spanish troops in the province ought to have easily destroyed Shafter's little army of 16,887, all that he had until the 4th of July when the First D. C. and 32nd. Wis. arrived. From the time Shafter's corps began landing at Daquiri, on the morning of the 22nd of June, nine days elapsed before the battle of San Juan and El Caney; ample time for Linares to have concentrated his troops. Instead, at Las Guasimas, fought without General Shafter's authority and contrary to plan, 964 Americans successfully assaulted and defeated 1500 Spaniards. At El Caney, a strategic mistake and tactically badly conducted, 520 Spaniards without artillery held out nearly all day against 6,653 Americans. At San Juan, on July 1st, some 5,347 Americans (including Duffield's brigade, which was on the Siboney-Santiago railway) assaulted and captured the ridge against only an equal

General Vara del Rey, Spanish Commander at San Juan and El Caney

number of Spaniards. The valor of the Spanish troops cannot be questioned, after El Caney, where they killed and wounded 440 Americans, exactly 79 fewer than General Vara del Rey had in his command at the beginning of the combat. There is but one explanation: Garcia with whom General Miles had communicated the plans of capturing Santiago on the second of June, accepted General Miles' request as orders. He sent three thousand Cubans to check and prevent the movement of twelve thousand Spaniards at Holquin; a portion of these started for the relief of Santiago, but were successfully checked and turned back by the Cubans under General Ferera; 2000 Cubans under Perez held 6000 Spaniards at Guantanamo. 1000 Cubans under General Rios were sent against the 6000 Spaniards at Manzanillo. From this garrison 3500 started for Santiago and were attacked on the way no less than thirty times by the Cubans. The remnant

that reached Santiago the night of July 2nd were too late and too worn to be of much value. Garcia with 5000 men threatened Santiago on the west and maintained communication with the Navy via Cabanas. We are accustomed to judge the Cubans from the poor appearance made by those we come in contact with; yet without them, Linares would have concentrated his troops and Shafter's army would never have landed and captured Santiago. Linares did not dare abandon the Spaniards in the outlying stations to the mercy of the Cubans. There is yet a page to be written in our history on the part played by the Cubans in the Santiago campaign and a monument to be erected at El Caney to Vara del Rey.

Had we had in 1898 a trained General Staff properly functioning, Shafter's force and equipment would have been considered entirely inadequate for its task and not been allowed to leave the United States. In addition to its inadequacy for its task, the force was handled in violation of every rule and principal of the art of war, so that students must refer to the result of the campaign as "the miracle of Santiago." The explanation is that in addition to the generally overlooked part played by the Cubans, troops as well trained and of such morale, as were the bulk of Shafter's force, cannot be defeated. According to rule the credit belongs to General Shafter, but no general officer can claim distinction or fame for his strategy or tactics at Santiago. In the light of the World War, the Santiago Campaign becomes more marvelous. The percentage of men present actually on the firing line was the largest in any of our campaigns, the supplies and impedimenta the smallest, the number of rounds of ammunition required to disable a man the smallest, about one thirtieth of the number required in the World War. The stupidity and ignorance displayed, though glaring, did not exceed that in the World War, for which we had two years and a half to prepare.

The personnel of the Santiago expedition excelled in guts, and the officers in their acquaintance with and knowledge of their men. We can never assemble such a fighting force again. On the first of July 1898, every general officer had an intimate knowledge of the American soldier.

After each of our wars the realization that our battles must be fought by hastily raised troops is sharpened and the effort is made to improve the organization and training of them. To do this requires a very dangerous separation of regular officers, for long periods from their organizations. It is essential that the technique of war be learned. It is essential that the plans for mobilization of men and supplies be worked out in detail for every probable emergency. It is essential that the methods of American big business be adopted, using specialists and experts, to obtain improved weapons and machines. But plans of campaign that can be used cannot be made. Just as at Santiago, politics and unforseen events will govern the operations. In 1898 the Navy dictated the plan of campaign. Shafter was ordered to go and capture the garrison at Santiago and assist Sampson in capturing Cervera's fleet. That he succeeded was due to men with guts. Morale they had, but one heard nothing of it. Now we talk and preach much about morale to the confusion of the American soldier.

The Santiago campaign stands out in our history as the maximum accomplishment at a minimum expenditure of blood and treasure.

The Mexican Army in the Chihuahua Sector

By Lieutenant W. P. Withers, 1st Cavalry

A GREAT deal of space in publications throughout the country is devoted to activities of our army which may seem extraordinary to the layman. During the past year the First Cavalry has managed to include in its activities, other than an intensive training of troops, a great many extra-military features. Perhaps the enlisted men feel that this means quarters and stables construction. For the officers on the border, however, and many of the men, the most outstanding event of the year, or series of events, has been connected with the progress of our relations with the Mexican Army. The close relations of the First Cavalry with the Mexican Army have given many of us our first close view of a foreign army, and perhaps it may prove interesting to relate some of these observations.

Our regiment is primarily concerned with the so-called Chihuahua sector, which is commanded by General Matias Ramos, a general of division. He commands the 5th of 32 districts similar to our Corps Area, called by the Mexicans *jefeturas de operaciones militares*. The 5th Jefetura contains the very large state of Chihuahua, and in this district there are stationed some two thousand soldiers, about equally divided between Cavalry and Infantry.

In the Mexican system of government the military establishment occupies a most important place. While the civil government is theoretically paramount, the dependence upon the Army to maintain order and peace is so great as to place it in a prime position, hence the Commanding General of a jefetura is a personage of importance. General Ramos is a man who measures up to the responsibilities and requirements of this high position in every sense. Because a discussion of activities in any sector is really a reflection of the personality of the commander of that sector, it is necessary to give a description of this man.

General Ramos is a rather large man, broad shouldered, possessed of a pair of sharp, keen eyes, in which is mirrored the intensity and force of his nature. A close-clipped mustache sets off a rather full face, topped with bristly, black hair. He wears a distinctive uniform very much like our own, and walks with a limp due to many wounds received in battle. He wears a decoration for valor received from his government which is possessed by few men of any rank. He speaks rather slowly, in a low voice carrying the mark of years in authority. He is surrounded by men equally as keen, his Chief of Staff, Colonel Adolfo Terranes, being a man, who but for his uniform, would pass for an American business man of responsibility.

The status of the Mexican Army in many ways resembles that of our own. The government is intent upon cutting down expenses, and, like the United States, has made the army feel the pressure of this policy. In Chihuahua City, a town of over forty-five thousand people, General Ramos is engaged in two great enterprises. Nearest his heart is the construction of a large hospital for his entire command. This hospital is situated near the southwestern edge of the city, in a ten-acre plot which is rapidly assuming the appearance of a park. The building itself has four wings, each a 30-bed ward, with a large central mass containing dining hall, kitchen, laundry, and other service space. It is built along the lines of our most modern hospitals, and is to be equipped and staffed accordingly. The grounds contain courts for tennis, basketball, and fronton, a game known in Cuba as jai alai, or in the Basque country as pelota. Many Mexican Army officers are proficient in this difficult and exhausting game, supposed to be the fastest in existence. A swimming pool in one corner of the grounds tops the list of recreational facilities.

All of this construction is being accomplished with soldier labor. Soldiers have built and are operating on the adjoining premises, brick kilns, where bricks for the hospital are manufactured. The clay is dug near at hand, the fuel for fires is drawn from the ravines on one side of the hospital in the form of rushes, which are dried in great areas and fed to the fires in bunches. Hills not far away furnish a sort of caliche-limestone which the soldiers burn and from which they obtain lime and cement for mortar. The laying of the bricks and carpentry incident to construction seem to be a secondary matter. The whole business of construction is carried on under the supervision of a colonel of the engineers, and in truth, the whole scene presents a much busier appearance than a similar one in our country. The soldiers work with a will, and move faster than anyone else I saw in Mexico.

Army engineers have laid out plans for landscape gardening which required five thousand evergreen trees. When I observed the work with General Ramos, these trees were being placed, the holes having been dug prior to their arrival. The proper mixing of earth and fertilizer had been accomplished and a pile of this material was placed alongside each hole, and small gangs of soldiers made rapid progress in the planting. Beautiful avenues of trees will furnish shaded walks to the patients. A well is being dug for the proper irrigation of the grounds. The whole enterprise reflects great credit upon the military personnel connected therewith.

The other great project engaging the efforts and minds of the military organization in Chihuahua is road-making. Mexico, as everyone knows, has long suffered from a dearth of good roads, except in the vicinity of the national capital. If the 5th Jafetura is a criterion for the other districts, this lack is soon to be thoroughly overcome. I witnessed numbers of soldiers engaged in making a road from the city to Santa Eulalia mine, some fifteen miles distant. This was a forty-foot road with a good crown, topped with gravel. Except for hauling gravel by White trucks, the only implements in use were picks and shovels. Bridges and culverts are of stone masonry of first-class appearance. The road is built as well as earth and gravel roads can be made. Soon work is to commence on the road to Ojinaga, a distance of some 150 miles. This latter road will furnish to people of our Southwest a route of extreme beauty and interest when completed. Due to the Big Bend in the Rio Grande, Chihuahua City, directly south of El Paso, is nearer to Marfa by more than a day's travel by automobile. This is a matter which will govern traffic between Texas and Chihuahua to a large extent.

But the Mexican Army does not fall behind in military preparation, as we found during our visit to Mexico City with the First Cavalry. There we saw officers with their private mounts drawn from every garrison in the Republic. No finer group of horses is owned by officers in any army. Their course of jumps in common use throughout the army is as difficult, all considered, as our Prix de Nations or Olympic courses. The performance of all these horses in races of 2000 metres was better, I believe, than we could expect from a similar group of our own private mounts. Every horse finished at least one heat at this distance. The Cavalry, Infantry, and Artillery arms put on exhibitions that would vie with any we might produce. A regiment of Infantry handled Mauser rifles as one man; the Cavalry wheeled and manœuvered exactly as our own regiments do on show; the Artillery, all mule-drawn, gave us much to remember. This is true of the Mexican Army as a whole, and the responsibility for it, in the last analysis, rests with General Joaquin Amaro, their Secretary of War and Marine.

This fine officer and gentleman labors twelve to fifteen hours every day, and personally inspects every organization in the army many times a year. He demands of his officers a high standard of personal conduct, bearing, and appearance, and sets for them an example they may only attempt to equal. He requires that every officer own his own mount and keep it in a state of excellent training. He selects for those responsible positions of command officers who can maintain these standards. The officers who cannot meet the high standards set forth by the Secretary of War find themselves separated from the service. A decrease of some three hundred generals in the Mexican Army was achieved in a relatively brief period. Other ranks have suffered proportionately. It is for this reason that we find throughout the Mexican Army, not only in Chihuahua, a status of affairs that amazes the average officer of our army.

In accordance with policies instituted by General Amaro, General Ramos is making plans for the extension of polo in his command. He has directed Colonel Neftali Gonzalez, commanding the garrison at Ojinaga, to commence at once the construction of a polo field. At Ojinaga is to be placed a squadron of the 33rd Cavalry regiment, and later, when a new *quartel* is built, an additional squadron is to be placed there. Polo will be played weekly, alternating with the field at Marfa, or Fort Russell, and officers from Chihuahua will come to Ojinaga to furnish sufficient personnel. More horses are being purchased, and officers will have them to train for polo. This is being done in co-operation with the First Cavalry. Our relations with the neighboring army are most pleasant, and polo activities so far have made many firm friendships between the two armies.

Thus, through polo and other channels, the First Cavalry is developing international friendship and good will. This not only between the military peoples, but, since each visit between the two countries includes many civilians, between the entire populations of the two districts. During the visit of the First Cavalry to Mexico City last November, both President Ortiz Rubio and General Amaro spoke emphatically of the value of this interchange in friendships. Both of these leaders spoke of the benign influence which resulted, affecting the international relations of the two countries. And both had no hesitation in paying tribute to two cavalrymen, Colonel John S. Fair, and Colonel Gordon Johnston, our Military Attache in Mexico, as well as to other cavalrymen who have been in Mexico City, for this condition. Service on the border has one big advantage—it broadens the view of an officer and gives him an insight into a national character differing greatly from our own, in addition to offering opportunities for service which the Cavalry has not been slow to seize.

Pan Americanism, its Origin and Development

A. Curtis Wilgus, Associate Professor, Hispanic American History, George Washington University

ON December 4, 1930, Dr. John Bassett Moore, former World Court Judge, speaking before the American Bar Association in New York, asserted that in our relations with the Latin American states we had "drifted into a fog and lost our bearings." This is not the first time that so important a citizen of the United States has criticized our policy in the Western Hemisphere, and doubtless it will not be the last. But while we criticize ourselves, we are being taken to task by others outside of the country and particularly by Latin Americans. Because of this wide-spread criticism, it seems desirable to examine the whole subject of Pan Americanism and its allied doctrines.

In his volume entitled "Our Relations to the Nations of the Western Hemisphere," Charles Evans Hughes has pointed out what most citizens of the United States are prone to forget, namely, that the Monroe Doctrine, Pan Americanism, and Imperialism are separate policies, distinct in origin, characteristics, and aims. Chronologically they developed in the order given, and have quite generally remained in that order of importance in our national diplomacy. But while the Monroe Doctrine is the most talked of and the most important, its growth and development cannot be thoroughly understood and appreciated until one understands the meaning and nature of the other two. It is therefore the aim of the writer to present brief studies the significance to the United States and to Latin America of these various doctrines.

The idea of Pan Americanism must be kept separate and distinct from the concept of Pan Hispanic-Americanism, and from Pan Iberianism, or Pan Latinism. The first was intended originally to include all the nations of the Western Hemisphere, Canada as well as the West Indies, and Hawaii. The second aims to include only the so-called Latin or Hispanic-American states, while the third embraces the relations between Spain and Portugal on the one hand, and their former colonies in America on the other. With the last, however, we are not concerned here.

Briefly stated, Pan Americanism emerged out of Pan Hispanic-Americanism. The latter was suggested more than a century ago by Juan Martinez de Rozas of Chile, Francisco de Miranda and Simón Bolívar of Venezuela, Henry Clay of the United States, and others. In fact the last two men are frequently but erroneously called the "fathers of Pan Americanism."

After the collapse of the Panama Congress, called by Bolívar in 1826, and the failure of the Mexican government to reconvene it, the Latin American nations wearied for awhile of such meetings. But in 1844 Juan Bautista Alberdi, an Argentine jurist, took up the idea once more and suggested a league of Latin American states, backed for the sake of stability by one or more European powers. Such a league should take cognizance of Latin American boundary disputes, arbitration, confederation, international law, inter-American communication, commerce, trade, and the like. No steps were taken at the time by any of the Latin American countries; but three years later the governments of Bolivia, Chile, Ecuador, New Granada (Colombia), and Peru met at Lima to draw up treaties, pertaining to confederation, commerce, navigation, postal communication, and consular relations. After it was seen that this movement would definitely fail, Peru, Chile, and Ecuador signed at Santiago in 1856 a "Continental Treaty" for the purpose of establishing a "great American family union." This attempt likewise came to nothing.

In 1864 the government of Peru invited the Latin American states to form a union which would maintain peaceful relations and mutual respect among themselves, settle boundary disputes, and punish revolutionary peace-breakers. But the eight states represented failed to consummate the project.

It was not until 1880 that another attempt was made at Latin American cooperation. In that year the Colombian government issued invitations to the Latin American republics to attend a convention at Panama in 1881, for the purpose of concluding a general arbitration treaty. Although fourteen nations replied to the invitation, this meeting was never held, because of the continuation of the War of the Pacific between Bolivia, Peru, and Chile.

Finally, in 1888, was held the last inter Latin American meetings before the movement became Pan American in scope. This was the Congress of Jurists which met at Montevideo, Uruguay, from August 25, 1888 to February 18, 1889. At this conference treaties were drawn up dealing with Latin American international law, civil law, penal law, commercial law, and laws concerning trade-marks, copy-rights, patents, and so on.

Meanwhile, statesmen in the United States had become interested in the Pan Hispanic-American movement. James G. Blaine particularly, secretary of State under President Arthur, saw an opportunity to broaden the movement into Pan Americanism. Consequently, in 1881 he attempted to assemble representatives of the states of the Western Hemisphere, with the exception of Canada, in a great conference at Washington. Failing at the time, he succeeded eight years later, when as secretary of state under President Harrison, he convened at Washington what was called the First International American Conference. Since

that date five other similar conferences have been held, the second in 1901 at Mexico City, the third in 1906 at Rio de Janeiro, the fourth in 1910 at Buenos Aires, the fifth in 1923 at Santiago, Chile, and the sixth in 1928 at Havana, Cuba. A seventh is planned in 1933 at Montevideo, Uruguay.

At their inception, these conferences were looked upon by the United States from the viewpoint of their probable economic value. Secretary Blaine had been particularly interested in encouraging the interchange of commodities with Latin America, and throughout the subsequent meetings this idea remained prominent. Three of the 21 subjects discussed and agreed upon at the first conference, 17 were of an economic nature. In the second conference, 12 out of 19 dealt with such subjects. In the third, 10 out of 15; in the fourth, 12 out of 14; in the fifth 15 out of 30; and in the sixth, 29 out of 73 subjects concerned economic questions. This stressing of the economic aspect has not always been looked upon with favor by the Latin American states, since many of them preferred to choose their products and markets for themselves, and to trade with whom they pleased. Other questions discussed at the conferences, and more particularly in the later ones, have dealt with social welfare and intellectual cooperation. In each meeting the problem of arbitration has appeared and occasionally the Latin American delegates have attempted to inject into the discussions the question of the Monroe Doctrine and the whole foreign policy of the United States with regard to Latin America. Without doubt, the most important work of the conferences, has been the creation and maintenance of the Pan American Union (originally called the Bureau of American Republics) with its headquarters at Washington.

While the United States Government has repeatedly instructed its delegates not to dominate the discussions of the conferences, its representatives have been looked upon as leaders by most of the Latin American members. Exceptions have occurred to this general rule when occasional blocs have been created by certain states to accomplish specific ends. These, however, have never been of long standing. All action taken by its representatives at the conferences have been looked upon by the United States as recommendatory rather than as mandatory, with the result that the signature of the delegates to the numerous treaties, conventions, resolutions, and the like has not bound the United States to take definite action. The Latin American states have followed this example; consequently, the meetings have frequently degenerated into debating societies and discussion groups. Most of the actual work has been done in committees, and in the later conferences many more subjects have been treated in a shorter time than in the earlier meetings. The first conference continued 200 days, the second 102 days, the third 36 days, the fourth 50 days, the fifth 40 days, and the sixth 36 days. Because the conferences have attempted to accomplish so much, the results seem comparatively small. Hence many observers throughout the world have considered the movement a failure and have attempted to convince others that such is the case.

Several reasons have been adduced by these persons as contributing to the material failure of Pan Americanism. The racial temperaments of the American peoples are fundamentally different, and their view points upon many questions are quite opposite. The men of the United States are eminently practical and business-like, while their southern brothers stress the cultural aspects of life. They are idealists, esthetic, rather than ethical, and emotional rather than logical. These fundamental differences have made progress difficult.

The United States must share the blame for the undoubted paucity of concrete results accomplished at these gatherings. During the interims between the meetings, its public policy concerning imperialism and the Monroe Doctrine has frequently won enemies in Latin America to Pan Americanism, for the minds of the Latin Americans, and for that matter the minds of the people of the United States and Europe, have been confused and deceived into believing that the three-fold problem is really one. To disabuse the other Americans of this idea, and to regain their good will and diminish the suspicion directed toward its policies, the Government of the United States has at each succeeding conference attempted to justify and to make amends for its interim actions. This accounts in part for the fact that two conferences were attended by the Secretary of State and a third by the President of the United States.

This action on the part of the United States has tended to center world interest in the conferences and to act as an advertising feature for the people of this country. Generally speaking, the nearer the seat of the conference is geographically to the United States, the greater the interest manifested by its citizens. Thus the conferences in Mexico and Cuba attracted the greatest attention, while that in Chile aroused the least interest.

One of the most recent and at the same time one of the most important products of these Inter American conferences has been the calling of a series of special All-American conferences to discuss such subjects as highways, railroads, commerce, finance, agriculture, sanitation, public health, child welfare, women's rights, scientific problems, bibliographical projects, educational affairs, intellectual cooperation, international law, and arbitration. This expansion and at the same time concentration and specialization of the conferences is perhaps the most healthy sign of growth and development in the whole history of the movement. In these meetings, as in the general conferences, the close association of the delegates from the several states in social and intellectual intercourse has proven of immeasurable value for increasing the good fellowship and friendliness between the nations. At the same time it has tended to remove national prejudices and mutual suspicion. Certainly these reasons, it would seem, afford sufficient justification for the continuance of Pan Americanism as an international policy of each of the American states.

The Cost of the National Guard

Colonel William H. Waldron, Executive Officer, Militia Bureau

DO YOU KNOW how much money the Federal Government puts into the National Guard each year? How much money the States provide? How much it costs each citizen to maintain his National Guard for a year, and what he gets for his money? What projects are included in the Militia Bureau's federal appropriation? What the per capita cost of a National Guardsman is?

All of these interesting questions are answered in this article. Other articles to follow will furnish similar vital and little-known information about the National Guard.—EDITOR.

THE cost of the National Guard is the sum total of the money that is expended on that component of the Army of the United States. The following summary shows what it is and whence it comes:

Federal appropriations for the fiscal year 1931 (and a like amount for the fiscal year 1932)	$32.909.142.00
State appropriations for the fiscal year ending June 30, 1930, which is the latest date for which data are available	15.037.008.70
Rental of armories and from private sources (estimated)	2.000.000.00
Total	$49.511.806.70

Table No. 1, which accompanies this article, gives the details of the distribution of all of these funds, both federal and state. In this table Column 2 shows the allocated enlisted strength of the National Guard to the States. In the past this has been somewhat erroneously referred to as the authorized strength, but there is no such thing, except that imposed by the limitation of funds for the support of the National Guard.

In Column 3 appears the amount of federal aid apportioned to the States by the Militia Bureau. It will be noted that in this there is a considerable variation. This is due to the kind of military organizations maintained by the States. In the States that have large mounted organizations the costs in animal caretakers and forage make a considerable item. The nineteen States that maintain aerial observation squadrons also have their allotments increased to meet the heavy expenses incident to such an organization.

The funds provided by each State for the support of the National Guard appear in Column 4. Here also there is a wide variation, which ranges all the way from the State that meets the federal aid with a like amount, down to the one which provides only a small percentage. A complete comparison may be arrived at by considering Columns 5 and 6 together. Here the range extends from the States of Connecticut, New Jersey, and Illinois, which supply more funds per capita than does the National Government, down to Nevada and Georgia which supply only small proportions.

Column 9 shows the per capita cost of the National Guardsman, considering both federal and state expenditures. It is not possible to pro rate the $2,000,000 derived from armory rentals and add it to these figures, so it is disregarded entirely.

Now all of this makes it appear that the National Guard costs a mighty lot of money—and it does. But when you take a one-cent lead pencil and calculate it all out, the figures are not so appalling as they seem at first impression. Let us try it. There are about 122,000,000 people in the United States. Figuring the cost of the National Guard on a country-wide per capita basis, we find that your individual share is just a little over 40 cents. In other words, it costs the people of the United States about 40 cents a year each to maintain their National Guard.

What do you get for your 40 cents. In the first place, you have a splendidly organized and equipped force of 190,000 citizen soldiers who are well trained and who stand ready to step into the breach when the situation is such that it cannot be handled by the constituted civil authorities. This may take the form of a disaster to a community in which the elements play a part—flood, fire, tornado, or wreck. Or, it may assume the nature of a disorder, which if unchecked may develop into a riot with an angry and uncontrollable mob, bent upon the destruction of life and property. You may say that yours is a peaceful community and that you have never needed and are not likely to need the services of the National Guard for this latter purpose. The chances are that you are correct, but you are correct because of the very fact that there is a force whose moral influence makes itself felt up and down the land. Those persons who would transgress the rights of others are deterred simply because they know that they cannot "get away with it." They know that the National Guard is a body of loyal citizen soldiers who stand ready on call to back up the legally constituted authorities, to help them in upholding the dignity of the State, and to protect your life and your property.

In the second place, the National Guard is the citizen soldiery elements of the national defense. It is organized into 18 combat divisions, nine cavalry brigades, and certain essential corps, army, and GHQ troops. All of these are equipped for peace strength and are prepared to take their places in any military force that may be called into service in case of national emergency.

In Column 7 of Table No. 1 you will find the total amount of money devoted to the maintenance of the National Guard in the several States. These funds are distributed under the various Militia Bureau projects indicated in Table No. 2. Those of you who are in the National Guard and those who engage in activities that have to do with the supply of the National

Guard receive a proportionate share of the money included in the disbursement of these funds. In other words, all of this money goes into the trade channels of the country and is distributed over the United States in such a way that hundreds of thousands of the people receive direct or indirect benefit from it.

You have in your communities hundreds of national guard armories that are made available for a variety of civic purposes. In many places the armory is the only place available for large assemblies.

It is interesting to note the extent to which the States support their National Guard in proportion to what the federal Government does. The following tabulation shows this with the States arranged in order on a percentage basis:

1.	Conn.	59%	4.	Vt.	46%	7.	H. T. 42%
2.	N. J.	55%	5.	N. H.	45%	8.	Ariz. 41%
3.	Ill.	53%	6.	Penna.	44%	9.	W. Va. 41%
						10.	N. Y. 41%
						11.	Calif. 36%
						12.	Mass. 36%
						13.	Wyo. 36%
						14.	Ind. 31%
						15.	Md. 30%
						16.	D. C. 29%
						17.	Iowa 29%
						18.	Minn. 29%
						19.	Ohio 29%
						20.	Ark. 28%
						21.	Mich. 27%
						22.	R. I. 27%
						23.	Maine 26%
						24.	Wash. 26%
						25.	Colo. 25%
						26.	Wis. 25%
						27.	Nebr. 24%
						28.	Fla. 23%
						29.	Kans. 23%
						30.	N. C. 23%
						31.	Ky. 22%
						32.	Del. 21%
						33.	Okla. 20%
						34.	N. D. 19%
						35.	P. R. 18%
						36.	Utah 18%
						37.	Ore. 17%
						38.	S. C. 17%
						39.	Tex. 17%
						40.	Mont. 16%
						41.	Tenn. 15%
						42.	Va. 15%
						43.	La. 14%
						44.	Mo. 14%
						45.	N. M. 14%
						46.	Ala. 13%
						47.	Miss. 13%
						48.	Idaho 11%
						49.	S. D. 11%
						50.	Nev. 9%
						51.	Ga. 7%

TABLE No. 1

A Table Showing the Federal and State Appropriations for the Support of the National Guard, Fiscal Year, 1930.

State	Enlisted Strength of National Guard, June 30, 1930, Including W. O's.	Amount of Federal Aid Apportioned	State Appropriations	Amount per capita per National Guardsman: Federal	Amount per capita per National Guardsman: State	Appropriated by Federal and State Governments	Total Amount per capita per National Guardsman
1	2	3	4	5	6	7	8
Alabama	2,465	$607,216.82	$94,000.00	$246.35	$38.45	$701,216.82	$286.80
Arizona	1,073	159,045.68	104,632.00	139.84	97.51	254,677.03	237.35
Arkansas	2,027	397,090.51	157,500.00	195.90	77.70	554,590.51	273.60
California	5,570	949,323.36	538,106.51	160.19	91.67	1,478,429.87	251.86
Colorado	1,447	337,990.98	113,640.87	205.22	69.00	451,631.85	274.21
Connecticut	2,291	695,059.95	976,413.27	176.06	250.94	1,661,464.22	427.00
Delaware	756	122,419.49	31,700.00	161.50	41.82	154,119.49	203.32
District of Columbia	922	141,786.32	57,827.00	153.78	62.72	199,613.32	216.50
Florida	2,209	435,283.50	127,277.73	191.84	56.09	562,561.32	247.98
Georgia	3,385	539,536.47	40,000.00	157.66	11.89	570,536.47	169.55
Idaho	1,549	183,987.99	130,274.77	118.52	84.10	313,862.67	202.62
Illinois	1,168	263,644.37	33,100.00	225.69	28.46	296,744.37	255.15
Indiana	9,317	1,453,137.91	1,650,111.00	155.97	177.11	3,103,248.91	333.08
Iowa	4,238	748,795.74	337,000.00	172.63	77.90	1,085,795.74	250.53
Kansas	3,269	549,757.02	221,378.00	167.87	67.72	770,135.02	235.59
Kentucky	2,668	616,269.99	179,800.00	214.91	62.69	796,169.99	277.60
Louisiana	2,571	454,043.27	126,454.81	176.60	49.18	580,498.08	225.78
Maine	1,849	378,469.94	63,520.00	205.65	34.52	441,920.94	240.17
Maryland	2,182	358,230.06	122,761.72	164.18	56.26	480,991.80	220.44
Massachusetts	2,805	567,022.11	240,850.00	189.52	80.42	808,472.11	269.94
Michigan	9,469	1,575,954.13	892,922.98	174.98	99.11	2,468,877.11	274.05
Minnesota	4,239	739,946.46	284,800.02	177.18	66.33	1,044,446.48	243.52
Mississippi	4,494	945,947.39	378,425.70	205.44	82.70	1,324,276.09	287.64
Missouri	1,162	278,999.33	40,000.00	163.19	36.28	318,999.33	309.46
Montana	4,138	776,987.34	129,089.56	168.21	31.27	906,025.90	219.48
Nebraska	1,669	139,792.84	26,155.91	133.14	24.91	165,948.75	158.65
Nevada	1,538	231,998.83	72,132.00	148.65	46.94	304,730.83	195.59
New Hampshire	109	24,231.53	2,999.00	226.27	21.56	27,231.53	249.83
New Jersey	977	171,985.25	141,175.00	175.96	144.49	313,080.25	320.45
New Mexico	4,339	833,594.76	992,606.96	191.88	229.84	1,821,201.72	421.67
New York	902	265,164.60	42,500.00	297.30	47.12	310,664.60	344.62
North Carolina	19,774	3,391,467.65	2,363,594.02	171.51	119.53	5,754,991.65	291.04
North Dakota	2,602	527,242.09	157,300.00	173.78	50.87	684,642.00	224.66
Ohio	1,972	161,234.36	35,000.00	141.06	32.65	196,234.36	173.73
Oklahoma	7,791	1,498,943.28	576,999.40	184.04	73.92	2,009,783.28	257.96
Oregon	4,636	877,466.32	215,615.04	190.09	46.58	1,092,481.36	235.67
Pennsylvania	2,382	599,599.98	112,679.43	185.78	39.30	641,930.36	226.08
Philippine Islands	19,697	2,107,359.23	1,638,586.31*	197.19	153.33	3,745,936.54	350.51
Porto Rico	1,422	199,684.49	42,000.00	183.63	29.54	232,024.49	163.17
Rhode Island	1,695	359,734.98	125,410.17	206.92	73.76	479,145.10	282.68
South Carolina	1,986	312,518.84	63,599.68	157.20	32.12	376,370.52	189.32
South Dakota	1,233	213,727.41	27,500.00	172.53	22.30	240,227.41	194.85
Tennessee	2,259	459,604.83	58,700.00*	218.00	37.88	565,704.83	255.02
Texas	7,339	1,324,423.27	501,459.13	207.72	41.07	1,825,877.50	248.79
Utah	1,324	283,220.84	63,790.84	224.15	50.47	347,121.68	274.62
Vermont	1,188	142,661.24	119,189.40	128.21	107.57	261,251.64	253.79
Virginia	2,327	697,245.88	110,343.02	172.20	31.29	717,691.90	203.49
Washington	2,488	324,488.12	191,681.45	216.72	77.49	725,314.58	194.21
West Virginia	1,284	285,905.66	141,500.00	110.50	73.91	347,465.66	186.41
Wisconsin	4,527	708,689.12	289,000.00	156.45	50.92	936,606.12	207.37
Wyoming	572	139,374.14	94,520.00	292.80	147.76	274,894.14	410.66
Miscellaneous[2]		1,757,331.56				1,757,331.56	
Total	169,988	$32,486,675.23	$15,037,608.70[3]	[3]	[4]	$47,463,683.93	[5]

[1] The information furnished; estimated from 1929 report. Distribution among items estimated by Militia Bureau.
[2] Miscellaneous includes approximately $1,500,000.45 allotted to Quartermaster General for manufacture of new uniforms.
[3] Does not include approximately $2,000,000.00 derived by organizations from rental of armories and other private sources.
[4] Average per capita from Federal appropriations based on enlisted strength as of June 30, 1930—$190.76.
[5] Average per capita from State appropriations—$88.48.
[6] Average per capita from Federal and State appropriations—$279.23.

You will be further interested to know what becomes of the money appropriated by Congress for the support of the National Guard. This money is included in three major activities under which there are a total of 43 projects. All of this is shown in Table No. 2, which will give you an idea of the wide variety of the activities of the National Guard.

The initial estimates for the funds included in the appropriation bills have to be made up nearly two years in advance of the date when these funds are made available. During such an extended period of time, conditions may change appreciably and the Militia Bureau might find it uneconomical and unwise to adhere to the exact amounts which were appropriated for specific project. To meet this situation, Congress provides for a ten per cent interchangeability among the items, those under Arms, Uniforms, and Equipment, and the Chief of the Militia Bureau can make these changes with the approval of the Secretary of War. This gives considerable flexibility in the handling of funds. The transfer of funds among the projects under the item Arms, Uniforms, and Equipment may be made to the extent desired.

TABLE No. 2

A Table Showing the Federal Appropriation for the Support of the National Guard, During the Fiscal Year 1932.

Project No.	Sub-appropriation	1932
	Arming, Equipping and Training the National Guard	
1	Forage, bedding, etc.	$ 1,255,707
2	Employment of caretakers	2,428,553
	Camps of Instruction:	
3	Field Training	9,129,550
4	CP Exercises	15,915
5	Construction and maintenance of current camps	66,667
6	Continuation of construction work on camp sites	100,000
7	Upkeep of National Guard camps	150,000
8	Military Service Schools	375,000
9	Property and Disbursing Officers for the United States	79,800
	General Expenses:—	
10	Pay, Chief, Militia Bureau, on duty in the Bureau	$29,722
11	Wages of range keepers	43,660
12	Rental of target ranges	50,908
13	Construction work on target ranges	15,000
14	Repair work on target ranges	30,000
15	Repair and renovation of clothing and individual equipment	149,629
16	Repair, organizational equipment	88,017
17	Gasoline and oil, etc., for armory training	157,605
18	Publications, stationery, etc.	50,000
19	Intra-state transportation of supplies and equipment	49,008
20	Pay and hospitalization of Air Corps personnel injured during armory drill	5,000
21	Miscellaneous expenses	5,000
22	Correspondence courses	2,500
30	Pay, etc., for officers, N. G. A. C.	19,920
	Travel, Regular Army personnel:—	
23	Visits of instruction	165,000
24	Camps of instruction	82,469
25	Changes of station	20,000
26	Miscellaneous, Corps Areas and Departments	45,000
27	Officers on duty in War Department	5,000
28	Transportation of equipment and supplies	225,000
29	Expenses, sergeants instructor	480,000
	Total, "Arming, Equipping and Training the N. G."	$15,339,630
	Armory Drill Pay	
1	Armory Drill Pay	$11,632,368
	Arms, Uniforms, Equipment, Etc., for Field Service, National Guard	
1	Articles of the uniform	$ 951,231
2	QM Motor Equipment, supplies and repairs	202,919
3	Musical instruments, supplies and repairs	74,980
4	Miscellaneous QM equipment, supplies and repairs	219,000
5	Ammunition for the National Guard	2,246,531
6	CWS equipment, supplies and repairs	36,900
7	Ordnance equipment, supplies and repairs	600,000
8	Procurement of airplanes	884,185
9	Air Corps equipment, supplies and repairs	504,635
10	Signal Corps equipment, supplies and repairs	138,802
11	Engineer equipment, supplies and repairs	22,636
12	Medical equipment, supplies and repairs	55,325
	Total, "Arms, Uniforms, Equipment, etc."	$ 5,937,144
	Grand Total	$32,909,142

Current Events Overseas

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

DEFLATED national purses succeeded last month in advancing the cause of world peace when Great Britian, France, and Italy finally discovered a formula permitting French and Italian adherence to the London Three-Power Naval Treaty of 1930. Their action disposes of one of the knottiest international problems inherited by 1931 from its predecessor. At this writing only the principal points of agreement are clear; briefly substantial reductions in the naval construction programs of France and Italy for the next five years, Italian abandonment of the principle of parity with France, and England's important collateral announcement that she will not invoke the "escalator clause" of the treaty to parallel France's submarine program.

France emerges with a tonnage total, as of 1936, placed at 670,000 according to dispatches from Rome, and at 642,000 according to Paris. French retention of 84,000 tons regarded as obsolete, or at least obsolescent, as compared with but 5,000 tons of older ships in the Italian navy reduces by that much the mathematical superiority of the French navy. However, France secured a distinct lead in one important category, the submarine. There Italy gains parity with the United States, Great Britain, and Japan, at 52,700 tons, and France has a superior margin of at least 29,000 tons. Her advantage over Italy is largely nullified by the necessity of being prepared to fight in two seas, whereas Italy would concentrate in the Mediterranean. Both powers have agreed to limit their construction of 23,000 ton "pocket battleships," their answer to the German Ersatz Preussen to two units. In modern 10,000 ton cruisers substantial parity is attained.

Exact data on the naval terms of the agreement will probably remain unavailable until their submittal to the other three powers for ratification. In the meanwhile, "semi-official" figures furnish the basis of speculation in the continental press as to the ultimate consequences of the bargain.

How far the agreement will serve to check the growing political understanding between Italy, Germany, and Russia, and the development of the "revisionist bloc" of powers whose objective is the overthrow of the Treaty of Versailles, the future will determine. The immediate benefits to European stability, both political and economic, cannot be doubted.

The British Empire

United Kingdom. All political activities within Britain during February were based upon unemployment. Mounting figures have divorced it from any actuarial basis as hordes of "transitional beneficiaries" have been added. Additional borrowing by the fund from the treasury, with no end in sight, is sinking the whole system into a seemingly hopeless morass of debt. The figures must speak for themselves. The government's contribution of $58,750,000 in 1928 rose to more than three times that amount last year. Present prospects indicate a further increase to not less than $275,000,000 in the present year.

In the military field, discussion is roused in Parliament and the press by the slump in British recruiting, a fair barometer of the mental and physical state of the nation's manpower. More than 10,000 vacancies exist in the army, the result of applicants' failure to meet the prescribed standards. An increase of 6.1 rejections per 1,000 applicants for physical cause in 1929 has forced a lowering of the requirements, but that action has brought no appreciable improvement in acceptances for service.

A notable achievement in military aviation appears in the tests of a new fighter capable of climbing 15,000 feet in nine minutes. Its speed of 200 miles per hour, and its armament of six converging machine guns mark it as the most formidable plane of its type so far produced.

Foreign Relations. Russia's large-scale dumping, under which the initial flood of raw materials is followed now by finished and semi-finished manufactured goods, has so heavily invaded the British home market that concerted attacks are launched against the government, from within and without Parliament, for its maintenance of relations with the Soviet government. Taking this in conjunction with the action of the American and Canadian governments in declaring embargoes against Russian products, the British press sees and acclaims Anglo-Saxon solidarity against the menace of the Russian Five-Year-Plan. However, Great Britain has still to take the vital steps.

India. Mahatma Gandhi's declaration, on March 2, of a truce in the Indian Nationalist campaign of civil disobedience ended an impasse which for weeks had threatened to undo the good work of the recent Round Table Conference. His compromise with Lord Irwin to that end secured the Nationalists valuable concessions, including the acceptance of the natives' right to make salt for consumption at the seacoast. The government, however, retains its monopoly in the interior. The right of peaceful picketing of liquor and foreign cloth shops is also granted, and the confiscated property of political prisoners is to be restored.

The Dominions. Australia's fiscal problems continue as a first concern, not only to the people of that Dominion, but to the British banks and investing public. The credit standing of the Commonwealth is clearly indicated by the 37 per cent drop since 1928 in the market value of her leading security, a 5 per cent bond issue. Mired on their golden road to socialism, Australia's political leaders make three separate proposals toward escape, inflation, repudiation, retrenchment. The last, and the only path consistent with national common sense and honor is suggested by the Federal Treasury Loan Council. It finds but little support in the electorate. Meanwhile, the suggestion of secession from the Federation gains adherents in Western Australia, South Australia, and Tasmania, its advocates insisting that the Commonwealth is "too deeply involved in the toils of high tariffs and fictitious values."

The completion and opening of the Hudson Bay Line railway, connecting the Winnipeg grain area with Churchill, a new port on Hudson Bay, makes an important step in Empire communications. It reduces by 930 miles the haul from Winnipeg to Liverpool, opening a new low-cost outlet for the products of the Canadian Northwest. Strategically, it provides sea communications with the mother country far less vulnerable than the Liverpool-St. Lawrence lane. The question of maintaining open communications in the winter months awaits the practical test of weather and of ice breakers.

ROBERT B. RANSOM,
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Western Europe

League of Nations. Refusal of our State Department to consider the questionable honor of furnishing a president for the General Disarmament Conference scheduled in 1932, maintains the traditional stand of the United States in avoiding embarrassing entanglements in European politics. The successful steps toward naval disarmament accomplished by the London Conference indicate that this world conclave will be concerned chiefly with land and aerial armaments. In view of the small forces maintained by the United States in those arms, our position as a leader at Geneva would be false. American refusal of the invitation left the meeting of the League Council in a deadlock on that issue, resulting in no appointment.

Dr. Hjalmar Schacht, former president of the German Reichsbank, has accused the Bank for International Settlements of failing to do its share in helping Germany meet its reparations payments, as contemplated by the spirit of the Young Plan. Pointing to the inevitable necessity of a heavy export trade for Germany if she is to meet her obligations, he declares that she is receiving none of the aid to which she is entitled. More to the point, he argues that the Bank should aid in financing undeveloped countries, particularly those which buy German products.

France. Like her weaker neighbors, France begins to feel the acute pinch of economic recession. Tax receipts are dropping sharply, car loadings have made a precipitious decline, unemployment mounts to 109,000, with more than a million workers going on part time, the unfavorable trade balance reached $50,000,000 in January, and domestic trade is in stagnation. Caught by the slump more than a year after her rivals had been overtaken, France hopes to ride through a trough both shallow and narrow. Meanwhile, the glut of French gold continues and becomes a burden. The extension of credits totalling $120,000,000 to the Balkan States, announced by the bankers as an indication of their willingness to play a part in restoring world prosperity, will not affect the gold hoard, since it represents merely bulk purchases of French goods by the countries involved. A $32,000,000 international credit extended to Germany, France participating, may actually move gold to the debtor country. In addition a financial agreement with Great Britain should serve to stop the flow of bullion which was draining England and gorging France.

Facing a probable budget deficit the French parliament nevertheless continues to spend heavily for defense and for development of her colonial possessions. Total disbursements for military and naval purposes in the year 1931-'32 will aggregate $753,000,000. In the colonies the outlay for railways, harbors, communications, and other public works will reach $180,000,000.

Spain. Once more King Alfonso has played his cards superbly. With even the Royalists at war among themselves, there appeared to be little prospect of resisting the Republican clamor for the abolition of monarchy. Under pressure from every side the dictatorship of General Berenguer, premier, was brought to an end. The following day the King designated José Alphonse Guerra, bitter opponent of the monarchists, as premier, and European cables mentioned a vacation for the King as a first step in shelving him permanently. In twenty-four hours the situation reversed itself. Republicans, Socialists, Syndicalists, could not agree on a program satisfactory either to themselves or the throne. Worse still, Guerra found difficulty in forming a slate, with most of his candidates for the ministry reposing in jail. His failure gave the King the desired opening, and the aged Admiral Aznar, whose long career had rarely touched politics, was given the opportunity to form a ministry. Under his leadership, a monarchist coalition government, uniting the Romanones and Alhucemas factions, took office February 17th.

Municipal elections, to be followed by provincial and general elections are promised shortly by the new government. Whether or not the Republicans carry out their threat of abstention, it is expected that the Cortes will assemble in a few months with authority to function as a constituent assembly. Radical efforts to stampede that body into overthrow of the throne are expected, although the signal failure of the anti-monarchists to agree on a program has done much to weaken the movement. Amnesty for the 20,000 odd political prisoners is not yet forthcoming, censorship is maintained in full force, and the university doors are still closed in the continued repression of the volatile students.

DONALD A. FAY,
First Lieutenant, Infantry.

Central and Southern Europe

Germany. Germany continues to flounder. Happily, the latest lurch carried the nation in the direction of stability, when the government forced the hand of Hitler's Fascists on February 11th by passing a bill on parliamentary procedure which put an end to minority obstructionism. In reply the Hitlerites, 107 in number, walked out of the Reichstag, and were followed by 41 Nationalists and a handful of Agrarians. The "Rump Parliament" as the Nazis called it (but still a majority) survived the attack of nerves over the incident, then proceeded to transact business. In the meanwhile, Hitler's efforts to stampede the country into calling for a dissolution of the parliament proved futile. The sum of results indicates a distinct setback for Hitlerism, a corresponding strengthening of the government, and a growing confidence abroad in the ability of President Hindenburg and Chancellor Bruening to carry Germany forward on the charted course of safety. Foreign opinion is well reflected by the sharp and continued rise of German bonds in overseas markets since the spanking of the Nazis.

The seventh birthday of the Reichsbanner, an organization of ex-service men, on February 22d, was the occasion of demonstrations revealing the new "defense formations" of the Schupos, as they are called. Created as a reserve force to assist the police and the Reichswehr in combatting efforts to overthrow the Republic, the Reichsbanner now musters a first levy of 100,000 men, followed by an enrollment of a second and a third levy, available in emergency.

On the same day Hitler reviewed in Brunswick 40,000 members of the "storm detachments" of his party, and three days later, "International Unemployment Day" was observed by the Communists who paraded with their "Red Front Fighters" in the lead. With three well drilled, semi-military, political groups —the Schupos of the Reichsbanner, the "storm detachments" of the Hitlerites, and the "Red Front Fighters" of the Communists, now in existence, future political campaigns in Germany will tax the resources of the government to maintain order.

In an attempt to steal some of Hitler's thunder, the Reichstag, denuded of Nationalists, passed a resolution directing the government to reopen the question of war guilt and reparations. Paris promptly recognized it for the political gesture which it was, and proceeded with the arrangements for a substantial loan to Germany. In the meanwhile, Germany has obtained a much needed international loan of $28,680,000, American bankers participating. Foreign trade continues to show a handsome favorable balance, although total volume is falling off. Unemployment figures, running five millions, are expected to improve with the resumption of spring construction and agricultural work.

A quiet warning from the new head of the army, General von Hammerstein, calls attention to the fact that Nazist efforts to undermine the loyalty of the Reichswehr have not subsided. In this instance, retired officers were apparently being used as Hitler's instruments.

Italy. Italian reaction to the Franco-Italian naval accord is difficult to gauge, in view of Mussolini's unrelenting press censorship. Fears are expressed as to the nature of secret understandings which it is assumed are hidden behind the letter of the agreement. At the same time there is evident relief over the resulting reduction in a burdensome naval construction program.

The capture of the Oasis of Kufra in southern Libya during February marks the end of seven years of intermittent warfare against hostile tribesmen in Italy's African possessions. For the first time the entire area of Libya and Cyrenaica is fully under Italian domination. As a result, the Tunisian-Libyan boundary question, a sore point in Franco-Italian politics since 1919, presses for solution.

Like France, Italy shows an increase in her forthcoming military budget, this despite the general cut in pay of all government employees. The total increase, $5,905,000, results from the government's act in setting up military zones along Italy's Alpine frontiers facing France and Jugoslavia, in addition to those established along the Austrian border in 1924. The total cost of the new fortifications will be spread over several years.

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First Lieutenant, Infantry.

Eastern Europe

Russia. Warsaw reported on March 5th the disclosure by Ogpu (Soviet secret police) of a plot aimed to stir up revolt in the Ukraine. Never satisfied with their minority role under the Russian heel, despising the Russians as an inferior race, the Ukrainian Nationalists have always looked to the day of complete independence for their people. The frequent uprisings against the Lenin regime were to be repeated in this instance. Apparently the plot had wide-spread ramifications, involving officers of high rank in both the army and navy, members of the Ukrainian secret police, and government officials. The most prominent officer arrested was General Kossak, commandant of the Red Army officers' school at Kharkov.

Carefully synchronized with the annual session of the All-Union Soviet Congress, a second trial of alleged conspirators against the Soviet state opened in Moscow on March 1st. Fourteen Mencheviks (Russian Social Democrats) are charged with participation in an international plot to overthrow the Russian government. Menshevik units in continental capitals, it is alleged, have been working through the defendants to rouse the Russian populace to revolt and furnish an occasion for armed foreign intervention. There is no repetition of the charges made against leading European statesmen in the first trial. On the contrary, Prosecutor Krylenko declares that he has unearthed the "War plans" prepared by the Second (Socialist) Internationale for its attack on its Communist successor.

The steady closing of foreign markets to Russian goods, as one country after another declares its embargo against Soviet dumping is causing the Communists deep concern. Once more Russia turns to Germany for help, whether as a threat to the United States and other industrial powers which have been furnishing machinery and equipment to prosecute the Five-Year Plan, or as a step in permanent policy, cannot be said. The bait of a volume of orders totalling $500,000,000 on a five-year credit, and an alternative of $100,000,000 on a three-year credit left the Germans gasping. However, the state of German finance and of Russian credit prevented consummation of either deal.

GEORGE M. BADGER,
First Lieutenant, C.A.C.

The Balkans and the Near East

Albania. A possible second Serajevo was averted when two would-be Albanian assassins failed in an attack on the life of King Zog, picturesque Albanian ruler. Ostensibly undergoing a course of medical treatment in Vienna, he was given a police guard to ensure his safety. However, when it developed that the monarch's mission was actually concerned with dalliance, the vigilance of the police was relaxed out of deference, giving the gunmen their opportunity. Their poor aim averted a probable Balkan crisis, involving at the outset the two Powers most concerned over the future of Albania, Italy and Jugoslavia.

DONALD H. GALLOWAY,
First Lieutenant, Cavalry.

The Far East

China. Banditry, piracy, and the refusal of silver to rise above its panic price make up the principal sum of Chinese troubles today. It is not the season for active military campaigning, but such have been the inroads of the bandits, or "communists," that Nanking forces have kept the field constantly. The Nationalist capital reports one week-long battle resulting in the capture of Macheng, 60 miles north of Hankow, after the routing of a force of 10,000 Communists. Death by torture of three Nanking generals captured by Communists figures in another report. A not unusual difficulty arises over the uncertain attitude of several "grey" (i. e. neither quite loyal nor Red) generals and governors. How far financial persuasion will curb such disaffection and bolster the Nationalist alignment before the heavy fighting expected this spring is a question. The basic difficulty seems to arise from the attempted reduction of China's military forces from the 280 divisions enrolled, constituting in sum the greatest number of men under arms in any nation today, to the maximum of 100 divisions desired by Nanking. Not infrequently a division designated for disbandment secures advance information and mutinies as a unit. In other cases the mass of disbanded soldiery become bandits, "Communists" and what-not, to live on the country.

The military alliance of the Mukden War Lord, Chang Tsuch-liang, with the Nationalists continues firm, as that leader takes up permanent headquarters at Peiping. The establishment of daily air communication on the route Nanking-Peiping-Mukden helps the arrangement, maintaining at the same time Chang's connection with Manchuria.

Failure of the six Great Powers concerned with extra-territoriality in China to reply to Nanking's representations in the matter brings an announcement from that quarter that more forceful methods may be necessary. In the meanwhile these Powers show concern over Nanking's new labor law, effective August 1st, next. Reduction of hours and restriction of child labor will apparently end a low-cost industrialist's paradise, and these owners for the most part, are foreigners. They damn the scheme as a wholesale invitation to bribery, whereby wealthy factory owners will be able to avoid the tax by means of bribing government tax officials.

Oriental deliberation prolongs the monotonous parleys between the Soviet and Mukden governments over issues arising from the armed clash in 1929. The Manchurians are refusing to accept one clause on which Moscow insists, the prompt deportation of any White Russian in Manchuria whose presence there may irritate the Soviet government. The latter refuses to make any exception in the case of Russians who have adopted Chinese citizenship. A second parley, between Nanking and Moscow, covering the affairs of the Chinese Eastern Railway is in a similar deadlock.

Japan. Naval affairs occupied the attention of the Japanese Diet throughout the month to the almost complete exclusion of all other matters. At one period, early in the month, the consideration of the naval bill to put into effect the clauses of the London Naval Treaty produced five successive sessions in which wild disorder prevented debate. In the resulting mêlées furniture was smashed and physical attacks among members were the order of the day. The alleged attempt of Foreign Minister Shidehara to charge the throne with responsibility for treaty ratification was eventually explained by that minister, and comparative calm was restored. The announcement of the Franco-Italian adherence to the London Naval Treaty was greeted with general enthusiasm. The Opposition, however, will fight bitterly the provision which allows France a 30,000 ton margin of submarines over the other four powers.

A bill granting women equal suffrage with the men in elections for municipal autonomous assemblies passed the lower house. Its final passage is doubtful in view of the fact that a similar bill was shelved by the upper house last year.

The prolonged Soviet-Japanese fisheries dispute has brought the Japanese to the conclusion that Moscow is pursuing a consistent policy of nibbling away Japanese commercial rights by treaty. That conclusion stiffens Tokyo's back against further concessions.

ROBERT E. BLAIR,
First Lieutenant, Infantry.

SPORTS

Hunts at Fort Riley

SUNDAY, January 18. A field of 37 met at the Pump House and were soon away on one of the best runs of the season. The pack was working well and faster than usual. The hunt covered the old Russian Ride and cut-off near Lone Tree to the old Hay Camp and Dixon Springs, then following the west reservation fence went down into Breakneck Canyon and over Republican Flats, with the kill near the Polo Bungalow.

Wednesday, January 21. Due to a dental survey for the 9th Cavalry, horses from the school could not be turned out for this hunt. A small field of nine met at the kennels and the entire pack was taken out for exercise. It has been found that these exercise hunts with a field are the finest means of training the pack in discipline. Toward the end of the exercise a fine run was had on a coyote. After about a four mile run the trail was lost and the pack returned to the kennels.

Sunday, January 25. Earlier in the week two coyote baits had been placed in canyons in preparation for the coyote hunt held on this date. The canyons just west of the reservoir were first dragged, with no results. The pack was then lifted and Magazine Canyon was tried. A cold trail was found here that took the field at slow gaits over Artillery Hill to Sheridan Point, where it was lost. While dragging Forsyth Canyon a big jack rabbit came to the rescue and a fast run through Coyote Canyon and back into Magazine gave the only chase of the day.

Wednesday, January 28. Permission having been obtained to hunt over the farm land east and south of Grant Ridge and temporary panels constructed, the hunt met at the east end of Engineer Bridge. The first run across Smoky Hill Flats and up Grant Ridge was marred by a freshly burned piece of grass land and the pack finally had to be lifted and recast on the other side. From there on the pack worked well except for one incident, where they became more interested in a flock of chickens than the trial. Luckily for the club, only one of the chickens was killed and this was promptly settled to the satisfaction of the owner. The new ground over which this hunt was laid adds much interest to the hunting, as the change from the reservation land is very refreshing.

The National Lancer Trophy Competition

By Captain F. H. L. Ryder, Cavalry (D.O.L.)

THE 104th Cavalry, Massachusetts National Guard holds an annual competition for the possession of the cup known as The National Lancer Trophy. This two-foot silver cup was placed in competition in 1914 by the National Lancers, the parent organization of the present regiment. The Lancers were organized in 1836 and have carried on through the years as such until the advent of the World War when most of its younger members joined other outfits. It is now a veteran organization, donning its red and blue uniform at the various times during the year to participate in Boston parades.

This year's contest, arranged by Capt. Harold Rose, Plans and Training Officer, consisted of four events, a cross-country ride, squad drill, saber course, and jumping.

Sunday, October 26, 1930 proved to be an ideal day for the Boston cavalrymen on their cross-country ride. The day was cold and snappy, with the roads and bridle paths in excellent condition due to a light shower the night before. In this event each troop entered five enlisted men. It was designed to bring out qualities of horsemanship and ability to ride over varied terrain and obstacles by each individual acting alone. The event was judged for the following points: condition of equipment and grooming at the start, ordinary questions of general information a cavalryman should know about his mount, condition of horse at end of first hour, action of horse and rider at each of the four obstacles, elapsed time over entire course, march control and discipline, and condition of horse at end of ride.

The course, about fifteen miles long was over the Fenway bridle path, thru the picturesque Arnold Arboretum, thence cross-country to the Brookline Country Club, returning to the Armory via the Beacon Street bridle path. The contestants evinced considerable thought in this event, many of them having prepared excellent march schedules which were closely followed. Sgt. W. W. Vrom, Headquarters Troop, was high man with a score of 87½, followed for a close second by Sgt. W. L. Joyce, Troop E, who rode in for a total of 87 points. Headquarters Troop team finished first with 410¼, Troop A placing second with 357¾, leading Troop E which scored 353¾ points.

The remaining events were held in the Armory on Wednesday evening, November 5, 1930.

The squad drill was judged on appearance of horses and equipment and of squad members, performance in squad drill and horsemanship shown by the squad as a unit. Each squad drilled for six minutes, using any movements desired but they were required to use all three gaits at some time during the drill. Troop A's squad threatened Headquarters Troop's lead by winning the event with a score of 60. Troop E finished second with 40, and third place went to Troop F with a 30.

The second event of the evening was a modified regulation saber course. Teams of three men from each troop competed. Scoring was as laid down in TR 50-

70. Headquarters Troop retained its lead by winning this event with 56 points. Troop E's sabermen chalked up 53½ points for second and Troop A galloped to third place with 49½ points. High individual honors were tied by Corp. G. J. Woodworth, Troop B, and 1st Lieut. W. G. Regan, Troop E, with a score of 22 each.

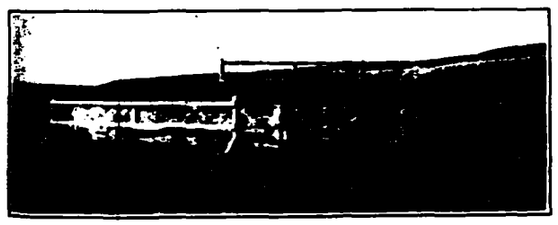
The last event was the modified Olympic jumping course. Teams of three men from each troop competed. The usual horseshow penalties applied. The excellent performance of the horses over this difficult course drew considerable applause from the packed balconies. Sgt. R. L. Ripley, Headquarters Troop on *Hiram O'Biff* with four faults was the best individual jumper in the event, followed closely by one of his team-mates, Capt. R. A. Mangini, Headquarters Troop on *Houghton* with five faults. Sgt. J. L. Reagan, Troop A, on *Apache* was awarded third place with six faults. The event was won by the Headquarters Troop team with 279 points, Troop F placing second with 267 points.

The trophy was won by Headquarters Troop with a grand total of 765¼ points.

Much interest and rivalry was stimulated between the various troops of the regiment by this competition and troops are already laying plans for next year's contest. The competition itself is an excellent test of the individual's knowledge of caring for his mount while on the march and his proficiency in the use of arms and jumping.

Fort Riley Hippodrome

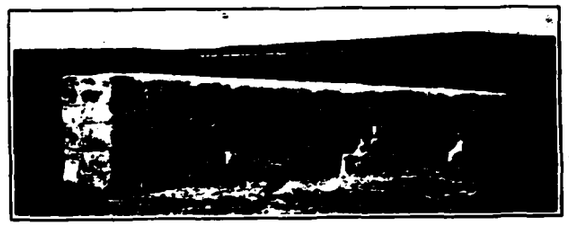
THE Fort Riley Hippodrome is a fenced area, 2000 feet long and 600 feet wide, on the flats between the Pump House and the Pump House polo field and containing every conceivable type of obstacle that might be required for training jumping horses. Construction has been in progress throughout the school year and although no funds were available, and materials were quite difficult to obtain, the project is now nearing completion. About 100 solid, permanent obstacles are now completed and in use. Others will be added in the spring when it is again possible to work with cement. During the winter, movable jumps will be constructed in the shop and later they can be used to vary the courses at will.



Right Sided Bank: Various Jumps Can be Arranged on Each Face and on Top

Timber Bridge with Barriers (Adjustable)

The purpose of this Hippodrome is to provide, within easy reach of the stables, facilities for instruction, training and competition in outdoor jumping over a great variety of obstacles requiring much galloping and many changes of direction. The obstacles are



Arched Stone Wall, 3' 8" High

graduated from three feet to six feet in height, and correspondingly in breadth, so that every horse finds jumps up to his capabilities. The hedges and oxers are of osage orange. Brick, stone and heavy timber were used generously in construction; consequently the jumps will not easily be broken and upkeep should be a simple matter. The accompanying illustrations show the types of construction on jumps installed. The entire area is enclosed by a smooth wire fence on posts of four inch iron pipe set in concrete, with steel "drive in" posts supporting the wire in between.

Pianoforte Jump: Ditch, Bank and Wall, Height of Wall 4' 6"

It is planned to set hydrants at various places in the field to afford water for the water jumps and for the natural hedges, trees and other shrubs. One of the obstacles is a watering trough with a stone base, which makes it possible also to use the arena as a pasture. There are two iron gates into the enclosure and also four stone panels of various types, one in each corner.

Professional Notes and Discussion

System for Determining Basic Allowances

By Master Sgt. John J. Reardon, Office Chief of Cavalry

In order to determine what supplies and equipment are authorized for an organization, two basic documents must be consulted: the tables of basic allowances and the table of organization for the unit concerned. It is a somewhat complicated and tedious task to determine allowances unless a system to simplify the procedure is adopted. Also unless a simple system is adopted there is a considerable chance for error.

It is not known whether any one individual or organization has worked out and adopted a regular system to simplify figuring their requirements. However this has been the source of much study and concern to the Materiel and Equipment Section, Office of the Chief of Cavalry. It is believed that the system there used can be adopted to advantage by those concerned with supply in all organizations.

First, one must be thoroughly familiar with the tables of basic allowances and the tables of organization before he can determine readily in his mind on just what basis the majority of items are issued. After a thorough study, you will see that there are certain major items or headings, with sub-items coming thereunder. The main headings are: Animals, Arms, Personnel, Platoons, Squads, Ratings, and Vehicles. Under these main sections all the necessary bases of issue can be listed. For example, under "Animals," the items are Horses, riding; pack and draft; total horses; Mules, draft; Aggregate animals. We can therefore start the construction of a reference table, listing the various classifications of animals under the general heading "Animals" and placing opposite in columns for the various organizations to be considered the proper number as given in the tables of organization in effect. Similarly the items under the other general classifications are filled in.

Now refer to your tables of basic allowances and you will see the items to be issued given as so many "per horse, riding," "per horse, pack," "per animal," or per one of the other sub-classifications which you have listed on your work sheet. Suppose you come to an article listed in the table of allowances as based on "per EM," you readily know that enlisted men will come under the heading "Personnel" on your work sheet; look in the column opposite "Enlisted" for the unit you are considering and you have the number required without further figuring.

The method above outlined of transcribing to a work sheet with only one column to refer to, eliminates the practice of looking all over the tables of organization to find the figure; by using this work sheet you refer to your tables of organization only once instead of repeatedly and thereby eliminate delay, and risk of following the wrong line and making an error.

In the hope of explaining this system more clearly, there is given herewith a model chart for a cavalry regiment, peace strength. From this chart allowances can be worked for a troop, machine gun troop or headquarters troop as well as for the regiment as a whole. The same kind of work sheet can be used for reference for any other organization up to and including the cavalry corps. The number of animals may not be the same on this chart as you will find in the table of organization, for the simple reason that your table may not show that only *one horse* per officer is now authorized, and that *seven* horses have been added for pack of the 37 mm gun contemplated for machine gun units, thereby making the pack horses in the machine gun troop total thirty-five instead of twenty-eight. This is a simple method whereby you can check back on your figures very easily. First be sure you get the correct data on your work chart from your organization table, and you can't go wrong.

This office keeps a record of the requirements for each individual item issued to the cavalry service for both peace and war, up to and including the division for peace, and the cavalry corps for war. Each item is listed separately on a 5" x 8" card; on one side is listed the "article," the number issued "for Mob.," and "for Peace," and "remarks and basis of issue." On the reverse side of the card is shown each organization from the troop to the division for peace, and to the corps in war, and beneath each their total requirements for that item. In the upper left hand column of the card, the price of the item is written in, so at a glance the cost of any and all organization equipment can be figured. The cards when completed are filed in the same manner as the items appear on tables of basic allowances. If changes occur from time to time, notations should be made on this card, and your table of basic allowances as well as your equipment tables will always be up to date. Prices of items can be found in the following publications:

Quartermaster—A. R. 30-3000; 30-3010; 30-3020.

Ordnance—See Standard Nomenclature Lists.

Engineers—A.R. 100-75.

Chemical—Pamphlet issued by C.W.S. "Nomenclature and Price List of Chemical Warfare Material" dated January 1, 1929.

Signal—Signal Corps Supply Catalogue.

Medical—A.R. 40-1710.

WORK SHEET FOR EQUIPMENT TABLES
CAVALRY REGIMENT
(Peace Strength)

	Troop	Machine Gun Troop	Hq. & Hq. Troop	Cavalry Regiment	Total Incl. Attached
Animals:					
Horses:					
riding	120	114	69	665[17M1C]	683
pack	9	35	11	82	
draft	2	2	2	12	
Total horses	131	151	82	759	777
Mules, draft	8	16	12	60[4M]	64
Aggregate	139	167	94	819	841
Arms:					
Rifles	104	38	47	501	
Pistols	123	112	87	724	
Sabers	97	...	28	420	
Machine Rifle	6	...	..	24	
Machine Gun	...	8	..	8	
Antitank Gun	...	2	..	2	
Bolos	...	16	..	16	
Personnel:					
Officers	4	4	9	33[4M1C]	38
W. O.	...	...	..	1	
Enlisted	119	108	78	690[20M]	710
Aggregate	123	112	87	724	749
Platoons:					
Rifle	3	...	..	12	
M. R.	1	...	..	4	
M. G.	...	2	..	2	
Communication	...	...	1	1	
Headquarters	...	...	1	1	

	Troop	Machine Gun Troop	Hq. & Hq. Troop	Cavalry Regiment
Ratings:				
Master Sgts.	..	..	2	2
First Sgts.	1	1	1	6
Tech. Sgts.	..	..	2	2[1B1M]
Staff Sgts.	..	..	4	4[1B1M]
Total 1st 3 grades	1	1	9	14[4]
Sergeants	10	11	12	63[4B2M]
Corporals	12	12	5	64[2B]
Pvt. 1st class	27	25	18	151[20B1C1M]
Privates	69	60	34	370[16]
Buglers	2	2	5	15
Cooks	2	2	2	12
Chauffeurs	..	..	6	6
Horseshoers	3	3	2	17
Messengers	7	5	8	41
Observers	..	..	2	2
Saddlers	1	2	1	7
Scouts	..	..	3	3
Wagoners	3	5	4	21
Squads:				
of 8 men	15	14	10	84[3M]
Rifle	9	..	..	36
Machine Rifle	3	..	..	12
Machine Gun	..	8	..	8
Vehicles:				
Wagons.				
escort	2	4	3	15[1M]
spring	1	1	1	6
Trucks	..	..	3	3
Cars.				
X—country	..	..	3	3
Motorcycle.				
w s.c	..	..	..	...[1M]

[M] Medical attached.
[C] Chaplain attached.
[B] Band.

Notes on Development Work

The Chemical Warfare Service and Cavalry are continuing the study of a suitable means of transporting the 4.2" chemical mortar to allow it to accompany the cavalry division.

The 1st Cavalry Division has developed a mounted-man receiving set for radio telegraph, which, it is believed, is an important step in developing communication between moving cavalry units.

Cavalry armored car development is progressing. The Ordnance has under construction on cavalry specifications a combined wheel and track car and a six-wheel four-wheel drive car.

The Cavalry Board has completed and furnished the Quartermaster Corps new specifications for a training saddle.

A motor vehicle for rapid laying and recovering of wire has been developed in the 1st Cavalry Division for use by the Signal Troop.

CURRENT TOPICS

The Cavalry Journal to Become Bi-Monthly

THE War Department Appropriation Act for 1932 contains the following clause:

"No appropriation for the pay of the Army shall be available for the pay of any officer or enlisted man on the active list of the Army who is engaged in any manner with any publication which is or may be issued by or for any branch or organization of the Army or military association in which officers or enlisted men have membership and which carries paid advertising of firms doing business with the Government: Provided, however, that nothing herein contained shall be construed to prohibit officers from writing or disseminating articles in accordance with regulations issued by the Secretary of War."

In order to comply fully with the above restrictions, the Executive Council, at a meeting held March 6, 1931, decided to continue the publication of THE CAVALRY JOURNAL without paid advertising and with its present personnel. In order to make possible a balanced budget, it was further decided to publish the JOURNAL as a bi-monthly of the same size as the monthly editions published in January and February. The March-April issue therefore appears as the first issue under the new policy.

The six bi-monthly issues per year of the present size give an annual text content about one-third greater than the old quarterly magazine. It is felt, therefore, that even though circumstances have made the monthly publication of the JOURNAL impracticable, at least for the time being, the policy now adopted still presents an advance over the quarterly both in frequency of publication and in total contents.

The loss in advertising income confronts the Association executives with a difficult problem in maintaining the JOURNAL at the desired standard without incurring an annual deficit. It will be necessary to make every possible saving in overhead and to curtail expenditures for trophies. Further, it becomes very desirable to increase income from other sources. This can best be accomplished through the active support of the Association members in increasing circulation and the income from the book department. Officers on duty with National Guard and Reserve units can be of especial assistance in bringing the Association and the JOURNAL to the attention of the officers of their organizations.

The JOURNAL of the future will more than ever reflect the support of the Association members.

Minutes of the Annual Meeting of the Cavalry Association

Washington. D .C., January 30. 1931.

The meeting was held at the Army and Navy Club, Washington, D. C., this date, being called to order at 8.20 P. M. by the President. Thirty-eight members were present in person and 236 by proxy, a quorum.

Upon motion it was voted to dispense with the reading of the minutes of the last meeting and to approve them as published in the CAVALRY JOURNAL for April, 1930.

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

Washington. D. C., January 30. 1931.

To: The United States Cavalry Association.

Gentlemen:

There is submitted herewith, as required by the Constitution, the financial statement for the year ending December 31. 1930, and the report of the activities of the Association for the same period.

FINANCIAL STATEMENT OF THE UNITED STATES CAVALRY ASSOCIATION FOR THE YEAR ENDING DECEMBER 31, 1930

CASH STATEMENT

Account	Receipts	Expenditures
Balance, Jannary 1	$ 3255.96	
Advertising	1933.47	$ 6.30
Book Department	6761.99	5631.14
Dues and Cavalry Journal	4089.65	3960.65
Interest	810.00	
Postage, Sta. and Inciden.	289.79	763.56
Rent	455.00	1080.00
Saddle Department	623.90	19.27
Salaries		2742.50
Telephone	85.01	159.96
Trophies		375.52
Balance, December 31		3565.85
TOTAL	$ 18304.77	$ 18304.77

ASSETS

Cash in bank, December 31, 1930	$ 3565.85
2 Real Estate Notes of $1000 each	2000.00
Interest accrued on above	50.00
2 Baltimore & Ohio Ry. bonds @ 82	1640.00
Interest accrued on above	40.00
2 Rio Grande Western Ry. bonds @ 79	1580.00
Interest accrued on above	20.00
2 Kentucky Utilities bonds @ 95	1900.00
Interest accrued on above	41.66
1 North Carolina Gas Co. bond @ 40	400.00
Interest accrued on above	10.00
1 Foltis-Fischer bond @ 60	600.00
Interest accrued on above	32.50
2 Consolidated Gas Utilities bonds @ 78	1560.00
Interest accrued on above	75.83
1 Professional Arts Building bond @ 70	700.00
Interest accrued on above	10.00
2 Theatre Realty Co. bonds @ 60	1200.00
Interest accrued on above	40.00
1 Atlantic Gas Co. bond @ 80	800.00
Interest accrued on above	30.00
Int. due on trust fund in Savings Bank	129.51
Stock on hand, books (Exhibit "A")	506.72
Office equipment and supplies (Exhibit "B")	374.55
Accounts receivable: Advertising (Exhibit "C")	648.85
Book Department	2121.50
Dues and Cavalry Journal	736.50
Saddle Department	410.00
Telephone	7.36
Equity in consignment saddlery a/c import tax paid	77.72
Petty cash	26.94
TOTAL	$ 21335.49

LIABILITIES

Bills payable: Ledger Accounts (Exhibit "D")	$ 1576.60
Telephone, December	9.52
Hermes (Exchange at $ .0393)	554.02
Due customers on unfilled orders (Exhibit "E")	176.91
Net value, December 31, 1930	19018.44
TOTAL	$ 21335.49

Washington. D. C., January 29. 1931.

We, the undersigned, appointed by the President of the United States Cavalry Association, to audit the accounts of the Treasurer of said Association, for the year ending December 31. 1930, do hereby certify that we have examined the books of account, vouchers, and the foregoing statement, covering said fiscal year, and that the same are correct and true, to the best of our knowledge and belief.

A. W. HOLDERNESS,
Lt. Col., Cavalry (G. S. C.).
J. P. ALEXHIRE,
Major, Cavalry.
A. D. SURLES,
Major, Cavalry (G. S. C.).

Net Assets

The net assets on December 31. 1929, as shown in the last annual report, were $22,484.33. The present net assets, namely, $19.018.44, show a decrease of $3.465.89 during the year. This amount is slightly less than the total of the loss in the quoted market value of securities held, namely $2.230.00 plus $1.258-.15 of old accounts receivable listed as assets in the last report and written off the present report. Of these accounts receivable marked off, $1,118.15 had accrued from El Paso advertising contracts. In order not to interfere with the Fort Bliss Horseshow, which started enlisting the assistance of El Paso merchants in the period during which these contracts ran, the policy was adopted of not pushing collection of these accounts. The remaining accounts written off were dues and subscriptions several years old, contracted by persons whose whereabouts are not now known.

Of the net assets $16,452.29 are represented by investments, accrued interest, cash deposits and cash. Accounts receivable amount to $3,924.21, all of which is considered good, due to the discounting of doubtful accounts above mentioned.

Investments

No change has been made in investments during the year. The quoted market value of investments as of December 31 was $12,380.00. The decline in market value above mentioned may be expected eventually to be regained with the return of normal financial conditions throughout the country.

Membership and Subscriptions

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

Regular Cavalry Officers	839
National Guard Cavalry Officers	246
Reserve Corps Cavalry Officers	338
Other Active Members (Retired Cavalry and and General Officers)	90
Associated Members and Subscribers	326
Honorary Members	4
Life Members	3
Exchanges	103
TOTAL	1949

These figures show 85.4% Regular Officers, 44.1% National Guard Officers and 9.2% Reserve Officers as members. This is about the same percentage of Regular and Reserve Officers as last year and an increase of 16.4% of National Guard Officers. Membership figures are always approximations, as large fluctuations take place quarterly due to delay in renewing dues and subscriptions.

The cash received for dues and subscriptions during the year amounted to $4.089.65.

Business Departments

The cash income from dues and subscriptions was about equal to the cost of publishing the JOURNAL.

The Book Department and Saddle Department operated at a small profit. The interest on invested funds amounted to $865.00 and interest on the savings account held in trust for the Leadership Test for Small Units to $55.54. Income from advertising showed a considerable decrease from the previous year due to discontinuing the El Paso advertising and to cancellations of advertising contracts due to current financial depression. The net cash income from this source showed $1.927.17 as against $3.760.57 for the previous year.

Other Departments

The receipts from the above activities are depended upon to support the overhead of rent, telephone, salaries, postage and incidentals, trophies and other donations.

The following expenditures were made from the Trophies account:

Transportation of Goodrich Trophy to Troop A, 7th Cavalry	$ 21.31
Pictures of Goodrich Trophy for past winners	20.50
Medals for Cavalry Rifle Team	134.50
Engraving on Goodrich Trophy pictures	6.00
Contribution to Cavalry Rifle Team	75.00
Trophy (watch) for N. C. O. Class, Fort Riley	18.56
Dues, American Olympic Association	60.00
Dues, International Equestrian Association	39.65

Summary of Year's Business

Taking the year's business as a whole, the total gain in value of cash and credit accounts over those of December 31, 1929, show a trading profit for the year's operations of about $500. It is believed that the past year has been as difficult financially as any which the Association is liable to encounter. It has followed the policy of expending on the JOURNAL and in trophies and contributions to Cavalry activities profits from other activities and retaining no profit other than a safe margin to avoid loss on current operations.

The Cavalry Journal

The JOURNAL was maintained during the year on a quarterly status. During the year a proposal was made by the National Service Company for printing the JOURNAL. Briefly, the proposal was to print the JOURNAL as a monthly, giving during the year about two and a half times the text matter of the quarterly, at the same cost of printing as the quarterly and to guarantee the Association an income from advertising equal to the income from this source during the year 1930. At a meeting of the Executive Council held December 30, 1930, the proposal was considered and the Council decided to accept it. Accordingly the publishing of the JOURNAL as a monthly commenced January 1. The additional expense to the Association will result from additional author's fees, engraving and mailing charges resulting from the increased text matter and frequency of mailing. It is hoped that an increased usefulness of the JOURNAL will justify the change. No change in dues and subscription price is believed necessary.

Other Activities

The Association has continued to act as custodian of the Fund for the Leadership Test for Small Units.

The Basic Cavalry Manual has been produced during the year for distribution by the Association. It has met with approval by all components of the Army and the first edition has been sold out. A revised edition is in preparation and will be produced shortly. The Association derives a small profit from the sale of these texts to compensate for the clerical work and credit transactions involved.

OLIVER L. HAINES,
Major, Cavalry
Secretary-Treasurer.

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

The following were unanimously elected to the offices indicated there being no other nominations:

President:	Major General Guy V. Henry
Vice-President:	Colonel Harry Cootes, 3rd Cavalry
Executive Council:	Colonel Leon B. Kromer, Cavalry
	Colonel Llewellyn B. Oliver, Cavalry
	Colonel William Innes Forbes, 305th Cavalry
	Colonel Hobart B. Brown, 302nd Cavalry
	Lieutenant Colonel H. T. Bull, G. S. C. (Cavalry)
	Lieutenant Colonel John K. Herr, Cavalry
	Lieutenant Colonel A. W. Holderness, G. S. C. (Cavalry)
	Lieutenant Colonel John W. Converse, 103rd Cavalry
	Major A. D. Surles, 3rd Cavalry

Following the election of officers, the President gave a short talk to the members on current developments in Cavalry weapons and equipment.

There being no further business, the meeting adjourned at 9:30 P. M.

OLIVER L. HAINES,
Major, Cavalry,
Secretary.

Organization Activities

3d Cavalry (less 1st Squadron) Fort Myer, Va.

BRIGADIER General Edgar T. Collins, U. S. Army, commanding the District of Washington, received the honors at the drill at Fort Myer on Friday, February 20th. The Deep Run Hunt Club of Richmond, Virginia sent about fifty of its members to witness the drill, also, the Alumni Association, Virginia Military institute, of Washington, D. C., was present in large numbers. Over one thousand applications for reservations were received too late to be filled.

The Chief of Staff, United States Army, General Douglas MacArthur, acted as host for the Diplomatic Corps at the exhibition ride given February 26th, twenty-three ambassadors and ministers of the various embassies and legations in Washington accepted the invitation to be present, also several hundreds of attaches and secretaries of the various diplomatic households.

On March 27th and 28th, the famous Society Circus at Fort Myer will be held and, judging from the number of applications for boxes and tickets already received, there will be an immense crowd at each performance. The Society Circus is given for the purpose of raising funds for athletic and recreational activities at Fort Myer and for welfare work among the soldiers and families of the post.

4th Cavalry, Fort Mead, South Dakota

ON February 7th, Colonel W. L. Luhn, celebrated his 62nd birthday, probably his last in the command of the 4th Cavalry. All officers of the command were present at the stag dinner given in his honor, at which the colonel was presented with a small gift. Music was furnished by members of the Regimental Band. It was a most excellent affair and well enjoyed by all.

5th Cavalry, Fort Clark, Texas

THE unusually heavy and unprecedented rain fall at Fort Clark during the winter months has been somewhat of a handicap to all out door work. However the regiment is well advanced in the training and is entering the final month's work preparatory to the annual tactical inspection of the Brigade Commander which will take place during the month of April.

Major H. W. Hall was recently relieved from assignment and duty with the Regiment and detailed for duty with the Organized Reserves at Detroit, Michigan. Since joining the Regiment in September 1928 Major Hall has in turn commanded the First Squadron and served as Regimental S-3. He also was in charge of the Regimental Horse Show Team which participated with considerable success in the First Cavalry Division Horse Show last October. Major and Mrs. Hall left the post on January 22nd on leave prior to reporting at their new station.

7th Cavalry, Fort Bliss, Texas

THE regiment is devoting this month to preparation for the squadron tests to be conducted by the 2d Cavalry Brigade and preliminary work for the Division maneuvers to be held in May. Particular attention is being given to devising a suitable ration carrier for the Phillips Pack, as much of the maneuver area will be over country that is too rough for wagon transportation. The regiment is also beginning its preliminary work with the pistol.

In the Brigade Platoon Tests last December the regiment did very well, First Lieutenant C. A. Burcham, Troop "A", and First Lieutenant C. V. Bromley, Troop "E", winning first and second place respectively.

The Horse-Show Team which is being coached by Major C. J. Wilder gave a good performance in the first Horse Matinee of this year, held on February 4th, Sergeant G. B. A. Lewis, Troop "F", won a first place in the Novice Jumper Class and First Lieutenant C. A. Burcham second place in the New Jumpers.

Polo practice is being held under the supervision of the team captain, Captain T. E. Voigt, with the object of developing new players and new ponies.

305th Cavalry, Philadelphia, Pa.

THE regiment continues its training for the C.M.T. Camp at Fort Myer next summer. A basic equitation class is conducted Friday nights and a class based on the camp schedule Wednesday nights. These drills are held in the City Troop Armory.

One-hour weekly noon conferences conducted by officers of the regiment have proved popular. Interesting talks have been given by Colonel Forbes, Major Bell, Captains Leusch, Young, Adams and by Lieutenant Esler. Captain Leusch also exhibited a famous 8th Cavalry Border film, kindly sent to us by Colonel Langhorne, its old and popular commander.

Colonel Bowman, our Chief of Staff, paid us an inspection visit during the month and held a conference on the coming summer work.

Plans are being made for Regimental Hunt Day, tentatively set as March 4th; also for the exhibition

ride which is held yearly in the City Troop Armory on organization day.

306th Cavalry, Baltimore, Md.

THE Sunday riding classes held at Fort Hoyle, Maryland, have been discontinued during the winter and will be resumed as soon as the weather permits. These rides have proved of interest to officers of all Baltimore units and one of the useful results is the opportunity afforded to become acquainted with officers of other units.

The regular conferences are now conducted entirely by Reserve Officers. While this requires a great deal of study on the part of those acting as instructors, it is time well spent as it gives them an opportunity to perform the exact role which will be one of their important duties in case an emergency makes necessary their call to active duty.

2nd Squadron, 306th Cavalry Washington, D. C.

INTEREST in inactive training for January, 1931, held up to the standard established in the fall as has also the attendance at both the evening conferences at Reserve Headquarters and the Sunday equitation classes at Fort Myer, Va.

At the conference held on Thursday evening, January 29th, the new Signal Corps film, "The Organization, armament, equipment and formation of the Cavalry rifle platoon" was exhibited. This type of visual instruction is highly favored by the officers and enlisted reservists and is proving very helpful both from the standpoints of the instructor and the student.

Arrangements have been made by the social committee for a dinner to be given on Wednesday evening, February 18th, at the Racquet Club. The Regimental Commander, Colonel John Philip Hill, 306th Cavalry, will act as toastmaster. Invitations have been extended to several distinguished persons to be the guests of the Squadron on this occasion.

307th Cavalry, Richmond, Va.

THE inactive training period has been in full swing since the holidays with the officers displaying unusual interest in the conferences. In addition to the scheduled subjects, a portion of the time is devoted to items of general military interest.

An important phase of a cavalryman's training is cross country riding. Here in Virginia the various Hunt Clubs afford this opportunity. Colonel William Henry Gilliam hunts regularly with the Middleburg Hunt. Lieutenant Colonel John C. Butler is always in the field with the Piedmont Hunt. Lieutenant Colonel Joseph C. Earnest leads the Deep Run Hunt. Arrangements are being made with this club, whereby officers of the regiment living in Richmond will be afforded the opportunity to ride to hounds.

Second Lieutenants Joe T. Brodnex, Virginia Military Institute, Lexington, Virginia, and Henry V. Millner, Lynchburg, Virginia, have recently been assigned to the regiment.

The 307th Cavalry Association has presented us with a Regimental Standard. The order for its manufacture having been recently placed with the Philadelphia Q.M. depot.

3d Squadron and Machine Gun Troop, 307th Cavalry, Norfolk, Va.

A MEETING of the squadron officers was held at the home of the Squadron Commander, Major James R. Mullen, Cav.-Res., on January 22nd at which time plans for spring training were discussed.

Major Mullen and the Unit Instructor visited the Mechanized Force from Fort Eustis, Va., when that organization made its over-night march to Virginia Beach, Va., on January 28, 1931. The visit was very interesting and instructive.

Interest continues to run high with respect to the Extension Courses. The number of lessons submitted during the last four months of 1930 being more than twice the number submitted in any other six months period.

January 30th the Squadron Commander, Major James R. Mullen, Cav.-Res., entertained the officers of the squadron at his quarters after a conference on Armored Cars. This meeting was thoroughly enjoyed by everyone.

308th Cavalry, Pittsburgh, Pa.

FIRST Lieutenant Edwin Port Geesey, Cav.-Res., 308th Cavalry, has been ordered to proceed to Fort Riley, Kansas, to attend the National Guard and Reserve Officers Course for 1931. We know that Lieutenant Geesey will enjoy this course.

Regimental Organization Day was celebrated on February 24, 1931 by this regiment with a dinner at which our Regimental Standard was formally presented.

The Pittsburgh Polo League, comprising the following teams is in the midst of its schedule, which comprises twelve games: 107th Field Artillery, Shady Side Academy, 308th Cavalry, and The Vangs.

All games will be played at Hunt Armory, Emerson and Alser Streets, East Liberty, at 8:45 P. M.

The first game of the season was one of the closest and most hotly contested that has been played here. The score was tied several times and the game finally ended with the score—107th Field Artillery 10½; 308th Cavalry, 10.

On February 8th, the Polo team consisting of Lt. Madden, Mazuzan and Perritt, went to Youngstown, Ohio, where they were the guests of their opponents of the Mill Creek Riding Club who have a real team. While the team was defeated they are looking for a return game.

(Continued on page 64)

BOOK REVIEWS

THE LONG ARM OF LEE, or "The History of the Artillery of the Army of Northern Virginia," With a brief account of the Confederate Bureau of Ordnance. by Jennings Cropper Wise. Illustrated. Two Volumes. Cloth. 995 pages. J. P. Bell Company, Inc., Lynchburg, Virginia. 1915.

This book bears out its title and therefore occupies a valuable and distinct place in the literature of the Civil War. Part I of Volume, I, consisting of four chapters, gives an excellent narrative of the Confederate Bureau of Ordnance. The reviewer does not know of any other readily available account of this remarkably efficient organization which equipped the armies of the Confederacy throughout the war.

The remaining part of Volume I, and Volume II give a most readable account of the organization, expansion and unusual service of Lee's artillery. The fine character sketches, the intimate details, and the affectionate admiration with which the author carries you on from page to page through the trying years of war, establish the fact that the author is a writer whose work people delight to read. Colonel Wise pays a well-deserved tribute to Virginia Military Institute: he gives praise where it is due, and cites facts from which the reader may draw critical deductions. A sufficient number of general annotations add to the value of the book which is also well-served by a carefully prepared index.

Every artillery man should read the book, if he would know how leaders like Stonewall Jackson, Pendleton, Long, Alexander, Walker, and Pegram may inspire the artillery of an army to gain the profound reliance of infantrymen in battle. Officers of other arms will do well to read the book, so that they, too, may know how to appreciate and expect real service from the sister arm that can help in all phases of battle. It is a good book that will live.

■ ■ ■ ■

A CHATEAU AT THE FRONT, 1914-18. By the Marquise de Foucault. Houghton Mifflin Co., Boston. 1931. 338 pages. $4.00.

The Marquise had just finished moving into her newly bought Château of Pronleroy near Compeigne when the war started. Sticking to her home, she saw the Germans sweep by on their march toward Paris. For twenty days the château was behind the German lines—then the Marquise and her daughters saw the invaders withdraw to the Aisne and Pronleroy skip the rope back behind the French lines, but not far enough to be out of earshot of gunfire, and hostile airplanes. Threat of capture and danger of destruction by long range heavy artillery fire were constant until August 24, 1918, when Pronleroy, as the author expressed it "finished its role of 'Château at the Front'."

The Marquise played hostess to an unending stream of staff and line groups, enlisted men, and refugees. Among her most distinguished guests were General Mangin and his staff. From her château he launched on July 11, 1918, the counterattack of Mery-Courcelles.

An interesting and fascinating personal narrative.

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DIZIONARIO MILITARE (Military Dictionary) Part I, German-Italian, by General Roberto Segre, Royal Italian Ministry of War; State Polygraphic Institute, Rome. 426 cuarto pages. Price, Lire 100. (Postage included).

As German war records become available to the foreign students of World War history, the need of an up-to-date military dictionary of the German language becomes more and more evident. The author has solved the problem for Italian military historians and students. General Segre's excellent compilation contains about 50,000 German military technical terms and abbreviations and their Italian equivalents. They include expressions peculiar to the armies of Germany, Austria, and Switzerland. The practical value of the dictionary is greatly enhanced by the skillful explanatory definition of German terms for which the Italian language possesses no exact equivalent.

Part II, Italian-German, still remains to be published.

This excellent piece of work should prove a valuable guide in the preparation of a similar German-English dictionary. Orders of the Royal Italian Ministry of War designate this dictionary an official publication.

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PROPHETS OF THE NEW INDIA by Romain Rolland. Translated by E. F. Malcolm-Smith. Albert and Charles Boni, New York. 1930. 5⅞" x 8¾"; 683 pp.; $5.00.

To the student of philosophy looking for new thoughts on which to meditate, to the reader of current events desiring new light on the Indian problem, to the historian searching for the effect of religion on politics, this book should be most welcome, and, by such a noted author as M. Rolland, it commands both respect and attention. In it he tells of a religious revival or renaissance which has been taking place in India during the last century and which has been of considerable influence in shaping the thought of contemporary Hindu leaders.

Brahmanism is one of the oldest religions of the world, dating from at least four thousand years ago. It is generally considered a religion of idolatry, as there are said to be several hundred deities in the Hindu pantheon. However that is a corrupt evolution of the original creed as expounded in the Vedas and Upanishads. In the sixth century B. C. Guatama Bud-

she endeavored to purify Hinduism but he succeeded only in establishing a new religion, the old one continued without change.

In 1836 there was born a Brahman, by name Ramakrishna, who, following in the footsteps of Gautama, made the reform of Hinduism his life work and so far there has been no attempt to establish a new religion of Ramakrishna. M. Rolland gives a most interesting and scholarly account of the life and teachings of this modern prophet of the Hindus. It is impossible to read it without having one's thoughts continually recur to the New Testament, Ramakrishna's life being a constant reminder of the founder of Christianity. As M. Rolland says he "is the younger brother of our Christ."

His doctrines and moral teachings were of the finest; one cardinal theme can be given as illustrative of his breadth of mind. "I have practised all religions, Hinduism, Islam, Christianity and I have also followed the faiths of the different Hindu sects. I have found that it is the same God towards whom all are directing their steps, though along different paths. Let each man follow his own path." It is interesting to note that there is a great similarity between the philosophy of Ramakrishna and that to be found in the works of Whitman, Emerson, Thoreau and Mrs. Eddy, although probably none of these ever heard of the Indian sage.

His most distinguished disciple was Vivekenanda, who attended the Parliament of Religions at the Chicago World's Fair in 1893. His was a striking personality; an intellectual of the highest type he had studied the works of the great philosophers before he was twenty-one and had corresponded with Herbert Spencer. A man of boundless energy and fire he carried the gospel of pure Hinduism, as taught by Ramakrishna, not only to all India, but also into other lands, obtaining many followers in both the States and England. He was the St. Paul of Hinduism.

In the estimation of M. Rolland the work of these two men has affected the Hindus, at least those of the upper castes, to an unparalleled extent and no estimate of the Indian situation can be complete without taking this into account. It seems more than likely that through the efforts of Ramakrishna and Vivekenanda, Hinduism will purge itself completely in the process of time.

It must not be thought that either of these two men promoted revolution or were opposed to British rule, quite the contrary in fact, but they taught progress and freedom and the Hindu of this generation has profited by their teachings, while, according to M. Rolland, British rule in India has deteriorated. Gandhi, Tagore and most of the Indian leaders of today has been profoundly influenced by Ramakrishna and Vivekenanda.

This book is not light reading, it is full of Oriental philosophy and mysticism, difficult for the western mind to appreciate. However anyone who is interested in religious revival which appears to be without parallel since the time of Mohammed cannot do better than read this remarkable work.

CAVALRY, NOW AND TO COME

(Continued from page 6)

change the method of our employment by the High Command in that intervening area. What possible use can the leisurely movement of six miles per hour be to those swift moving lines in front and to the entrucked forces in rear? It will be the same in bridging the gap between Corps and Armies, in moving from assembly areas to a threatened point. Therefore when we cover those larger marches it will be in the fastest transportation available, in passenger cars if they can be had, and our horses will arrive porteé or by marching when they can.

This one major change in tactical employment should affect all of our teaching and practice that bear on the subject of long marches. The placing and handling of rendezvous points for forward reconnaissance agencies; the seizure and exploitation of critical points; the dismounted work and use of our own armored cars until our horses arrive and until we close to short marches from large bodies of the enemy should be familiar matters in both tactics and supply for all of us.

The practice and theory of the increase in speed of the short march we have already appreciated. The high rates that are practicable of attainment and the methods that facilitate them are being exploited, so that speed we formerly considered dazzling will be usual and proper.

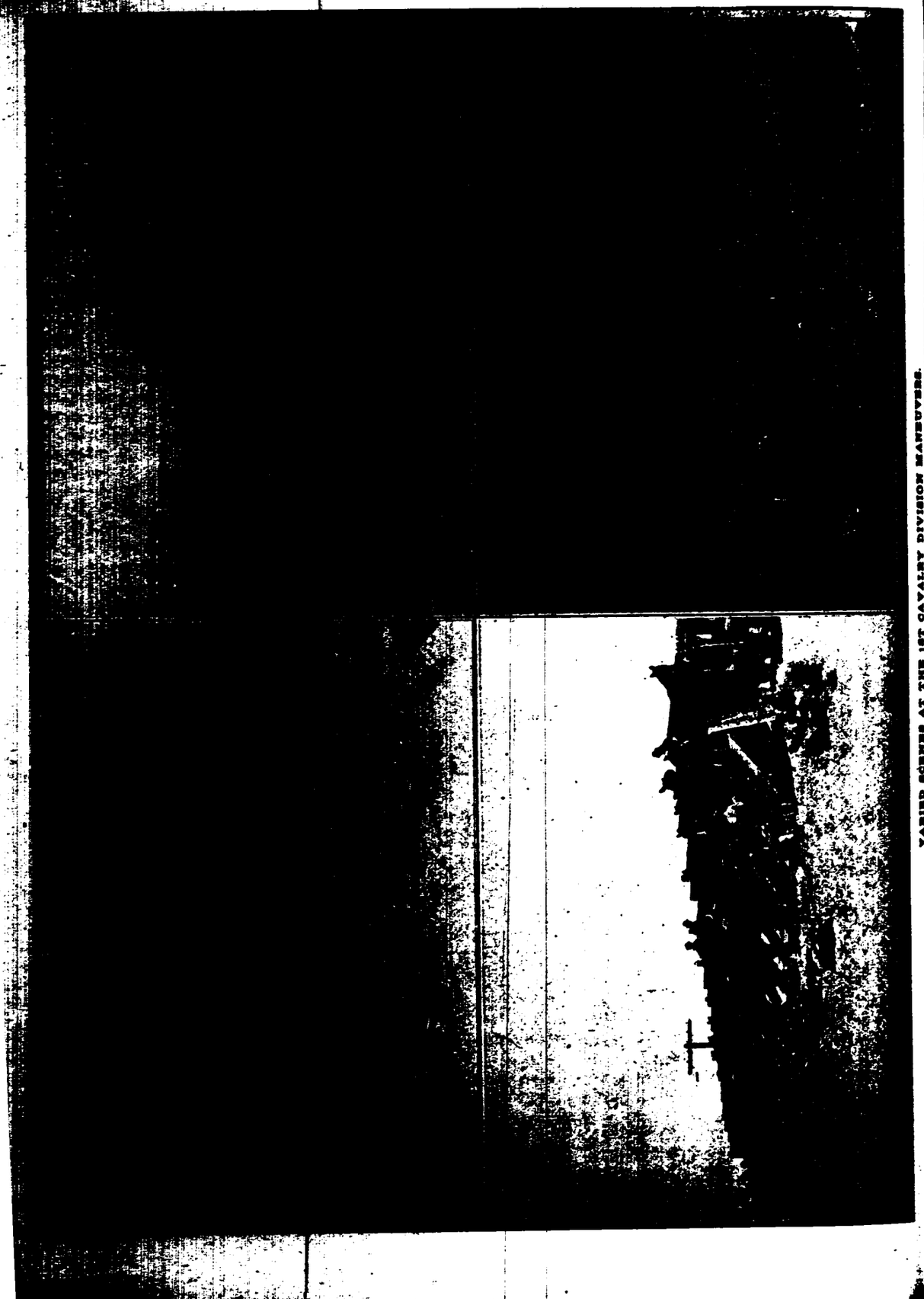
What effect the foregoing will have on the mind of the reader it is impossible to conjecture other than this. He should recognize, while strange things are surrounding him and intruding on his fond traditions, that feeling which is dearest to him—he is again on the offensive. With the organization we have outlined he will not cringe. He is necessary in the scheme of war and the proof is ever present. Other things being anywhere nearly equal, place this organization when conflict comes, or in maneuver and map problems until it comes, on one side and deprive the other of its aid. The proof will be there.

ORGANIZATION ACTIVITIES

(Continued from page 62)

862nd Field Artillery, Horse, Baltimore, Md.

IT WAS a source of gratification to note, from statistical reports which have just come to hand, that the percentage of officers of this regiment receiving training during the first half of the current fiscal year is larger than that of any other organization in this division having a membership of over fifteen officers. Coupled with the fact that we have the second greatest assigned strength of any regiment of horse artillery of the Organized Reserves, and that the course being pursued requires a very considerable effort on the part of both students and instructors—different ones are detailed for each conference—there results a very satisfactory feeling that the responsibilities incident to holding a commission in the Army of the United States are seriously appreciated.



TANKS SCOUTING AT THE 1ST CAVALRY DIVISION MANEUVERS.

THE CAVALRY JOURNAL

VOL. XL MAY-JUNE, 1931 No. 165

Authors alone are responsible for statements contained in their articles.

Mechanized Force Becomes Cavalry*

SINCE assuming the duties of Chief of Staff last November, General MacArthur has been reviewing the basic War Department policies with a view to the modernization of the Army. Among the subjects which he has had under consideration is that of the extension of Mechanization and Motorization throughout the Army. As a result of this study he has enunciated the following general principles which will govern the reorganization and development of the Army along this line in the future:

"The fundamental mission of an army to secure decisive victory and to secure it promptly, has not changed throughout the long period of recorded history.

"In undertaking such a problem, an army commander is confronted with preliminary tasks whose proper accomplishment is a prerequisite to final success. Other tasks must be accomplished when the bulk of the opposing forces are engaged, while still others must be performed when we pursue the beaten enemy or are forced ourselves to retire from the field. The character of the tasks to be performed fixes, in a general way, the characteristics of the troops assigned to them.

"The various tasks that the combat arms are expected respectively to perform become their general 'missions.' In organizing combat forces, the question then arises, 'How should these troops be equipped to enable them to carry out these missions?' Here is where we see the modern stamp on our forces, as they are equipped with new implements of war to assist them in solving missions centuries old.

"Too often in the past organization has been attemped from the standpoint of equipment, rather than from the standpoint of missions assigned.

"Few classes of equipment belong exclusively to any one arm. The rifle, although the basic arm of Infantry, is an important item of the equipment of other arms. When the tank had only the speed of the foot soldier, its use was confined generally to close support of the Infantry in attack. When it required strategic mobility, it had to be entrucked. Today, tanks posessing great strategic mobility are being developed, and it follows that certain types of these tanks may appear in organizations having missions far beyond the normal missions assigned to the Infantry.

"Cavalry acquired its name during a period when soldiers mounted on horses were able to move more rapidly upon an enemy than any other arm. At that time, the horse also had value as a charging weapon. Thus, there has grown up in the public mind a very natural conception that Cavalry must include the horse. Modern firearms have eliminated the horse as a weapon, and as a means of transportation he has generally become, next to the dismounted man, the slowest means of transportation. In some special cases of difficult terrain, the horse, properly supplemented by motor transportation, may still furnish the best mobility, and this situation is properly borne in mind in all our plans.

"The missions of the Cavalry arm now, as in the past, include the following:

Long distance strategic reconnaissance.

Fighting for the control of the theater of reconnaissance.

Seizing points of strategic and tactical importance.

Tactical reconnaissance.

Pursuit of the enemy, or delay of his advance.

As an exploitation force to take advantage of any break or weakened point in a hostile battle line. In this type of operation, the cavalry may act alone or in conjunction with other arms.

As part of a reserve to be used tactically or strategically. It is not difficult to visualize a reserve of the future, moving out in column from head to rear—Cavalry (mechanized), units of the Tank Corps, Infantry temporarily embussed, all elements being able to move at a uniform speed without noise. Field Artillery must be prepared to support such a force with units especially organized and equipped to accompany it.

"An equally important function of the arm is to preserve the cavalry spirit, an asset which, while intangible, is none the less a vital factor in combat.

"To enable the Cavalry to develop its organization and equipment so as to maintain its ability under modern conditions to perform the missions enumerated, the following program is announced:

The Mechanized Force will be reorganized as a reinforced cavalry regiment, in which appropriate equipment of the present Mechanized Force will be absorbed. To provide for future development of the proper supporting arms for use with mechanized cavalry units perhaps larger than a regiment, the artillery and maintenance units will remain attached for the present.

As far as necessary, officers and enlisted men of any arm or corps may be attached to the regiment in order that the best thought upon this subject may be brought

*War Department Release, May 18, 1931.

to the Cavalry. Changes in enlisted personnel will be made gradually so as to accomplish both the retention of the experience gained in the Mechanized Force and the reconstitution of detached units in their parent organizations.

The Cavalry will undergo such general reorganization and re-equipment as will enable it best to perform the missions enumerated above. This may require at least two types of cavalry regiments. One (horsed) in which the horse and mule may remain only where they cannot be replaced by the motor for the performance of difficult tactical missions, or for operations in difficult terrain where the horse and mule still give us the best mobility. A second type of Cavalry (mechanized) in which the horse and mule shall have disappeared entirely.

"The infantry mission is to close with the enemy, and its ability and power to accomplish this makes Infantry the decisive arm. Its success is a prerequisite to army success; consequently, its efforts must not be dispersed in the performance of auxiliary and supporting missions that can be carried out by other arms. In time of peace the Infantry will be trained in close proximity with other arms, in order to develop the team work and mutual understanding so necessary to insure the accomplishment of the infantry mission.

"As one of the principal duties of the tank will be to support Infantry, it should be trained with it to develop the most efficient type of machines and most applicable methods of tank support for infantry units. But the tank itself may never become a piece of equipment assigned to an infantry regiment. In war, tank organizations may be assigned to corps and army troops to be employed where opportunity offers, including opportunities of terrain.

"In the development of tanks, and tank organizations, it must be remembered that certain important considerations apply to the employment of tank units in war. Among these are:

Tanks will be difficult to procure in large numbers, particularly in the early stages of any war.

Opportunities for their best employment on the battle front must be carefully selected, both as to time and as to place. They are assault weapons only, to be used for relatively short periods of time, under favorable opportunities.

Maintenance will offer many difficulties, particularly in the areas of front line divisions.

"All these considerations indicate the desirability for visualizing tank units in war as Corps, Army, and G.H.Q. troops. In the development of the tank, due regard must be paid to the necessity for strategic mobility, even though its fundamental qualification must be tactical mobility.

"The 'tank' is properly the term that will be used when this vehicle is employed with infantry. When it is employed as a part of the equipment of cavalry, it may be developed to possess characteristics particularly requisite for such service, and it might then be given the name 'combat car.'"

The above directive in no way intends rendering inactive as mounted troops any number of cavalry regiments. It means that one mounted regiment will be rendered inactive as a mounted regiment and reconstituted as a cavalry regiment (mechanized). Which regiment this will be has not yet been determined, nor have the details of the change been worked out. When the selection of the regiment has been made the enlisted personnel and horses of this regiment undoubtedly will be absorbed gradually by other mounted regiments and the enlisted personnel of the present Mechanized Force will gradually be transfered to the mechanized cavalry regiment.

Further mechanization of horse regiments will undoubtedly depend upon the results obtained with the one regiment which the War Department directive contemplates mechanizing.

The Mechanized Force
Its Organization and Present Equipment[1]

Captain Arthur Wilson, Field Artillery

THE Mechanized Force, officered and manned by personnel from all arms of the service, assembled at Fort Eustis, Virginia, is in the midst of an intensive training program. At a time of the year when many organizations are not taking part in extended maneuvers, this force is participating each week in tactical exercises that take it over most of the Virginia Peninsula. A single problem extends as far as 75 miles for the entire force, with the reconnaissance vehicles covering well over 200 miles a day. Night marches and maneuvers, with all vehicles moving without lights, have also been part of the schedule.

The concentration of the force was completed in November, 1930, with the exception of the signal platoon which arrived the first week in March and the quartermaster repair unit which arrives in June. While the Mechanized Force is a new unit, it is by no means composed of new organizations. It has, therefore, been possible to launch immediately into a training program which not only carries on individual and company training, but also includes the work of coordination between units and the development of the tactical missions of the force as a whole.

Before we go into the internal organization and equipment of the Force let us define the word "mechanization." In order to avoid confusion of thought the War Department has seen fit to define and to differentiate between mechanization and motorization.

Mechanization is "the application of mechanics directly to the combat soldier on the battlefield."

Motorization is "the substitution of the motor-propelled vehicle for animal-drawn in the supply echelons of all branches of the Army, and in providing increased strategical mobility for units of all types through the carrying of men, animals and equipment in motor vehicles over roads."

To reflect in the organization of the Army the mechanical age in which we live, to take advantage of the outstanding leadership of this country among the nations of the world in the automotive industry, and to exploit to the fullest extent possible the mechanical and scientific field of the nation in the interests of national defense, the Mechanized Force was constituted. It is not only a self-sustaining unit designed to fulfill a particular and necessary role in the organization of the Army, but is a field laboratory to develop tactics for such a force and to test mechanical vehicles and weapons suitable to its use. The War Department has determined that the United States, the leader in motor vehicle manufacture, will not continue to be the last in the application of this great asset to the national defense.

"A new element foreseen as a development in the armies of the future is the mechanized force," wrote General Summerall in his final report to the Secretary of War; and as one of his last official acts as Chief of Staff he ordered the organization of such a force.

To carry out its mission and its tactical rôle the force is organized with means for administration and command, for ground reconnaissance, and for defense against air attack; and is provided with an attack unit, a holding unit, and supporting units. It consists of a force headquarters and staff, and ten organizations, which are a headquarters company, an armored car troop, an antiaircraft detachment, a tank company, a machine gun company, a chemical detachment, a field artillery battery, an engineer company, an ordnance company, and a quartermaster motor repair section.

Force Headquarters. It is at once apparent that there must be developed for the force a technique of command and communications different from anything that has heretofore been accomplished. There must be evolved the internal tactics of the force itself, as well as the tactics of the force acting as a unit and in cooperation with other organizations. There are also many questions of equipment, supply, and maintenance that must be worked out in this experimental field laboratory for mechanization.

The headquarters consists of the commanding officer and a staff of an executive, an adjutant, an assistant adjutant (personnel), a plans and training officer, an assistant plans and training and liaison officer, a supply officer, an assistant supply officer, an intelligence officer, an ordnance officer, and a commanding officer of special troops. This last named officer is a major and has administrative command of the headquarters company, antiaircraft detachment, chemical detachment, ordnance company, and quartermaster repair section. He also commands the field trains. The commanding officers of the chemical and signal detachments also act as chemical and signal staff officers.

Headquarters Company. The headquarters company is organized into an administrative section, a supply platoon, and a communications platoon.

Armored Car Troop. The ground reconnaissance element is provided for in the armored car troop from the 2d Cavalry Division. With this unit ground reconnaissance can be pushed far beyond anything that has ever been accomplished on foot or on horse.

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[1] This article was written in March and revised in April. Consequently some minor changes might have occurred by the time it appears in the JOURNAL.

The cars are built for rapid movement; and because of the large number of automatic weapons and their armor, they have a high degree of fighting power. The troop is organized into a headquarters, consisting of an armored Franklin radio car, a five-passenger Ford touring car for cross-country, a solo motorcycle, and four platoons. The first platoon consists of two light cars, a Chevrolet and a Plymouth; the second has three light cars, all Whippets; the third, two medium Lafollette cars; and the fourth three medium, so-called, Franklin cars. All cars except the Franklins are built on commercial chassis and have the engine corresponding to their make.

The light cars are entirely protected with 1/16-inch armor, except the turret which is ¼-inch armor. In each turret is mounted one caliber .30 Browning tank machine gun, air-cooled.

The medium cars all carry a crew of four men, and are completely armored with ¼-inch armor. The La Follettes each carry one caliber .30 Browning tank machine gun. The Franklins carry one caliber .50 machine gun which can fire at a rate of 400 rounds per minute, and two caliber .30 Browning machine guns, capable of firing from 500 to 600 rounds per minute. The light cars are capable of a speed of 50 and the medium cars of 70 miles per hour.

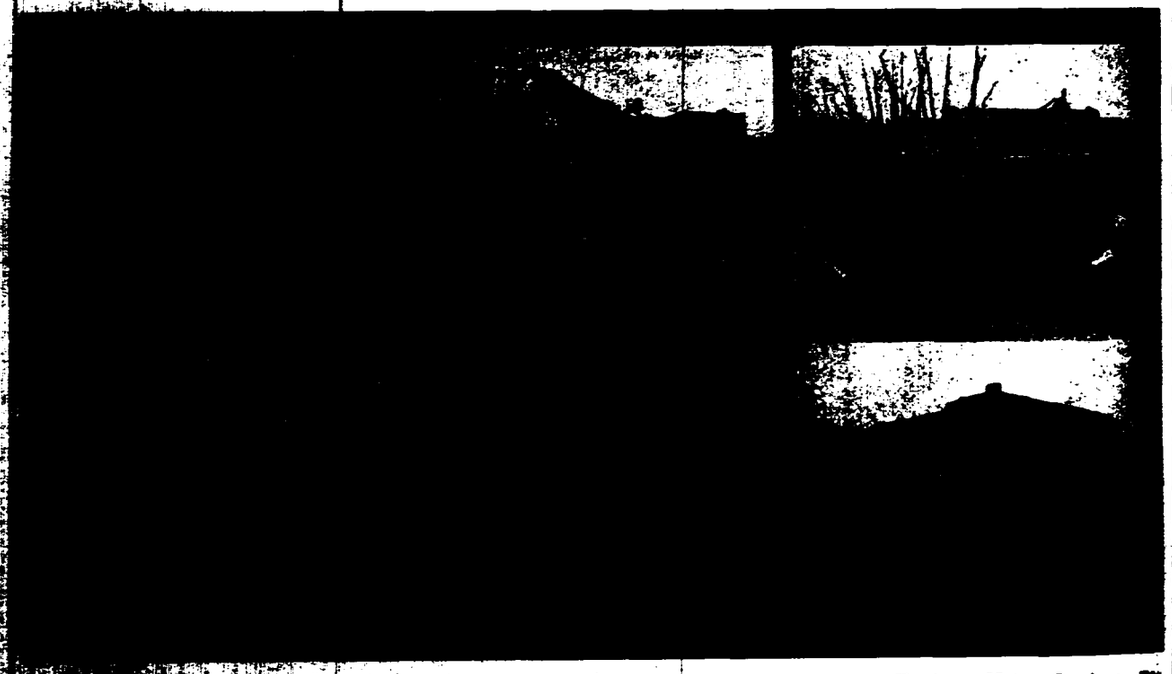
In addition to the machine guns each car carries a Thompson sub-machine gun, and all members of the troop are armed with the automatic pistol.

Antiaircraft Detachment. The force is a vulnerable target from the air when on the march, at a halt, or in bivouac; to protect its fighting as well as its non-fighting vehicles for front line transportation, an antiaircraft detachment is provided. It is organized to give a close, powerful, emergency defense against aircraft. It is equipped with two single-gun antiaircraft mounts with caliber .30 Browning water-cooled machine guns, carried in two-ton F. W. D. trucks, and with one multiple machine gun mount (carrying two caliber .50 Browning machine guns) on a commercial White chassis. The mount has all-around traverse and can be elevated to 87 degrees. It is equipped with a stereoscopic sight. Though the guns can fire 7500 yards, the effective tracer range is considered as 1200 yards.

The crew consists of a driver, an assistant driver, a gunner, two assistant gunners, and two observers. The gunner elevates and traverses with his hands, and fires the guns with his feet. One assistant gunner on either side watches a gun, sees that it works correctly, and attends to the ammunition supply. The two observers are used to watch for targets. When on the march the two assistant gunners are also used as observers, and the four are seated so as to give all around observation. To protect the gunner from the gas and smoke a special shield is provided above the guns.

The detachment consists of one officer and nineteen men from the 69th Coast Artillery at Aberdeen Proving Ground.

Tank Company. The tanks are offensively the backbone of the force, the unit around which it is built.



Left to Right—The 4.2-inch Chemical Mortar on a T1E1 Chassis; 75-mm. Pack Howitzer Motor Carriage, T1; 75-mm. Gun on Mark VII Self-propelled Mount.

Left to Right—Diamond-T Wrecking Truck Lifting a Cross-Country Wire Cart; The Mechanized Force Mobile Repair Shop; Two-Ton FWD Truck with Liberty Kitchen.

This company comes from the 1st Tank Regiment at Camp Meade, and consists of five officers and 88 men.

It is equipped with 22 tanks, two of which are radio and command tanks (one a TIE2 and one a Model 1917 with Franklin motor), three are light tanks Model TIE1, six are 6-ton tanks Model 1917 which have been remodeled and equipped with Franklin motors, and eleven are 6-ton tanks Model 1917.

The light tank TIE1 has three speeds forward and one reverse; it can travel 3.18 miles per hour in first, 14.5 in second, and 21.9 miles per hour in third. It is engined with a Cunningham V-8 motor.

The Model 1917 tanks, redesigned and modified to take a Franklin engine, have a maximum speed of nine miles per hour. They each carry one caliber .30 Browning tank machine gun, air-cooled, or one 37-mm. gun. The TIE1 tanks are each equipped with one caliber .30 Browning machine gun and one 37-mm. gun. For each caliber .30 machine gun 4200 rounds of ammunition are carried, and for each 37-mm. gun 238 rounds. One of the TIE1 tanks is equipped with a semi-automatic 37-mm. gun.

To get the necessary amount of speed on the march and before going into battle area the tanks are transported on tank carriers, six-wheeled trucks developed in the Service and built at Camp Holabird. The company is equipped with ten carriers with solid tires and two carriers of a later model equipped with pneumatic tires for the command tanks. At present not all the tanks are carried when on tactical exercises, due to lack of carriers.

The tank carriers are engined with six-cylinder Continental motors and are capable of a speed of 33 miles per hour.

The tank company is organized into three platoons of three tanks each. The additional tanks may be used later to organize another platoon, and for mobile battle command posts for unit commanders of the force. They will always be used for training.

Machine Gun Company. The machine gun company of three officers and 70 men was sent from the 34th Infantry (motorized) at Fort Eustis. It is organized into three platoons of three guns each, or a total of nine caliber .30 Browning machine guns, with three more in reserve. All of the guns are carried on six-wheeled cross-country ¾-ton Chevrolet trucks, one gun and a crew of six men, a driver, an assistant driver, and a squad leader on each truck. The crew for the gun is four men, the other two being riflemen for protection of the guns. All individuals carry caliber .45 automatic pistols. Five trucks, not used to carry guns, are for baggage, ammunition, and the three reserve machine guns. In addition to the trucks the company has three cross-country Chevrolet passenger cars, and will soon have for test two-wheeled machine gun carriers and two wheel-and-truck machine gun carriers. The guns are mounted on the trucks facing to the rear for fire from the vehicles, and when detrucked run on rubber tired carriages pulled by hand.

Chemical Detachment. Smoke is one of the most valuable agents in the assistance of tank attacks and in the screening of the enemy's antitank weapons during the withdrawal of tanks from action. The chemical detachment is provided with a 4.2-inch rifled chemical mortar which can fire high explosive shell as well as smoke or chemical shell. It has a range of 2500 yards. The mortar is mounted on a self-propelled TIE1 cargo chassis, the same chassis as the TIE1 tank. A tank carrier is provided to give it road mobility consistent with that of the force. The detachment of one officer and fifteen men was sent from Chemical School at Edgewood Arsenal.

Field Artillery Battery. In addition to units which will provide ground reconnaissance, striking power, and holding power, the force has its own supporting fire units. To get the comparative value of self-propelled and portée artillery for the missions that artillery will have to have with the force, the battery is equipped with a variety of guns and experimental materiel. It has a complete portée battery of French 75-mm. guns with caissons, battery reel, and Caterpillar "20" tractors, self-propelled American 75-mm. guns mounted on Mark VII chassis, one self-propelled 75-mm. pack howitzer mounted on an ordnance track development chassis, an experimental motor reel mounted on a TIE1 chassis, one ammunition carrier on TIE1 chassis, and a Fort Sill trailer for 75-mm. gun.

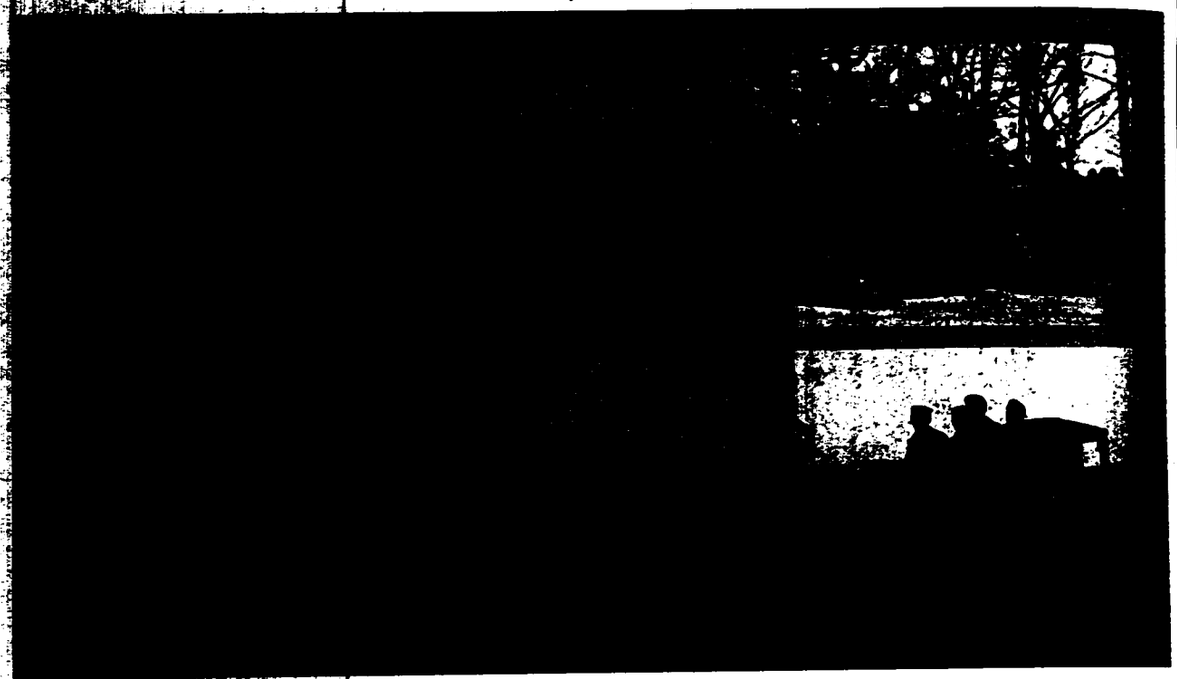
The howitzer is the new pack 75-mm. howitzer mounted on a motor carriage TI, which is the track development chassis designed by the Ordnance Department in 1929. It has maximum speed of 21.3 miles per hour.

The battery has a strength of five officers and 127 enlisted men, and is Battery A of the 6th Field Artillery from Fort Hoyle.

Engineer Company. For the inevitable field engineering duties that come up in every organization, the force has Company C of the 13th Engineers from Fort Humphreys, with a strength of three officers and 90 men. It is organized into a headquarters and three platoons. Basic engineer platoon equipment is furnished for each platoon, and in addition the company carries special bridging and other material. Its motor equipment consists of seven 2-ton FWD trucks, a Mackmobile crane and power truck, a kitchen truck, a Ford cross-country car, a motorcycle, and a ¾-ton GMC truck.

Ordnance Company. Aside from the purely supply work of the force, which is taken care of by the supply platoon of the headquarters company, the maintenance, repair and salvage of broken down and damaged motor vehicles and materiel of all kinds is a complicated one and involves many technical and mechanical problems. The vehicle of the fighting force must be kept moving or its efficiency is seriously affected.

Quartermaster Repair Unit. The quartermaster mobile repair shop, one officer and 15 men, comes from the Quartermaster Intermediate Depot at Camp Holabird. Like the ordnance unit, it will be specially trained and equipped to take care of wrecked and damaged vehicles, and to provide for upkeep and maintenance of motor vehicles.



Top, Left to Right—Mechanized Force Crossing James River Bridge, January 27, 1931; Light Armored Car Equipped with one Caliber-.50 Air-cooled Browning M. G. Weight 4142 Pounds; Franklin Medium Armored Car, Equipped with one Caliber-.50 and two Caliber-.30 Browning Air-cooled M. G.'s. Weight, 7138 Pounds.

Bottom, Row Left to Right—Tank, 6-ton, Model 1917, Being Loaded on Carrier; White Multiple-mount Equipped with two Caliber-.50 AA Browning M. G.'s; Browning M. G. and Crew in Chevrolet Cross-country Truck.

Equipment in General. Because the force has to operate as an experimental field laboratory for the testing and developing of vehicles and weapons suitable to its use and will be progressively supplied with motor and mechanized equipment, it has, of necessity, a great variety of types of vehicles. This makes the problem of maintenance and of spare parts a difficult one, but much valuable information for the guidance of future design and manufacture will be obtained from the field tests and close scrutiny of the records. Much of the motor equipment has come direct to the force from factory or proving ground. All of the passenger cars, motorcycles, 2-ton and 5-ton FWD trucks, pneumatic-tired tank carriers, field artillery carriers, TIE1 tanks, motor reel, ammunition carrier, Fort [illegible] carrier, TIE2 radio tanks, kitchen trucks, generator trucks, Franklin 1½-ton trucks, radio trucks, wrecking trucks, chemical motor mortar, and pack howitzer are new. Much of the equipment has been used only slightly, and some of it is old. The old equipment will be replaced as soon as possible with new designs.

The Franklin 1½-ton trucks are on the same chassis and have the same engine as the medium armored car and the radio armored car. The 2-ton FWD trucks have class A bodies and dual tires on the rear. The kitchens are mounted on these trucks by taking the body from a Liberty kitchen and installing a burner for gasoline. It will also burn wood or coal and is equipped with two 20-gallon water tanks and compartments to carry kitchen utensils and rations.

Steeplechasing and Point-to-Point Racing

Captain Marion Carson, 9th Cavalry

THE origin of horse-racing is shrouded in antiquity. It is believed that the Egyptians were the first people who made any effort to understand horsemanship, but they left little of record concerning their mounted sports. No doubt informal races date from the first use of the horse for riding: at least when it was first used for combat. It is easy to imagine many match races caused by the presence of a spear-point between the two impromptu entries. In those days too there were probably many horses with ambitious tendencies, who raced without the consent of their riders.

It is known that the Greeks indulged in the pastime and had regular race courses. The *hippodromus* at Elis was the most famous. Racing was started there in the seventh or eighth century, B. C., under most strict supervision, as part of the Grecian Games. Horses and riders had to report thirty days before the games started and go through a prescribed course of training. From Greece the sport was adopted by the Romans. They are credited with inaugurating the custom of having the riders wear colors. They in turn introduced it into England at the time of their invasion.

Until well into the nineteenth century conditions were more favorable for its development in the British Isles than in continental countries. The latter were suffering internal difficulties from time to time and some race meetings were organized purely to attract crowds for political purposes. As a result, most continental meets were under strict governmental supervision and even operation. This destroyed the individual initiative of the racing enthusiasts. England, while enacting many laws correcting moral and administrative abuses, did not make it a government enterprise. The rulers were usually very favorable to it and the the nobility were quick to follow their lead.

Flat racing has always had more supporters than steeplechasing. The latter is not recorded at all in early accounts, and is believed to have originated in England or Ireland. One story of its start begins with a group of horsemen gathered in a tavern. The discussion of the merits of their various horses waxed quite warm. Finally a race was arranged for the following night. The start was after dark, but there was a moon. The course ran to another tavern some miles away. Any route could be taken, but it was "jump or lose," for avoiding the obstacles meant a much longer route. Clothing, equipment, and weights were optional, but *nightshirts* had to be worn.

There is a record of a race of four and a half miles over the country from the Church of Buttevant to the spire of St. Leger Church, in Ireland, in 1752. Many similar races followed, with the course laid between two well-defined and plainly visible objects. Church steeples were especially popular for finishing markers and furnished part of the name for the sport.

Some of the races in the early days were quite strenuous. In 1805 one was run at night over a distance of eight miles for a sweepstake of one hundred guineas. The winner's time was given as twenty-five minutes, thirty-two seconds. Another record lists one of twenty-six miles on January 6, 1818, between two contestants for one hundred guineas a side. In a four-mile race at Lismore, Ireland, in 1819, the winner fell four times and the third horse six, but both finished ahead of some that didn't fall at all. The also-rans must have been poor horses, or poorly trained or ridden. The Grand National was started at Aintree in 1839 as a four-mile race for gentlemen riders. It has since made Liverpool the steeplechasing capital of England.

It was the hunting men who took up the new type of racing in great numbers. Most of them were too heavy to ride in the big flat races and the local meetings did not give them enough worlds to conquer. It gave them a chance to use their hunters for all of their mounted pastimes. To men who rode for real sport it furnished thrills that were not present in a run over a course without obstacles. Fox hunting furnished an incentive to "get there first," but it was quite uncertain as to direction, duration, and terrain. All of these conditions made it a natural consequence that hunt clubs were, and still are, the sponsors of most of the races over jumps.

Conditioning, training, and riding in public races require much time and some capital. Fifty or sixty years ago English army officers had plenty of the former and usually enough of the latter. As a result, many went into racing as their principal diversion. Several rivalled the leading professional riders. Major E. R. Owen holds the record of being the only man to win all three of the leading steeplechases in England. Mr. T. Pickernell rode in seventeen Grand Nationals, winning two and falling twice. Since the World War they are not so well supplied with either spare time or money, so the Army's participation in the larger races has been somewhat curtailed. However, the number of local meetings continues to be quite large and many strictly military meets are still held.

Various factors have prevented the sport from becoming prevalent in our army. The lack of suitable horses, the need of those we did have for other purposes; the necessity of constructing courses; the popularity of polo and horse shows; and the lack of knowledge of proper training methods and the conduct of meets, have discouraged the few officers who would have popularized it.

Many classes of people have been interested in rac-

ing. Some for the thrill of active participation, some for the prestige of owning winners, some as a means of honest livelihood, and some as a means of a dishonest one. The first two named classes have been the real sponsors of steeplechasing, with the third giving it some attention in Europe. The fourth class has left it pretty well alone, principally because of its uncertainty. Even if a horse is sent in to put the favorite out, there is no way of being sure that a selected horse will stand up. Pocketing for the whole distance is out of the question. A horse that is doped enough for the effect to last for even two miles would wear himself out in the first mile. There is entirely too much uncertainty for a sure-thing operator. These

Landing over the Liverpool on the Fort Riley course. Position of leading rider is good.

factors have kept the sport largely on an amateur basis in this country.

Uncontrolled and unsupervised, it is a dangerous sport. Our natural impetuosity makes us ask things of our horses for which they are not prepared. We are always wondering if they can't do a little more and hoping that they will be able to do it. Untrained and undisciplined horses are sometimes entered and unless the entry is rejected, serious injury may result. At Fort Riley, during a race meet one year, a horse was named for two two-mile races (on different days). He had not been seen in action on the course, hence an investigation as to his suitability was made. It was found that he had never been over the course, had not been in real training at all during the spring, and had just come off several weeks' sick report. Needless to say, he did not run.

Often dangerous riding doesn't appear to be dangerous to the beginner. He's so busy riding his own race that he does not realize that he is turning other people's hair grey. He continually hunts low places in the jumps, not thinking that he may cross someone and find himself buried under two horses and another rider. He goes up to a jump on a green racer half a length or less behind another horse and is quite surprised when his mount takes off in mid-stride and lands on the jump or falls beyond. All of our horses are beginners at the sport when they start racing, and it is usually after we get them. Therefore, it behooves us to find out everything we can about their previous handling in order to prevent the mistakes they may cause.

If we apply ourselves to the study of steeplechasing, as we have to polo and show jumping, we could make it as sound a basis. Taken up in that spirit it has many beneficial effects. It is cross-country riding of the best kind. It fosters concentration, quick thinking, and iron self-discipline. It is a wonderful physical training. It develops daring and nerve. Properly handled, race meets more than pay for themselves and could furnish funds to send entries to the many hunt race-meets. It encourages the ownership of good horses. Every mounted post has suitable terrain for at least a point to point course.

A steeplechase course is on level ground, or nearly so, with artificial jumps. To be sanctioned by the National Hunts and Steeplechase Association, it must be at least a mile in length and contain a water jump, a liverpool, and four other jumps of specified sizes, in each mile. The footing must be turf and the races not less than two miles.

A point-to-point course is across country over varied ground and with natural or apparently natural jumps. It is a better type of course for hunter races, for usually the jumps are solid and a horse has to be a good jumper in order to finish. On the steeplechase course the jumps are of brush and the horse in some cases can drag through above the supporting frame or dirt mound.

In constructing a course, beware of low jumps. They are a snare and a delusion. Many horses put at a two-foot jump at a fast pace, are tempted to try to merely run over it. When other horses are running with them there is even more temptation. I saw one horse try it on a jump that was over three feet. He rolled over twice. The best height is about six inches under the consistent jumping limit of the horses to use the course if the jumps are solid, and at their full limit if of brush. Then they know that they must put out at every jump.

A cross-section of the track should be absolutely uniform. If turns are banked the slope should be the same all the way across. The jumps should be of even height their whole length, except that the end panels may slope up to the outside to discourage attempts at running out. The footing should be the same all the way across. Abrupt changes in footing should be plainly visible, otherwise a bowed tendon is likely to occur. A horse running at full speed from turf to plowed land suffers a terrific strain to his legs. For beginners, the flatter and more uniform the terrain, the better it will be for horses and riders. Lots of experience is required to get the most out of a mount, and still finish, over a course that includes hills, plowed ground, heavy sand or low ground. The last-mentioned is extremely bad in most localities. A heavy rain the day of the race may make it practically impassable.

At Fort Riley, half-breds are raced only two miles their first season. Then if they have shown that they are equal to it, they are put in longer races. Of course some of these horses are much better bred than their papers show. A couple of races separate the runners from the plugs. Lots of troop officers in the past would have been ready to swear that *Glint* would never stop running, especially just after riding him in a flock on a frosty morning. He went into the race string and was ready to quit after the first mile in

any race. Some horses which were good gallopers in their younger days, but were never allowed to run, eventually develop high action. *Black Forest* was one of these. In two seasons of training and racing he really ran low only twice, once in a workout over the steeplechase course and once in a flat race. Both times he beat very good horses, but the rest of the time he "bumped his teeth with his knees."

Ability to gallop or trot long distances at moderate paces does not indicate racing ability. *Ganadore*, a half-bred that many graduates of the Troop Officer's course remember all too well, made a fifty-five mile night ride in six hours and nineteen minutes, taking second place, but when raced he finished last every time.

Jumping at speed is quite different from show jumping, for two reasons. One is that the considerable collection necessary in the careful show jumper, at each obstacle, would slow up a running horse enough to cause the loss of a race by several lengths. The other is that this change of pace, muscular contraction and subsequent increase of pace, require effort which will mean lengths more at the finish. Attempting to really collect a well-trained chaser is likely to be disastrous. He is used to being allowed to work out his own salvation, or at most, having his nose pulled in slightly, thereby putting his hind legs a little further forward. When the rider tries to do more, it cramps him and usually puts him in difficulty. Therefore, quite a change in jumping style must be taken up early in the training, if the horse has had previous experience. It is often easier to train a flat-racer who has never seen a jump than a jumper with a big reputation. The best prospect is a thoroughbred horse from jumping stock that has never been raced or jumped in a show-ring. Hunting is a good training, however.

No one who rides in races over jumps, can expect to escape an occasional fall. They are bound to come until a fool-proof horse is found. Only two things are necessary to prevent serious consequences. One is a level head which will keep the rider from asking the impossible and from putting himself in a dangerous place. The other is good hard physical condition. This can be obtained in only one way, by hard cross-country riding. Walking every day is needed too, to loosen up the legs and prevent the muscles becoming set, but riding at a gallop over varied terrain, especially on a horse that pulls, gives muscles with which to control the mount and to withstand the shock of a spill. A pulling horse during the training period has another advantage. If the rider can't learn to control him and rate him when he wishes, he should never be allowed to ride in a race. A run-away horse eventually inspires panic in the mind of the rider. This is turn makes the horse worse and disaster is even more certain than playing with an "unloaded" gun.

By "control and ability to rate" is not meant that the rider must be able to stop his horse like a polo pony. It means that the rider can make changes of direction and cause the horse to slow the pace four or five miles an hour, instantly. He must be able to do this without fighting or frightening the animal. The ability to change direction slightly is necessary throughout any race, from the first jump to the last. The rating will sometimes be impossible for the first quarter of a mile and with a sure, true jumper can be neglected for that distance. After that the rider must have such control that he is able to place his horse in exactly the position where he can do his best running.

The officials are a most important part of a successful race meet. They make or mar it for both the spectators and the contestants. The conditions of the races must be published clearly and early. No change should be made in them after publication. The paddock judge should see that all entries are ready to start at published race time. Five minutes delay disgusts the crowd. The stewards should be fully qualified to fulfill their function of seeing that all conditions are met and that the riding is strictly in accordance with the rules. The judges should know what places carry prizes and double-check the winner of each place. On a flagged course the patrol judges must know on which side of which flags the race runs, know where they should be to see that all riders follow the course, and know what to do if someone cuts the course.

In organizing army race meets it is always well to consider the wishes of the spectators as well as those of the contestants. In a section of the country where steeplechases are unknown, it would be foolish to try to make up a card exclusively of races over jumps. Three or four flat races sandwiched in would draw a much larger attendance. A race for local civilians helps immeasurably. Be sure the distance and conditions are satisfactory to them. Stock should be taken of the horses available and the number and kind of races arranged accordingly. Green riders and green steeplechasers require a lot of room at jumps, so no attempt should be made to crowd a dozen entries into one race on a narrow course. Conversely, if only six or eight horses are in training, to make two races of three or four entries each, instead of one good one, would be a mistake. Flat races should be as long as possible consistent with an interesting finish. Half-breds should not be expected to run a mile and still be bunched. Each ounce of blood will tell in that distance and they may be strung out for a quarter of a mile when the winner crosses the finish line. Some thoroughbreds don't really run for a quarter, hence short races are not true tests for them. Remember the enlisted men who do so much of the work, and make sure they get a chance at some of the prize money.

A race meet well run throughout will have taught many officers and enlisted men a great deal about training, riding, breeding, and the capabilities of horses, it will promote vigorous riding and will have brought the surrounding country into closer contact with the post.

Military Instruction Films

Captain Alonzo P. Fox, (Infantry) Signal Corps[1]

MAN, since the days when he used a club to accentuate his more captious statements, has found the spoken word somewhat inadequate as a medium of expression. Thus we find him from time to time devising adjuncts and embellishments in the form of hieroglyphs, symbols, and song. When pictures of word forms were devised, communication of ideas became an art, and the keystone of civilization was set. But inasmuch as these forms convey only words, and as these words often inadequately depict the subject, the instinct to *see* calls for a truer likeness. Of this need the picture is born. We like to see what we are to believe, and our minds are peculiarly receptive to what we see. Today, we are decidedly picture-minded.

Now a new field is about to be intensely cultivated—academic and industrial education by means of motion pictures. The practicability of this is undoubted. Retarding factors, for the moment, are lack of proper facilities for showing the new type of pictures, and an inadequately supply of well arranged and authoritative films. Both of these deficiencies will certainly be overcome. When it is realized that instruction films will soon be available depicting, for example, a noted surgeon performing operations bordering on the miraculous, and explaining in detail his demonstration as he proceeds, the real application of such films must be apparent.

The United States Army was the first institution in this country (and probably in any) to attempt mass instruction by means of motion pictures. In the latter part of 1918 and the early part of 1919 some 60 subjects were produced, portraying various phases of military training. These films were intended to assist in the training of our National Army. Unfortunately, the project did not reach full fruition until after the Armistice and its real value could not then be determined. This very failure, however, should serve to impress the fact that the time involved in the production of satisfactory films renders it imperative that this work be carried on progressively before the emergency arises, if they are to be used effectively.

These films were used more or less in the years immediately after the war for instruction purposes. Many of the subjects were well conceived and portrayed. Some of the so-called "animated" pictures were especially well done and had a wide appeal. Other films were intended to teach by motion pictures what hand books have been left to subordinate instructors on this ground. The real field for demonstrations of minor tactical problems remained an aching void.

As experience, material, and training methods changed,

[1] Chief of the Section of the Signal Corps Photographic Laboratory, Long Island City.

the task of revising the existing films and producing new ones devolved upon the Army Pictorial Service, a section of the Chief Signal Officer's Office. All but 22 of the films originally made were declared obsolete and were withdrawn from circulation. A tentative schedule, at present requiring the production of not fewer than four subjects annually, will be increased to eight films annually in 1933. This project was begun in December, 1927, since which time 20 new subjects have been produced and distributed. To broaden the scope of application and to simplify their use, 15 of these later films have been distributed also in the 16-millimeter or "home movie" size. This has been a popular innovation, especially among the reserve and national guard units, as these films can be exhibited in a squad room or a recreation room by the rankest of amateur projectionists.

A system of decentralized distribution has been set up, utilizing the corps area signal offices in the capacity of local film exchanges for their corps areas. An ideal distribution within a corps area appears to be the rotation of films on schedule to the various units for short periods. In some corps areas this ideal has been so nearly approached that excellent programs are carried on throughout the year, embracing also the C. M. T. and R. O. T. C. encampments. Unfortunately this is not universally true and considerable pioneer work is still necessary to make for a better understanding and more effective use of this valuable adjunct to the usual training methods.

In the production of training films the Signal Corps works solely as the operating agency. It has the facilities for processing and distributing training films. It also has the cameramen, camera equipment, and officer-directors. The selection of the subjects to be produced, the writing of the scenarios, and the form of their presentation, the arrangement for the necessary troops and local facilities, are the responsibilities of the interested arms with, of course, the concurrence of the War Department. The Signal Corps, obviously, cannot assume these functions. In connection with the more recent pictures produced, it has been found desirable and profitable to have the officers who were detailed to draw up the scenarios do this work in collaboration with officers of the Signal Corps familiar with the possibilities and limitations of the camera.

The subjects filmed since 1927 are diversified. This is so by reason of the fact that the demands for films covered a wide range of subjects, and the endeavor has been to meet these demands, at least in part, within existing means. A partial list of these newer films is indicative:

1. School of the Soldier, Steps and Marchings, Manual of Arms, The Medical Service with Infantry in Combat.

2. Care of Animals, The Trooper Mounted, The Cavalry Platoon in Mounted Action.

3. The Gasoline Engine, Lubrication, The Spark Plug, The Storage Battery.

4. The Tactical Handling of the Antiaircraft Coast Artillery Regiment, Defense Against Chemical Warfare.

5. Supply of a Division, Development and Deployment of the Division for Attack (Leavenworth).

6. A film to be used in antiaircraft sub-calibre rifle practice, in which the moving image of an airplane constitutes the target.

The question of what subjects may advantageously be "picturized" is a much mooted one. Granting that unlimited production facilities were available and that a very comprehensive library of subjects were already in existence, practically any subject which can be satisfactorily demonstrated would be a proper selection. However, only limited facilities exist, and the film library is in a more or less embryonic state, so that the choice in each instance should be one to meet the most insistent need, and one which lends itself to motion pictures—the essence of which is action. Generally speaking, the wider field of application of these films is in the R. O. T. C., the National Guard, and the Reserves, where so much of the instruction, particularly in the realm of minor tactics, is abstract and theoretical. Qualified instructors are scarce and trained troops to stage demonstrations simply do not exist there. Any means to make the instruction live and appealing is welcome. The map problem and sand tables are reliable stand-bys. The motion picture is an innovation, but if intelligently used it serves to amplify and impress the subject.

Almost invariably in a discussion of this subject, the unfortunate who has been button-holed will concede that this form of visual instruction is practical and that "it would be a fine thing" if instruction films could be had on military courtesy, care of the uniform, and the like—which is exactly what we did not want him to say. A capable corporal is well qualified to teach these subjects, along with the manual of arms and the care of the rifle. To demonstrate properly the combat principles of the squad, the section and the platoon is another problem. These and similar subjects as distinguished from purely mechanical instruction are more readily adapted to motion pictures and can be made both interesting and instructive.

It should be obvious that motion pictures are not intended to displace any of the usual forms of instruction. They are intended rather as adjuncts—the animated cousins of the lantern slide. They should serve to accentuate the high-lights of a subject. To attempt more than this in a picture is to convert it into a memory test which leaves the audience confused and befuddled. Too numerous and too lengthy titles are not easily assimilated; they retard the action and induce boredom. Likewise, experience indicates that an instruction film should rarely exceed two reels in length. If an audience retains rather vividly five or six salient points the film justifies itself.

The introduction of "talking" or sound films revolutionized the film industry. Whatever the opinion may be as to merits of the commercial type, the advantages of this new element for instruction are obvious. True, the recording of voice and incidental sounds has complicated film production immeasurably. Too, the exhibition of such pictures is not the simple task as was formerly the case with silent pictures. The equipment necessary for production and exhibi-

The Heart of the Sound Studio: the Monitor, or Mixing Booth. The Operator Controls the Volume of Sound as it is Photographed on the Film.

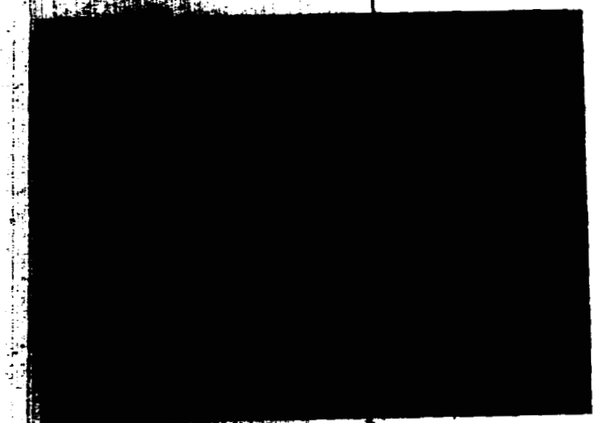
tion is expensive and cumbersome, but the silent picture has practically disappeared from the entertainment screen and its days are numbered in other fields as well.

The Signal Corps may "point with pardonable pride" to the fact that it is the first federal government agency to equip itself for the production of sound films. The United States Army, it is believed, is the first in the world to take this progressive step. The first films produced on a limited scale will issue during the summer of 1931. At present the only available facilities for exhibition are in the larger post theatres. The production of the silent variety will continue until portable sound projection equipment, readily transported and set up, can be procured in quantity. The present prohibitive cost of such equipment is a real obstacle.

The talking films contemplated for the immediate future will be scored in the studio; that is to say, the films will be shot in the field as ordinary silent films and the lectures will be recorded later. This eliminates the many difficulties encountered in attempting to record speech in the open—where practically all training films must necessarily be filmed. It has the advantage also of permitting the lecturer to see exactly the finished scene as it will appear to his audience and to permit the absolute synchronization of the speech with the demonstration.

As has been indicated, the Army is not wholly "sold"

on the use of films in conjunction with training, but on the contrary, a considerable amount of inertia, which in time will be overcome, militates against their general use. Just where they are to fit into the scheme of training must be determined if they are to be effective. In the Regular Army, where instructors and facilities are amply available, the need for these films in the regular training season is not urgent. During the closed season of the year, however, when garrison schools prevail excellent use may be made of them to diversify the instruction. The regimental, or other unit, operations officers should acquaint themselves with the subjects pertinent to the training of their



Training Film: The Prepared Lecture is Delivered into the Microphone in Synchrony with the Scenes as they are Projected on the Screen.

organizations and in their training schedules make proper allotment of hours for their exhibition.

At this point it is probably not amiss to remark on the best procedure in the use of any instruction film. A very common tendency is merely to stage a show, often of several unallied subjects, and let the pictures tend what they can in one hurried showing without comment or discussion. The better practice, and one fruitful of results, is to select, first of all, a film that deals with current training. A preliminary explanation of what the film is intended to depict is probably in order. After the exhibition a discussion embodying upon the presentation will serve to consolidate the impression. Oftentimes a second showing is desirable if the "saturation point" has not been reached.

The hours of armory training for the National Guard, as is well known, are limited and each hour must be filled with 60 minutes of instruction. On the other hand, because of the limited drill area, even simple tactical problems are difficult to demonstrate or illustrate. A judicious selection of applicable films would help materially to take the mystery out of this phase of training. As a matter of fact, certain units of the National Guard of the District of Columbia are making extensive use of films during the winter months and have served to heighten the interest and also to build up attendance. Guard company commanders, naturally, are loathe to part with their units, which often need as much training in the fundamentals as time will permit. They cannot well object, however, to a break in the routine of instruction which is primarily designed to assist them in their task.

Except for short periods of active duty training, the Reserves are restricted almost entirely to theoretical instruction, lectures, conferences, and map problems. It is the task of the regular officers on duty with these units to make this instruction as interesting and agreeable as possible. In some of the units, more fortunately situated than others, having the means to hire an operator and projection machine, excellent results have been achieved by means of motion pictures. They realize that the reserve officer is often a "tired business man" in fact, and that he is not at all averse to assimilating instruction in a sugar-coated form. Here again the attendance curve is constantly rising.

It will be objected that the hiring of an operator and machine is not always possible, or that the means are not available. It was to meet this contingency in part that the sub-standard "home movie" type was placed in distribution. The machines are so widely used that almost any representative group will have access to one for this purpose. It not, one can usually be hired for a small sum and, as every individual is a potential operator, no high powered technician is required.

In the R. O. T. C. units, the training films have received their most extensive use. It is from the instructors of these units that the most insistent demands and the most thoughtful criticisms have come. It is not astonishing that this is so. These instructors are associated with teachers who must constantly strive to keep youthful minds pointed in a very definite direction. They are constantly casting about for new ways and means to accomplish this. In the course of events the military instructor does likewise and very often resorts to the film as his gesture of modernity. If his first selections are happy ones he may become a confirmed user; if not, the aforementioned criticisms are sometimes forthcoming.

The courses at our special service schools are well planned and generally excellent. I would not purpose that the training films supplant in any way any part of these courses. However, in view of the great portion of time each officer must necessarily serve with the Reserves and similar units, I feel that some part of these courses might well be devoted to acquainting him with the art of visual instruction and what facilities the Army has available for this purpose.

I should like to leave you with the thought that the Army is committed to a real program of training film production. Much serious thought is expended in their conception and great care in their production and presentation. They are designed primarily to amplify and diversify military instruction. A real effort is made to render their use simple and practicable. They are not the brain-children of faddists but represent the Army's effort to apply an art which is recognized generally as an excellent medium for instruction.

Training a Cavalry Regiment in Teamwork

Colonel Walter S. Grant, 13th Cavalry

MY FIRST year's experience as Colonel of the Thirteenth Cavalry impressed me with the belief, that, among the many duties imposed on a regimental commander, the most important (aside from maintaining at a high level the morale and spirit of the command) was the development of tactical teamwork in the regiment.

This conviction arrived at, the question was: "Where to begin?"

Through the gloom of difficulties that arise in present-day garrison life with respect to drawing up and carrying out systematic schemes of higher training, to obtaining a full complement of officers and men with which to train, and with respect to the host of other obstructions that those who serve with troops so well understand, the answer suddenly emerged: "Plunge in anywhere!"

Great Britain's "Contemptible Little Army" plunged in at Mons. There was nothing systematic about that. They came from their Aldershot training and, without preliminaries, banged into contact, desperate fighting, defense, retreat, rear-guard action, outposts, support of adjacent flank troops, advance, advance-guard action, frontal attack, pursuit, attempted envelopments, trench warfare,—all a jumble when compared to a progressive, systematic peace time plan of tactical training. They learned the art of war by receiving and giving blows, and by applying the basic principles of war, aided by common-sense, to the actual necessities of the moment; and they came out, magnificient and victorious.

They made mistakes; so would we. But they got somewhere; so would we.

The first thing to do was, from a full schedule of various and sometimes conflicting duties, to wrench the necessary time.

Two days per month were arbitrarily set aside, sacred and inviolable, for regimental training days.

All dressed up but nowhere, yet, to go! What next?

The regiment had been detailed to conduct some tests for the Cavalry in anti-aircraft combat—a test from the cavalry point of view of the Training Regulations on the subject. Popular opinion conceived the greatest menace to the Cavalry to be from airplane attacks. Bodies of Cavalry seemed particularly susceptible to hostile airplanes. Here was a starting point. Devise formations and tactics to perform ground missions in spite of hostile airplanes. The test of Training Regulations was to be handled by tests of actual firing. The experiments in formations and tactics could go on hand in hand with these separate firing experiments.

Also, reduce the tactical problem to be solved to its simplest terms; remember that tactics are as fluid as water; that tactics are invented to meet conditions as they exist; realize that their operations are, fundamentally, matching wits with the enemy; decline to be bound too strongly by formal, crystallized conceptions; and go ahead.

The problem drawn up to serve as a vehicle for these tactical experiments, this training in regimental teamwork, was the simplest. Hundreds of cavalry officers can follow its outline without a map since it was drawn up for use on the Fort Riley reservation, but a map is furnished.

The Problem

General Situation: Blue and Red have been fighting for day along a line running generally northeast from RANDOLPH HILL. Blue is attacking. Blue faces northwest; Red, southeast.

Special Situation (Blue): The 13th Cavalry (Blue), which has been behind the blue line reconstituting itself, was ordered to JUNCTION CITY. It arrived there before daybreak, September 4, 1930, and bivouacked in the woods on the north bank of the REPUBLICAN RIVER, east and west of the WASHINGTON STREET BRIDGE.

Through mounted patrols, sent out from the regiment early on September 4, and other sources of information, it has been established that the extreme right, or western end of the Red line, is located on RANDOLPH HILL; that there are no Reds west of the MORRIS HILL—RANDOLPH HILL Road; that a Red battery has been located in position 2400 yards due northeast of NORTH GATE; and that Red appears to have no knowledge of the movement, or the location of the 13th Cavalry.

At 7:00 A.M. the 13th Cavalry receives orders to move north and attack the Red right flank at 11:00 A.M., September 4, 1930.

Now a word of explanation. For the purposes of more thorough training it was decided that the preceding situations would serve as a framework into which certain steps would be fitted. It was decided that as much time as necessary would be devoted to each step; that the problem and its solution would be a continuing one that might take many days for its accomplishment; that on each regimental training day the regiment would start at that place in the problem where it had left off on the preceding training day. It was decided that the exercise would be neither a maneuver (so called), nor, in its early stages, a test of the ability of officers to make quick decisions in the field, and express them in the form of orders. It was to be considered a *drill* in various phases of field operations. It was to be carried out from the viewpoint that tactically, one must learn to creep before he can walk, and to walk before he can run. On the day preceding each regimental training day, a conference of all officers and noncommissioned officers of the regiment would be held, and the different steps

Section of Fort Riley Reservation Covered in the Maneuver.

to be carried out the succeeding day, with the tactical reasons therefor, would be carefully explained by the regimental commander.

At last we were plunging in, and the successive steps of the problem will now be explained.

First Step

To emphasize the necessity for establishing and clearly indicating the various common posts—regimental, squadron and troop.

The regiment started the exercise concealed in the woods on the north bank of the Republican River to the east and west of the Washington Street Bridge. In order to secure concealment from airplane observation, and to minimize loss in case of detection and possible air attacks, the regiment was pretty well dispersed through the woods and brush. This made control by each unit commander more difficult.

Sure and certain control, and quick transmission of orders, demand that each squad leader know where his men are: that each platoon commander know where the squads of his platoon are; that each troop commander know where his platoons are, and so on. To establish a framework for quick transmission of orders, contact points are needed. These contact points are the various command posts where the unit message-centers operate.

To facilitate finding these command posts, the Regimental Plans and Training officer had provided for each command post a small canvas sign, stencilled in black as C. P., 1st Squadron; C P Tr E; etc. These signs were about 8 inches high and 12 inches wide, with vertical seams at each end, through which passed iron pins about 2 feet high and ½ inch in diameter, with the top ends bent into hooks. These signs could then be planted in the ground or hooked over the branch of a tree. These signs were carried on the saddle by selected men, and as soon as units were in place, were set up. As soon as set up the next higher commander was informed of, and shown their location, and when the absence of hostile airplanes permitted movement, messengers were sent to locate them. This gave each subdivision commander a controlling grip on his unit, though he might not see anything more than the personnel of his immediate command post.

Second Step

To emphasize the necessity for concealment from airplane observation.

This may seem rather rudimentary but there was a reason for it. The 13th Cavalry had arrived at the Washington Street Bridge without its presence being known. It still had to go about five miles over open country to reach a position from which to attack. Enemy planes were assumed to be active. Daylight was coming on. If the presence of the regiment in the woods was discovered, their five mile advance over open country would be subject to constant harassment, and they would arrive at the jump-off line for their attack with their fighting edge already dulled.

To stimulate the troops to take an interest in concealing themselves, a Red airplane was secured from the 16th Observation Squadron to work during the problem. The plane was given information of the general situation, and was told that the Red right flank rested on Randolph Hill. It was also given the mission of watching for indications of enemy troops in the country south of Randolph Hill, west of Morris Hill—North Gate road, and as far south as the southern limits of Junction City, particularly with reference to any indications of an attempted attack on the Red right flank.

The plane took the air at 9:00 A.M.; the troops were already in position in the woods, and as the plane came over, all movement ceased. Although the plane returned, the presence of the troops was not discovered, and thus the beginning of their approach march, unsuspected by the enemy, was facilitated.

Third Step

To experiment as to the possiblity of moving large bodies of horsemen over open country by irregular movement forward of individuals, to reach sheltered positions from which further advance can be made, thus increasing surprise effect, and reducing time during which the command might be subject to observation by, or fire from, hostile aircraft.

Under the terms of the situation the advance of the 13th Cavalry to its jump-off positions for the attack might be divided into three phases; first, that part of the advance during which the command might be subject to fire from hostile aircraft only; second, that part of the advance during which the command might be subject to fire from hostile aircraft and artillery only; third, that part of the advance during which the command might be subject to fire from hostile aircraft, artillery, machine-guns and small arms.

In the framing of the problem, in order to facilitate analytical treatment, the Red battery of artillery was arbitrarily placed at such a distance behind the Red line that its southern limit of effective fire was just north of the Morris Hill-Estes Gate road, west of Four Way Divide. That permitted the terrain to be roughly divided into three physical areas corresponding to the three phases of the advance: first, from the river to the Estes Road, where the command would be subject to fire from hostile aircraft only; second, from the Estes Road to the jump-off position for the attack where the command would be subject to fire from hostile aircraft and hostile artillery; third, from the jump-off position to the objectives of the attack where the command would be subject to fire from hostile aircraft, artillery, machine-guns, and small arms.

In the first area, corresponding to the first phase, a peculiar situation, from a topographical point of view presented itself. That area could be divided into two parts—one part extending from the river north to the rimrock, the other extending from the rimrock to the Estes Road. If troops should advance across this latter zone, even by successive units in a very scattered formation, to the Estes Road and form there, their movement could easily be picked up because the Estes Road is entirely in the open, and the gradual

increase in size of units forming along this road would be noticed. But if the troops should advance across the first zone from their position along the river to the shelter of the trees in some of the cañons that indent the rimrock, there was a chance that they might not be detected, because the movement from one hiding place to the other might be carried out so as to deceive the hostile airplanes, and the gradual increase in the size of units in the cañons would not be soon due to the shelter of the foliage.

This deception of the hostile planes was the controlling idea in the third step. The regular advance of columns on a road can be easily picked up by airplanes. But could single horsemen, well separated, moving by irregular routes, halting in place when a hostile airplane flew over and facing in the reverse direction, thus resuming their irregular march, and slipping rapidly into their sheltered rendezvous after the hostile plane had passed, gradually be built up into a large force, well forward, without its presence being detected? In other words, could infiltration tactics be adopted by Cavalry as against hostile airplane observation?

The experiment was tried. The regiment was ordered forward, to be built up in two groups—that part west of the Washington Street Bridge, consisting of the 2d Squadron, Troop A (less MR platoon), and the Commander's Group, Foward Echelon, to be built up in Governor Harvey Cañon; that part to the east of the bridge, consisting of the 1st Squadron, the MR platoon of Troop A, and the Machine Gun Troop, to be built up in Pump House Cañon. In order to avoid too great dispersion of groups, the original plan was to have the two groups built up in Breakneck Cañon and Governor Harvey Cañon, respectively, but the National Range was in use, and the groups had to be shifted to the right.

Officers preceded the groups to receive and assign bivouacs to the men as they came in, and the arrivals were quickly placed under cover and all other movement prevented. Command posts were quickly established in the new location and clearly marked. Plenty of time was available—the country traversed was free of hostile ground troops—these were necessary requisites for such a method of advance. The men were gradually and successively fed out of the old location with definite instructions as to what they were to do. They threw themselves into the spirit of the game with the greatest interest—they were matching wits with the observer in the plane—they were inventing tactics to meet a certain situation. Within an hour the group destined for Governor Harvey Cañon was, with only one or two exceptions, safely there, under cover, undetected by the hostile plane, and ready for the next step of the advance. They had accomplished this over practically flat and open country. The other group had a tougher problem; they had the advantage of cover along the river almost to a point opposite the mouth of Pump House Cañon, where by rapid movement during the temporary absence of the hostile plane they might have time to cross the open country between the river and the shelter of the trees in the cañon. But here orders of the squadron commander went wrong, and the troops did not start.

It was interesting to read the log of the airplane observer after the day's exercise was over. The Governor Harvey Cañon group had succeeded. There was little question but that the other group would have succeeded had they started. The advantage of this method was the gaining of ground forward without detection. The disadvantage was the time during which the troops were more or less out of hand, and the dispersion of the two groups.

On the next regimental training day the exercise was started with both groups in position under cover in their respective cañons, and the exercise progressed to the fourth step.

Conclusions

As a result of this experiment these conclusions were drawn.

This method of advance is practicable—

(a) When concealment is more valuable than time.
(b) Over short distances.
(c) When troops are well disciplined.
(d) When their morale is good.
(e) When the locality to which they are going is visible from the starting point; or if hidden from the starting point, is well known or easily found.
(f) When all men go to the same locality, or two points close together.
(g) When there is no danger from enemy ground troops.

This method of advance should not be attempted—

(a) If troops are raw and comparatively untrained.
(b) If morale of troops is poor.
(c) If localities to which individual men are to advance are not easily found, are widely separated, or are at a great distance.
(d) If hostile forces are close by.
(e) If time is more valuable than concealment.

Fourth Step

To experiment with methods of moving the regiment forward, mounted, when exposed to fire from hostile aircraft, the movement being uncomplicated by any other hostile fire.

The regiment having been moved forward as individuals, or in very small parties in which the individuals were well separated, and formed in two groups without detection by, and under shelter from, airplane observation, one group in each cañon, now found itself from 3½ to 4 miles from its objective, Randolph Hill.

To reach its jump-off position for the attack it had to cross open country where it was impossible to build up large groups for an attack in an advanced location without detection. The tactics of infiltration had to be abandoned.

We must realize that from the very beginning of the movement forward, the Regimental Commander had had in mind a tentative plan for his attack, which he hoped to put into effect with such variations as might be dictated by conditions found on his later personal reconnaissance of the terrain.

For the sake of clearness in discussing the movement of the regiment forward to its jump-off position for the attack we shall assume that this plan was as follows:

Machine-gun Troop to Custer Hill to open fire on enemy position on Randolph Hill;

1st Squadron (less Tr. A [less MR Plat.]) to the draw about 800 yards northwest of Custer Hill to attack dismounted to the east, towards Randolph Hill;

2d Squadron to the crossroads about 1500 yards north of Custer Hill to attack mounted towards the east;

Troop A (less MR Plat.) as regimental reserve to western slope of Hill 1340;

Regimental Command-post to Hill 1340, about 1500 yards northwest of Custer Hill.

Also for the sake of clearness it might be well to repeat that in framing the problem the Red battery had been arbitrarily located at such a point in rear of the Red line that its fire on rapidly moving targets, such as Cavalry in dispersed formations, would not be effective on or south of the Estes Road.

Since one condition of the problem was that Red airplanes were numerous and very active, it could be expected that the movement of the 13th Cavalry northward to the Estes Road from its sheltered positions in the cañons would be quickly picked up. The regiment might therefore expect to advance under fire—but up to the line of Estes Road this fire would come from weapons discharged from the air, not from the ground.

Now, in the approach march from the cañons to the Estes Road, the troops could resort to movement only, or to a combination of fire and movement, to counteract the enemy's aircraft fire on them. By movement only, is meant the rapid advance of the regiment in dispersed formations, such as column of flocks, line of flocks, or successive lines or echelons of flocks. By a combination of fire and movement is meant the same sort of rapid advance, accompanied by the fire of rifles or pistols at approaching hostile aircraft. Should movement only be used, the hostile planes could descend practically to the heads of the troopers, and would be unimpeded in their attack on the horsemen. Should the second method be used, the fire, or actual threat of fire, on the hostile airplanes, would tend to keep them up, and the danger from their attacks would become less. So, for the approach march in this zone, a combination of fire and movement was adopted.

In an advance against *ground* fire, one of the combinations of fire and movement is as follows: Alternate subdivisions rush forward under cover of the fire of other subdivisions which remain stationary until it becomes their turn to rush forward under cover of the fire of those which have already moved forward. This method was applied in the advance against *air* fire.

For example, let us consider the troops that trickled individually into Governor Harvey Cañon. They were: 2nd Squadron, Regimental reserve (Tr. A [less MR Plat.]) and The Commander's Group.

In the approach march from the cañon to the Estes Road, the scheme adopted was this. As the squadron emerged from the cañon preceded by a small covering force it formed line of flocks. Each troop consisted of two rifle platoons and a machine-rifle platoon. One rifle platoon of each troop, in line of flocks, would ride to the front at a fast gait until it had gained about 300 yards. Here it would dismount, the men would link in couples, with the couples well staggered and dispersed, would form a line of flocks dismounted a short distance in front of the horses, and prepare to fire on hostile aircraft. This done, the rifle platoon in rear, in line of flocks, would rapidly ride past the advanced platoon until it had gained about 300 yards to the front, when it would repeat the maneuver of the other platoon. The machine-rifle platoon of each troop, in line of flocks, followed close after one of the rifle platoons, advancing when it did; halting, dismounting and dispersing when it did; not removing the machine-rifles from the packs, but relying on the fire of the dismounted rifle platoon for its protection.

A deep "cloud of horsemen," made up of individual troopers riding with intervals of from ten to twenty yards was thus formed.

The regimental reserve followed the 2d Squadron at a distance of from 1000 to 1500 yards, and similarly moved forward by successive rushes of its squads.

The commander's group followed the regimental reserve close enough to be protected by the latter's fire against hostile aircraft.

Off in the other cañon the machine-gun troop followed the 1st Squadron close enough to be protected by its fire. It did not attempt to unpack its machine-guns.

The 2d Squadron was the guide. It moved to the north with the Governor Harvey Road as its axis until it was near its first assembly position, which was that part of the Estes Road that extends from the bottom of the gully one-half mile northwest of the crossroads at Four Way Divide to Estes Gate.

The 1st Squadron moved from Pump House Cañon towards the northwest in the extended fashion described, joining up with the 2nd Squadron on an approximate east and west line through Harvey Hill. Guiding on the 2nd Squadron it then advanced on its first assembly position which was that part of the Estes Road extending from the crossroads on Four Way Divide to the bottom of the gully about one-half mile to the northwest.

On the Harvey Hill line, the acting Regimental Executive Officer took charge to superintend moving the troops forward to the first objective, while the Regimental Commander and certain personnel from the Commander's Group galloped forward to Custer Hill to make a personal reconnaissance.

As the Regimental Commander turned over the line to the Executive, and started forward, he noticed that far to the east and far to the west, echelonned by platoons in dispersed order, some galloping forward, others dismounted prepared to fire, but all advancing systematically and rapidly, stretched the regiment. Again, upon returning from the reconnaissance on

Custer Hill to the Estes Road to meet the troops, no spectator could fail to be impressed at seeing, against the background of the rolling, dun-colored, open position, those swarms of galloping troopers, alternately advancing and dismounting, pulling themselves forward hand over hand as it were, and converging on their assembly positions along Estes Road; dispersed for protection, coalescing for attack.

Near the Estes Road they halted, linked in couples well dispersed in rear of the road, formed dismounted in flanks with leading troopers on the road just out of effective range of hostile artillery fire, prepared to protect themselves against hostile aircraft, and awaited orders.

Officers' call was sounded, and in the gully, in rear of the center of the line, the Regimental Commander gave orally his orders for the attack.

* * *

About this time appeared the October number of THE CAVALRY JOURNAL. In an article "Cavalry in Modern Combat," by General Summerall, the Chief of Staff appeared this paragraph: "While it (Cavalry) is more vulnerable than Infantry to attack by aviation, it must rely upon its antiaircraft weapons as well as its normal arms and upon dispersion when it cannot find concealment. No arm is exempt from losses in battle, but there is no reason to assume that Cavalry cannot develop tactics and methods which will enable it to preserve its fighting efficiency to a degree comparable to that of Infantry."

We evidently were not wasting time in our experiments.

* * *

This exercise, up to the line of the Estes Road was repeated on several successive training days, as a drill, to see that it was thoroughly understood, with the command but not the *actual* presence of hostile airplanes. Then, thanks to a post order which put the 16th Observation Squadron; Battery D, 18th Field Artillery; Troop A, 1st Armored Car Squadron; and 1st Platoon Troop A, 9th Engineers, at the disposal of the Commanding Officer, 13th Cavalry, for combined training, it was again carried out.

The addition of these troops extended the instruction in teamwork, but made several variations necessary. Again the two groups of the 13th Cavalry were to be formed in their respective cañons. Troop A, 1st Armored Car Squadron was to take post at the southern exit of Governor Harvey Cañon, and upon orders move north with the following mission:

(a) To observe the enemy right flank on Randolph Hill;

(b) To watch for any enemy movement south along the Governor Harvey Road, and west or southwest from North Gate and vicinity, or across country from these directions;

(c) To reconnoiter the country north of the northern exit of Governor Harvey and Pump House Canyon and west of the road from Morris Hill to [illegible] for any patrols or parties of the enemy.

The 1st Platoon Troop A, 9th Engineers was to [illegible] of the regimental reserve in Governor Harvey Cañon. Battery D, 18th Field Artillery was also assigned to the group in that cañon.

The participation of the 16th Observation Squadron was arranged for as follows: One flight and one or more single planes were designated as Red planes. They received instructions to fly at that ceiling at which they would normally fly if under fire from riflemen on the ground. Should troops on the ground fail to protect themselves by simulated rifle fire, the planes were to swoop and simulate attacks on unprotected troops. If mounted rushes were too long and platoons became too much separated from their protecting fire, the planes were to swoop. One plane was also designated as a Blue plane to work with the Blue artillery (Battery D).

The only change made in the advance was to have the battery follow the right (interior) wing of the 2nd Squadron, about abreast of the reserve, in its normal protective formation. It was to protect itself against hostile aircraft, also, by the two machine guns mounted on its carriages for that purpose.

With these changes the exercise was again carried out on the presence of representatives of the Cavalry Board, the Academic Division of the Cavalry School, and Post Headquarters.

At this point it is convenient to make certain observations. When the presence of hostile planes was assumed, it was imagined that they were numerous, active and aggressive; that one flight, or more, was constantly over the troops, watching for a chance to make an attack on them; and that their mission was to break up the advance of the Blue Cavalry as a primary means of protecting the Red right flank from attack. It was also considered that there was plenty of time to reach the jump-off positions and attack at the hour set. These were the underlying reasons for advancing by a method that would be slower and more laborious than a continuous mounted advance. However it might be stated here that the method proved to be not very much slower than a continuous advance at a trot, because the 600 yard rushes were made at a gallop, and due to the rapidity with which men dismounted and linked, the rushes followed each other very quickly.

The conditions of the problem, and the presence of the armored car troop, and covering detachments, well in advance, in open country, insured early information of any Red counter movement of ground troops which might present a greater danger to the advancing troops than the fire from hostile airplanes.

But, as opposed to imagination, on the day when the planes actually took the air and one hostile flight of three planes, and one single hostile plane in addition, circled about looking for vulnerable targets that could be attacked with reasonable security to the planes, the fact soon became apparent that danger from the hostile planes was not continuous but occasional. This was because the planes were few, and frequently in their circling were quite far away from the troops so that there were periods of almost as much as five minutes, when the planes were too far away to be dangerous, and yet were in sight. In the absence of any immediate danger from hostile planes it was unnecessary to advance by the successive rushes of mounted subdivisions. In five minutes the regiment could advance almost 1200 yards at a regulation trot. Based on the actual activity of the hostile planes the regiment (not forgetting the machine-rifle platoons, reserve, etc., in successive lines in rear) might just as well have advanced in line of troops, each troop in line of flocks, dismounting all riflemen only when the planes actually threatened. Or better, in order to avoid a long and continuous, though sinuous, line, the regiment might have advanced in line of troops, each troop echelonned by platoons in line of flocks, all dismounting when the planes actually threatened. In these two cases it would have been unnecessary to link. Time could be saved and security of horses better insured by having the odd numbers hold in couples, well staggered, and the even numbers prepare to fire.

Fortunately the greater part of the advance was over country that made it difficult for the planes to fly low in cañons or behind hills or woods, and suddenly emerge before it was possible to assume, dismounted, a protective formation. It was unnecessary at any time to resort to pistol fire or rifle fire from the backs of horses.

Conclusions

As a result of this experiment these conclusions were arrived at:

This method of advance by the successive rushes of mounted subdivisions under the protection of dismounted rifle fire against hostile aircraft is entirely practicable, when the ground permits, during those periods in an advance when hostile planes are actually and constantly threatening, provided that time is of less importance than morale and casualties.

That this method of advance is only one of a number of methods, that has its application under certain conditions, and must not be adopted as a set tactical conception, irrespective of the necessities of the problem to be solved.

That ordinarily in a battle involving all arms, mounted Cavalry, in its dispersed formations, would offer such a relatively poor target to hostile airplanes, that the times when this method of advance would have to be adopted are relatively few.

That this method of advance is excellent as a drill in control of extended lines in dispersed formations.

That dismounted rifle fire against hostile airplanes is the best protection that Cavalry can ordinarily provide for itself.

So much for the advance to the Estes Road. The next step was to issue the attack orders, and for the various subdivisions of the command to proceed to their jump-off positions for the attack. This brings us to a detailed consideration of that step.

Fifth Step

To move the regiment forward, mounted, when exposed to fire from hostile aircraft and artillery.

As stated before, on arrival of the troops at the Estes Road the regimental commander, having returned from his personal reconnaissance to Custer Hill, where he had gotten in touch with the armored cars and covering forces, and had observed the general disposition of the enemy's right flank, issued orally to the assembled officers, his orders for the attack.

These orders were, in brief:

The command to attack the Red right flank, rolling it up toward the east;

Machine-gun Troop to vicinity of Custer Hill to open fire on enemy on Randolph Hill;

1st Squadron (less Troop A [less MR Platoon]) to the draw about 800 yards northwest of Custer Hill to attack, dismounted, the enemy on Randolph Hill;

2nd Squadron, reinforced by 1 platoon, Troop A, 1st Armored Car Squadron, to the crossroads about 1200 yards north of Custer Hill, to prepare for a mounted attack towards the east;

Battery D, 18th Field Artillery, assisted by one Blue plane, 16th Observation Squadron, to the draw about 1000 yards due west of Custer Hill, to silence Red battery; later, on call from commanding officer, 1st Squadron, to assist dismounted attack by firing on enemy on Randolph Hill;

Troop A, 1st Armored Car Squadron (less 1 platoon attached to 2nd Squadron) to reconnoiter north of the east and west road through North Gate, to detect, resist, and report any hostile movement towards the left flank or rear of the 2nd Squadron;

Regimental reserve (Troop A [less MR platoon], and 1st Platoon, Troop A, 9th Engineers) to western slope of Hill 1340 (400 yards east of Estes Gate), and await orders;

Commander's Group, Forward Echelon, to Hill 1340, east of regimental reserve;

Movement to commence at once, and attacks to start as soon as troops have arrived in position ordered, except that attack by 2nd Squadron to be made only when specifically ordered by Commanding Officer, 13th Cavalry;

Command Posts of all units to be plainly marked with signs provided;

Combat trains (assumed in Governor Harvey Cañon) to be brought rapidly to draw on Estes Road, and released to organizations;

Regimental command post to hill 1340.

In this phase of the operation teamwork between the cavalry units became less necessary. Since the covering forces had discovered no threatening movement by the enemy, the various subdivisions advanced to their jump-off positions independently, by the shortest route, and were free to adopt their own formations against hostile aircraft and artillery fire. On the other hand, the teamwork between artillery and cavalry was of more importance, because the artillery could now be used to counterbattery the Red artillery, occupy its attention, and enable the cavalry to still pay particular attention to hostile aircraft.

Certain features of this advance to the jump-off positions are worthy of note. The method of advance used from Harvey Hill to the Estes Road was no longer compulsory. Subdivision commanders were permitted to use their own discretion. Time now

being an important element the tendency naturally was to discard the formation.

One squadron, advancing from the Estes Road in line of squad columns, mounted, was considered by the planes as offering a vulnerable target, and it was attacked from the air. This forced, for a moment a return to the "hand over hand" method of advance. The battery, moving by the flank, also presented a vulnerable formation, and was attacked.

However, it must be said that in this advance the troops were getting close to that stage of the operation where they would have to concentrate more definitely on the actual job they had to perform, and accept losses. The job was narrowing down to that of driving an enemy on the ground out of his position. Concentration on that would of necessity make it less easy to devise ways and means of avoiding losses. In fact too much consideration given to avoiding losses would tend to a defensive frame of mind when the mission demanded *a fiercely aggressive frame of mind.* In other words, the troops were now getting to the stage where Napoleon's dictum applied: "It's impossible to make an omelette without breaking eggs!"

The Regimental Commander, with the Commander's Group, Forward Echelon, galloped to Hill 1340 where the regimental command post was established. The battery also established its observation post here connected by field telephone with the battery. A line was also laid to the command post of the commanding officer, 1st Squadron, in order to facilitate cooperation by the battery in the dismounted attack.

Sixth Step

To experiment with the teamwork essential in a combined attack.

From the commanding height of Hill 1340 the various subdivisions could be seen going into action. The Machine-gun Troop found a favorable position from which to fire a few hundred yards northeast of Custer Hill. The 1st Squadron dismounted in the draw to which they had been ordered, and advanced [illegible], taking advantage of the folds in the ground to maneuver forward, rather than make a direct attack, irrespective of the ground. The 2nd Squadron soon disappeared into the draw that had been assigned as their jump-off position, and reported by mounted messenger that they were ready. The Blue plane soon reported that the Red battery was out of action, and the battery, on call from the commanding officer, 1st Squadron, sent by field telephone, switched its fire to the enemy on Randolph Hill. After the dismounted attack was well under way, orders were sent by mounted messenger to the 2nd Squadron to launch their attack. Far to the northeast the 2nd Squadron soon appeared in successive lines of mounted troopers, well [illegible] of the enemy's right flank, attacking rapidly towards the east. The regimental reserve, in column of squadrons, awaited orders at the position [illegible].

[illegible] group on Hill 1340 watched the development of the attack, this question was asked. Were the different elements of the command too widely separated?

The consensus of opinion was that they were not. The open country with its various commanding knolls permitted such a view of the local battlefield by the regimental commander, and by the subdivision commanders, that even greater distances and intervals could have been used had the lie of the ground demanded, without loss of control or impairment of coordination. And smaller intervals actually would have hampered each subdivision commander by prematurely involving him in the offensive movements of the other. The Machine-gun Troop had to watch the development of the dismounted and mounted attack in order to displace forward at the proper time, and switch the direction of its fire so as to avoid firing into the squadrons.

Seventh Step

To experiment with the teamwork essential in a withdrawal.

For the next regimental training day it was assumed that the attack had met with initial success, but that conditions on other parts of the Blue line had resulted in orders for the Commanding Officer, 13th Cavalry, to withdraw to a defensive line in the vicinity of Harvey Hill, for a temporary stand while the main Blue forces retired to the south.

Accordingly for this exercise the troops took initial positions that it was assumed they might have had at the conclusion of the attack on Randolph Hill.

There was no change in the position of the regimental reserve, of the battery, or of the armored car troop.

The 2nd Squadron, with its attached platoon of armored cars was in the vicinity of Milk Ranch Gate, being gotten in hand after their mounted attack, which, it was assumed, had dispersed an enemy mounted reserve of one troop. They were suffering a scattering, and gradually increasing, rifle fire from the east.

The 1st Squadron (less Troop A [less MR platoon]) was on Randolph Hill from which they had just dislodged the enemy, and were readjusting their formation before further advance, with patrols 400 yards to the east in touch with the enemy, who were reported to be rallying in the draw about 650 yards east of Randolph Hill.

The Machine-gun Troop was about 600 yards northeast of Custer Hill, preparing to move forward to Randolph Hill.

While there was a certain incongruity in assuming that a retirement had been ordered so soon after the attack had been launched, the situation, with the troops separated as they were, afforded an excellent opportunity for the required combinations for mutual assistance, or teamwork, in a withdrawal from close contact with the enemy.

The general plan for the withdrawal can be seen from the provisions of the orders issued at 9:30 A. M., at the regimental command post on Hill 1340, which if combined into a formal field order, would have read as follows. The more important instructions in the order, involving teamwork, are in italics.

Hq. 13th Cavalry,
Hill 1340 (400 yards E of Estes Gate)
9:30 A. M., 8 Dec., 1930.

Field Order
No. 2.

1. Our attack on the enemy right flank has succeeded in driving them from RANDOLPH HILL. On the remainder of the front our forces have not been so successful.

2. This regiment will retire, and take up a defensive position in the vicinity of HARVEY HILL, facing the northeast.

3. (a) The 1st Platoon Troop A, 9th Engineers, on receipt of this order, will withdraw to the vicinity of HARVEY HILL, and will mark out a defensive line from HARVEY HILL along ARNOLD DIVIDE to HILL 1300 (about 400 yards to the northwest) and thence to HILL 1300 (about 300 yards farther to the northwest and west of GOVERNOR HARVEY ROAD). After completion of this duty they will take post as Regimental reserve, under cover, in the north end of GOVERNOR HARVEY CANON.

(b) The 2nd Squadron, 13th Cavalry, releasing the platoon of armored cars which will revert to Troop A, 1st armored Car Squadron, will proceed on receipt of this order *under cover of the fire of that part of the 1st Squadron, 13th Cavalry, on RANDOLPH HILL,* to the north of HILL 1340 (east of ESTES GATE), and via open country west of the GOVERNOR HARVEY ROAD, to the defensive line indicated above; and will be distributed in depth, to hold dismounted that part of the line from HILL 1300 (west of GOVERNOR HARVEY ROAD) to HILL 1300 (on ARNOLD DIVIDE) exclusive.

(c) As soon as the 2nd Squadron has disengaged itself, the 1st Squadron, 13th Cavalry (less Troop A [less MR platoon]), *under cover of fire of Battery D, 18th Field Artillery will retire to the high ground half way between HILL 1340 (east of ESTES GATE) and CUSTER HILL, and will take position dismounted to assist in covering the withdrawal.* On specific orders from Regimental Commander it will withdraw via FOUR WAY DIVIDE to HARVEY HILL, and will organize, dismounted, in depth, to hold the line from HARVEY HILL to point where north and south road on ARNOLD DIVIDE crosses the crest line.

(d) *Troop A, 13th Cavalry* (less MR platoon) now in regimental reserve, *will take position dismounted on HILL 1340* (east of ESTES GATE) *to assist in covering the withdrawal of the 2nd Squadron.* It will then withdraw, on specific orders from the Regimental Commander, via open country west of the GOVERNOR HARVEY ROAD, to the defensive line indicated, and organize for defense on HARVEY HILL. Upon arival of the 1st Squadron, it will be reported to the Commanding Officer, 1st Squadron, for duty.

(e) *The Machine-Gun Troop, 13th Cavalry, from* the vicinity of CUSTER HILL, *will assist in covering the withdrawal,* and on specific orders from the Regimental Commander, will withdraw to the defensive line indicated, and will take post for defense on HILL 1300, between the interior flanks of the 1st and 2nd Squadrons.

(f) *Battery D, 18th Field Artillery, will support the withdrawal of the 1st Squadron to the high ground between HILL 1340 and CUSTER HILL,* and will then proceed by platoon directly to the defensive line indicated, and will take post in the draw about 400 yards southwest of HILL 1300 (on ARNOLD DIVIDE), *and will assist with its fire the defense of the forward line, and the successive withdrawals of the units therefrom* to the defensive line near HARVEY HILL.

(g) *Troop A, 1st Armored Car Squadron* will be joined by the platoon now with the 2nd Squadron, 13th Cavalry, and *from flank positions to the west, will cover successively with its fire, the withdrawal of Troop A* (less MR platoon) *from HILL 1340; the 1st Squadron, 13th Cavalry, from the high ground southeast of HILL 1340; and the Machine-gun Troop from CUSTER HILL.* It will then reconnoiter to the north of the GOVERNOR HARVEY ROAD, and to the west thereof, and protect the left flank of the troops on their defensive line.

(x) Each squadron, on retiring, will leave patrols to maintain contact with the enemy in their front.

4. (a) Combat Train will immediately assemble in draw on ESTES ROAD, half way between ESTES GATE and FOUR WAY DIVIDE, and will proceed rapidly to take post under cover in north end of GOVERNOR HARVEY CANON.

(b) Regimental Aid station to southern exit of GOVERNOR HARVEY CANON.

5. (a) Commander's Group, Forward Echelon will follow 1st Platoon, Troop A, 9th Engineers to draw southwest of HILL 1300 (on ARNOLD DIVIDE) and establish Regimental Command Post.

(b) Temporary Command Post will be established on CUSTER HILL to which messages will be sent after 9:30 A. M. After withdrawal of Machine-gun Troop from CUSTER HILL, messages to Regimental Command Post southwest of HILL 1300.

WSG.
Colonel, 13th Cavalry,
Commanding.

The gist of this order was explained to the officers and noncommissioned officers in a conference on the day preceding the exercise, and copies of the order were issued. This enabled all concerned to reflect on the manner in which they would carry out their missions, particularly squadron commanders, who were able to prepare themselves on the tactics pertaining to their own movements in withdrawal, and the manner in which they might carry out their roles with respect to assisting other units.

On the day of the exercise, as soon as the troops had taken their initial positions, the order was dictated by the regimental commander on Hill 1340, to the acting Plans and Training Officer, to the Commanding Officer of the Engineers, the Commanding Officer

of Troop A, and to the Commanding Officer of Battery D. This was done, both as an experiment, and as a feature of the training which a regimental commander needs. As soon as the order had been dictated it was sent to the Armored Car Troop, to the 1st and 2nd Squadrons of the 13th Cavalry, and to the Machine-gun Troop, and the withdrawal started.

Much was learned in experimenting with this method of issuing orders. For this particular situation the method was entirely wrong. It took too long—about twenty-five minutes to dictate the entire order. Then it had to be sent to the distant units. To this should be added the time required by the unit commander to form his plan after receipt of his orders from higher authority.

What is the value of the best plan, and the best prepared order based on that plan, if it arrives too late in the hands of those who should execute it?

Based on a condition that is believed to exist, if delayed in getting to the troops the order may arrive in the midst of changed conditions, and become the worst possible plan and order.

What was the great factor under the circumstances? Time! The troops were getting ready to continue their attack; in a few more minutes they would be under way. If they were to retire, then was the time, before they had again become committed to a continuation of the attack; or before the enemy had engrossed them with a counterattack.

It was essential for the Regimental Commander to have formulated, in his own mind, a plan of withdrawal. It would have been splendid if he had been able to communicate it, entire, in a minute or two, to his various commanders, in order that the best possible teamwork might have resulted. But "there is a strength which dies if stretched too far or spun too fine." The regimental commander was faced with a practical problem, not a theoretical one. Rough and ready methods instantly applied were better than intellectual refinements applied too late. His order should have been issued piecemeal to the organizations in the order in which action or movement on their part was desired by him,—issued direct if the Commanding Officer of the organization concerned was available, as in the case of the Commanding Officer of the Engineers, Troop A, and the Battery—by written message or other means if the commanding officer of the organization concerned was closely in touch with the enemy.

In any case, if a stenographer were available, these fragmentary orders should have been made of record in shorthand notes, to be transcribed into longhand by the stenographer at once, to serve as an *aide memoire* to the Regimental Commander so that he could keep track of what he told the various units to do and when. In the absence of a stenographer, several staff officers should have been assigned to jot down the orders issued direct to commanders. Retained copies of messages sent would complete the record—not a record for history but a working record for the commander himself.

Instructions for necessary teamwork, insofar as they involved the unit to which the order was issued, could have been incorporated in the various fragmentary orders.

But teamwork,—the aiding of units to the right and left when conditions demand it, or permit, and all the other varieties of mutual assistance which the term implies, must become so habitual through practice, that, except in important cases, it will be unnecessary to specifically prescribe in orders just how that teamwork is to be applied.

Antiaircraft Terminology

First Lieutenant Joseph I. Greene, 24th Infantry[1]

A STUDY of the 1929 regimental reports on TR 300-5 (Antiaircraft Combat. Basic, for All Arms Except Antiaircraft Artillery), and a careful reading of articles that have appeared in the Service Journals dealing with various aspects of antiaircraft, bring the conclusion that we need a clearer definition of terms. It is not astonishing that we are confused. The antiaircraft problem is a big one and a young one. Its technical ramifications are wide and its tactical and strategical aspects cannot be settled in a day. Besides, the whole problem is so important that if we fail to meet it with successful measures we shall see the whole of war become vastly changed. It is not a minimization to state that we are just beginning to find the solution, although by this time we have a good idea of the size of the job. We can make better progress, however, if we halt for a brief period to reorganize.

By all means let us make our second start with a clear view of the ground to be covered and the objectives to be gained. To accomplish this we must speak a common language. We must call things in antiaircraft by names whose use will reduce confusion of thought and action to a minimum. It is the purpose of this article to suggest a revision of antiaircraft terms and to suggest a terminology that will be an improvement on the inadequate and confusing one now in use.

The greatest confusion and lack of clarity exist in the terminology of airplane flight. At present we hear and use such terms as "Parallel Flight," "Vertical Flight", "Diving Flight", and the like. To some of us they mean one thing and to some another. An attempt was made about two years ago by Major Leonard R. Boyd and the author to define these existing terms. The definitions evolved were included in TR 300-5 (paragraph 47). Their purpose was to establish clarity in antiaircraft thinking and writing. Time has shown, however, that they are incomplete and inadequate. The continued development and research in antiaircraft need a more definitive set of terms.

General Classification of Flight

To arrive at a logical and usable flight terminology we must begin by analyzing the movements possible to airplanes. All of these movements can be placed under two general classifications: curved flight and straight flight. Under the first heading we may put all abrupt turns of which the airplane is capable—banks, loops, spirals, and the like. These are not of great importance in antiaircraft fire for two reasons: attack planes engaged in curved flight are almost impossible for riflemen to hit, and attack planes following a curved flight path can do little or no damage to ground troops.

Straight flight is the classification with which antiaircraft chiefly deals. It includes all flight that follows or nearly follows a straight line. For our purposes it is best to include in this classification flight on a widely curved path because such flight appears approximately straight to the infantryman.

Types of Straight Flight

It is over the terms now applied to the kinds of straight flight that confusion reigns. We can best make order out of this confusion by determining all the types of straight flight and then giving them clear and understandable names. But we must decide first upon a reference point. We must refer the path of the airplane to something on the ground.

We have the choice of referring the flight path to an area, such as a strong point or a bivouac area; to a line corresponding to a deployed unit, such as a section or platoon; or to a point corresponding to the individual soldier. As we shall see later when we discuss the terms of flight now used, it is the attempt to define flight by reference to lines or areas that has caused most of the existing confusion. Antiaircraft firing, whether rifle or machine gun, is basically individual. A given target at a given moment appears differently to each rifleman or gunner. For example, when a plane is directly over one man's head it is not over the head of a man 50 feet away. Each individual is naturally his own reference point. Moreover, as antiaircraft firing develops it becomes more and more evident that the control of a group during an aerial attack will be difficult if not impossible, because of such factors as noise and confusion of battle. Therefore, terms and definitions of flight, if they are to be clear and practical, must be arrived at from the individual soldier's viewpoint.

There are two other things we must remember. A soldier who is firing at an airplane must always face toward it. Hence, in analyzing flight we must never think of a plane as being "behind the firer". We should also think of flight as approaching rather than receding. The purpose of antiaircraft fire is to prevent enemy planes from attacking by bringing them down, and failing this, to make their attack as costly as possible. Therefore, we must place a maximum of fire upon them as soon as we can. Hence, the *approaching plane is the important one.*

New Terms Suggested

Now, if we refer the flight path of the approaching plane to the individual and bear in mind that the firer continues to face toward or aim at the plane, we find that all straight flight falls into two divisions. Let us name and define these two general types as follows:

[1] Formerly Test Officer, Department of Experiment, The Infantry School.

Overhead Flight: Straight flight the extended course of which passes over the head of the firer.

Non-overhead Flight: Straight flight the extended course of which does not pass over the head of the firer.

These classifications are clear, but we shall need to be more explicit if we are to give adequate names to

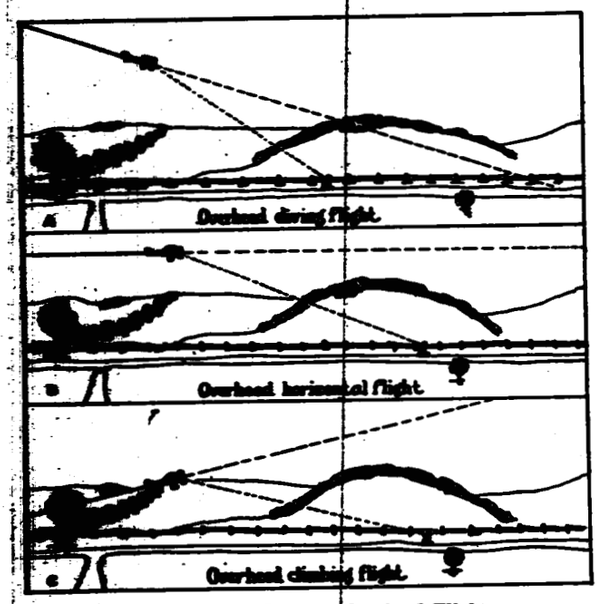


Plate 1. The Types of Overhead Flight

all the types of straight flight. The simplest way to accomplish this is to classify straight flight further into downward flight, level flight, and upward flight. We may express these better, perhaps, by using the common terms; diving, horizontal, and climbing flight. Definitions for these are:

Diving Flight: Straight flight that decreases in altitude.

Horizontal Flight: Straight flight parallel or approximately parallel to the ground.

Climbing Flight: Straight flight that increases in altitude.

Then, from these two methods of classification we can combine terms to form a simple terminology that includes every kind of straight flight. These, defined, are:

Overhead Diving Flight: Straight flight, decreasing in altitude, the extension of which passes over the head of the firer. (Plate 1-A).

Overhead Horizontal Flight: Straight flight, parallel or approximately parallel to the ground, the extension of which passes over the head of the firer. (Plate 1-B).

Overhead Climbing Flight: Straight flight, increasing in altitude, the extension of which passes over the head of the firer. (Plate 1-C).

Non-overhead Diving Flight: Straight flight, decreasing in altitude, the extension of which does not pass over the head of the firer. (Plate 2-A).

Non-overhead Horizontal Flight: Straight flight, parallel or approximately parallel to the ground, the extension of which does not pass over the head of the firer. (Plate 2-B).

Non-overhead Climbing Flight: Straight flight, increasing in altitude, the extension of which does not pass over the head of the firer. (Plate 2-C).

To these six terms it will be well to add one more to cover a special case:

Direct Diving Flight: Straight flight, decreasing in altitude, and moving approximately directly toward the firer. (Figure 3).

Further Limitation of Meaning

These seven terms can be augmented further, but as they stand they should be sufficient for purposes of training and technical discussion. They are simple and self-explanatory, hardly needing to be defined. There is little chance for confusion in their use. They are an improvement on the ambiguous terminology now employed. Where their use is still not explicit enough, the use of the words "low" and "high", or the actual statement of the altitude in feet or yards, will add the required accuracy when both types of horizontal flight are referred to. The use of the words "close" or "distant", or the actual statement of the minimum slant range, will give a like accuracy to references to all types of non-overhead flight. When

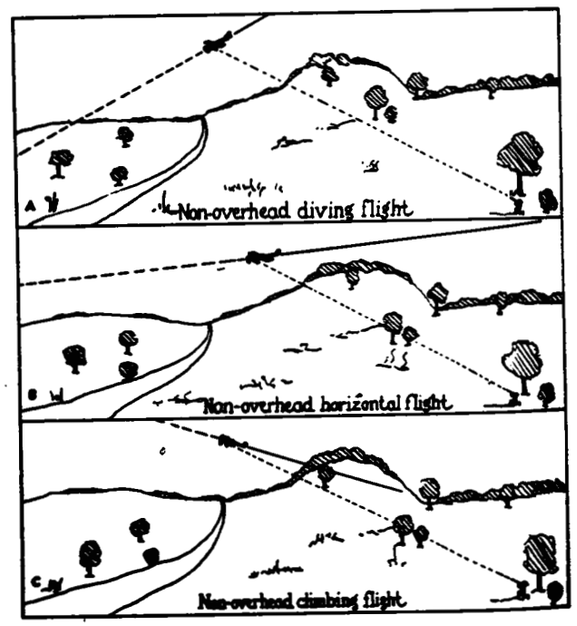


Plate 2. Types of Non-Overhead Flight

necessary also we can use "receding" or "approaching" to limit further the meaning we desire.

We shall need, however, another kind of terminology when we discuss the tactical aspects of attack aviation in its relation to infantry. The terms "Attack Flight" and "Non-Attack Flight" would need no definition.

If the use of gas-laying planes becomes general we can add the term "Gas Attack Flight".

Reasons for Confusion in Terms Now Used

Now that we have outlined a proposed new terminology for flight, let us examine the terms most commonly employed at present. These are "Parallel Flight", "Perpendicular" or "Vertical Flight", "Oblique Flight," and "Diving Flight."

Any attempt to define "Parallel Flight" encounters the question "parallel to what?" This term is usually applied to "Non-overhead Horizontal Flight". It is not, however, clear and self-explanatory. The word "parallel" may refer to the ground or to the line of riflemen drawn up for towed-target practice. As a matter of fact, the term did refer originally to the firing line. But suppose a plane passed directly over the firing line from one side to the other, flying over the head of every man on it. What kind of flight would that be? The flight would still be parallel to the firing line and to the ground also. It was a very natural thing to refer the path of flight to the firing line, but it was a mistake. In combat there will be no firing line. There will be only a hastily deployed and irregular formation. Hence, as suggested earlier in this article, we must define flight with primary reference to the individual soldier. The individual is not a line, but to all intents a point. Neither a line of airplane flight nor any other line can be parallel to a point. Therefore, "Parallel Flight" is a misleading misnomer.

The term "Perpendicular" or "Vertical Flight" comes under the same category. It, too, got its name by reference to the firing line in early antiaircraft development work. It refers to Overhead Horizontal Flight. Actually such flight is not perpendicular to the firing line, and it never intersects that line. Neither is this flight perpendicular or vertical to the ground, which indeed is its correct meaning. The ris-

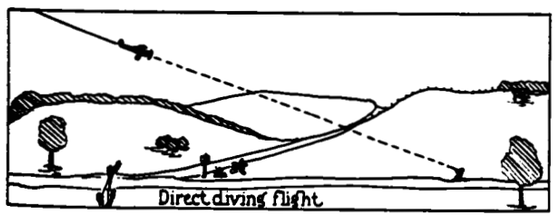


Plate 3

ing or descending helicopter or autogiro may engage in perpendicular or vertical flight, but not the airplane.

"Oblique Flight" has been used with reference to "Non-Overhead Climbing" and "Non-Overhead Diving Flight", although its original meaning denoted any flight that passed over the firing line at an acute angle. In the first application it is not an incorrect term, and in the second it also loses all meaning when we think of it with reference to the individual in combat. As it seems well to preserve the distinction between "Diving" and "Climbing Flight", and as the new terminology evolved above is complete enough, we can do without this term.

Thus "Diving Flight" remains the only term now in common usage that it seems advisable to retain. In paragraph 47, TR 300-5, this is defined as "any approximately straight flight toward the firer from a higher elevation." This definition limits the term "diving" too much. A plane may dive at any point on the ground and yet be within a sight of an individual firer. Hence, the definition given above, straight flight that decreases in altitude", is truer and more inclusive. Then, by forming the terms "Overhead Diving Flight" and "Non-Overhead Diving Flight", we separate "Diving Flight" into the only two classifications in which infantry antiaircraft needs to be interested.

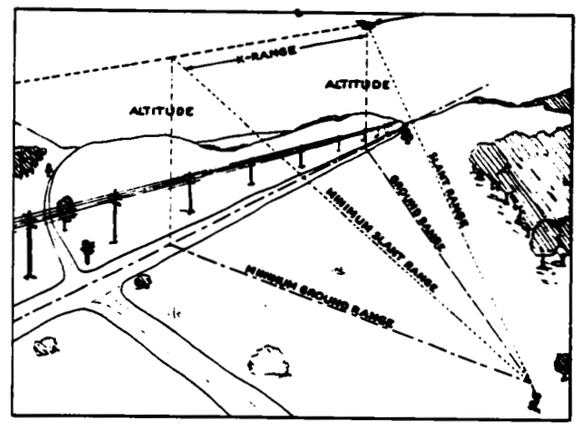


Plate 4

Although not in general use, the term "Passing Flight" has been suggested as a term for "Non-Overhead Flight". However, an airplane in "Overhead Flight" passes over the firer; consequently the use of "Passing Flight" might lead to confusion.

Other Terms that Need Revision

There are other antiaircraft terms besides those that refer to flight that need revision. The term "Horizontal Range", is defined in paragraph 47 h, TR 300-5 as "the distance along the ground, *i. e.*, the level plane of the firer, to a point directly under the vulnerable center of the target at the moment of impact." This is sometimes called the "Ground Range"; and "Ground Range" is a much more explicit term than "Horizontal Range". (Plate 4).

Also defined in the same paragraph of TR 300-5 is "Parallel Range". This term has, in general, only a technical use, denoting as it does the distance, in "Non-Overhead Horizontal Flight", from the target at the moment of impact to the point at which the extended path of the target is nearest to the firer. The term was evolved to complement the terms "Minimum Ground Range" and "Altitude". The three terms form the X, Y, and Z components of "Slant Range". "Parallel Range", of course, received its name from

"Parallel Flight". As we have suggested a new and better term for this type of flight—"Non-overhead Horizontal", to be consistent in clearing up confusion we must rename "Parallel Range". We can name this technical element the "X-range" as it corresponds to the X element of the "Slant Range" and as no other self-explanatory name, which would not be confusing, offers itself. (Plate 4).

In some writings and reports on antiaircraft, including TR 300-5, the word "elevation" has been used to express the height at which an airplane flies. This use of the word is not strictly incorrect although it is usually applied to the height of objects that rest on the ground, *e. g.*, "The elevation of Mount Everest is 29,009 feet" and "The Empire State Building will have a greater elevation than the Eiffel Tower." Furthermore, machine gunners and artillerymen already have a well established use for the word, employing it in a different sense. "Altitude", therefore, is a better word, and is a term that is already in use in the Air Corps. (Plate 4).

There is no doubt room for improvement in the list of terms here suggested. And as new elements enter into antiaircraft development, new terms and definitions will be required. Certainly the vague terminology with which we now struggle needs bettering.

The Aids

"THE disability from which I suffer is a great handicap, but there is a bright side to everything, and my inability to apply the aids strongly has been a great lesson to me. I can use but very little force, and the results obtained by my weak efforts have convinced me that horses are generally overridden; that much more strength than necessary is habitually used in applying the aids.

"The rider must reduce *his actions to the very minimum* and leave the horse *the greatest possible freedom in his.*

"To be understood readily and quickly by the horse, the language of the aids must be the simplest, but in scientific theories it is rarely so, and the lessons are as difficult to give as to take. Training thus becomes as boresome to the rider as to the horse. It is even said that in demanding a very simple movement, we must, for example, raise the right hand and carry that rein to the right; lower the left hand and close it on this rein; carry one leg forward, the other back; displace the seat to this or that side and incline the body to the front. Few of us can say to the horse so many things at one time without making a mistake and thus being misunderstood. I, for one, will not undertake such a task. I fear I might end raving.

"It is also said that the aids must be applied at the precise moment when this or that foot is raised or planted, etc., etc. In my humble opinion this is too exact and exacting. A horse must not be robbed of his initiative. When I wish my horse to take the gallop, my aids acting on the horse's position imperceptibly put him into the gallop, smoothly—without jerks and without any feeling or sensation other than that experienced when seated in a Pullman which is smoothly started. It is only by the whir of the wheels that you realize you are moving."

Extract from "Extérieur et Haute Ecole" by Captain E. Beudant, translated by Lieutenant Colonel John Barry, Cavalry. To be published summer, 1931, by Charles Scribner's Sons.

Sport With the Saber

Captain G. B. Guenther, Cavalry

THE advent of firearms has gradually eclipsed the importance of the lance and the saber in modern warfare. The World War with its trench warfare in which the employment of modern Cavalry was difficult has convinced the military that the lance has no further use as a weapon in modern engagements, and just recently Germany has followed suit with France and England and has discarded the lance. This decision on the part of these countries marks the passing of the lance as a hand weapon in modern warfare. The saber only remains, either in the form of our pointing weapon or that of the British and French, or the cutting weapon of the Cossacks and the Arabs.

When will the saber arrive at the same point as the lance and be called obsolete? Many of our cavalrymen are today advocating that the saber be discarded and be replaced by a bolo, corn knife, or machete.

Whatever may be the duration of the life of the saber, the fact remains that it is still a part of the equipment of the Cavalry of our modern armies. It is carried to drill and on practice marches and is merely tolerated as a necessary evil but is not popular as a part of full pack equipment or as a hand weapon. The saber to be used with skill requires that the mounted soldier be a horseman; that he be agile and aggressive, imbued with the desire to close with the adversary and give combat.

The exercises which follow are intended not only to increase the interest in the saber and by wholesome competition properly rewarded, to improve the horsemanship of the cavalryman but also to make him more proficient in the use of the saber without always holding strictly to the routine of the monotonous runs on the saber course.

Exercise 1. Equipment: A level piece of ground twenty-five yards by fifty yards sodded or heavily sanded. Four saber dummies (without heads) with arms attached to hold ring in a vertical position but easily detachable. Four rings for each contestant. Rings to be the size of those used in a cavalry halter or those used in the old hair cinch of the McClellan saddle (rings to suit the degree of ability of the contestant). The old wooden saber or the issue saber can be used.

Course and requirements: The dummies with arms attached and rings adjusted in the arm have been placed either in line at intervals of fifteen yards or staggered, the first on the right and the second on the left. The contestant, mounted, starts with saber drawn and at the guard and crosses the starting line at a gallop. As he approaches the first ring he thrusts the point of the saber toward and through the center of the ring, attempting to retain the ring on the saber. If the ring is properly adjusted, it will drop from the fastening as soon as contact is made with the saber. The point of the blade must now be elevated to prevent the ring from sliding off of the saber (if the point has properly entered it). The same for each ring. When the contestant has arrived at the finish with the four rings on his saber in the prescribed time and has remained at the gallop he has fulfilled the requirements. In competitions the distance between the dummies and the time limit are so adjusted as to be proportionate to the skill of the contestants.

Exercise 2. Equipment: A similar piece of ground as in Exercise 1, the surface of which will hold an ordinary tent peg with ease. Five pegs the thickness and size of the issue peg used on the kneeling silhouette for the pistol target except that they are only ten inches long. One saber for each contestant.

Course and requirements: The pegs are driven into the ground at intervals of five or ten yards, either on the right or left of the track on which the contestant rides. The pegs are driven deep enough so that actual penetrating contact by the point of the saber is needed to knock them to ground.

The contestant, mounted, starts at the gallop and is required to knock the pegs to the ground by a penetration of the point into the pegs and to arrive at the finish in the required time, having retained the gallop throughout the entire distance. Time and method of arranging the pegs can also be adjusted to suit the skill of the contestants.

Exercise 3. Equipment: A piece of ground as in Exercises 1 and 2. Four pointed sticks two by two inches by five feet. Four toy balloons at least six inches in diameter. Contestants to have issue sabers.

Course and requirement: The sticks are driven into the ground and on a straight line at intervals of ten yards. The balloons are attached so that they are not more than an inch from the top of the sticks.

The contestant crosses the starting line at a gallop with drawn saber piercing the balloon as he approaches. He is required to pierce each balloon and arrive at the finish within the prescribed time. In order to make the exercise more difficult the height of the balloons can be varied and they may be placed at varied intervals.

Benefits to be derived from these exercises: Properly conducted, these exercises will provide a type of mounted sport for the cavalryman.

Mounts can be trained to accept the saber, go straight, or change direction at the will of rider and carry him in any position he may take.

The cavalryman very readily improves in his ability to ride his horse; he becomes more proficient with the saber; and last but not least becomes a bold and aggressive rider because he soon feels more at home on his mount.

Industry and National Defense

IV[1]

Major General George Van Horn Moseley, U. S. A.

WAR has ever been accompanied by rising prices and depreciating currency. The trouble begins in those items for which there is unusual demand, such as copper, iron, steel, wool and cotton. Increased cost in these items occasions an increase in the prices of articles made from them, and the cost of living begins to mount. Wage earners face hardships and rightly demand increased compensation. This in turn increases costs of all production from basic raw materials to finished products, and the whole process begins anew. Rising prices require the government to procure more money on credit than would otherwise be necessary, and when its credit begins to be strained, the effect on the whole is most startling. In the World War, Russia had extreme experience along this line. Our own experience was not so unfortunate, but it was sufficiently disturbing to cause us to reflect on what might have happened if we had begun to approach exhaustion without having adopted positive stabilizing measures. It also points to the necessity of developing some method to prevent the beginning of the vicious circle of rising prices and money inflation.

No one has as yet discovered a complete or perfect method of controlling prices in war. Contradictory theories affecting it have been advanced. Often it is said that an attempt by the government to control prices would be an attempt to "repeal the law of supply and demand," and at this bald statement we are supposed to blanch with terror and hastily thrust such thoughts from our minds.

It is true that when prices are fixed they are placed at different levels from those that would result from free bargaining during the stress of war. But it is also true that in fixing prices consideration must be given to the necessity of equalizing supply and demand. In other words, we know that we must not fix prices at a level that would stifle production, and at the same time must find some method for stimulating supply without the necessity of offering absurdly high prices. Reduction in consumption should be accomplished by some means other than charging such prices. Appeals to the patriotism of citizens had a marked influence in this regard in the past war, particularly in curtailing consumption. Who does not remember the wasteless, meatless and useless days, as well as the need for dispensing in saving worn out electric light bulbs for them in the authorities? In response to these patriotic requests we planted "war gardens" and abandoned the practice of hoarding supplies. Measures along this line tend to enhance supply and diminish demand, but they are not in themselves sufficient to effect stabilization of prices in war.

Fundamentally the purpose of price control is to effect the equitable distribution of the war burden without interfering with production. This equalization should apply among ourselves, and also between the present and the future. We wish to prevent excessive profits in one quarter, and a lowering of a living standard in another; we do not want to incur great debts on an inflated money basis, and pay for them later in a period of deflation.

It is frequently said that to accomplish these purposes in war the United States should "draft everything and everybody into the government service." People who make such a sweeping statement probably do not employ the word "draft" as we usually understand it. The government must put everything and everybody to work in the common cause: but it would be difficult to conceive an organization such as would result from a complete "drafting" of the American nation. It seems unnecessary to enumerate the manifold administrative and technical difficulties that would inevitably arise in attempting to form such an organization. Questions as to the constitutionality of the plan are left to the lawyers; what we are concerned in is its practicability. It seems to me that here is proposed a scheme that at best would require more time for its accomplishment than could possibly be permitted if we were faced with a major emergency. Moreover, 120,000,000 people would be trying to adjust themselves to a complete change in our economic processes at the very time that their full attention should be given to the tasks laid out for them in repelling the enemy from our gates. These are my personal views. I appreciate the justice in the idea that lies behind the proposal, but I for one should not like to see the safety of the country made dependent upon an organizational scheme which could not be put in operation promptly, if at all. At least, such a solution cannot be considered as a practicable one until some person comes forward with a detailed and workable program for its consummation.

On the other hand, I do not for a moment agree with those who say that we should keep hands off and let prices go where they will, and take back into the treasury all excess profits by means of graduated income taxes. While excess profits taxes would have their place under any scheme, to accept such a method as a complete solution is akin to a deliberate courting of disease in the belief that the doctor's pills will surely cure us.

One thing is certain; we cannot supinely say there is no solution. When we enter a war the mass of our

[1] This is the concluding article of a series of four.

citizens are willing and anxious to make unusual efforts and sacrifices for the good of the country. The weight of public opinion thus engendered is the most powerful and compelling force in our list of assets. All we need is the intelligent and practical direction of this force to accomplish any desired result. With the aid of this force any practicable plan will work; without it, none will solve the difficulty. Based on this line of reasoning, certain eminent men have evolved a plan for price control which they believe will be effective.

The essence of this plan is: Upon the outbreak of war, and subsequent to any necessary authorization from Congress, the President would issue, under the authority of a specific law, a proclamation fixing or "freezing" prices at the levels existing on some prior date, chosen to represent as nearly as possible the prices of "normal" times. This scale of prices would apply to all things and all services. Coincidentally with the promulgation of this proclamation there would be established a price-control committee composed of able administrators representing every kind of human endeavor. This committee would consider the "fixed" price list as a basis on which to make adjustments from time to time to meet the needs of the country and to insure justice to all classes. In addition to specific law and public opinion, another means of making effective the decisions of this committee would be through governmental control over raw materials and other essential elements of production. No manufacturer, railway executive, or mine operator could long ignore a reasonable price regulation if he were confronted with the certainty that non-conformance would result in the withholding from his concern of steel, fuel, power, transportation, or other essential items.

In time of peace, countless arguments can of course be propounded against introducing such a system in war. There are unquestionably many difficulties to be overcome, and probably no one can foresee the eventual results. Proponents of the plan urge that in the United States it was being gradually evolved during the war, and that sufficient experience was gained to prove its practicability. We should not forget, though, that in 1917 price reductions were effected by agreement rather than by governmental fiat.

In England price fixing was apparently much more extensively practiced. Commentators state that, though their system was not perfect, it was in general effective.

No one can deny the great importance of preventing rapid price fluctuation in war. Careful prearrangement for procuring governmental supplies, and aggressive and intelligent leadership, backed up by supporting public opinion, can accomplish much. Whether or not we should attempt the application of a rigid and all-inclusive system at the beginning of a great emergency is a question that requires more discussion and thought before it can be definitely answered.

Transportation, like finance, is a vital factor in plans for national industrial mobilization. The transportation facilities of this country are varied in nature and are becoming more so. However, the railway systems remain the backbone of internal transportation, and the studies are grouped around their capabilities and limitations.

During the war we took over the railways, but the experience was not entirely a fortunate one, and a better plan for satisfying governmental needs should be devised. We need control rather than possession. Over and over it should be emphasized that the government should take advantage of the experience, training, and ability gained in time of peace by commercial organizations and by individuals. The government's directives to all should be: "Meet our requirements efficiently and fairly, and full justice will be done to you." Railway executives are experienced in meeting transportation emergencies. To relieve them of the responsibility for meeting the transportation emergency incident to war would be to rob ourselves of an important national asset. Recognizing their responsibility in this matter, the railways, through the American Railway Association, have developed, in cooperation with the War Department, a comprehensive plan that would unquestionably work efficiently.

The government would necessarily perform functions in war with respect to industry other than those mentioned. Enough has been said, however, to illustrate the underlying principles of the plans now being developed. To indicate what should be done is manifestly insufficient: the plans must provide for the necessary administrative organization. Here again we must fall back upon experience to point out the path to practicability. No doubt such an organization could assume any of several forms and still meet the requirements of the situation. I believe the following would be satisfactory.

A vital part of the organization, *but not a part of the government*, would be a group of committees, known in the late war as "War Service Committees." Each was in effect an executive committee for the particular branch of industry it represented, and was maintained in Washington by that industry. It served as the connecting link between its particular association and the government. Recent years have witnessed a growth in the business world of the tendency of related activities to group themselves into associations, so that, in general, these executive committees exist in time of peace. In the late war there were about 175 service committees: in any future emergency, there would probably not be fewer.

The governmental part of the industrial organization would of course be purely a war-time emergency unit. It would be an organization authorized by Congress. Through it would be exercised those parts of the war powers of our President dealing with industrial matters. This organization, heading up into one man directly responsible to the President, would be made up of the ablest representatives available from all branches of industry. In the name of the President it would direct and control the industrial forces of the whole country in accordance with the necessities of the particular situation.

In the process of developing the organization outlined above, the cooperation of many agencies is essential. For instance, we need the cooperation of the National Chamber of Commerce and the various trade associations. Data, studies, initial operating plans, and much of personnel should be ready for grouping under the men the President would select to fill the key positions in the organization. The Department of Commerce could provide information and experts on domestic and foreign trade; the Department of Agriculture on food, cotton, wool, and other products; the Treasury Department on financial matters; the Interstate Commerce Commission on transportation; the Army and Navy on requirements of those forces; and so on. All appropriate parts of the government should be familiar with the essentials of the plan. When mutual understanding and agreements had been established among all these, progress on this part of the program, could keep abreast of that applying strictly to the procurement plan of the military service.

Moreover, in time of peace these questions should be discussed openly and fearlessly in the forum of the whole people. The measures adopted to meet them would have a direct and profound effect upon the lives and welfare of us all in the event of an emergency. Every citizen has a right to know what may happen to him under these circumstances, and an equal right to be heard by those who would have the responsibility for making the ultimate decisions.

While the whole process described in this article is called preparation for industrial mobilization, it is not preparation for war in the generally understood sense of that term. It seeks only to make the best use of all resources in the event we are suddenly plunged into conflict, to insure equal distribution of the sacrifices and hardships entailed by war.

Under a well prepared and widely understood scheme of this description, American industry would not be violently disturbed in the event of a national emergency. Since there would be no competition among governmental agencies, one great cause for the skyrocketing of prices would not exist, and a proper balance between cost of living and income would be easier to maintain. The government would be in position to make the best use of all resources. Public opinion would encourage maximum effort by all. Profiteering, if it still existed, would be reduced to the minimum, and, the guilty discovered and punished. War debts, to be paid by ourselves and by our children, would be no larger than necessary and would not include enormous sums to pay for our own folly, waste, ignorance, and inefficiency.

The Trainer

A SPOILED horse, made stubborn by harsh treatment, sometimes has a bad disposition—an unbroken horse, never. I am convinced that the first requisite of a successful trainer is a *complete realization that he is not infallible.* To think that he must be the Devil himself is vanity, opposed alike to good training, to the soundness of the horse, and to the instruction of the rider. It is much easier to use force than brains. When after careful observation one is almost certain that his actions have been logical, his demands intelligent and intelligible, and that he has not violated involuntarily the simple laws of mechanics by weighting a member that should have been lightened, or committed any similar error, then, when the horse continues to disobey, instead of punishing, it is much better to regain the horse's confidence, calm him, and try again to make him obey. A horse, I insist, habitually responds logically to demands made upon him. Instead then of trying to force him to respond to our possibly and indeed, probably illogical or unintelligible demands, we had better *carefully study ourselves.* The correctness of the response is almost *always in proportion* to the accuracy of the demand. If the horse does not obey, the rider has only himself to blame; he may not have given the horse the correct position or sufficient impulsion to comply with his demands, or he may have been guilty of any one or many of the countless sins of omission and commission.

Extract from "Extérieur et Haute Ecole" by Captain E. Beudant, translated by Lieutenant Colonel John Barry, Cavalry. To be published summer, 1931 by Charles Scribner's Sons.

Cavalry in European Armies

Colonel Mauriz Wiktorin, Austrian Army

BEFORE the World War the Cavalry in all European countries was more or less incorrectly organized, equipped and trained. In general, only mounted combat was considered, combat with firearms was neglected, the Cavalry had far too few machine guns, airplanes, armored cars and artillery. And, moreover, the World War was chiefly position warfare, and the Cavalry naturally did not have much opportunity to operate.

Now the emphasis is being placed in general more on open warfare, and in that type of warfare a modern Cavalry will again play an important part. For, in spite of all technical advances, the motor cannot in all situations replace the horse; the two will rather have to cooperate, although in this cooperation the importance of the motor as compared with the horse has become greater.

For that reason, all European armies have retained the Cavalry. For its strength in comparison with the other arms different factors are decisive, the most important of which is whether the country concerned will conduct a future war on the offensive or defensive, hence as open warfare or position warfare.

Then also the topography of the country in which a war may be carried on, mountains or maneuvering terrain, is of importance. Lastly whether the country itself has a sufficient number of horses or whether they have to be imported, whether there is enough fodder in the country, whether the soldiers are well suited for cavalry service, and then also the soldierly qualities and leadership of the prospective enemy are matters of importance.

Now in the following we shall give a brief discussion of the Cavalry in the armies of the different countries, taken in order of their importance.

France

As we know, a great reorganization in the army was decided upon in the year 1929. It provides for a so-called "covering army," which is to consist of the youngest, best trained and best equipped troops and must always be ready for operation in a few days. This covering army will consist of 25 infantry divisions, 5 cavalry divisions and 3 air divisions. Therefore in this army the Cavalry is quite strong, a proof of the importance once again attributed to it even in France, a country in which the sentiment has been strong for motorization.

According to the army reorganization, 25 white, 5 Chasseurs d'Afrique, 13 Spahi regiments and one cavalry regiment of the Foreign Legion will be organized. Of the 55 white regiments formerly existing, many have already been broken up. They were used to organize 5 motorized dragoon battalions and 18 auto-machine gun detachments.

The French cavalry regiment consists of 2 half regiments of 2 squadrons of cavalry each, each squadron having 8 light machine guns, one machine gun squadron of 8 heavy machine guns and one headquarters squadron in which the headquarters detachment, telegraphists, engineers, etc., are combined.

The cavalry division consists of 3 brigades of 2 cavalry regiments each, 2 battalions of horse artillery of 3 batteries each, then 3 to 6 motorized batteries, 1 auto-dragoon battalion, one battalion of bicyclists of 2 to 3 companies, then 3 auto-machine gun detachments, one detachment of armored cars of 3 squadrons of 12 cars each, and one flight of airplanes.

England

In England the Cavalry has been considerably reduced in recent times. Two regiments, the 11th Hussars and 12th Lancers, were reorganized into armored car regiments of 3 squadrons consisting of 11 armored cars each. In all other regiments the number of squadrons was decreased from 3 to 2. The cavalry regiment now consists of one headquarters squadron, which also has 2 anti-aircraft machine guns, 2 squadrons of troopers and one motorized machine gun squadron of 8 guns. The whole train is also motorized.

There is no doubt but that this organization of a cavalry regiment is not appropriate. As a matter of fact this has also proven true in England, and a reorganization of the Cavalry has recently been considered, in which the chief change is the loading of the machine guns on horseback. And for the train some horsedrawn vehicles are also being introduced.

At the present time in the regular army there still are 20 regiments, 12 of which are in England, 8 in India and the other colonies; in the territorial army the skeleton for the organization of 16 regiments is available.

Of larger cavalry units there are 2 brigades each of 3 to 4 cavalry regiments, one horse artillery battalion of 3 batteries, a few motorized batteries, one armored car regiment with 33 armored cars, and sometimes also detailed Infantry in trucks and on bicycle.

Italy

Since the Italian Army during the World War had almost no opportunity of using its Cavalry, it has no experience of its own in this line. Moreover the frontier areas within which a new war would be fought are almost entirely mountainous. Therefore, shortly after the end of the war the Cavalry was very greatly reduced in size, and the new army reorganization of the year 1926-27 brought no change in it.

Therefore there are now only 12 regiments, the regiment consisting of one headquarters squadron, 4 cavalry squadrons with 4 light machine guns each and the skeleton of one heavy machine gun squadron for

8 machine guns. Some of the regiments have retained the lance.

In case of war the Cavalry is organized into the so-called "Mobile Corps" *(Corpo Celere)*. For this purpose there are already in time of peace three larger cavalry units. A mobile corps consists of from 3 to 4 cavalry regiments, one battalion of horse artillery, 1 squadron armored cars, and several motorized batteries, and—due to the fact that there are many good roads in the upper Italian plain—2 Bersaglieri Bicyclist Regiments of 2 battalions each.

In any case the whole organization and strength of the Italian Cavalry is not sufficient and suitable for its purpose, even if the great number of mountains is considered.

Russia

Russia has from time immemorial been the El Dorado of the Cavalry and has remained such since the time of the World War. Her great plains, her few good roads and highways create very excellent conditions for a good and strong force of Cavalry. In addition to this it may be stated that the country has an immense wealth of horses, the men grow up accustomed to horses and therefore make excellent cavalrymen. Therefore Russia is even considering the organization of very strong cavalry forces into whole cavalry armies. In the well-known cavalry officer Budjenny, who was so successful in the war against Poland in 1920, she has a very excellent and energetic general for training her masses of Cavalry.

The army has about 100 cavalry regiments, which, it is true, are not all equally well organized and trained, for there are among them certain partially regular Cossack formations. The normal regiment has 4 squadrons of troopers with 4 light machine guns each and one very large machine gun squadron with 16 heavy machine guns.

The cavalry division has 6 regiments, 4 horse artillery batteries, 1 cyclist detachment, 1 armored car squadron. There are 15 cavalry divisions, and 7 independent cavalry brigades and 3 cavalry corps headquarters.

Poland

Here also both the geographic conditions and those pertaining to the highways and railroads are very favorable for the use of large forces of Cavalry. The Polish Army is, as we know, mostly made up of regiments from the former Austrian, Russian and German armies; among them there was also a great number of cavalry regiments, most of which were very good and which even now form the best part of the new Polish Army.

In all there are 49 regiments available, the regiment having 5 cavalry squadrons, one machine gun squadron with 8 heavy machine guns, 1 engineer section and 1 telegraph squad. The squadrons are very well equipped with machine guns, each having 8 light and 2 heavy ones. The Polish cavalry regiment therefore has the strongest combat forces of all European cavalry regiments. However, whether the regiment has not been made too unwieldy by the many especially heavy machine guns is doubtful. Moreover, each regiment is also to get one armored car section, although so far there have only been very few of them available.

Of larger units there are 4 cavalry divisions and 6 independent brigades. One of these 6 brigades is fitted out to form one of the so-called mixed divisions, more cyclists, Infantry in motor trucks, motorized artillery and armored cars being assigned to it. The other brigades have 3 regiments each, 1 horse artillery battalion, 1 cyclist company and 1 armored car squadron.

The 4 cavalry divisions consist of 3 brigades of 6 cavalry regiments each, one horse artillery regiment consisting of 6 batteries, 1 bicyclist company and 1 armored car squadron of 8 cars. In addition to this, machine gun battalions are organized, of which every cavalry division is to get one.

Czechoslovakia

In this country the Cavalry again is comparatively weak; the Czechoslovak Army was organized chiefly upon the basis of the French, which at that time assigned no particular role to the Cavalry in a modern army. It must also be added that there is not a sufficient number of good horses suitable for use in the Cavalry in the country itself. Very recently voices have been raised in Czechoslovakia also declaring that the Cavalry is too weak and demanding that it be strengthened.

There are only 10 regiments available organized into 3 cavalry brigades. The regiment consists of 4 cavalry squadrons each with 8 light machine guns, and 2 machine gun squadrons, each with 8 light machine guns, and 2 machine gun squadrons, each with 8 heavy machine guns, also one engineer squadron and one telegraph section. It is worthy of note that the Czechs have no horse artillery, but that the cavalry brigades have only motorized batteries, which is decidedly a mistake. Moreover, the 3 brigades have one Jäger battalion each, 1 cyclist detachment and one section of armored cars.

Rumania

Since conditions for Cavalry are favorable here, the Cavalry is comparatively strong, that is to say, 21 regiments in all. Nevertheless the Rumanian Cavalry is not uniform. The 12 Rosiori (Red Hussar) Regiments and the one guard regiment are active units consisting of 4 squadrons of cavalry, 1 machine gun squadron and 1 headquarters squad each. The cavalry squadrons have 4 light, the machine gun squadron 8 heavy machine guns. On the contrary the 8 Calarasi Regiments (ordinary Cavalry) are kept at half strength in time of peace; the soldiers in the Calarasi Regiments serve under a sort of militia system and have to report at maneuvers and in case of war bringing their own horses and saddles.

Since the Rumanian Army still has great difficulties to meet in the matter of effectives, it is desired to disband some of the Calarasi Regiments and use the remaining men to fill up the Rosiori Regiments.

There are 3 cavalry divisions of 6 regiments, 3 horse batteries and 1 bicyclist company each; the Rumanian cavalry division therefore has almost no modern means of combat. However, a few armored car squadrons have been organized, and it is also said that machine gun battalions on motorcycles will also be organized and some batteries are to be motorized.

Jugoslavia

In spite of the fact that much of the country is mountainous, great importance is placed on the cavalry, and it therefore is very strong. The whole army is still engaged in reorganization; the Cavalry is being increased from 9 to 16 regiments. At the end of 1928 there were 13 regiments available.

The cavalry regiment in the Jugoslav Army consists of 4 squadrons of troopers with 4 light machine guns, one machine gun squadron of 6 heavy machine guns and one telegraph squad each.

Of the larger units there are at present 3 cavalry divisions, a fourth will also be organized. Each division has 4 regiments, 1 horse artillery battalion and 1 bicyclist battalion. The Jugoslav cavalry division like the Rumanian is comparatively weak and has very few modern means of combat. This is connected with the circumstance that both of these countries have few industries of their own and the greater part of their war materiel has to be imported from abroad, from France and Czechoslovakia.

Jugoslavia intends to develop the cavalry divisions further and for that purpose first of all to organize machine gun battalions on armored motorcycles.

Germany

As we all know, the organization of the German Army was prescribed in detail by the Treaty of Versailles. For that reason it has had to organize 18 cavalry regiments, which is a great deal when compared to the 21 infantry regiments. The cavalry regiment, however, consists of only 4 squadrons, has no light machine guns and only one platoon of heavy machine guns, which has to be formed of men from the squadrons of troopers, as does the telegraph squad. The organization of the German Cavalry, therefore, as the result of the limitation placed upon it by the Treaty of Peace, does not correspond to modern views. Insofar as possible, the German Cavalry is very well trained.

The 18 cavalry regiments are organized into 3 cavalry divisions, which, however, have only one horse artillery battalion and, aside from that, no modern means of warfare.

Spain

In the year 1927 the Cavalry was somewhat decreased and at present is composed of 27 regiments. Of these, only 11 regiments are at full strength, each having 4 cavalry squadrons and 1 machine gun squadron with 8 heavy machine guns. These eleven regiments form 5 cavalry brigades, each of which also has 1 horse artillery battalion and 1 cyclist battalion. Eight regiments are at half strength and in war form the Cavalry for the infantry divisions. Finally the last 8 regiments have in time of peace on the whole only one squadron at full strength, otherwise merely skeleton organizations and are used in war to form the Cavalry for the divisions for the second and third line.

Turkey

Turkey has regular and irregular Cavalry. The regular Cavalry has the strength of 12 regiments, the regiment has 3 cavalry squadrons and 1 machine gun squadron. How many irregular regiments there are is not exactly known, probably 12 to 15, with a highly varying number of squadrons and not organized uniformly in other respects.

There are 5 cavalry divisions, which are not uniform in organization; 3 to 6 regiments, then a few horse batteries, 1 to 2 bicycle companies and some also have one armored car detachment.

SCANDINAVIAN COUNTRIES

The *Swedish* Army has been in a state of reorganization since the year 1926, which, according to the socialistic defense program, would result in a far-reaching disarmament. However, this program is not being executed, but a new plan has been worked out, which, however, has not yet been finally determined.

In any case, however, the Cavalry will be greatly reduced. Up until now there have been one guard and 8 line cavalry regiments; the latter will probably be decreased to 3; the guard regiment may remain. Each regiment will have 4 squadrons of Cavalry and 1 machine gun squadron.

In *Norway* also, the Cavalry is being decreased on the basis of the new defense program; how great this decrease will be is not yet known. Up until now there have been 3 regiments, each with four squadrons of cavalry and 1 machine gun squadron.

MINOR EUROPEAN STATES

Finland has a very strong and good army for its size, has two cavalry regiments, each of 3 cavalry squadrons, 1 machine gun squadron and 1 bicyclist squadron.

The three small Baltic countries, Esthonia, Latvia, and Lithuania naturally have only very small armies with very small forces of Cavalry, that is to say, each country only 1 regiment of 3 to 4 squadrons.

Denmark is also about to make a drastic reorganization of its army. So far it has had 3 cavalry regiments of 3 squadrons each. In Denmark it is desired to do away with the Cavalry as such and to make Mounted Infantry out of it, or transform it into bicyclist detachments. It is clear that this would naturally be bad; how far this reorganization will be carried out in reality is not yet known.

Holland: The Dutch Cavalry consists of 2 regiments, each having 4 squadrons of troopers, 1 machine gun squadron and 1 cavalry gun battery. The squadrons of cavalry have 4 light machine guns each, the machine gun squadron 6 heavy machine guns, the battery four light cannon of 6cm. caliber. This makes Holland the only European country in whose army cavalry guns have actually been introduced.

Of larger units there is one light brigade of 2 cavalry regiments, 1 bicyclist regiment and 1 horse artillery battalion.

Belgium: The whole Cavalry—6 regiments—is organized into one cavalry corps, there being 2 cavalry divisions, each having 3 cavalry regiments, 1 bicyclist

(Please turn to page 64)

A Long March to Battle

Colonel M. B. Stokes, C. S. C.

THE following account of a 469 mile march of a cavalry regiment during the Civil War from South Carolina to Virginia, followed by almost immediate participation in active operations, is of interest to cavalrymen as an example of strategic mobility of the Cavalry.

The account is taken from the journal and letters of Lieutenant Colonel William Stokes of the 4th South Carolina Cavalry. This regiment was among the troops drawn from the coast of South Carolina and sent to reinforce Lee in his operations against Grant in the Virginia Campaign of 1864-65.

This regiment, together with the 5th and 6th Regiments of South Carolina Cavalry, constituted Butler's Brigade, commanded by Brigadier General M. C. Butler. On reaching Richmond it was assigned to Major General Wade Hampton's Division which formed part of Lee's Cavalry.

Since the troops of these regiments had served continuously from the early part of the war in the sandy coastal belt of South Carolina, the shoeing of their horses had been unnecessary. Before undertaking the march to Virginia it was of course necessary to have all of their animals shod. In order to get this done as expeditiously as possible, the regiments were ordered to assemble first at Columbia, S. C., where there were government supplies and facilities which could be utilized to advantage for this purpose.

There was considerable delay, however, in getting this work done; and the departure of the regiment from Columbia, was, after all, a hurried one, and undertaken before the shoeing of all the horses had been completed.

For the Confederacy, the getting of these troops to Lee in Virginia was urgent. As a march, the distance would be great. It was decided that one way to help marching conditions would be to have the regiments march separately, instead of in one command. The desire to lighten the load on the mounts for such a long and tedious march was natural. In effecting this, however, a serious error was committed, for the regiments were authorized to ship their arms to Richmond by rail instead of retaining them with the command. This error was forcefully brought home to them later, as will be noted from incidents that transpired while enroute.

The 4th S. C. Cavalry consisted of ten troops, or companies as then designated, with a total strength of about 800 officers and men. The regiment was under the command of Colonel B. F. Rutledge with Lieutenant Colonel William Stokes as second in command.

The regiment left Columbia, S. C., on April 29, 1864, and arrived at Richmond, Va., May 23—having made the march of 469 miles in 24 days, including two days' stop-over at Camden and one day at Greensboro for the purpose of having horses shod.

From the journal of Colonel Stokes the schedule of March as actually made was as follows:

From	Columbia, S. C.	22 miles	Apr. 29, 1864
	Mill Pond	23 miles	30,
	Lay-over for two days to have horses shod.		
From	Camden	26 miles	May 2,
	Ingram	15 miles	3,
	Lancaster	22 miles	4,
	Pleasant Valley	20 miles	5,
	Charlotte, N. C.	22 miles	6,
	Concord	22 miles	7,
	Salisbury	22 miles	8,
	Lexington	17 miles	9,
	High Point	18 miles	10,
	Greensboro	15 miles	11,
	Grahams	22 miles	13,
	Cedar Grove	20 miles	14,
	Mt. Zion	22 miles	15,
	Oak Hill	20 miles	16,
	Clarksville, Va.	20 miles	17,
	Christianville	20 miles	18,
	Keysville	20 miles	19,
	Burksville	23 miles	20,
	Amelia, C. H.	23 miles	21,
	Georgories	25 miles	22,
	Richmond	10 miles	23.

Left Richmond May 26th and marched to the South Anna. Though considerably reduced in strength for lack of effective mounts (due to shortage of shoes and general hardships of the march) the regiment went into action on May 28th.

Journal of the March

Extracts from letters and journal of Lieut. Col. Wm. Stokes, with reference to the movement of the regiment follow.

Coosawhatchie, S. C., March 30, 1864.

The orders from the War Department have reached us to move to the Army of Northern Virginia and report to Brig. Gen. M. C. Butler.

On the 1st of April, 1864. I was relieved from the command of the Coosawhatchie Sub-District and was ordered to report to my regiment at Pocotaligo, S. C. The regiment left Pocotaligo on the 10th of April and arrived at Columbia, S. C. on the 15th, and with two other regiments, the 5th and 6th S. C. Cavalry, was reviewed by Major General Wade Hampton on April 20th.

Camp of 4th S. C. Cavalry,
near Columbia, S. C., April 27, 1864.

I arrived here yesterday morning. The horses are not yet all shod; consequenty the regiment will not move until Saturday next. All of the men who are on furlough are to join the regiment at Greensboro, N. C., and are to march through on their horses.

General Hampton has turned over the movement of the troops from here to General Butler. General Hampton leaves for Richmond tonight. Colonel Rutledge is to join us also at Greensboro.

Camp of 4th S. C. Cavalry,
Camden, S. C., May 1st, 1864.

We left Columbia on Friday morning very hastily to evade an order that was being issued to reduce the companies by taking those men who last joined and giving us back dismounted men who were already transferred, which would have injured the regiment very much. So Gen'l. Butler, Colonel Rutledge and I concluded it was best to get away at once. We arrived here Saturday about 1:30 P. M., and are staying over here today, shoeing the horses that had not been shod when we left Columbia.

Camden May 2nd, 1864.

We got through shoeing all of the horses today.

Camp 4th S. C. Cavalry, on march
Salisbury, N. C., May 8th, 1864.

Arrived here a few minutes ago, (three o'clock P.M.). We marched twenty-two miles today.

Camp 4th S. C. Cavalry,
Greensboro, N. C., May 12th, 1864.

Arrived here yesterday evening. Col. R. (Rutledge) and the furloughed portion of the command were awaiting us. We will be here until tomorrow to get some horses shod. We got orders here to keep on as fast as possible.

We had to ford the Yadkin six miles this side of Salisbury. Anticipated some trouble, but got the command over safely. The river was about 300 yards wide and caught the horses about half saddle skirt. Colonel Dumovant's Regiment, (the 5th S. C. Cavalry), preceded us.

Camp 4th S. C. Cavalry,
Clarksville, Va., May 18, 1864.

We received a dispatch at Oak Hill night before last from the A.Q.M., A.C.S., and the Ordnance officer of this place that the enemy were within 30 miles and moving on this point, and asked us to hasten on to its defense. We armed about 250 men with all the sabers and pistols we had and sent them on. On arriving here, however, we learned that the raiding part was bearing down on the peninsula to Butler's Army. We have sent off to reconnoiter the country ahead of us, before moving this morning. Hope we will not meet them until our regiment has gotten their arms again.

We cross the Roanoke this morning, and go to Christianville tonight.

Camp 4th S. C. Cavalry,
Kingsville, Va., May 19, 1864.

We did not go to Christianville as I wrote you from Clarksville. Col. R. got some alarming reports of the enemy's raiding party being there, which proved to be false. As soon as a little over half of the regiment had gotten across the Roanoke River which we had to cross in flat boats (7 of them, the river being about 400 feet wide) he immediately moved off with them to Roanoke station, 15 miles out of the way, and sent me word to come on as fast as possible with the others. It took two hours to complete the crossing.

The Colonel also ordered that the wagons be left behind. We had something to eat on the road yesterday, but did not get our breakfast this morning until about noon. The wagons will be up with us again tonight.

Camp 4th S. C. Cavalry,
In 10 miles of Richmond, Va., May 23, 1864.

Spent the night here, with but little for man or horse.

May 24th.

We passed through the city about noon yesterday, and are now encamped four miles out on the Brooks Turnpike Road. Our camp is near where Stuart was killed in a battle with that raiding about one month ago.

Our horses are not getting more than one-third feed, and we are on the shortest sort of rations ourselves. It has begun to tell on the horses. *Marshall's** back has become a little sore within the last three or four days.

Camp 4th S. C. Cavalry,
Near Richmond, Va., May 25, 1864.

Saw General Butler yesterday. He told me we were to go to the front tomorrow (Thursday). We are to go to Lee's Army near Hanover Junction, about 20 miles from here. I think the probabilities are the Regiment will go into action very soon, for the Yankee Army is pressing Lee very hard. In fact Richmond is very closely besieged on the north and east.

Headquarters 4th S. C. Cavalry,
On North Side South Anna, Va., May 27th, 1864.

We are now about two miles from Hanover Junction and within a short distance of General Lee's Headquarters, awaiting orders from General Hampton, whose headquarters are about 5 miles from us.

Camp of 4th S. C. Cavalry near
Atlett Station, Va., Control R. R.
11 miles north of Richmond, May 29, 1864.

Yesterday about four miles from here, near the Pamunky River, we had for three or four hours a very severe engagement with an advance element of Grant's Army. General Hampton fought a Yankee Cavalry Corps supported by Infantry with his Cavalry Division, about 7000 strong. General Butler was not with us, so Col. Rutledge commanded the Brigade and I was in command of the Regiment.

Our Regiment fought most gallantly and suffered very seriously. I held my line in perfect order until we were nearly surrounded and we were ordered to fall back. I had in action about 300 men exclusive of horse holders, and so far as I can ascertain there are about 125 killed, wounded and missing. Gen'l. Hampton met me as we were falling back and told me I did all that could have been expected, and to

* Lieutenant Colonel Stokes' own mount.

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Organization and Strength of National Guard

Colonel William H. Waldron, Executive Officer, Militia Bureau

The Second Article of a Series that Presents in One Place Information that Has Never Before Been Brought Together

WHEN the National Guard was drafted into the federal service in 1917 for the World War, it was incorporated into the Army of the United States and ceased to be state troops. This left the States without a military force and necessitated a complete reorganization during and after the war. It is one of the salient purposes of the National Guard Bill now before Congress to do away with the necessity for this reorganization of the National Guard after a period of federal service. By giving the National Guard a dual status of state and federal troops it may be called to active duty and at the termination of such duty revert to its status of state troops.

In the course of the war period there arose a demand for a military force for the preservation of order and the protection of property, and in a number of instances it was provided for by the organization of what were known as Home Guards. This force consisted of officers who had had some military experience and who were above the draft age or had been found physically disqualified for active service, and enlisted men secured by voluntary enlistment from among those who were not within the draft age, or who had been drafted and discharged on account of physical disability. At the date of the Armistice, there were 48 battalions of Home Guards distributed over 32 States. They were employed in guarding shipyards, docks, railroad terminals, arsenals, government buildings, property and war supplies, and other public utilities. At the date of the Armistice, the force had reached a strength of 1,216 officers and 25,068 enlisted men.

In a number of instances the Home Guard form of organization did not meet the requirements and state authorities presented strong arguments for the organization and allocation of national guard units. The War Department authorized the organization of units in 14 States, with the express understanding that they would in no wise be considered available for service overseas. Included in this authorization was a provision for the organization of two national guard cavalry brigades in Texas. These were designed to relieve the regular cavalry forces then on the Mexican Border and thus make them available for service in France, where the conditions of warfare on the Western Front rendered it probable that cavalry troops in large numbers would be required for the open warfare operations then in prospect.

After the war, and pending the restoration of normal peacetime conditions in the United States, it appeared desirable to suspend further organizational activities in the National Guard until such time as a definite military policy could be established by Congress and the necessary funds appropriated for the maintenance of citizen forces.

However, there was a limited amount of funds available from the 1919 appropriations, and they were made available for the purpose of organizing a few units in those States in which it appeared most likely that the services of national guard troops would be required for the maintenance of law and order and for the protection of government and private property. By June 30, 1919, the number thus organized had grown to 1,198 officers and 36,012 enlisted men, allocated to 24 States.

At this time both the War Department and Congress were studying the military situation in the light of our recent war experience, with a view to arriving at conclusions on a military policy, and this made it particularly undesirable to go ahead too rapidly with the reorganization of the National Guard. There were many questions of organization to be considered. The National Defense Act of 1916 prescribed that the National Guard should have the same organization as the Regular Army. The Regular Army was still organized on its war-time basis, and a peace-time organization had not been decided upon. In general, the people were "fed up" with the military. In the medium sized communities it was difficult to find a hundred men who would volunteer for service in the National Guard. In the smaller communities it was impossible. State authorities, faced with this situation, requested a lower recognition strength for their national guard units, and the expedient of organizing infantry war-strength platoons was adopted in some of the States. These platoons were combined to make companies.

Considerable progress was made in the organization of the National Guard during the latter half of 1919 and the early part of 1920. On June 4, 1920, the provisions of the amendment to the National Defense Act of 1916 became a law. Section 62 of that measure provided for the strength of the National Guard and prescribed that the expansion of this force should be made by increments, the last of which was to be completed in 1924.

Table No. 1 shows the strength of the National Guard contemplated on June 30 of each of the years from 1920 to 1924. The figures are interesting in the light of what has happened since the passage of the law in 1920. The program has never even been approached, because Congress has consistently failed to provide the funds necessary for its consummation. The strength provided for the third increment has not yet been reached, and the indications are that it will not be attained for a number of years to come.

It is interesting to trace the organization strength progress of the National Guard through the years since reorganization was begun in 1919. The tabulation (next column) shows the actual strength of the National Guard as of June 30, each year from 1919-1930.

Early in 1922 it became apparent that the national guard allotment which had been provided for in the National Defense Act was entirely too comprehensive, and in view of financial and other considerations could not be accomplished by either the States or by the United States.

Accordingly, a committee of the War Department General Staff composed of officers of the Regular Army and the National Guard was assembled for the purpose of studying the problem and submitting a modification of the basic plan that would meet the existing condition

This committee consulted with the corps area and state authorities and with the Chief of the Militia Bureau. It arrived at the conclusion that if the National Guard could be expanded to a strength of 250,000 the necessary combat elements of that component could be organized within the number. The elements to be provided were 18 infantry and four cavalry divisions, together with certain corps, army, G. H. Q., harbor defense, and special allotment troops which had been allocated and which were considered essential for immediate mobilization in the event of an emergency. The expansion was to take place over a period extending to June 30, 1926. The Secretary of War approved the plan on January 23, 1923.

In the summer of 1927 it became apparent that, due to the Government's financial program, the expansion of the National Guard to the 250,000 strength could not be accomplished within a reasonable time, and that any further attempt to expand in accordance with that plan would serve to increase the unbalanced state of organization. Consequently, in August of 1927, the Chief of the Militia Bureau submitted a memorandum to the Chief of Staff proposing that a well defined program with an ultimate definite objective be adopted for the organization and strength of the National Guard: that all "deferred units" under the 250,000 program be withdrawn from allotment to the National Guard: that the allotment of units be divided into two categories "active" and "inactive". He stated that by adhering to this classification the organization of the National Guard could be completed and maintained at 110 per cent maintenance strength with a total aggregate of 210,000, including the state staffs and detachments. This memorandum was the subject of a study by a committee of the General Staff composed of officers of the Regular Army and the National Guard and was tentatively adopted as the plan for the future expansion of the National Guard.

At the annual convention of the National Guard Association in Los Angeles in 1929, a resolution was

Table No. 1

Strength of the National Guard as authorized by the National Defense Act of June 4, 1920.[1]

State	First increment, 1920: 200 per Member of Congress	Second increment, 1921: 300 per Member of Congress	Third increment, 1922: 450 per Member of Congress	Fourth increment, 1923: 675 per Member of Congress	Final increment, 1924: 900 per Member of Congress
1. Alabama	2,400	3,600	5,400	8,100	9,600
2. Arizona	600	900	1,350	2,025	2,400
3. Arkansas	1,800	2,700	4,050	6,075	7,200
4. California	2,600	3,900	5,850	8,775	10,400
5. Colorado	1,200	1,800	2,700	4,050	4,800
6. Connecticut	1,400	2,100	3,150	4,725	5,600
7. Delaware	600	900	1,350	2,025	2,400
8. District of Columbia	600	900	1,350	2,025	2,400
9. Florida	1,200	1,800	2,700	4,050	4,800
10. Georgia	2,800	4,200	6,300	9,450	11,200
11. Hawaii	600	900	1,350	2,025	2,400
12. Idaho	800	1,200	1,800	2,700	3,200
13. Illinois	5,800	8,700	13,050	19,575	23,200
14. Indiana	3,000	4,500	6,750	10,125	12,000
15. Iowa	2,600	3,900	5,850	8,775	10,400
16. Kansas	2,000	3,000	4,500	6,750	8,000
17. Kentucky	2,600	3,900	5,850	8,775	10,400
18. Louisiana	2,000	3,000	4,500	6,750	8,000
19. Maine	1,200	1,800	2,700	4,050	4,800
20. Maryland	1,600	2,400	3,600	5,400	6,400
21. Massachusetts	3,600	5,400	8,100	12,150	14,400
22. Michigan	3,000	4,500	6,750	10,125	12,000
23. Minnesota	2,400	3,600	5,400	8,100	9,600
24. Mississippi	2,000	3,000	4,500	6,750	8,000
25. Missouri	3,600	5,400	8,100	12,150	14,400
26. Montana	800	1,200	1,800	2,700	3,200
27. Nebraska	1,600	2,400	3,600	5,400	6,400
28. Nevada	600	900	1,350	2,025	2,400
29. New Hampshire	800	1,200	1,800	2,700	3,200
30. New Jersey	2,800	4,200	6,300	9,450	11,200
31. New Mexico	600	900	1,350	2,025	2,400
32. New York	9,000	13,500	20,250	30,375	36,000
33. North Carolina	2,400	3,600	5,400	8,100	9,600
34. North Dakota	1,000	1,500	2,250	3,375	4,000
35. Ohio	4,800	7,200	10,800	16,200	19,200
36. Oklahoma	2,000	3,000	4,500	6,750	8,000
37. Oregon	1,000	1,500	2,250	3,375	4,000
38. Pennsylvania	7,600	11,400	17,100	25,650	30,400
39. Rhode Island	1,000	1,500	2,250	3,375	4,000
40. South Carolina	1,800	2,700	4,050	6,075	7,200
41. South Dakota	1,000	1,500	2,250	3,375	4,000
42. Tennessee	2,400	3,600	5,400	8,100	9,600
43. Texas	4,000	6,000	9,000	13,500	16,000
44. Utah	800	1,200	1,800	2,700	3,200
45. Vermont	800	1,200	1,800	2,700	3,200
46. Virginia	2,400	3,600	5,400	8,100	9,600
47. Washington	1,400	2,100	3,150	4,725	5,600
48. West Virginia	1,600	2,400	3,600	5,400	6,400
49. Wisconsin	2,600	3,900	5,850	8,775	10,400
50. Wyoming	600	900	1,350	2,025	2,400
N. Porto Rico	1,400	2,100	3,150	4,725	5,600
Alaska	150	225	340	500	600
Total	106,950	163,425	245,140	367,700	435,900

[1] Sec. 62, defense act: "The number of enlisted men of the National Guard to be organized under this act * * * shall be for each State in the proportion of two hundred such men for each Senator and Representative in Congress from such State, and a number to be determined by the President for each Territory and the District of Columbia, and shall be increased each year thereafter in the proportion of not less than fifty per centum until a total peace strength of not less than eight hundred enlisted men for each Senator and Representative in Congress shall have been reached" * * *.

Date June 30	Officers	Warrant Officers	Enlisted Men	Aggregate
1919	1,198	None[1]	36,012	37,210
1920	2,073	None	54,017	56,090
1921	5,543	None	107,797	113,340
1922	8,744	None	150,914	159,658
1923	9,675	None	150,923	160,598
1924	10,900	97	166,433	177,433
1925	11,435	160	165,980	177,575
1926	11,273	162	163,534	174,969
1927	12,010	182	169,950	181,142
1928	12,244	184	169,793	181,221
1929	12,347	186	164,453	176,986
1930	12,782	198	169,735	182,715

[1] No warrant officers were appointed in the National Guard until 1924.

Table No. 2

The allocated and actual strength of the National Guard as of June 30, 1930:

	Allocated Strength June 30, 1930			Actual Strength June 30, 1930		
	Officers	Warrant Officers	Enlisted Men	Officers	Warrant Officers	Enlisted Men
Alabama	229	2	2,888	202	1	2,444
Arizona	85	1	1,189	65	1	1,072
Arkansas	185	2	2,685	144	2	2,025
California	585	7	6,677	414	7	5,883
Colorado	185	1	1,770	127	1	1,646
Connecticut	345	6	4,021	220	5	3,886
Delaware	70	1	899	62	1	757
District of Columbia	78	1	997	63	1	921
Florida	185	3	2,385	171	3	2,226
Georgia	185	3	2,889	244	3	2,302
Idaho	185	2	1,617	109	2	1,547
Illinois	185	2	1,981	109	2	1,981
Indiana	685	11	8,985	625	11	9,286
Iowa	385	6	4,249	345	6	4,220
Kansas	285	4	3,579	257	4	3,295
Kentucky	285	4	2,827	221	4	2,864
Louisiana	185	3	2,735	211	3	2,666
Maine	185	2	1,981	125	2	1,866
Maryland	185	3	2,339	166	3	2,179
Massachusetts	285	4	3,221	220	4	2,971
Michigan	772	10	9,066	662	10	8,989
Minnesota	385	5	4,269	285	5	4,224
Mississippi	285	5	4,799	253	5	4,259
Missouri	185	2	1,689	129	2	1,521
Montana	285	5	4,265	205	5	4,128
Nebraska	185	1	1,182	72	1	1,049
Nevada	114	2	1,661	111	2	1,556
New Hampshire	11		212	6		190
New Jersey	485	2	1,697	72	2	975
New Mexico	485	6	4,671	345	5	4,314
New York	785	2	889	73	1	991
North Carolina	1,385	22	19,857	1,340	20	19,754
North Dakota	285	5	3,289	205	5	3,097
Ohio	77	1	1,110	77	1	1,071
Oklahoma	485	9	6,189	345	8	7,723
Oregon	285	6	4,269	205	6	4,616
Pennsylvania	485	8	2,567	345	8	2,240
Rhode Island	885	12	11,345	825	13	10,674
South Carolina	185	1	1,489	97	1	1,421
South Dakota	185	2	1,789	125	2	1,686
Tennessee	285	2	2,674	125	1	1,997
Texas	285	2	1,389	161	2	1,321
Utah	285	3	2,385	189	3	2,226
Vermont	685	10	7,789	585	10	7,389
Virginia	285	2	1,985	159	2	1,586
Washington	185	1	1,144	82	1	1,107
West Virginia	285	4	2,685	205	4	2,533
Wisconsin	285	3	2,489	212	3	2,486
Wyoming	185	2	1,685	121	2	1,589
Hawaii	371	6	4,671	345	6	4,511
Porto Rico	85	1	970	65	1	971
Total	14,695	207	175,531	12,782	198	169,785
Authorized			180,193			182,715

adopted which provided for the expansion to 210,000 in four annual increments. There is now a bill before Congress, based upon the resolution, which provides for a strength of 210,500 to be made in four annual increments. It has not been acted on by the military committees and will have to be reintroduced at the next session of Congress.

There is now a project under consideration in the Militia Bureau for an increase of 5,000 men in the National Guard. Its consummation depends upon whether or not there will be sufficient funds to take care of these men. It is proposed that the increase shall be made in the grade of private and spread laterally over the National Guard. This will have the effect of giving units about 112 per cent of their authorized strength and allow unit commanders a little more leeway in making the grade for armory drill pay. It is not contemplated that any new units will be organized from this increase in strength. The organization of new units involves an outlay of money for initial equipment that cannot be met with the funds now available to the Militia Bureau.

It might appear to be a simple matter to provide for this increase of 5,000 men in the National Guard but there are a number of problems connected with it that have to be solved. Under the existing economic conditions it may be assumed that military expenditures cannot be increased and that the national guard budget will have to remain as it is for a period of time.

This 5,000-man increase will cost approximately $306,950, and if this additional expense is met the funds will have to come from other national guard projects which have become more or less stabilized over a period of years. The provision of funds for this increase is the problem of the Militia Bureau, and measures are being taken to provide for it as far as practicable.

The present allocated and actual strength of the National Guard is shown in detail in Table No. 2.

The allocated strength is a fixed quantity and depends upon the funds made available by Congress. The actual strength varies from month to month. It depends upon the separation from active service, and the appointment of officers and warrant officers; and the discharge and enlistment of the enlisted personnel.

The apparent shortage in officers is not so extensive as indicated in the table, because in a large majority of cases the vacancies have been filled by the state authorities and the federal recognition of the appointees is in process of accomplishment in the Militia Bureau. Only those officers who have been federally recognized are included in the numbers.

The following tabulation shows the budget projects that are involved in this increase in strength and which have to be provided for:

Estimated Increase in the Appropriations for the Fiscal Year 1933, to Provide for the Training and Equipment of 5,000 Increase in the National Guard.

Project No.	Appropriation	Item	Amount
3	Arming, Equipping, and Training the National Guard.	15-day camps It is estimated that 90% of the increase will attend the camp during the fiscal year 1933. The per capita cost (privates will be $34.80, 90% of 5,000. 4,500 by $34.80 equals $156,600.	$156,600
15	Arming, Equipping, and Training the National Guard.	Alteration and renovation of clothing	4,350
16	Arming, Equipping, and Training the National Guard.	Maintenance or organization equipment	2,000
1	Armory Drill Pay	Armory Drill Pay It is estimated that 80% of the 5,000 additional men will attend the 48 armory drills at the rate of pay of $1 per drill (privates). 80% of 5,000 is 4,000. 4,000 by 48 equals $192,000. One-half of this amount to be added to the 1932 appropriations, as there is an item in the 1932 budget covering it.	96,000
1	Arms, Uniforms, Equipment, etc.	Uniforms Based upon present prices of the reimbursable items of the uniform at $6 per man.	30,000
4	Arms, Uniforms, Equipment, etc.	Ammunition It is estimated that of the 5,000 increase, 3,000 will be authorized to fire the rifle and 2,000 the pistol at an average cost of $4.20 and $2.50 per man, respectively.	17,600
		Total increase	$306,950

Under Militia Bureau regulations no State may increase the strength of its National Guard above the number allocated by the Chief of the Militia Bureau. In practice, however, occasionally a State will go over the allotment in the enthusiasm of a recruiting campaign. The current strength of the National Guard is constantly checked up in the Personnel Division of the Office of the Chief of the Militia Bureau, and when a State goes over strength the state authorities are called upon to bring it back within the allotment without delay. The methods by which this may be done is left to the state authorities, but it generally means the discharge of the number of men necessary to accomplish the result; so, there is little or no advantage to be gained by going over strenth at any time.

The apparent wide discrepancy between allocated strength and actual strength is not so great when it is considered that the difference between the two figures is spread over a considerable number of officers whose federal recognition is in process as explained above, and the further fact that the difference in enlisted strength is spread over nearly 4,000 units of the National Guard. It is necessary to maintain this difference in order to take care of the constant turnover due to discharges for one cause or another, and the enlistment of men as replacements to fill the vacancies in the ranks.

The army geographical departments were abolished by orders dated August 20, 1920, and nine corps areas and three departments were organized. This geographical organization has met the requirements in every way.

It was decided that two infantry divisions and the National Guard's proportion of corps, army and general headquarters reserve troops, together with certain special allotment organizations, should be allocated to each of the corps areas. This geographical organization and the allotment of national guard troops at the present time, is shown in the tabulation which follows:—

First Corps Area

Conn., Maine, Mass., N. H., R. I., Vt.
26th Div.—43d Div.—Corps Troops: 197th C. A. (AA)—Army Troops: 211th C. A. (AA), 59th Cav. Brig.—Coast Defense Troops: 240th C. A. (HD), 241st C. A. (HD), 242d C. A. (HD), 243d C. A. (HD)—Special Allotment: 3d Bn., 372d Inf.—State Staffs and Dets.

Second Corps Area

Del., N. J., N. Y.
27th Div.—44th Div.—Corps Troops: 258th H. F. A. Regt. (155-mm. Gun, 198th C. A. (AA), 101st Sig. Bn.—Army Troops: 212th C. A. (AA), 51st Cav. Brig., 102d Sep. Cav. Regt.—Coast Defense Troops: Hq. & Hq. Det. C. A. Brig., 245th C. A. (HD), 244th C. A. (HT), 261st C. A. Bn. (HD), 262d C. A. Bn. (HD)—Special Allotment: 93d Brig. Hq. & Hq. Co., NGNY, 10th Inf. NGNY, 14th Inf. NGNY, 165th Inf. NGNY, 369th Inf. NGNY—State Staffs and Dets.

Third Corps Area

Md., Pa., Va., D. C.
28th Div.—29th Div.—Army Troops: 213th C. A. (AA), 52d Cav. Brig., 165th Sep. Bn. F. A. 75-mm. Gun (Horse), 125th Engr. Combat Bn. Mounted, 260th C. A. (AA)—Coast Defense Troops 246th C. A. (HD)—Special Allotment: 1st Bn. 372d Inf.—1st Sep. Co. Inf.—State Staffs and Dets.

Fourth Corps Area

Ala., Fla., Ga., La., Miss., N. C., S. C., Tenn.
30th Div.—31st Div.—Corps Troops: 2d Bn. 133d Engrs., General Service, 146th Motorcycle Co.—Army Troops: 164th Engr. Regt., General Service, Hq. Tr. Sp. Trs. 23d Cav. Div., 55th Cav. Brig., 141st Sep. Bn. F. A. 75-mm. Gun (Horse), 127th Engr. Combat Bn. Mounted, 123d Med. Sq.—Coast Defense Troops: 252d C. A. (TD), 263d C. A. (HD), 264th C. A. (HD), 265th C. A. (HD)—Special Allotment: 122d Inf.—State Staffs and Dets.

Fifth Corps Area

Ind., Ky., Ohio, W. Va.
37th Div.—38th Div.—Army Troops: 54th Cav. Brig.,; Sig. Tr. 22d Cav. Div. Sp. Trs., Vet. Tr. 122d Med. Sq.—Special Allotment: 201st Inf., 2d Bn. 372d Inf.—State Staffs and Dets.

Sixth Corps Area

Ill., Mich., Wis.
32d Div.—33d Div.—Corps Troops: 182d F. A. (155-mm. How.), 202d C. A. (AA), 135th Med. Regt., 114th Sig. Bn. Army Troops: Hq. Tr. & Ord. Tr. Sp. Trs. 22d Cav. Div., 53d Cav. Brig., 166th Sep. Bn. F. A. 77-mm. Gun (Horse), 126th Engr. Combat Bn. Mounted, Amb. Tr. 122d Med. Sq., 22d Cav. Div. QM Train—GHQ Reserve Troops: 216th F. A. (75-mm. Gun TD)—Special Allotment: 8th Inf.—State Staffs and Dets.

Seventh Corps Area

Ark., Iowa, Kans., Minn., Mo., Nebr., N. D., S. D.
34th Div.—35th Div.—Corps Troops: 203d C. A. (AA), 154 Obs. Sq., Med. Dept. Det. 154th Obs. Sq.—Army Troops: 206th C. A. (AA), 216th Amb. Co., 216th Hosp. Co., Sp. Troops (less Hq. Tr. & Tk. Co. 24th Cav. Div.), 57th Cav. Brig., 24th Cav. Div. QM Train—GHQ Reserve Troops: 128th F. A. (75-mm. Gun Portee), 147th F. A. (75-mm. Gun Portee), 142d F. A. (75-mm. Gun TD)—Special Allotment: 153d Inf., 92d Brig., consisting of Brig. Hq. & Hq. Co., 205th and 206th Inf.—State Staffs and Dets.

Eighth Corps Area

Ariz., Colo., N. M., Okla., Texas
36th Div.—45th Div.—Corps Troops: 137th Med. Regt., 106th Sig. Bn.—Army Troops: 56th Cav. Brig., 111th Cav. (Non Div.), 168th Sep. Bn. F. A. 75-mm. Gun (Horse), 128th Engr. Combat Bn. Mounted, 124th Med. Sq., 117th Sep. Sq. (Non Div.) Cav.—Coast Defense Troops: 268th C. A. Bn. (HD) State Staffs and Dets.

Ninth Corps Area

Calif., Idaho, Mont., Nev., Ore., Utah, Wash., Wyo.
40th Div.—41st Div.—Corps Troops: 190th F. A. (155-mm. How.), 196th F. A. (155-mm. Gun), 251st C. A. (AA)—Army Troops: Hq. Tr. Sp. Trs. 24th Cav. Div., 58th Cav. Brig.—Coast Defense Troops: 248th C. A. (HD), 249th C. A. (HD), 250th C. A. (HT)—Special Allotment: 200th Inf.—State Staffs and Dets.

Porto Rico (Second Corps Area)

295th Inf.—1st Bn. 296th Inf.—State Staff and Det.

Hawaii

298th Inf.—299th Inf.—State Staff and Det.

The Officers' Reserve Corps

Major L. L. Stuart, C. A. C.

Editor's Note—The information contained in the following article is probably well known to reserve officers. Due to the many changes which have been made in the regulations pertaining to the Organized Reserve it has been very difficult for regular officers not on reserve duty to keep up to date on the requirements for appointment, promotion, and reappointment of reserve officers. Major Stuart was asked to write an article, supplying the general information which every regular and national guard officer should have.

IN 1917, when we found ourselves involved in a war of the first magnitude, our most serious deficiency was our lack of trained officers; in fact a lack of sufficient officers of any kind. We found that men could be obtained and trained in a relatively short time, provided we had the officers to train them. The problem of developing officers was much more difficult.

In case we should become involved in a war at present we would find that we had in the Army approximately the following officers:—

12,000 Regulars
13,000 National Guard
100,000 Reserves

What is the status of the reserve officers, who will comprise three-fourths of the Army on the day of mobilization? If we consult the National Defense Act we will find that the appointment of a reserve officer shall be for a period of five years, except that an appointment in force at the outbreak of war shall continue six months after its termination. We will also find that these reserve officers will include every grade from second lieutenant to general. Approximately 8,000 are assigned to units of the Regular Army.

Thus we see that the reserve officers will, by force of numbers constitute the bulk of the Army which will begin to mobilize on M-day. We, who will serve shoulder to shoulder with these officers, should know them; know what military training and knowledge they possess—their capabilities as well as their limitations.

Possibly the clearest realization of the strength and importance of the Reserve Corps, as well as its weaknesses, can be obtained by a presentation of the policies and regulations under which it operates. These are presented in the following discussion.

Purpose and Composition

The Officers' Reserve Corps is organized for the purpose of providing a reserve of officers available for military service when needed. This includes the furnishing of a certain number of noncombatant officers and units for the supply and administrative service necessary to the maintenance of the Regular Army and the National Guard in the first phases of the war; the completion of the commissioned strength of regular army units by the assignment of junior officers; and the formation of the framework of the units supplementary to the Regular Army and National Guard which must be raised in a general mobilization of the nation.

Of the 100,000 reserve officers, 72 per cent are lieutenants, 16 per cent are captains and 12 per cent are of field grade. Of these 77,000 can be relied upon for immediate use, most of the remainder being inactive. Approximately 51,000 of the available officers are combatant and 26,000 noncombatant.

In its peace time functioning the Army of the United States is comparable to a large university, wherein the regular officers are the professors or instructors and the national guard and reserve components correspond to the student body, ranging from freshmen to those taking post-graduate work.

To assist in administration and training, the Reserve Corps is divided into some twenty sections. These correspond to the different arms and services of the Army. In addition it includes other sections, such as the Sanitary Corps Reserve, the Military Intelligence Reserve, and the Specialist Reserve. To the latter are assigned those officers required for certain phases of industrial mobilization.

Appointment

All persons appointed reserve officers are commissioned in the Army of the United States. Appointment is primarily based on the applicant's military qualifications, although he must also have at least a high school education or its equivalent, a good moral character, and be physically fit. Appointments may be made from the following classes of persons:—

1. World War officers and former regular army and reserve officers, excepting these who were separated from the Army as a result of their own misconduct. This class is appointed upon the approved recommendation of an examining board, in any section and to any grade not above the highest held by them when in the Army. Last year appointees of this class numbered only 700 out of 10,000, and in a few years the World War officers will have ceased to be a source of supply.

2. Approved graduates of the Reserve Officers' Training Corps, who are commissioned in the lowest grade without examination on the recommendation of the PMS&T at the college. About 6,000 officers are appointed in this manner every year, which is over half of the yearly increment. This class represents in general those who are best qualified, by education and natural endowments, to supply officer material.

3. Approved graduate flying cadets. Last year this included 200.

4. Graduates of the Citizens' Military Training Camps who have completed a certain specified amount of extension course work may be appointed in the lowest grade. During the past five years the number of appointments from this source varied from 36 to 140 in 10,000. The extension course work normally requires a year or two for completion.

5. Warrant officers and enlisted men of the Regular Army and Enlisted Reserve Corps, and persons not included in the preceding classes who served in the United States Army during the War, may be appointed to the lowest grade on the approved recommendation of an examining board. Last year this class supplied 2700 of the 10,000 appointees.

6. Specially qualified persons may be appointed in the Specialist Section on the approved recommendation of an examining board without limitation as to grade. These officers are industrial specialists required for industrial mobilization, and are generally appointed with the concurrence of the Assistant Secretary of War charged with industrial procurement.

7. A federally recognized officer of the active National Guard may, on his own application, be appointed in the Officers' Reserve Corps in the same grade and branch in which he holds appointment in the National Guard, and for the period that his National Guard appointment is effective. Also any warrant officer or enlisted man of the National Guard may be appointed in the lowest grade of the appropriate section of the Officers' Reserve Corps for a period of five years, provided such action has the approval of the National Guard authorities. These reserve officers who are also members of the National Guard cannot be assigned under their reserve commissions, but must be assigned under their national guard appointments. Therefore they are not included in this discussion, which deals primarily with reserve activities. There are approximately 12,000 of these officers, or about 93 percent of all national guard officers.

Summarizing, the total number of officers now on the rolls, excluding those who are also national guard officers, may be classified as to source as follows:—Reserve Officers' Training Corps graduates, 35 per cent; World War officers, 31 per cent; World War enlisted men, 17 per cent, miscellaneous sources, 13 per cent; Citizens' Military Training Camp graduates, 1.6 per cent; regular army enlisted, 1.2 per cent; former regular army officers, 0.8 per cent; flying cadets, 0.3 per cent. This is the first year the R. O. T. C. graduates have outnumbered the ex-World War officers, who are passing out of the Reserve Corps in increasing numbers.

Reappointment

Except for the "dual status" officers just mentioned, appointment in the Reserve Corps is for five years, at the expiration of which time the officer must be reappointed. Formerly a reappointment in grade was generally tendered irrespective of the activity of the officer concerned. This resulted in a corps which was large on paper, but contained many officers who did nothing to increase their military knowledge or advance themselves in grade. In 1927 the regulations were changed so as to require that officers, in order to be reappointed with full privileges of assignment and promotion, must have during the preceding five year period obtained a Certificate of Capacity, (in which it is certified that the officer has demonstrated the necessary professional qualifications, usually by written examination, for the grade and section specified in the certificate) or has demonstrated his interest in military instruction by having a written record of at least 200 hours of extension course work, attendance at classes, or active duty training. The result of this policy has been that, while it has reduced the Reserve Corps in number, it has greatly increased its efficiency by retaining therein only those officers who took an active part in increasing their military knowledge.

"Inactive" Officers

Those reserve officers who have not demonstrated their interest in military affairs by having earned 200 credit hours during their five year appointment period are tendered reappointment without eligibility for assignment, promotion, or active duty training. Their records are kept in corps area headquarters. While they have failed to keep up with their military training, they have been classified and commissioned in an arm or service and have had some training in the past. They thus form a valuable initial replacement pool. Of the 100,000 reserve officers, approximately 20,000 belonged to this class last July. Until a five year period has elapsed since 1927 this class of officers will rapidly increase; thereafter it should stabilize, more or less.

Assignment

The basis for all assignments are the qualifications of the officer for the duty to be performed. There are three assignment groups of reserve officers—The General Assignment Group, which includes those assigned to War Department activities; the Branch assigned to a regular army unit, and this officer must an activity under the control of a chief of branch; and the Territorial Assignment Group, which includes all those assigned to corps areas. Ninety percent are assigned to this last group.

Regulations prescribe that in general the priority in assignment of the Territorial Assignment Group shall be:—

1. To active units of the Regular Army so as to bring them to war strength.
2. To inactive units of the Regular Army.
3. To units of the Organized Reserves.

Not more than one officer of field grade may be assigned to a Regular Army unit, and this officer must have had commissioned service during the World

War. Assignment to reserve units is in general on a territorial basis, the officer being assigned to the appropriate unit nearest his home.

Promotion

The promotion system in the Reserve is based on the principle that no person should be promoted to a higher grade until he has demonstrated that he is qualified to perform the duties thereof. But the manner of demonstrating these qualifications has been unsatisfactory in the past, and has undergone numerous revisions. Present regulations prescribe three requisites for promotion:—A minimum time in grade varying from three years for a second lieutenant to seven years for a lieutenant colonel; a vacancy must exist; and the officer must hold a Certificate of Capacity for the next higher grade.

Certificate of Capacity

A Certificate of Capacity is an instrument in writing executed under the direction of the Corps Area Commander, which certifies that the officer named therein is deemed to have the necessary professional qualifications to perform the duties and to assume the responsibilities of the grade and section specified in the certificate. To obtain a Certificate the officer must: (1) Demonstrate his knowledge qualifications by successfully passing the required examinations in from 5 to 8 subjects, depending on the grade, except that the completion of extension school subcourses will be accepted in lieu of the examination in the corresponding subjects; (2) demonstrate his ability to perform the duties of his grade before a board of officers; and (3), as an experience qualification, he must have completed at least one 14-day active duty training period with an efficiency rating of at least satisfactory.

Training

Training is either on an active duty status or an inactive duty status. In active duty training the officer receives the same pay and is subject to the same regulations as a regular officer. Inactive duty training is given on a non-pay basis and is normally performed while the officer is engaged in his civilian occupation. Active and inactive duty training together should provide mobilization, unit, and individual training.

Active duty training is either for a period of 14 days or, in special cases, for a longer period. The 14-day trainees attend a unit camp under the supervision of the Regular Army, conduct the C. M. T. Camps, or are attached to a unit or activity of the Regular Army. Specially selected officers may be placed on active duty for more than 14 days as additional members of the War Department General Staff, to attend the various special courses at the service schools, or for duty with tactical units of the Air Corps.

Appropriations provide for the active duty training of approximately 20,000 officers a year, which, if all were attached, would be an average of one in every three or four years. Actually some officers apply every year, while others never do and consequently eventually gravitate to an inactive status upon reappointment. Credit hours for reappointment are granted at the rate of seven hours for each day of active duty.

The amount of active duty training is limited by the lack of funds appropriated for this purpose and the shortage of regular army units and personnel to conduct training. As now given, active duty training is considered to be both essential and practical. The number of officers who may benefit by it are being slightly increased by three expedients. One of these is by reducing the proportion of field officers, since the active duty pay of a field officer will be sufficient for the pay of two junior officers. Another expedient is the attachment of reserve officers to units of the National Guard while in camp. This is done with the concurrence of the national guard authorities, and promises to provide for the field training of over 2000 reserve officers each year. The third expedient is by having the reserve officers conduct the C. M. T. Camps, which is the nearest approach to training in the duties they would be required to perform in mobilization. As regards the effect of this latter policy on the C. M. T. C., Major R. E. Lee, General Staff Corps, has testified as follows before the House Sub-committee on Appropriations.

"When this idea was first promulgated we in the training section of the General Staff were very critical of it, because we thought it might injure the C. M. T. C. and that they would be used more or less as a chopping block for the reserves. A very careful estimate, based on a great many inspections that made the first year the plan was in effect, led to the belief that the efficiency of the C.M.T.C. boys was about 20 per cent below the efficiency of the training under straight regular army instructors. The Citizens' Military Training Camps Association was also rather afraid of it. We agreed, however, to try it out for another summer. At the end of this last summer not only had it apparently worked out very well, but the Military Training Camps Association were reconciled to experimenting further and instead of the training camps enrollment falling off, the number of applicants increased. We are not entirely committed to it yet but if at the end of three years it seems to work, I think it will be adopted permanently."

The test, as Major Lee further states, is whether the improved training of the reserve officers more than offsets the reduction in the perfection of the C. M. T. C. training, considering the entire national defense project as a whole.

Inactive duty training consists of extension courses, conferences, group schools, and other forms of instruction in military subjects. Of these the extension courses are by far the most important. During the school year 1929-30 more than 38,000 students were enrolled in the various army extension courses, of which 25,000 were Reserves. During that year 22,000 students completed 35,000 subcourses, representing a total of nearly 800,000 hours of work.

If this training were equally distributed among all

"active" reserve officers, it would average two weeks active duty training and something over thirty hours of inactive duty training every three years, which is just about sufficient to qualify the officer for reappointment on an active status. Actually the interest displayed by different officers varies considerably, some doing nothing while some officers have received the equivalent of a full month's active duty training each year (half without pay) and others have completed as much as 15 extension subscribers in less than a year totaling well over 200 hours of work.

Of the 80,000 "active" reserve officers, approximately 42,000 took some form of training during the last fiscal year, including 11,000 who had only active duty training, 11,000 who had active duty training as well as some form of inactive duty training, and 20,000 who completed extension courses or attended conferences but were not ordered to active duty. In addition, during the last ten years a total of 1,773 reserve officers have taken the special two to three months courses at the various service schools.

Conclusion

Some officers are inclined to be skeptical as to the value of the Reserve Corps. It is estimated that the military instruction received in the R. O. T. C. is equivalent to but approximately four month's continuous training, as compared to the average period of one year's continuous military training required of candidates for reserve commissions in most foreign armies. Also the training received by the average reserve officer after his appointment is much less than the several months with the colors required of the reserves of other great nations. These facts must be recognized and provided for in our training schedules effective on mobilization. But on the credit side of the ledger we have a Reserve Corps of 100,000 partially trained officers, already commissioned, and the majority assigned to units, ready to step into their assigned places. Compare this with the conditions that existed in 1917. As to the duty of the Regular Army to the Reserve Corps, the Secretary of War, in his last Annual Report, states:—

"The Reserves form a very important part of our system of National Defense. Only our best regular officers should be detailed for duty with this component. The standards to be met by our reserve officers must be high, so that the system built up shall be thoroughly dependable, while the reserve officer himself must enjoy the complete confidence and respect of his brother officers is all components of the Army, and especially of the people of the community in which he lives."

Events Overseas

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

EUROPE'S frayed nerves were subjected in March and April to a succession of heavy shocks. Coming with little or no warning when eighteen months of the most severe depression in history had lowered morale everywhere, they have plunged the Continent into a cloud of black pessimism. The specter of a new general war, which has stalked Europe since 1918, gains substance as armament programs are stepped up and the recent hopes of progress toward real disarmament recede. In several dispatches appears the thought expressed by one correspondent that "the peace of Europe hangs by a hair."

However, in all the welter of doubt and fear no one has seen fit to declare just who is going to fight and why, where the money is to come from, what is to be gained. Moreover, the consensus of opinion discloses a Europe collapsing into chaos if such a war does materialize, with the greater specter of Bolshevism in its train. And finally, Russia, the single great power which at first glance would stand to gain most from such an outcome, actually foresees catastrophe for her experiment unless she can have some years of peace, and trade, to complete her economic reorganization.

The first of the shocks to European equilibrium may be labeled *Zollverein—Anschluss—Mittel Europa*. Without previous warning the German Foreign Office announced late in March the consummation of a Customs Pact with Austria which, in effect, would make an economic unit of those two countries. Anticipating the storm provoked by the announcement, the partners to the pact disclaimed any intent to create the political union—*Anschluss*—forbidden not only by the Treaties of Versailles and St. Germain, but more precisely barred by the protocols of an international convention signed by Austria, October 4, 1922, in return for an international loan of rehabilitation guaranteed jointly by Great Britain and France, Italy, and Czechoslovakia. Over that signature Austria agreed to maintain at all times her economic independence. Germany's bland declaration that the pact is but a step toward full consummation of Briand's proposed economic union, and the later indications that Hungary will join the *Zollverein* shortly, have only served to stiffen the resistance of the powers hostile to the arrangement. Unwillingly, Germany has finally consented to examination of the "legal aspects" of the pact by the League Council at its May meeting. Meanwhile, hard-pressed Rumania and Jugoslavia discover that their inclusion in the union would provide the sorely needed market for their surplus grain.

France has placed herself squarely athwart the road marked out by the former Central Powers. Almost in a day she sees the revival of that chimera of 1916—Mitteleuropa. She dismisses the German avowals of economic effect purely economic as mere subterfuge. This to France, is *Anschluss*, and beyond it tomorrow, Germany would weld a solid block of powers from the Baltic to the Adriatic and the Aegean under her hegemony. Gone, then, status quo under the war treaties, gone France's preponderance in European affairs. Germany's declaration that she will insist on her right to rearm, unless the 1932 Disarmament Conference produces a wholesale scaling down of Europe's armed forces, adds color to French fears. Forced into a defensive role by the turn of events, France has retaliated by proposing anew her European Customs Union, with Germany and Austria barred. But at best she can count with certainty on but two allies in such a venture, Czechoslovakia and Poland. The situation promises a warm session for the League Council in May. Doubts appear as to the advisability of smoking out Germany's true aims and objectives in the matter. With the *Journal de Genève* making the interesting discovery that the pact is merely a German bogey thrust forward as a bargaining device to advance her intent to rearm, with France apprehensive of the collapse of the safeguards to her security, and with all Europe demanding some arrangement which will strike at the roots of economic depression, the Council faces a major problem.

A second bombshell exploded in the European camp when it was discovered that someone was guilty of a grievous blunder—or trick—in connection with the Franco-Italian naval agreement. Unknown to Italy, France had reserved the right to make substantial replacements of obsolescent vessels—too substantial for Italy's peace of mind. With that disclosure Italy's approach to parity by virtue of France's inclusion of many older vessels in her total tonnage, whose aggregate was materially larger than Italy's, disappeared. Great Britain's secretary of state for foreign affairs, who had acted as principal intermediary in securing adhesion of the two powers to the London Naval Agreement, appears as a scapegoat, in that he is charged with failure to inform Italy of France's intentions as to replacements. Today the entire question has reverted to the deadlock which dates back to the London parley.

The sudden collapse of monarchy in Spain, April 14, following the overwhelming victory of the Republicans in the elections of April 12, proved unexpected—in that it has been expected so long. The ejection of the House of Bourbon and the accession of a "Provisional Republican Government" is the least of this sum of troubles. What worries the neighbors of Spain, both near and far, is the ultimate outcome of that country's fourth effort within a century to find a political and social formula short of absolute monarchy or dictatorship which will unite the widely divergent elements of the nation in a common effort toward stability, both political and economic.

The British Empire

United Kingdom. The traditional dogged steadiness of the Briton in the face of adversity has rarely been illustrated so well as in the past two months. Moreover, the events of that period dispose of the fiction that that saving virtue is a monopoly of the "ruling classes." With Labor at the helm, the Government survived its long-standing, now acute, financial difficulties, made progress toward a sound solution of the Indian problem, and appeared as an effective, though somewhat bungling, stabilizer in a hectic Europe.

March was marked principally by efforts toward party solidification in the preparation for serious tests in April. In the fashionable St. George district of Westminster, ex-Premier Baldwin fought it out in a by-election with Lords Beaverbrook and Rothermere, Captain A. Duff Cooper, the Baldwin candidate, winning by a handsome majority. Baldwin had staked his leadership of the Conservatives on the issue, and winning, found it easy to effect a reconciliation with Beaverbrook. A questionable and unsuccessful effort of Lord Rothermere and Winston Churchill to discredit Baldwin on his Indian policy left that pair as leaders of the dwindling group of Conservatives in revolt. In the Labor group, the ousted Sir Oswald Mosley carried with him a following of six members. On the whole, the parties went to the test on April 16 with their ranks stiffened. Labor then defeated the vote of censure by a margin of 54 votes, the Liberals again furnishing the needed support. Obviously, the Conservatives prefer to synchronize their definite bid for power with an upturn in business—and that still lies in the future.

Recognition of disturbed conditions in Europe is seen in the clear-cut announcement of the Secretary of State for War, Mr. Thomas Shaw, that Great Britain will no longer take the lead in disarmament by cutting down her own defenses. Present strength of the army, he declared, must be maintained at all costs. The pronouncement is a far cry from the Labor platform of 1929, a fair measure of Right Wing Labor's development under the spur of responsibility. Budget estimates for the next year show a small reduction in both military and naval expenditures, and a moderate increase for the Royal Air Force, chiefly for the army contingent. Reductions are largely accounted for by the lowered cost of supplies.

The Dominions. Deliberate default by New South Wales on April 1, when interest payments on its bonds aggregating $3,500,000 fell due in London, provoked a financial crisis which for a few days threatened Australia's credit abroad. Prompt action by the Commonwealth government in providing the needed funds, as well as other millions due some days later, removed the threat, at the same time bringing to head a political crisis. Briefly, Premier Lang, an embittered (though moderately wealthy) Socialist, is leader in a movement for wholesale repudiation of all Australian obligations. His program entails "nationalization" of all property. Ample funds were available to the credit of his State in both Australia and London when the interest fell due. No question of bankruptcy existed. He was simply acting true to the tenets of all practical Socialists in meeting debts with the device of repudiation.

Faced with legal action by the Commonwealth to collect from New South Wales the funds advanced in London, bitterly condemned by the premiers of the other States, and threatened with a separatist movement in his own, Lang continued to trumpet about the Continent in his campaign to discredit the Scullin government. His mad course finally brought about a run on the State Savings Bank, a $400,000,000 institution, closing its doors.

Meanwhile the Commonwealth senate blocked the Scullin program of financial inflation when it voted to reject the government bill authorizing the issue of $90,000,000 for agrarian and unemployed relief. As a result, a general election is probable, but not before July 1. The electorate will then apparently have three choices open. The Nationalist Party, led by T. A. Lyons, stands for strict honesty in finance. Premier Scullin heads the inflationists, with Lang the leader of the radical repudiation element.

Foreign Relations. Recent weeks have produced a distinct sense of strain in Franco-British relations. The impossibility of reconciling their separate aims in international matters has resulted in the wrecking of three important British projects—Franco-Italian adhesion to the London Naval Treaty, a European tariff truce, and a four-power conference of foreign ministers in London. France's part in blocking Mr. Henderson's efforts is clear. Her grievance arises not only from Britain's refusal to parallel her strong line in condemning the Austro-German Customs Pact, but to a greater extent the British invitation to Dr. Bruening and Dr. Curtius for private conference in London on these matters. Whether France fears or senses a divergence of the French and British orbits in European affairs, and is taking steps in reprisal, will appear at Geneva in the coming weeks.

India. Communal riots at Cawnpore, the bloodiest incident since the Sepoy rebellion, furnish increasing proof that Hindu and Moslem cannot live peaceably together except under the control of foreign machine guns. In this instance, the Hindus were the aggressors. The affair has failed to check the preparations for the third Round Table Conference, scheduled for this Fall. Mahatma Gandhi succeeded beyond his hopes in securing approval of the All India National Congress, March 30, to his truce with Lord Irwin, principally because of his declaration that whatever form of government eventuates from the Round Table, it will be but a step toward complete independence. Indianization of the army proceeds at all too slow a pace to suit the radical theorists. A new obstacle appears in the native soldier's preference for the British officer.—R. B. RANSOM, *Captain, Infantry.*

Western Europe

League of Nations. The Austro-German Customs Pact has precipitated the most severe test of the vitality and usefulness of the League of Nations since the birth of that body. Moderately successful so far in settling and preventing the quarrels of petty states,

the League now faces a major problem, affecting every power in Europe. Prompt decision is not looked for; in fact, the Council is expected to call on the World Court for an advisory opinion before taking definite action.

The agenda for the May meeting include further preparation for the 1932 Disarmament Conference, now thrown into the background by the Customs Pact smarl. Of immediate interest to the United States are indications that steps will be taken in that field shortly to limit the tonnage of battleships to 23,000 tons, or thereabout. France, Italy, and Japan find their foreign possessions comfortably within the steaming radius of such a vessel. Britain, with her chains of naval bases, is in a similar position. The situation leaves the United States as the sole defender of the 35,000 ton battleship.

France. The rôle of scapegoat falls once more to Foreign Minister Aristide Briand. Assailed in the nationalist press for his German policy of rapprochement which, it is charged, has led directly to the Austro-German Pact, he refuses to give comfort to his enemies at home by resigning. The government continues to make moderate loans to the members of the Little Entente, hoping to strengthen the bonds which hold them to France. But the real difficulty finds expression in the Jugoslav press: "We cannot be helped much by small loans, while being bound to arbitrary burdens. What is more important is the chance to sell our products."

Further bolstering of her allies appears in France's undertaking to complete the rail lines from the coal area of Upper Silesia to Poland's artificial seaport, Gdynia. France is advancing the money and in return gets joint control with Poland over the road. That action raises a new bulwark against the treaty revision desired by Germany to restore to her the Polish Corridor.

Spain. "A republic in Spain would become such a hodge-podge of confusion that a king sooner or later would be welcomed as a savior." It is possible that the ex-king Alphonso XIII had in mind those words of Unamuno when he prepared his statement of April 13 to the Republican leaders, declaring "I do not renounce any of my rights. They are the accumulated store of history ***." Those are not the words of abdication. Yielding to the force of events when the elections of April 12 produced an overwhelming republican majority (in the cities), he stepped aside to let a "Provisional Republican Government" take charge. He recalls the three preceding abortive attempts within a century to establish a republic in Spain. He bears in mind the make-up of the Spanish nation—small aristocratic top, broad bottom marked by a poverty-stricken and land-hungry peasantry, an equally impoverished proletariat in the cities, a small and reckless bourgeoisie, a turbulent and dangerous minority of students and intellectuals. He does not believe that this is the stuff of which republics are made, but instead that it calls for a dictator's rule. He realizes that the anti-monarchial vote is merely an expression of the cities' sentiments. The villages are still bound to church and king. And he can foresee for the Republic just such a failure as once placed his father on the Spanish throne. Why should not history repeat itself in this instance?

Portugal. Revolt against President Carmona's undisguised dictatorship, breaking out late in March, is still flourishing, more than a month later. At Funchal, port of the Madeira Islands, rebel troops await the advance of a mixed government force. At Lisbon, the police dispersed a May Day mob with machine gun fire, whereupon the entire cabinet, apprehensive of more serious trouble, sought asylum in the barracks of the 3d Artillery.—DONALD A. FAY, *First Lieutenant, Infantry.*

Central Europe

Germany. Has Hitlerism shot its bolt? Public opinion in Germany and elsewhere examines the results of the last session of the Reichstag and scans the local election returns as they appear, for an answer to the question. Obviously, the internal dissension within the ranks of the National Socialists, as brought to a head by Hitler's expulsion from the party of Walter Stinnes, head of the "storm troops" of northern Germany, has proved a setback to Fascist plans. Hitler, trying to carry water on both shoulders to hold in line his revolutionary extremists while he bids for support of adventurous elements allied to the moderate parties, meets varying success. In some sections municipal and state elections show a steady swing away from Fascism's high tide of last July; in others the party records heavy advances. On the whole, it is not clear whether the Fascist tactics in bolting the Reichstag in February, and in subsequent attacks against religion throughout the country, have permanently crippled their cause. The vigorous reprisals of the Church against both that party and the Communists have damaged the Hitler program, especially in Bavaria, the birthplace of Fascism.

Having succeeded beyond his hopes in getting Germany through a trying winter, President von Hindenburg signalized the end of the Reichstag session by invoking Article 48 of the Weimar Constitution to establish temporary dictatorship again. Under his decree the "fundamental rights" of civil liberty are suspended for an indefinite period. In short, freedom of the press, speech, and assembly are left in each instance to the discretion of the police. The measure was aimed at both the Nazis (Fascists) and the Communists, whose constant fighting was marked by a total of 300 killed and many more hundreds wounded within a year—gang warfare which had begun to interfere seriously with business. From Hitler, who had promised with gusto a dictatorship in which "hundreds of heads will fall," comes an outburst which savors of a whine, demanding the resignation of "so ruthless a dictator as Hindenburg." The strongest reliance of the President in the past hectic year has been Heinrich Breuning. A year ago an unknown, today the "Iron Chancellor," he has handled Reichstag and state with the skill and courage of a finished statesman. Staking everything on securing a working agreement between the Social Democrats and the Center, he prevailed on the Reichstag to pass the measures most vital to Germany's immediate interests. The nation's finances have been placed on a sound basis, agricultural relief is established, and national defense is secured. In the latter category is found the initial appropriation for the construction of the Ersatz Lothringen, Germany's second "pocket battleship."

Italy. The apparent break-up in the Franco-Italian negotiations over naval restriction, referred to above, finds Italy and Great Britain in substantial accord, and France in the uncomfortable, if adamant, stand of safeguarding her needs regardless of the effect on her rivals. In spite of appearances, the issue remains alive, with deadlock no final bar to later compromise. —OTTO L. NELSON, *1st Lt., Infantry.*

Eastern Europe

Russia. Is *pyatiletka* succeeding? Adept in persuading their half-starved millions and their sympathizers abroad as to present and future success of the Five Year Plan, Stalin and his followers find it impossible to conceal the dangerous rifts in their scheme from the eyes of the impartial observer. Transportation, according to the state-controlled *Pravda*, falls 25 per cent behind the expected program; coal, 43 per cent, with a precipitous drop in output since January 1. The difficulty lies in the refusal of the workers to accept the intolerable working conditions in the mines. Worse news still in steel. The most signal failure, perhaps, occurred at the Stalingrad tractor plant, scheduled to produce eventually 150,000 tractors per year. Output fell to a few hundred, with 80 per cent of all castings going to the scrap heap. From Germany comes the news that Moscow, having dumped everything saleable on a depressed world market, was unable to meet her payments abroad without shipping a considerable part of an already inadequate gold reserve. The German Reichsbank was the immediate beneficiary of those shipments. At that juncture Moscow is relieved to find Berlin and Rome willing to advance longer credits than those hitherto granted. And now Russia reverses herself in the matter of dumping wheat. Her exports of 110,000,000 bushels in the 1930-31 crop year has disposed of her surplus, but at a price which must spell heavy loss to that country. Stalin, with the figures before him, becomes interested in crop control to restore production to a profitable basis.

General adoption of a piece-work wage system in agriculture as well as industry marks one more acknowledgment by Moscow that capitalism's tools are indispensable in the working out of communistic theories. With it is installed *khozraschiot* (economic accounting), under which each factory, farm, and economic unit becomes an "individual." And each is ordered to pay its own way in the future.

Recalling the 40-year preparation of Germany for "The Day," is an order requiring the "militarization of literature." Everything in print, from primary reader to lyric poetry, must sing the praises of the Red army and preach the campaign against the capitalistic countries. Other developments of note include a new drive against the Kulaks; increased collectivization of farms, now reported to have passed a mark of 50 per cent of all arable land; extension of foreign boycotts against Russian goods, and Russia's reprisals as shown above by doing her marketing elsewhere (Germany and Italy); and the recall to influence of Rykov, the leader of the Right Opposition who was ousted last fall. It is a chastened Rykov, however, who rejoins the Central Executive Committee.

Of chief importance is the fact that Moscow has weathered its heaviest test to date during the past winter, and the greater fact that peasant and proletariat, far from seeing improvement in their condition as the millenium year (1932) approaches, sense the growing poverty of individual and state. An even greater test still lies ahead of Moscow.—GEORGE M. BADGER, *First Lieutenant, C. A. C.*

The Balkans and the Near East

Rumania. Early in April a demonstration in the Russian Chamber of Deputies against Minister of Industry Mancilescu, a favorite of King Carol, led to the fall of the Peasant party cabinet of Premier Mironescu. From England, Carol summoned Minister Titulescu to form a new cabinet. Observers felt that opposing parties would prevent the formation of a cabinet, that the ruler has knowingly given an impossible task to Titulescu, upon whose failure, he, Carol, could proclaim a dictatorship.

Titulescu, however, managed to reconcile the warring parliamentary factions and offered a strong cabinet for the King's approval. But the monarch, reported to have been urged on by his paramour, Magda Lupescu, demanded the inclusion of several favorites in the ministry. Titulescu resigned.

Carol's dictatorship dream, fostered by Alexander's apparent success in Jugoslavia, was disturbed by Alphonso's departure from one of the last absolute strongholds. At any rate, he called upon his ex-tutor Jorga to form a cabinet and the new premier dissolved the extraordinary session of parliament within a few hours after it had first met on April 30. Wild disorder and passionate protests greeted this coup, the deputies of the Peasant party shouting "Down with the Dictator." What the future holds depends to a great extent upon the elections to be held in June.

Turkey. Kemal has taken steps to strengthen the government's hold upon the younger generation by the commandeering and reorganization of the Turkish Hearths Society. The Turkish president, using Mussolini's junior Fascists as a model, will gather into the centers of the organization the nation's youth for patriotic education.

It may be of interest to note that, in line with the recent treaties of the Western European powers, Turkey and Russia have signed a naval accord limiting naval armaments in the Black Sea.—D. H. GALLOWAY, *First Lieutenant, Cavalry.*

SPORTS

National Capital Horse Show

COMPETING against the usual fine entries at the National Capital Horse Show, held at Bradley Farms, May 13 to 16, the Fort Myer Horse Show Team made an excellent showing with its string of jumpers.

Organized by Colonel Harry N. Cootes, 3rd Cavalry, Post Commander, and led by Major A. D. Surles, 3rd Cavalry, the team consists of 1st Lieut. W. A. Holbrook, Jr., 1st Lieut. C. H. Noble, 1st Lieut. W. A. Bugher, 1st Lieut. Gordon Rogers, and 1st Lieut. C. W. Bennett, all of the 3rd Cavalry. Training was started early in the year, under Major C. P. George, 16th Field Artillery for a series of shows which in addition to the National Capital, include those at Worthington Valley and Devon.

First score was made at the National Capital by Lieut. Noble riding *Flash* in the Modified Olympic Course for fourth place. In the Handicap Jump, Lieut. Bennett won third and fourth ribbons with *Miss Clebourne* and *Sir Knight*. *Miss Clebourne* also placed third in the touch and out. *Peace Girl*, shown by Lieut. Rogers, brought the first blue in winning the class for mounts suitable to become polo ponies and his *Scandal* placed second in the Polo Pony class. *By Jingo*, ridden by Colonel Cootes, won first place among the officers' chargers. *Temptation*, ridden by Lieut. Bugher, placed second in the Handy Hunter class.

The event for troopers' mounts was won by Sergeant Mylar, Troop E, on *Grace*; *Queenie* shown by Private Miller, Machine Gun Troop, second. *Sailor*, shown by Private Reven, Headquarters Troop, third; *Daisy*, shown by Private Sinsel, Machine Gun Troop, fourth.

Major George S. Patton's hunt team, which included two of the Fort Myer riders, was fourth in its event with a fine performance. In the Triple Bar Jump, the feature event of the closing day, *Miss Clebourne*, ridden by Lieut. Bennett, and *Temptation*, ridden by Lieut. Bugher, took first and second places over twenty-two competitors.

Troop F, 3rd Cavalry, commanded by Capt. Hugh J. Fitzgerald, will give an exhibition ride at the Worthington Valley Show, where the team is next scheduled to compete.

In addition to the 3d Cavalry entries from Fort Myer, the Office of the Chief of Cavalry was well represented at the National Capital Horse Show. General Henry was unable to show his horses due to his absence from the city in connection with the Cavalry Division Maneuvers. Major George S. Patton, Jr. accounted for 2 Blue, 2 Red, 3 Yellow and 4 White ribbons. Major W. M. Grimes won one Blue and one Red.

Hunter Trials

Major W. M. Grimes, Cavalry

HUNTER trials are becoming more and more popular. A great many of the eastern hunts conducted trials at the end of the past season. These trials are conducted much after the fashion of our old point-to-point events on the Cavalry School graduation program.

Generally speaking, the object of a hunter trial is a comparative test to determine the relative merits of the various hunters that have regularly followed the hounds during the season. The course is usually from two to three miles in length, approximating as nearly as possible conditions encountered in the hunting field such as fences, terrain, and galloping ground. As to the conduct of the trials, entries as a rule are divided into two main classes, depending on the number of seasons a horse has hunted. Horses that have just completed their first season are entered in the class for green hunters; horses that have hunted more than one season enter the qualified class. Each class is run separately. Contestants usually start from three

The First Army Team to Win Indoor Polo Championship in New York Athletic Club Event. Left to right: Lt. A. George, Cav., Lt. J. F. Haskell, Inf., Lt. M. McD. Jones, Cav.

to five minutes apart; as a rule there is a time limit with an overtime penalty.

A word as to judging; hunter trial standards are different from showing standards. Hunter trials are judged on hunting field requisites and requirements. Horses are usually judged on their cross-country galloping ability (rate, way of going); fencing performance (form and style); handiness, manners and condition at completion of trial. There may or may not be a percentage for conformation. Where conformation is considered, as a rule it counts little—about 10%.

Jacks, curbs, splints and capped hocks, etc., provided they do not impair the hunter's ability to perform, are not seriously considered. "Hunting sound" is the judge's yard stick.

Contestants are required to complete the distance, usually two or three miles, in from ten to fifteen minutes, or at a 12 mile hunting gallop. There is a penalty for overtime; one point for each five seconds in excess of ten or fifteen minutes. At the finish, horses are carefully examined for condition, wind, etc. During the time each contestant is under way, judges are observing horses for ability to gallop cross country and fence; manners likewise are considered.

The number and the size of jumps vary. The height varies from approximately four feet six to three feet; the average height is about three feet six. Three refusals usually constitute a disqualification; as well as fall of rider or horse, or both.

Officials usually consist of three principal judges, patrol judges at the gates and the various fences, and the timers. The three principal judges score each contestant as outlined above for way of going, fencing, manners and condition at completion of the course; the patrol judges at the several fences record the scores at their fences. These are later collected and turned over to the three principal judges who consider them in making awards.

A great many hunting people decry the hunter classes one sees on the horse show circuit, claiming there is too much artificiality about the courses and the horses. Hunter trials eliminate a great deal of this criticism: the horses are required to gallop over and fence country that they hunt; and furthermore the trials are usually limited to horses that regularly hunt —in other words working hunters as opposed to show ring hunters. There is no doubt that the best test of a hunter is the hunting field where the horse is subjected to the scurry and excitement of other horses. However, the next best substitute is the hunter trial.

Dates of Olympic Equestrian Events

The schedule of equestrian events in connection with the 1932 Olympics has been announced as follows:

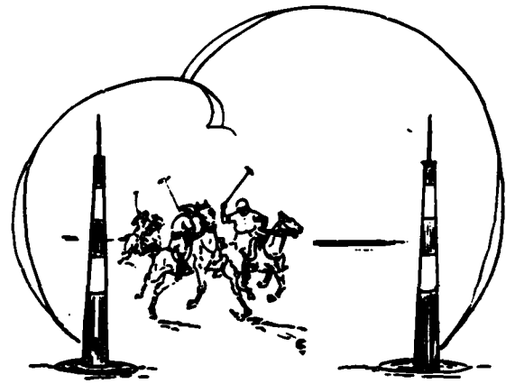
Place	*Date*		*Event*
Olympic Stadium	Aug. 10th, Wed. (12th Day)	A. M.	Individual Dressage
		P. M.	Competition
Olympic Stadium Village	Aug. 11th, Thurs. (13th Day)	A. M.	Three-Day Event—Schooling Phase
Olympic Stadium	Aug. 13th, Sat. (15th Day)	P. M.	1. Presentation of winner of Individual Dressage held on August 10th. 2. Three-Day Event (Jumping Phase)
Olympic Stadium	Aug. 14th, Sun. (16th Day)	P. M.	Prix des Nations

New Regulations for Inter-Circuit Polo

THE United States Polo Association has announced that following the indicated wishes of the majority of the member clubs through their answers to a questionnaire sent out in February, it has been decided to play the Inter-Circuit tournament for 1931 on the following basis:

a. Games will consist of eight periods instead of six.

b. The tournament will be played in two divisions. The location and dates will be announced later.



Professional Notes and Discussion

Inactive Duty Training

By Captain Clyde D. Keith, 319th Cavalry

FOR many years it has been apparent that some means of training for members of the Officers' Reserve Corps other than the regularly provided four-teen-day training periods conducted by the government was essential. Considerable time and thought has been given to this subject and the following outline of the way in which a Detroit group has solved the question of Inactive Duty Training is given for the information of other localities or groups.

In the spring of 1930 seven members of the 319th Cavalry and 465th Armored Car Squadron, which are units of the 65th Cavalry Division allocated to Michigan, decided to establish a training center for Inactive Duty Training.

For the purpose of accomplishing this mission, a tract of land containing 110 acres of ground and an old farm house was leased. Adjacent to the property was a riding academy where members of the organization could secure mounts suitable for the purpose desired. A special rate for the hire of mounts was obtained from the proprietor of the riding academy. This placed the facilities within reach of junior officers.

The next step was the organization of the group of officers initiating the movement, for the purpose of administration and development. The result was the formation of The Cavalry Club of Michigan, with the purpose of developing horsemastership and the study of military science and tactics. This also provided a social meeting place for all those interested in the purpose above described.

Schedules were prepared by the regimental staff of the 319th Cavalry and a program of training was conducted every Saturday afternoon, instructors being drawn from the officer personnel of the regiment itself.

As the training progressed the club increased its membership until at the end of six months there was a membership of over fifty officers. Social gatherings were held and as a result, the ladies of the officers became interested in the development of the club. During the summer and fall numerous afternoon parties were enjoyed, these being conducted during the week, as on Saturday the entire club was devoted to military subjects covered by the schedule.

In the month of July the regiment was ordered to active duty at Fort Sheridan where the value of the training conducted at the club was quite evident.

After the active duty period the training at the club was largely devoted to cross country riding and jumping. Informal rides of the officers and their ladies were conducted one evening each week after which a supper was served to the club. The rides turned out an average of twenty officers on each occasion. The outstanding result of this contact among officers was the development of an *esprit* never before attained.

By this time numerous officers from other branches of the service had been attracted to the club, the membership having grown to approximately seventy officers. The facilities, which up to that time had been ample, were deemed inadequate to handle the increased membership. It was therefore decided to negotiate a lease on an adjoining one-hundred-sixty acres of ground on which was located a twelve room brick clubhouse and stable accommodation for thirty mounts.

The constitution of the club was amended to extend membership to all Reserve Officers, Regular Army Officers and National Guard Officers holding reserve commissions. The effect of this change was to give added impetus to the growth of the club.

At the present time a problem embracing the various combatant branches of the service is being prepared for spring and summer training. Exercises will be conducted under supervision of the military affairs committee of the club on Saturday afternoons. Organizations participating will be the following: 339th Infantry, 328th Field Artillery, 310th Engineers, 319th Cavalry, and the 465th Armored Car Squadron. Credit for attendance will be given to those present.

The club is now well established in its new quarters with a competent caretaker in charge. The stables have been remodeled and fourteen mounts provided for use at this time. As additional horses are required they will be added. An active polo group has erected a training cage and will develop a team which will further add to the attractiveness of the club. A horse show ring will be constructed in the spring containing appropriate jumps and obstacles.

It should be borne in mind that the principle object of the club is to give training to all officers and more more especially to the junior officers. For this reason the cost of maintaining the club has been held to a minimum.

The initial cost of membership was five dollars. The monthly dues of five dollars entitled each member to ride four hours per month or an average of one hour each Saturday. When the club moved into its new quarters the initiation fee was raised to ten dollars with monthly dues of two dollars. Members buy their riding tickets as they require them, as during the winter months there is less opportunity for mounted work.

What has been accomplished here in Detroit can be carried on in any locality where there is an interested group of officers. A group which is really willing to do the work of organizing such a club and carry on, no matter how discouraging it may seem at times, will be successful.

Notes From The Cavalry Board

New Cavalry Air Cooled Machine Gun

THE Cavalry Board has just completed its study, and submitted to the Chief of Cavalry its report on proposed specifications for a new light machine gun for Cavalry. The object is to have this gun take the place of the present machine rifle, which has been temporarily superseded by the air cooled tank machine gun with certain modifications.

It is hoped, in due time, to produce this new light machine gun, especially designed for cavalry use, capable of being quickly put into and taken out of pack, transported a reasonable distance by a single man, dismounted, sustaining its fire at a maximum rate of 50 rounds per minute for thirty minutes, and of a maximum weight of 30 pounds including mount.

The Ordnance Department is at present issuing the tank machine gun, air cooled, modified as follows, to replace, temporarily, the machine rifle: The rear sight is the Browning machine rifle sight, placed on the rear of the cover latch with a peep 1 10″ in diameter; the front sight adjusted to a correct elevation at a range setting of 600 yards. Instead of the shoulder stock, a pistol grip is provided, which as soon as production can be accomplished will be replaced by the double spade grip. The tripod legs are provided with shoes to increase the stability of the mount, which is attached to the gun itself. The gun, spare parts, and 950 rounds of ammunition are carried on one horse, it being possible to maintain a balance of this pack load until an excess of 300 rounds of ammunition have been fired.

Semi-Automatic Arms

The Board has on hand 8 Garand semi-automatic rifles, caliber .276, 4 Pederson semi-automatic carbines, and 2 Pederson semi-automatic rifles—both caliber .276—for service test. Tests of former models of these weapons have been conducted; of the Garand in 1927, and of the Pederson in 1928.

These new guns represent what appears to be tremendous advances in the field of semi-automatic arms, the weight, size, and length all being such as to give great promise to these guns as future cavalry weapons.

Among some of the very excellent features are the 10 cartridge clip, which is automatically ejected when empty, the new design of rear sight, and most important of all, the fact that the weapon automatically loads itself, and is constantly ready for action so long as there is ammunition in the magazine.

Field tests are to be started in the very near future.

.50 Caliber Machine Gun

A number of service tests have been conducted to determine the suitability for packing of the .50 caliber machine gun T-1, and the expediency of adopting it as a cavalry anti-tank weapon. Because of its very heavy weight and size much difficulty has been encountered in adjusting this gun and mount to packs not exceeding the maximum weight authorized for cavalry pack loads. There is now, however, in process of evolution a scheme for packing this gun that gives promise of satisfactory results. Recently the gun, packed as a top load, was tested on a march of 100 miles accomplished in 23 hours, and the results were very promising. It is believed that very shortly it will be possible to recommend a satisfactory solution of this problem pending the production of the new cavalry .50 caliber machine gun, specifications for which are now in process of preparation.

Whiting Saddle Pack

Since the World War one of the subjects of primary consideration has been the lightening of the cavalry horse's load. Approximately 10 pounds have been taken off the enlisted man's pack since 1920, and further reductions are in contemplation. It is believed that one of the most promising moves in this direction, and one which at the same time will add more comfort to the lot of the enlisted man who rides the McClellan saddle, is the Whiting saddle pack, the details of which are now being perfected. This new arrangement of the enlisted man's equipment, and the changed method of packing his saddle will result in a considerable reduction in, and a better distribution of, weight. All the changes considered can be made by the troop saddler at negligible expense.

It is contemplated that the saddle pockets will be reduced in size and bulk, that they will be carried on the pommel instead of on the cantle. The rifle and saber will be removed to the off and near cantle respectively, thereby enabling the rider to use his legs on his horse, and removing these very uncomfortable encumbrances from under the legs. The two outside mortices on the cantle of the saddle are to be moved nearer to the side bars, thus enabling the soldier to affix his cantle roll more firmly and permit it to ride more snugly. The rifle scabbard is to be reformed permitting a snugger fit for the rifle and at the same time greater ease in its insertion and withdrawal. A new design of saber carrier is contemplated which will also accommodate fitted shoes for the horse. All auxiliary straps are to be of the same size and length, such as coat straps, saber knot, etc., the coat straps being materially shortened, thus eliminating the necessity for the two or three turns around the roll, raincoat, etc. The girth straps are also attached to the saddle by means of an iron square thus eliminating the canvas flap which now rips in a short time, requiring resewing. The same model stirrup strap as that now in use on the training and officers' field saddles is to be recommended as is also a steel or leather covered wooded, unhooded stirrup. The grain bag, feed bag, and raincoat are to be carried as now authorized.

CURRENT TOPICS

First Cavalry Division Maneuvers

THE annual maneuvers of the 1st Cavalry Division are being held, May 19th to June 2d, in a new maneuver area. The area used will include the Hueco and Sacramento Mountains on the east and extend to the Franklin and Organ Mountains sixty miles to the west. The troops of the division will encounter in this area the most rugged country possible to obtain. It varies from the typical desert of sand covered by mesquite and greasewood, where water is scarce and the going difficult, to the mountains 10,000 feet high where maneuver is practically impossible for wheeled vehicles and recourse must be had to packing on animals all articles transported.

It is believed that this area presents difficulties which have never before been encountered by our Cavalry in maneuvers. These maneuvers will test, practically, many questions of tactics which have arisen as a result of the rapid advancement of science applicable to military operation. Among such questions are: the proper employment of Cavalry in mountain warfare; the ability of Cavalry to maintain communications with airplanes while engaged in traversing such rough country, and also to so maneuver as to prevent being discovered by hostile airplanes; the use of signal communications; the ability of Artillery to keep up with and support Cavalry, both in the sandy desert and in the high mountains; the ability of the armored cars to operate over this difficult area; and the powers and limitations of modern inventions such as the radio telegraph and radio telephone, airplanes, weapons, and motor transportation.

These maneuvers are designed to bring out many problems of this kind which have been absent in former maneuvers.

Modern articles of equipment, now the subject of experiment under the direction of the 1st Cavalry Division Board, will be tested. Among these are the following:

The 37mm. gun with the new Heavey mount, all carried in pack; medical equipment carried in squadron packs; water purification equipment; signal equipment for armored cars; pack cooking outfits; various methods of packing water and other supplies on animals; sending signals by rifle grenades; laying of wire from [illegible]; new radio sets, including one which will permit a commander to communicate with the mounted man while he is moving at the walk, trot or gallop.

These maneuvers will be "free" to a great extent, that is the troops involved will operate continuously day and night with only brief periods of intermission in which a certain amount of control. In other words, the troops will simulate conditions of real war as nearly as possible. This introduces the question of supply of all articles needed by the division in war, such as food, forage, water and ammunition, and the necessity of all commanders to know how to conserve the physical strength of men and animals for the final punch to assure success in the field of battle.

The new cavalry light machine gun, intended to replace the present machine rifles in rifle troops, will be used in maneuvers for the first time, and will give regiments a greatly increased fire power. This machine gun is air cooled and has been recently adopted. Each cavalry regiment will have, when these machine guns are received, twenty-four light machine guns and ten heavy water cooled machine guns. In these maneuvers for the first time in the history of the American Army each rifle troop will be able to furnish its own machine gun support.

These maneuvers are drawn up so as to employ, under modern conditions of warfare, all units participating. The tactical problems involved will illustrate the following: Employment of the 1st Cavalry Division on a mission requiring high mobility; constant reconnaissance and the evaluation and prompt transmission of information; night operation; mountain fighting; use of Air Corps units to assist the Cavalry in operations over open and mountainous terrain, both in daylight and in darkness; practical use of the various services of the division, such as Quartermaster, Engineer, Ordnance, Medical, Signal and Chemical Warfare.

26th Cavalry in the 1931 Maneuvers

BASED on the assumption that an imaginary enemy would attempt a landing on the beach in the Lingayen Gulf area within 36 hours from first information received, the Philippine Division was rushed to the scene of action by motor truck, motor bus, trains and animals.

The 26th Cavalry came in for its share of rushing and as a consequence all the machine gun platoons of the rifle troops, and the machine gun troop with Battery E, 24th F. A. attached, were loaded in motor trucks on the night of January 5-6 and hurried to the scene of action where they arrived some 12 hours later, and where they took over the left of the Division sector.

The animal elements of the regiment left Fort Stotsenburg on the morning of January 3rd, moving through successive halts for the night at Bamban, Tarlac, Santa Ignacia, Bayambang to San Carlos where they took position covering the left of the division.

While at San Carlos, the regiment performed various reconnaissance missions, chief among which Troop E crossed the Agno River to Mangatarem in a road and river reconnaissance, and Troop A marched to Lasis, crossing the Agno River and several difficult, deep water filled ditches between San Carlos and Aguilar.

On January 11th a night withdrawal was made and the 26th Cavalry machine gun elements with Battery E, 24th Field Artillery, were conveyed by motor truck and bull cart through Binmaley to the north bank of the Calmay River. When the trucks were released, the equipment ferried across the river and the personnel marched over on a narrow, temporary foot bridge to the south side. Here the pack horses and mounts for the personnel were met, the guns packed, the men mounted and marched six miles to San Carlos.

The crossing was well planned and well carried out and the movement, made in pitch dark was as smooth as though it were made in broad daylight. Considering the fact that the road, upon which the animals met the ferry, was narrow and lined on each side with impassable marshes, it is considered a remarkable showing to have made the crossing in two hours with such an absolute lack of confusion.

The division commander, Major General Paul B. Malone, who witnessed the crossing, was highly pleased with the efficiency shown by all concerned and stated that "he did not see how it could possibly be improved."

The regiment being thus assembled, its mission of covering the division left continued and upon the withdrawal of the division through several successive delaying positions, it remained on the left flank about a day's march in rear of the division.

On the night of January 15-16, the 26th Cavalry passed from control of the division and it returned to Fort Stotsenburg in leisurely marches, arriving home on January 18, 1931.

It is interesting to note that this is the last maneuver in which Colonel Fleming will participate as a Regimental Commander as he returns to the U. S. in October, 1931, and retires for age in June, 1932.

British Maneuvers, Winter 1931

THE Royal Tank Corps Journal for April, 1931, gives an interesting account of the Aldershot Command Winter Exercise, 1931. The exercise took the form of a two sided maneuver involving two detachments approximately equal in Infantry and Artillery, but differing fundamentally in mobile troops. "Westland" comprised a medium armored brigade and a cavalry brigade; "Eastland" had a light armored brigade and a cavalry division. The "Eastland" light armored brigade was organized as laid down in the "Mechanized and Armored Formations" handbook, 1929 (three light tank battalions, close support battery, anti-aircraft battery); the "Westland" medium armored brigade as follows: Headquarters; Signal Section; one light tank battalion (three companies of three sections of five light tanks); three medium tank battalions (each consisting of: H. Q.; one close support section of three close support tanks; three companies each of one section of five medium tanks, and one section of seven light tanks.

According to the author, the superior mobility of the "Eastland" force was of distinct advantage in placing it in position to accomplish its mission. The conditions of the problem required the opposing sides to seize and hold the same area, equidistant from their starting points. Both sides dispatched their armored forces at maximum speed ahead of their other troops to gain and hold the ground until the arrival of the less mobile forces. To quote the article:

"At the conclusion of the exercise the G. O. C.-in-C. Aldershot Command (Sir David Campbell) gave a brief summary of his views on the subject of handling of mobile troops—which term he used to embrace both Cavalry and A. F. V.'s.

"In the first place he pointed out that Cavalry and A. F. V.'s are complementary one to another. Cavalry he considered immeasurably superior for reconnaissance; A. F. V.'s have the offensive power. It followed that both types of mobile troops should be used together.

"He agreed that there must be exceptions to this general rule, but, in his opinion, a commander would only be justified in using A. F. V.'s alone in circumstances when time was of vital importance, the distance involved too great for Cavalry, and the importance of the object to be achieved compensated for the heavy losses in A. F. V.'s to which their inability to reconnoitre adequately must render them liable.

"Finally, to ensure intimate cooperation, he stressed the importance of peace training and the necessity for a specially selected mobile troops' commander with an adequate staff.

"In answer to a request by the G. O. C. for suggestions, Colonel Broad said that he would go even further: he would add to the mobile troops specially trained Infantry carried in mechanical vehicles."

The Cavalry Rifle Team

IN the middle of May the candidates for the 1931 Cavalry Rifle Team assembled at the Erie Ordnance Depot, La Carne, Ohio, for preliminary training and tryouts to determine the members to form the team for the National Matches. In charge of the tryouts and organization of the team is Lieutenant George A. Rehm, 3d Cavalry, captain of the team. Lieutenant Clyde A. Burcham, 7th Cavalry, is team coach. Officers attending the tryouts are: Captain H. H. Cameron, Lieutenants W. S. Biddle, G. A. Brickman, W. S. Conrow, J. L. Hathaway, P. M. Martin, J. S. Moran, S. L. Myers, R. D. Palmer, J. J. Phillips, H. W. Stephensen, C. A. Thorpe and G. A. Williams. Thirty-six enlisted competitors have been ordered to the camp, of whom ten fired last year on the team.

Change in Duration of Courses

A CHANGE has been authorized in the duration of courses for Regular Army officers at the Cavalry School for the fiscal year 1932, to begin the courses September 7, 1931, and end same June 17, 1932, instead of beginning September 15 and ending June 10. This includes the Troop Officers' Course, the Advanced Course and the Advanced Equitation Course.

An Outstanding Cavalry Troop

ONE of the outstanding units in the National Guard Cavalry is the Machine Gun Troop, 108th Cavalry, Georgia National Guard, whose home station is at Atlanta, Georgia. The personnel is recruited from among the young men who are students at or who have graduated from Georgia Tech and Emory University. They boast a long waiting list.

It is understood that much of the armory drill pay of both officers and men of the troop is donated to the Troop fund and used for organizational purposes. As a consequence the recreational equipment and armory facilities have grown into a value of thousands of dollars.

At a recent inspection of the troop by a Regular Army instructor he found conditions such as to call for the expression of high praise for the outfit, which was transmitted to the Commanding General, Fourth Corps Area, who in turn complimented the troop for its efficiency and soldierly qualities. General McCoy furnished the Troop Commander with a copy of the remarks of the inspector and added his commendation. In his letter to the Troop Commander he said:

"1. Upon my visit of instruction to Machine Gun Troop, 108th Cavalry, Georgia National Guard, on November 4th, 1930, a thorough inspection was made of animals, stables, store-rooms and property.

"2. The conditions found to exist in this organization are far superior to any found within this State.

"A special room has been constructed in which to care for roll collar uniforms, overcoats and woolen equipment.

"The uniforms are hung in a specially constructed closet with curtains, preventing dust and moths. Woolen blankets are carefully stored in this room with ample protection against moths. This room is sealed and thoroughly impregnated with napthaline.

"3. A special room has been constructed for storing of tentage and organization equipment. This permitting prompt accessibility of equipment in case ordered out upon short notice.

"A storage shed has been constructed for the care of organization transportation permitting property to be housed from weather, also a complete blacksmith shop has been constructed, well lighted and equipped.

"The above report indicates that the officers and enlisted men of your organization have set a high standard for units of the National Guard of your State and the Fourth Corps Area. The 'esprit de corps' indicated is highly praiseworthy. Your organization and its commander are commended."

Organization Activities

1st Cavalry, Fort D. A. Russell, Texas

As this is written the First Cavalry is just leaving for the maneuvers of the First Cavalry Division north of El Paso, to include the vicinity of Alamagordo, N. M. The regiment is accompanied by the 2nd Pack Train. The date of return from maneuvers will be about June 10.

Captain H. E. Watkins, 1st Cavalry, is detailed to take the course at the Field Artillery School at Fort Sill, Okla. Captain H. S. Beecher goes to the 11th Cavalry at Presidio of Monterey. Captain Beecher is looking forward to making that section of California his permanent home after retirement. Lieuts. H. M. Zeller, P. A. Ridge and H. W. Johnson go to the Cavalry School in September.

After a long wait, electric refrigerators and stoves are about to be installed in quarters at Fort Russell. Contractors have arrived and are now drilling a new well near the site of the wooden water tank. When the well is finished, a tank will be built nearby, and we may then expect to have sufficient water to beautify the surrounding of the post.

Citizens of Marfa and the surrounding Big Bend or Highland country have banded together to form a polo club and have already completed fine new stables and a club house near the reservation. They plan to incorporate under the laws of Texas and will furnish new competition for our polo teams.

A guest house is now a part of the post equipment, and the members of the garrison offer traveling officers and their families the hospitality of the post.

2nd Cavalry, Fort Riley, Kansas

When Colonel Alexander M. Miller left command of the Second Cavalry April 1, 1931, to become chief of staff of the Seventh Corps Area at Omaha, Nebraska, his staff reminded him that the files of the regiment showed that there had been a steady improvement in the accomplishments of the regiment during the two years and eight months that he had been in command. Many remounts trained, longer practice marches, active participation in hunts, and the acquisition of French horns for the bugle corps and of organization year (1836) uniforms for the guards to the standard and the standard bearers were among the features characterizing the period. Rifle marksmanship improved from 91.8 per centage qualified in 1928 to 94.9% in 1930 with mounted pistol work jumping from 72.6% to 93% while the regiment maintained its 100 per cent of qualifications in both machine rifle and machine gun firing for all three years. The rate of desertions improved 51.8% and at the same time re-enlistments increased from 29.2 to 48.9% in 1930. Best wishes of officers and men alike went with the regimental commander to his new post.

6th Cavalry, Ft. Oglethorpe, Ga.

The Regimental Class Troop A) departed from its home station by marching on March 23, 1931, en route to Fort Benning, Georgia, for concentration of troops of the Fourth Corps Area for combined maneuvers. The Regiment arrived at Camp Leonard Wood, Fort Benning, Georgia, on April 4, 1931. The march was made without particular incident. Total distance marched:—231 miles.

The period April 6-11, 1931 was spent on regimental problems with particular reference to reconnaissance and night operations. Maneuvers of units up to the division followed, ending May 1. It is estimated that the regiment covered approximately 400 miles during the above maneuvers.

The regiment departed from Fort Benning, Georgia, on May 4, to home station via Atlanta, Georgia. While there it participated in the Atlanta Horse Show, May 21-23. On May 26th the Regiment departed for its home station, arriving there May 30, 1931. Estimated distance of return march—261 miles.

7th Cavalry, Fort Bliss, Texas

The Seventh Cavalry spent the month of May in final preparation for and participation in the Division maneuvers to be held in the Sacramento Mountains. Preparation consisted mainly of conditioning animals and short practice marches, some at night, as the coming maneuvers will be continuous and troops will have to do most of their marching under cover of darkness. Afternoons will be devoted to preliminary rifle and small bore practice, all troops having completed their dismounted pistol work.

Two Gary Owen polo teams are tied for first place in the post polo tournament. In the senior division the "A" team, 2nd Lt. P. D. Harkins, Capt. H. G. Culton, Capt. T. E. Voigt, and Capt. C. L. Stafford, has not lost a game and is tied for first with the 82nd F. A. Team, and in the junior division, the team of 2nd Lt. H. H. Howze, 2nd Lt. T. F. Van Natta III, 1st Lt. L. L. Judge, and Capt. Kirk Broaddus is tied for first with the Division Headquarters and 8th Cavalry Teams.

9th Cavalry, Fort Riley, Kansas

A considerable number of personnel changes have taken place in the regiment this spring. Officers recently assigned to the regiment are: Majors H. D. Chamberlin, J. W. Barnett, N. E. Fiske, James G. Monihan; Captains W. T. Bauskett, Jr., James T. Duke, J. T. Cole, G. B. Guenther, and W. B. Bradford; 1st Lieutenants H. L. Kinnison, C. J. Meehan; and 2nd Lieutenants R. W. Curtis and T. F. Trapolino.

Effective June 19th, Lieutenant Colonel Adna R. Chaffee is assigned to the regiment for duty as Direc-

ter of the Department of Horsemanship. Major John Millikin is assigned effective on completion of the course at the War College. Captain R. T. Maddocks will join on completion of his course at the German Cavalry School.

Captain G. R. Huthsteiner has been ordered to the German Cavalry School and Captain R. C. Winchester to the Polish Cavalry School.

The following officers are detailed for duty in connection with training for the Olympic Equestrian Events: Major Chamberlin, Captains Bauskett, Cole and Bradford; Lieutenants Kinnison, Meehan and Curtis.

12th Cavalry, Presidio of Monterey, California

On April 10th the garrison held a Gymkana in the morning and a Horse Show in the afternoon on the new drill field recently constructed, which the Commanding Officer, Colonel Ben Lear has named Francis Moore Field in honor of the first Colonel of the Regiment.

The Regimental Polo Team is now playing a series of games at the Presidio of San Francisco with the Ninth Corps and civilian teams. The team is now composed of Lieutenants Jernigan, Harrison, Thornburgh, Trapnell and Justice. A West Coast Army Team composed of Major Wood, Lt. Thornburgh, Captain Kilburn and Lt. Matthews, 30th Infantry, won the Pacific Coast Inter-Circuit at San Mateo March 29th, defeating Midwick in the final game. A team made up of Lt. Jernigan, Lt. Thornburgh, Captain, Kilburn and Colonel Wilson won the 15 goal tournament April 12th at San Mateo, defeating Santa Barbara in the final game.

The regiment regrets the loss of Captains Hood, Jacobs, Everitt and Lieut. Trappell and welcomes Lieut. Colonel John Cocke, Majors R. E. McQuillan, H. Hermann, E. M. Barnum; Captains H. S. Beecher, S. Burg, H. H. Cameron, James S. Rodwell; 1st Lts. C. W. Feagin and H. W. Davison whose orders to join have been received.

12th Cavalry, Fort Brown, Texas

The 12th Cavalry, Colonel Francis W. Glover, commanding, completed annual spring maneuvers and field training on April 14. Commencing with a maneuver phase, the regiment less 2nd Squadron, stationed at Brownsville operated against the 2nd Squadron at Fort Ringgold. After a meeting engagement about half way between the two posts, the 2nd Squadron fought a delaying action against the regiment for about 10 miles. The entire regiment then took part in a series of field exercises. The Corps Area Commander, Major General Winans, with members of his staff, made his annual tactical inspection during the last two days, of the maneuvers and pronounced the regiment as "fit for field service" and "animated by an exceptionally fine spirit." The field exercises terminated April 11, when each part of the regiment returned to its station.

Captain R. H. Garity has been ordered from the Staff Department to the Advanced Class at Riley. Major Geoffrey Keyes, who has been in command of the 2nd Squadron has been ordered to the Ecole de Guerre. Major R. C. Rodgers will relieve him.

13th Cavalry, Fort Riley, Kansas

At 9:30 A. M., April 29th the regiment was assembled in the War Department Theatre to celebrate its 30th birthday.

An overnight practice march was made on April 23-24. The regiment less Machine Gun Troop and Troop "B" marched 16 miles to the farm of Henry Amthauer. The roads were very muddy and rain fell almost continually during the march.

First Lieutenants John W. Wofford and Earl F. Thomson have reported. Both officers are members of the Olympic Equestrian Team.

Colonel Walter S. Grant, Regimental Commander, is under orders to report to the First Corps Area as Chief of Staff, effective June 30th. He will leave the regiment on May 20th.

14th Cavalry (less 1st Squadron) Fort Des Moines, Ia.

The winter training season of the regiment was concluded with a detailed training inspection during the middle of April, the results of which were highly satisfactory. The coming months will be devoted to target practice, field training and preparation for summer camp.

On March 27th and 28th a Military Pageant was given at the post by the Regiment, assisted by the 2nd Bn. 18th F. A. and the ladies of the ladies riding classes. The demonstration by the monkey drill troop and cossack troop shamed the "Old Army" advocate into silence, and the drill and jumping was, we believe, the best.

Polo opened at Fort Des Moines with a good turn out and some excellent mounts in prospect.

Colonel Edgar A. Sirmyer, our Commanding Officer for the past three years has recently been relieved from assignment and assigned to Organized Reserve duty in Detroit. Lt. Colonel G. H. Baird, 14th Cavalry, assumed command of the Regiment upon the departure of Colonel Sirmyer.

305th Cavalry, Philadelphia, Pa.

The regular weekly meetings were held during April. Regimental Day was celebrated on April 17th by an exhibition ride and dinner. The ride was held in the First City Troop Armory at 6:00 P. M. It was followed by a steeplechase which was won by Lieutenant Bradway Brown. Colonel Forbes presented Lieutenant Brown with a beautifully decorated cup. The dinner was held at 7:00 P.M. in the banquet room of the City Troop Armory. Many distinguished visitors were present including Colonel Mayo from the 62nd Cavalry Division.

The regiment is now preparing for active duty training at Fort Myer from July 5th to 18th.

306th Cavalry, Baltimore, Md.

Instruction in equitation has been resumed at Fort Hoyle, Maryland, with larger attendance than last

year. It appears that the number who will avail themselves of this instruction is only limited by the number of mounts available. Due to the availability of a riding hall at Fort Myer, Virginia, instruction in equitation for the 2nd Squadron, 306th Cavalry, was continued all winter, and the approach of Spring served to increase the enthusiasm of those who participate in these rides.

At the regular conferences, in addition to the usual instruction, problems have been prepared and each student given a separate requirement. While this requires a great deal of clerical labor, it is believed that the increased interest of the students makes the scheme well worth while.

307th Cavalry, Richmond, Va.

Lieutenant Colonel William Henry Clifford, Cav.-Res., Commanding 307th Cavalry is spending some months abroad. Lieutenant Colonel Robert B. H. Begg is commanding the regiment during Colonel Clifford's absence.

The Regimental Standard presented to the 307th Cavalry Association has been received from the Quartermaster Depot in Philadelphia, Pa.

Applications for active duty training at Fort Myer, Virginia, August 2nd to August 15th are being received daily. From present indications the number of applicants for this training will be in excess of the authorized quota.

Second Lieutenant James T. Sims, Virginia Military Institute, Lexington, Virginia, has recently been assigned to the 307th Cavalry.

Eighteen members of the present First Class at Virginia Military Institute will be assigned to the 307th Cavalry upon graduation. Five of this group have applied for active duty training this summer.

Third Squadron and Machine Gun Troop, 307th Cavalry, Norfolk, Va.

The History of Cavalry during the World War was the subject of a conference given in Norfolk on April 16, 1931 by the unit instructor Major David H. Blakelock, Cavalry, (D.O.L.). The conference was well attended, thirty-second reserve officers and civilians being in attendance.

The members of the Norfolk Saddle Club were entertained on the night of April 30th with "The Life O' Riley" and two reels of motion pictures taken at the Italian Cavalry School. These pictures were received very favorably and the consensus of opinion of the civilians present was that the Italians have nothing on us.

The officers of the squadron are looking forward with much pleasure to active duty training at Fort Myer, Va., which will take place from August 2 to 15th. The regiment will train as a unit at that time and it is expected that the quota will be filled.

308th Cavalry, Pittsburgh, Pa.

The 308th Cavalry polo team won the Pittsburgh Polo League Tournament and cup with the loss of but one game to the 107th Field Artillery.

On Saturday, May 2nd they played the Mill Creek Riding and Polo Club of Youngstown, Ohio, winning 8½ to ½ and returning previous courtesies with a dinner before and a buffet supper after the game.

The regimental fund has bought a Webley Air Pistol for indoor practice which furnished those who attended the unit meeting on May 4th with some interesting entertainment.

Through the efforts of First Lieutenant Edward R. Ayres the indoor rifle range of the Spang Chalfont Company has been made available to the regiment on Wednesday evenings after the riding class. Many officers have availed themselves of this opportunity.

862nd Field Artillery, (Horse), Baltimore, Md.

This regiment is much pleased at being ordered again this year to Fort Hoyle, Maryland, for a period of active duty under the guidance of the Sixth Field Artillery with whom it has had the privilege of serving for the past two years. Already the quota is over subscribed.

Preparation has been effected through regular regimental conferences on technical and tactical employment of Horse Artillery, on Supply and in the Unit Mobilization Plan. Instruction in pistol marksmanship has been available weekly throughout the winter and in equitation each Sunday during the Fall and Spring months.

56th Cavalry Brigade, T. N. G.

The 56th Cavalry Brigade has just completed its annual Federal Inspection. The Brigade was inspected by Major Frederick R. Lafferty, Cavalry (DOL), accompanied by Captain Fred Ward Edmiston, Brigade Adjutant, as State representative.

The 112th Cavalry had a 100% enlisted personnel present for the inspection. This is the second consecutive year this regiment has attained this record. The 124th Cavalry had an average attendance of 90.8% for the inspection while the Brigade Headquarters Troop had 100% present.

Now that the armory inspection has been completed, all troops in the Brigade are preparing for the field training period—July 4th to 18th, inclusive. A three-day maneuver will be conducted during the camp period. Troops have equipped themselves, at their own expense, with ration packs and the U. S. P. & D. O. is getting the Brigade thirteen kitchen packs, Cavalry, which will be issued at camp. This means there will be no wheels during the maneuver and the Brigade will operate in real cavalry style.

The Instructors for the Brigade have planned a problem whereby the two regiments will operate against each other during the maneuver. Brigadier General Jacob F. Wolters, the Brigade Commander, will be the Senior Umpire assisted by Colonel P. W. Corbusier, Cavalry (DOL), Major J. R. Finley, Cavalry (DOL), Major Carl H. Strong, Cavalry (DOL), and Captain Frank H. Barnhart, Cavalry (DOL).

Lt. Colonel Innis P. Swift, Cavalry U. S. A. will report for duty as Senior Instructor to the 56th Cavalry Brigade sometime in June.

BOOK REVIEWS

My Experiences in the World War, by General John J. Pershing. Frederick A. Stokes Company, New York, 1931. Two Volumes. Illustrated. Cloth. 836 pages, indexed. $10.00.

No student of the history of the World War can neglect an account of it written by one of the Allied Commanders. As Commander in Chief of the American Expeditionary Forces, General Pershing has written an historical document which members of the military profession everywhere should read and absorb. In chronological form and in very interesting manner he describes the American participation in the World War from the view-point of the Commander in Chief, with emphasis on the questions of policy which his responsible position thrust upon him.

In the early chapters of his book General Pershing dwells strongly on the lamentable unpreparedness with which America entered the greatest conflict which the world has ever seen. While his criticism of this condition may be resented by some who were in responsible positions, the reader is impressed with the fact that the General's purpose is not to place blame, but to prevent recurrence.

The book is filled with quotations from the Commander in Chief's diary which convince the student that the facts are as stated, and not afterthoughts. General Pershing's account of the war is almost unique in that very little acrimoniousness appears in it. He mentions differences of opinion, but with an absence of vituperation which emphasizes the dignity of the author and his calm appreciation of values. The book indicates that General Pershing had a confidence in himself and in the capabilities of the American Army which never deserted him. This is one of the highest attributes of leadership.

The student of history (and particularly of American history) will be impressed with the lack of "politics" which existed during the World War. There were no "political" generals, as there were in the Civil War. The subordinate commanders stood entirely upon their merits. It is obvious that this system might cause hard feelings and perhaps a sense of injustice in some individuals affected, but it is the only system which will win wars in the shortest possible time and with the least loss in lives and treasure.

The absence of "politics" came from the support and backing which General Pershing received from the President and the Secretary of War. This support is nowhere more apparent than in the discussion of the use of the American Army in France. It is well known that the British and the French brought extreme pressure to bear in order to induce General Pershing to agree to the replacement policy which they advocated. By such means would have been gradually worn down. Pershing's efforts confined to the almost continuous [illegible] with the Commander in Chief; they included an appeal to his government over his head and behind his back. It required a leader of exceptionally strong character to stick to his soundly reached opinion when there must have been doubts that he might not be jeopardizing the allied success.

Much of General Pershing's book is concerned with his experience with the other allied leaders who insisted that the American Army be used only for replacements, that it be not organized as a separate command. General Pershing's decision displays that type of extra-military knowledge which every great military leader should possess. He knew that the temperament and national characteristics of the American people are such that they never would have consented to arrangements such as our Allies proposed, that it is not in our nature to play second fiddle or to be placed in a position in which American initiative and ingenuity cannot be utilized. General Pershing states that American morale would have suffered through contact with our Allies, who were then almost in a defeatist state of mind, and that differences in temperament, in language, in habits, even in language, would have added to the difficulties.

If General Pershing seems to overemphasize the problem of the status of the American Army it is because it was a troublesome and ever present one to him. Perhaps his stand had more to do with the position of the United States in the peace negotiations than will appear to the casual reader. Without the prestige acquired by American troops acting as a separate army, it is entirely possible that a peace might have been consummated which would soon again have involved the world in a conflict even more disastrous than the last one.

■ ■ ■ ■

The Rise of U. S. Grant, by Colonel A. L. Conger, U. S. A., Retired. The Century Company, New York, 1931. 377 pages. $5.00.

Here is a book on military affairs that occupies the same relationship to other military books that the slow motion picture does to the regular picture. Reading it is like being instructed by the slow motion camera. The step by step process of the making of a general officer is slowly and clearly unfolded before the eyes of the reader in a fashion that is not only unusual, but unusually interesting. Colonel Conger makes no attempt to write a complete biography of General Grant, but confines himself to the Civil War period of Grant's life, and more especially to the early part of the War, when Grant was an unknown and obscure officer in the west.

The bibliography used is most complete, but the author relies very little on General Grant's own Memoirs, written years after the event narrated, nor does he lean very strongly on the various contemporary writers, most of whom had a strong bias for or against Grant. He does, however, make use of the official records, and compels Grant to tell of his thoughts, actions, and mistakes, and the lessons that he learned from them, in his own written words.

The training of General Grant for his final command and responsibility was almost perfect. First we find him as the commander of a regiment of Illinois volunteer infantry, and concerned with his own immediate job of training and equipping. His experience in the Mexican War as a regimental quartermaster is of great help to him here. Then his promotion to brigadier general and larger responsibilities in Missouri. His aggressive spirit keeps him more or less continuously in trouble with his superiors, but they recognize his growing ability, and keep promoting him to larger commands and responsibilities. As a district commander with headquarters at Cairo, Illinois, he learns more of the art of being a commander, and also acquires more tact in dealing with both seniors and subordinates. He commands the expedition against Forts Henry and Donelson, and any tendency to get an exaggerated opinion of his own powers and ability is quickly squashed by the treatment afforded him by General Halleck. For a period here he learns to take abuse and injustice without quitting. During this time of enforced inactivity he gives considerable thought to the larger strategical problems of the war, and more especially the importance of the western theatre of the war as it applied to the economic situation of both the North and the South. We see the results of this period of thinking later on in his grand plan for the consummation of the war.

To the reader who seeks new light on the larger campaigns of the Civil War, "The Rise of General Grant" will not offer anything extraordinarily new. The author sticks to his main idea very closely, that is, the Rise of General Grant. Except for emphasis given to General Grant's strategical plans for the ending of the war, the Vicksburg Campaign, the Wilderness Campaign, and finally the operations around Petersburg, are given scant notice. It is the small battles early in the war in the West, and the gradual enlargment of commands and responsibilities that made Grant, upon which the author dwells.

The book is intensely interesting to a soldier because the teachings of loyalty, duty, devotion to ones command rather than self-advancement, are here brought out vividly and in a manner that all who are not blind can read—and benefit by. It was this part of Grant's character, in addition to his aggressiveness and common-sense, that enabled him to profit by the daily lessons taught by war, and rise above all the others to the supreme command of all the Armies of the United States. Your reviewer recommends this book to all officers.

■ ■ ■ ■

Marines and Others, by Captain John W. Thomason, Jr. Scribner's, New York. 1929. 290 pages. $3.00. Illustrated by the author.

This collection of ten short stories by Captain Thomason of the Marines is in his usual style. The illustrations are virile. The stories, mostly about Marines afloat and ashore, are written with the sympathetic touch of a man who knows the Devil Dogs, as they like to be called.

The titles of the stories, The Letter Home, Love Story of a Marine, Before the Rain, War Dog, Hate, Distinguished Service Cross, Tell It to the Marines, Air Patrol, The Marines See the Revolution, and Crossing the Line with Pershing, indicate their subject matter.

If you are looking for action, description, adventure and life—read "Marines and Others."

■ ■ ■ ■

Mount Vernon, by Minnie Kendall Lowther. The John C. Winston Company, Philadelphia, 1930. 282 pages. $2.00.

This little volume will serve not only as an excellent guide for a visit to present day Mount Vernon, but also contains much interesting information concerning its early history and that of the Washington family. It traces George Washington's ancestors and descendants, together with the several allied families, and tells the story of the Popes, the Warners, the Reades, the Martineaus, and the Balls, with the anecodotes and pictures of the old manors in which they lived. The story of Nelly Custis is feelingly told. In fact, the whole work is a work of love on the part of the author, who has apparently devoted years to careful research. As a result, it offers a compact compendium of information upon the genealogy of four of the most noted families of colonial times, the Washingtons, the Custises, the Lewises, and the Lees. The last part of the volume deals with the mansions of Abingdon, Woodlawn, Audley, Arlington, and the White House on the Pamunky.

In view of the approaching celebration in commemoration of the two hundredth anniversary of the birth of Washington, "Mount Vernon" should prove of value and interest to many readers.

■ ■ ■ ■

Best Short Stories of the War, edited by H. C. Mincin. André Maurois, Arnald Zweig, and Coningsby Dawson. Harper's New York. 1931. 826 pages. $3.50.

This anthology is made up of sixty short stories selected from American, British, French, and German writers. Some few are extracts of novels.

"Fine writing" and ability to move one to pity seem to be the main tests applied by the editors in making their selection. The collection would be infinitely more entertaining—and that, in the final analysis, is why one reads short stories—if it contained more stories written in the lighter vein.

Craftsmanship and short story technique they all possess, and are therefore good models for study for those who try their hand at writing.

Cavalry in European Armies

(Continued from Page 37)

regiment and 1 armored car squadron; then as units belonging to the corps, 1 horse artillery regiment, a few motorized batteries, armored cars and 1 bicyclist engineer battalion.

Switzerland: In spite of the fact that the country is chiefly mountainous it has a comparatively strong force of Cavalry, that is to say, 6 regiments, each having 3 squadrons of cavalry with 6 light machine guns, and 1 machine gun squadron with 6 heavy machine guns. These are organized into 3 cavalry brigades, which in addition have one cyclist battalion. Switzerland does not have any horse artillery. Field artillery batteries are assigned to the cavalry brigades, which naturally also is a disadvantage.

In addition to this, that are 6 dragoon detachments of 2 squadrons each, which are to be assigned as regimental cavalry for the 6 infantry divisions.

As everybody knows, Switzerland has the militia system, in which the cavalrymen are trained for only 3 months and then go home with their horses, harness and weapons. The soldiers must naturally come to the maneuvers and to war with these horses.

Austria, the organization of whose army was prescribed by the Treaty of Peace, has only very little Cavalry, that is to say, 6 independent squadrons with 2 heavy machine guns each. These 6 squadrons form the Cavalry for the 6 mixed brigades.

Hungary, whose army organization is also limited by the Treaty of Peace, nevertheless has a comparatively strong force of Cavalry, because the topography of the country is very favorable, there are many fine horses in the country, and the Hungarian is a born rider.

There are 4 Hussar regiments of 2 squadrons of Cavalry and 2 machine gun squadrons each. The cavalry squadron has 2 light machine guns, the machine gun squadron 6 heavy machine guns; the regiment also has 1 engineer and 1 telegraph section.

In the year 1928, 2 cavalry brigades were organized, for which, however, there is only one horse artillery battalion available. Every brigade also has 1 bicyclist battalion.

Bulgaria has 3 cavalry regiments, each of 4 cavalry squadrons and 1 machine gun squadron.

Greece has 4 cavalry regiments, each of 3 to 4 cavalry squadrons and 1 machine gun squadron, which are combined into 2 cavalry brigades.

A Long March to Battle

(Continued from Page 39)

get my men to their horses as soon as possible and fall behind the second line of defenses. Skirmishing is going on now with the enemy and our Infantry.

* * *

The engagement on May 28th described in the last letter, above, was known as the Hawes' Shop Fight.

This regiment also took part in the following battles and engagements during the Virginia Campaign of 1864: June 11th & 12th, Trevillian Station; June 20th, White House, on York River; June 24th, Tamaria Church; June 25th, Nance's Shop; June 26th, Battle near Stoney Creek; July 5th, Riddle's Shop; July 9th, Sappony Church; August 23rd, Gravelly Run; August 25th, Rheam's Station; Sept. 16th & 17th, Cattle Raid near James River; Sept. 29th, Vaughan's Road; Oct. 1st, Cumming's Farm; Oct. 27th, Boynton's Plank Road; Dec. 14, 15 & 16th, Raiders on P. & W. R. R.

In order to account for the greatly reduced strength of the Regiment when ordered into action after its arrival at Richmond, an extract from a narrative report written by Colonel B. H. Rutledge shortly after the war is quoted:

"Upon reaching Richmond further difficulties occurred; the Richmond shops were overburdened with work. The shoes, bad in themselves and badly and hastily put on, had, nearly all of them, been lost. The horses were lame and foot sore. The arms of the men also had been forwarded by rail (for the purpose of lightening the horses) and there was considerable delay and difficulty in getting them from the railroad: much trouble also occured in redistribution, as the calibres were different at that time and it was requisite to have particular kinds of arms in particular companies.

"The pressure for troops was great at that especial period, and a portion of the Regiment, some three hundred and fifty men, with the best horses and arms, were hurried on to the North Anna River, where the Army of N. Virginia was then operating. It reached the North Anna on one day's march, and bivouacked for the night on the banks of that stream. At daybreak the next morning the Army of N. Virginia fell back and these troops were joined with the Cavalry of that army, under General Wade Hampton, and marched rapidly towards Hawes' Shop for the purpose of feeling General Grant and developing his position."

The United States Cavalry Association

Organized November 9, 1885

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With the Mechanized Force on Maneuvers

By Captain Arthur R. Wilson, Field Artillery

THE May-June issue of this Journal contained a discussion of the present organization and equipment of the Mechanized Force, which under War Department orders will soon be reorganized as a reinforced mechanized cavalry regiment. Although the missions of the reinforced mechanized cavalry regiment have not yet been announced, it may be assumed that they will closely parallel those of the present Mechanized Force, and that the internal tactics that have been developed so far within the Force will be carried over into the new unit.

The primary mission of the Mechanized Force, as laid down by the War Department is, "To provide higher commanders with a powerful weapon of tactical and strategic opportunity, where the mission indicates the desirability of employing a force whose characteristics are high tactical and strategic mobility, hard hitting power, high mobile defensive power, limited holding power, and one which is capable of sustained independent action."

The effective employment of the Force, the War Department points out in a discussion of its tactical role, "is limited by certain terrain features. Careful consideration of the proper tactical missions to be assigned to it and to be assigned to neighboring troops, is, therefore, constantly necessary. * * * It is believed that its principal role will be the execution of those tactical missions presenting an opportunity for a force capable of high tactical and strategical mobility, and hard, quick, striking power. * * * Its ability to crush its way forward over highly organized ground in the face of stabilized resistance is secondary."

This conception of a mechanized force is based on its being provided with modern equipment which will give it great strategical mobility and considerable tactical mobility on favorable terrain. The present equipment of the Force, most of which will probably be included in the new regiment, leaves much to be desired: many of the vehicles, for example 1917 tanks, tank carriers, and Model 1919 self-propelled guns, are obsolete and unsuited for the purpose for which they must be used. But any unit, whether it is the Mechanized Force or a reinforced mechanized cavalary regiment will have to act as a field laboratory for the development of weapons and vehicles suited to its use. Tactical doctrine should not be predicated on vehicles available: rather the place that mechanized forces will have in the Army and in the general scheme of national defense should first be decided upon, and then vehicles and weapons developed and built with which the unit can satisfactory fulfill its given missions. Furthermore, any type of organization that is set up will undoubtedly have to be changed from time to time to meet the requirements of changed conditions brought about by improvements in motor vehicles and in weapons.

Mechanization has been defined as, "The application of mechanics directly to the combat soldier on the battlefield." But it is more than that; for in addition to applying mechanics it applies armor. It might be said then, that mechanization, from the military standpoint, is the combining of armor protection, fire power, and mechanically propelled mobility, to the combat soldier on the battlefield. A mechanized force or a reinforced mechanized cavalry regiment is an organization that combines those qualities. Such a force is mainly offensive. Its principal value lies in its *mobility*. Its success depends upon *shock*, which is secured by its speed and armor, and upon *fire power*, given by its large number of automatic weapons and its artillery.

To constitute a mobile unit in the hands of an army or a corps commander, the force must have strategic and tactical mobility. Strategic mobility includes the ability to cover long distances on roads; therefore the present vehicles of the force that are not built for high road speeds are transported on carriers equipped, whenever possible, with pneumatic tires. Tactical mobility is the ability to maintain the power of maneuver in battle and on ground leading up to the battlefield. For a mechanized force it must contemplate cross-country movements over trenches, ditches, small streams, broken ground and artificial obstacles. The Force has caterpillar vehicles and light cars which are capable of such movement.

With these facts in mind it may be interesting to follow the Mechanized Force on a strategical and tactical march and see how its elements are used in an attack. The most interesting of the many maneuvers held so far was one that demonstrated the ability of the Force to cover long distances on a strategical and tactical march, and to go into combat at the end of the tactical march. The two-day problem of June 16 and 17 is the most extended that has been undertaken: it took the Force on the 16th on a march from Fort Eustis to Camp Lee, near Petersburg, Va., and on the 17th from Camp Lee to Yorktown where it went into combat.

The Strategical March

The march from Fort Eustis to Camp Lee, via Richmond, was a purely strategical march to place the command in army reserve; it covered a distance of about 90 miles. For marches not in the presence of the enemy the Force uses a marching formation which has been adopted for ease of control in marching and for maximum flexibility in order that the best speeds may be secured and the concentration of vehicles on the road may be reduced to a minimum. The usual convoy rules which have been practiced and adopted in motorized elements of our Army are followed. In this formation the Force marches in the following order:

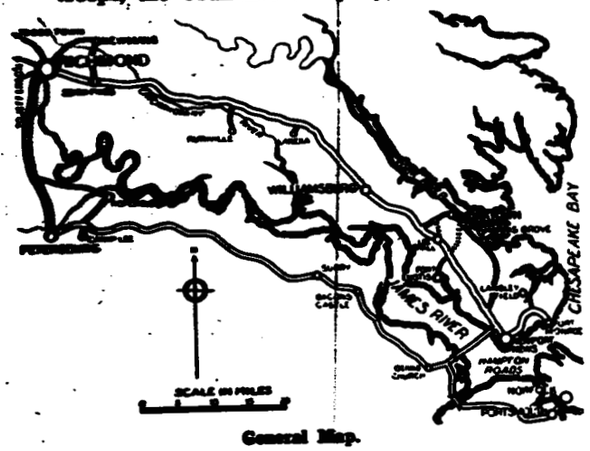
(a) The *light group* consisting of the Armored Car Troop and the Machine Gun Company, with a traffic control section of one officer and three enlisted men all mounted on motorcycles, attached.

(b) The forward echelon of Force Headquarters cruises in the interval between the light and heavy group.

(c) The *heavy group*, which follows the light group at a distance of from zero to one hour, and comprises the Engineer Company and the Tank Company.

(d) The *gun group* follows at a distance of from zero to ten minutes and consists of the Field Artillery Battery, Chemical Detachment, and Antiaircraft Platoon.

(e) The *Trains* follow at a distance of from zero to ten minutes. They include the rear echelons of Force headquarters and of all combat troops, the Ordnance Company, and the Medical



General Map.

Section. A radio truck from Force headquarters is attached to the Ordnance Company in order that the Force commander may be apprised of any serious accident or forced elimination of a vehicle from the column.

Within groups the senior line officer of the group commands; and he can specify a general distance for his vehicles as about so many yards or so many telegraph poles between vehicles. When the groups halt at concentration points they habitually close into sections of five or six vehicles with half a vehicle length between trucks, and 20 to 30 yards between sections. A halt is made at the end of one hour and thereafter every two hours. No halts are for more than 15 minutes. The Force commander orders concentrations at particular points or at specified hours; and he may specify the rate of march or it may regulated by the leading group, usually the latter. In restricted areas the convoys are usually closed to one truck length to facilitate marching. Efforts are always made to have state or city motorcycle police escort the Force through cities. Contact between groups is the responsibility of the group in rear, and this is maintained by radio and by motorcycle messenger.

In all of our formations on the road we deal in distance in units of time rather than in miles. It is more appropriate for the Force and easier for the organization commanders to know that they are to march at a certain rate of speed and at intervals of so many minutes than it is to say that they should be separated by so many yards or miles.

The Force left Fort Eustis at 7:00 A. M. and at 11:00 A. M. had concentrated on the outskirts of Richmond where it halted for 45 minutes for a motorcycle escort. At 1:30 P. M. it arrived at Camp Lee and the units were assigned bivouacs in a wooded area. Most of the march was made in a very heavy and continuous rain but there were no accidents and all vehicles reached Camp Lee under their own power. The distance marched was 91 miles in an elapsed time of six and one-half hours, or an average of 14 miles per hour. The total actual running time was five hours, or an average speed of about 18 miles per hour.

The General Situation

Having arrived in the area designated for the army reserve of the Blue army, the Force concealed its vehicles and bivouac from possible air reconnaissance. In the problem, Virginia (Blue) was at war with Maryland (Red). The Virginia army had suffered reverses and withdrawn south of the Chickahominy and James Rivers, where it held the line Ruthville-Richmond-Jefferson. The invading Maryland army was stopped on the line Lanexa-Newmans-Dogtown. Large Blue installations, including a mobile air base (at Langley Field) were on the lower Virginia Peninsula; and these were to be moved to the south side of the James River under cover of a reinforced Blue brigade which was holding a line through Lee Hall and had its headquarters at Fort Eustis. The Virginians had air supremacy and the Blue navy controlled Chesapeake Bay.

Late on the afternoon of June 16th the Blue army commander, who had his headquarters in Petersburg, received information that a Red division was moving south through Williamsburg with a view of capturing the installations on the Lower Peninsula, which he had expected to be able to move to the south of the James River by June 20th. At 2:30 A. M., June 17th, the army commander informed the commanding officer of the Mechanized Force that the Red division would doubtless attack the Blue brigade at daybreak. He expected to be able to move to the south of the James River Bridge, to reinforce the Blue brigade to enable it to make a counter-offensive and drive the enemy back to Williamsburg. At 3:00 A. M., a warning order was published directing that the reconnoitering detachment be ready to march at 3:45 A. M., the main body at 4:00 A. M., and the trains to await orders.

The Tactical March

At 3:30 A. M. Colonel Van Vorhis issued a field order giving the general situation and directing that the Force march at once via Virginia Highway No. 10-Benns Church-James River Bridge on Yorktown to reinforce the 1st Blue Brigade in a counter-offensive. He directed the reconnoitering detachment rapidly to gain the north bank of the James River and reconnoiter all routes to the line, Yorktown-Halstead's Point-Lee Hall, and connect with the 1st Brigade; the main body to march at a rate of 15 miles per hour, and the trains to await orders at Camp Lee.

At 3:45 A. M. the reconnoitering detachment left Camp Lee under lights, followed by the main body at 4:00 A. M., just as day was breaking. The Force took up its tactical march formation, which is used when operating in the presence of an enemy and is designed for security and to facilitate the entry of the Force into action. In this formation the elements are disposed as follows:

(a) The *reconnoitering detachment*, consisting of the Armored Car Troop, less one platoon, and an engineer reconnaissance section in light cars.

(b) Then follows the *advance guard* consisting of the Machine Gun Company, (less one platoon), and one platoon of armored cars. In this particular case the advance guard left immediately after the Armored Car Troop, but allowed the reconnoitering detachment to gain distance on it. In some cases, the reconnoitering detachment may precede the advance guard by from two to five hours. If it is considered necessary an engineer reconnaissance detachment is also attached to the advance guard. This may be desirable if the armored cars precedes the advance guard by several hours, as the condition of bridges, roads, and the like, may change as a result of the enemy's air activities. If the elements have to pass through congested areas a small traffic control section is attached to the advance guard.

(c) Next comes the *Force Commander's group*, consisting of the commanding officer, S-2, S-3, the Signal Officer, and the message center section of the signal platoon. This section, all in passenger cars, usually moves in the interval between the advance guard and the main body, but may go forward with the advance guard when action is imminent and the Force commander desires to get first-hand information of the enemy.

(d) The *main body*, under command of the executive officer, is distant from the advance guard from ten to 30 minutes. It marches in three sections, with intervals of from one to five minutes between sections. The first section consists of the forward echelon of Force Headquarters (less the Force Commander's group), one antiaircraft squad, the Tank Company, and the Engineer Company, less such reconnaissance detachments as may be with the reconnoitering detachment and the advance guard. The second section, or gun group, consists of one antiaircraft squad, the Field Artillery Battery, the Chemical Detachment, and one machine gun platoon. This machine gun platoon may be used as a flank or a rear guard.

The third section, which is the *Combat Train* comprises one antiaircraft squad, one platoon of the Ordnance Company and the Medical Detachment. If necessary, a detachment of the Supply Platoon of Headquarters Company, with only such vehicles as are necessary for the specific mission, is attached to this section. The Ordnance Officer and a trouble man ride in the interval between the second and third sections to diagnose the trouble on any vehicle that may have been forced from the moving column. The time interval between these sections is simply to facilitate marching.

(e) At the operating base in the *Base Group* which includes: the rear echelon of Force Headquarters (S-1, S-4, and the Supply Officer), the rear echelons of all combat units, the Ordnance Company (less one platoon), the Headquarters company (less detachments) and the supply vehicles of all other organizations. Since this march the Quartermaster Motor Maintenance Section of one officer and fourteen men has joined the Force. It will take its place with the Base Group and will march at the tail of the column in Formation A.

For brevity the tactical road formation is known as "Formation A" and the strategical formation as "Formation B." The most vital thing in the force is control of the various units. The feature of control can be improved by having normal formations which will cut down the necessity for actual means of control. Signal Plan A, which disposes the various radio vehicles with various units, goes with Formation A; and Signal Plan B normally goes with Formation B. As we progress in tactical development, the normal tactical formations of the Force will probably also be designated as set formations.

From a comparison of the strategical and tactical marching formations it can be seen that there is very little maneuvering necessary in changing from one formation to the other. If from a strategical formation it is desired to take up the tactical march formation, the Armored Car Company moves to the front and splits, three platoons going to the reconnoitering detachment and one to the advance guard; the Machine Gun Company sends one platoon to the gun group; the three accompanying self-propelled guns from the Field Artillery Battery go to their respective tank platoons; the Engineer Company sends whatever reconnaissance detachments are called for; the Antiaircraft Platoon splits into squads, one going to the head of each section of the main body; the Ordnance Company splits between the tail of the main body and the base; and the Medical Detachment moves up to the end of the combat group.

Tactical Uses of Various Units

Before going into the approach march and attack of the Force it will be well to summarize the missions and tactical uses of the various elements.

The armored cars provide the ground reconnaissance element for the Force, and their missions include distant reconnaissance and counter reconnaissance, security, liaison, battle reconnaissance by developing the flanks and determining the enemy's position, exploitation of the success of the Force, and covering rallying and withdrawal. It is assumed that the Force will normally have air observation to supplement the work of the armored cars. The planes can tell the armored cars where the enemy is, but cannot keep contact with the enemy or keep him under surveillance; and it is the duty of the armored cars to confirm and supplement this information, and to keep contact. There must be the closest cooperation between the two, and this can be kept up not only by direct communication between the armored cars and the planes, but between the air unit and the Force Headquarters, and thence to the armored cars. When the enemy is located it is the mission of the armored cars to keep contact, determine his flanks, and develop his position. If necessary, they have sufficient fire power to make him deploy.

The Machine Gun Company takes care of the usual missions of an advance guard and provides security when on the march. During the attack it must be prepared to take over conquered ground promptly, hold it, and exploit the success further if possible. A tank is vulnerable when halted in a zone of hostile fire, and a position once taken cannot be held by tanks alone. When the tanks have reached their objective, the machine gun company follows to the limit of the tank attack, takes up the best defensive position, temporarily consolidates it, holds, and covers the reassembly of the tanks for the next thrust. In addition to the power of its own automatic weapons and the protection of its own riflemen, it is supported by the artillery and the chemical detachments, and perhaps by the engineer company which may construct artificial obstacles. If the ground is to be held for any length of time it should be taken over by other units.

The Tank Company is the shock element of the Force; all other units are auxiliaries to it. Its attack is launched at the enemy's key position. It normally goes into action with two platoons of three fighting tanks each in the front line, and one platoon of three fighting tanks and the radio or tank commander's tank in reserve. Each platoon normally attacks in line with intervals of 100 yards between tanks, which gives a front of 500 or 600 yards. With each platoon is one self-propelled 75 mm. accompanying gun from the Field Artillery Battery.

The tractor-drawn portée Field Artillery Battery is used in the normal role of supporting artillery, but at much closer ranges than has been the custom in supporting foot or horsed units. However, the very close artillery support as well as the tactical dispositions of all other units of the Force, have been largely dictated by the limited areas of terrain which have been available for maneuver.

To facilitate command the Chemical Detachment is usually placed near the supporting artillery as a part of the gun group. It may be used to fire smoke to assist the tank attack or to blind antitank weapons, or it may fire high explosive shells.

The Antiaircraft Platoon splits as described above when on the march and pulls out of column to go into action. When the Force is attacking, it takes up a position to protect the carriers. In addition to the protection offered by this platoon, each vehicle in the Force is to be provided with automatic weapons for defense against low-flying airplanes.

In addition to providing detachments for road reconnaissance and doing the inevitable field engineering that goes with any force, the Engineer Company may be used to provide ground security for the carriers or at the termination of an attack to construct artificial obstacles and put up wire to aid the machine gun company in consolidating and holding a position taken by the tanks.

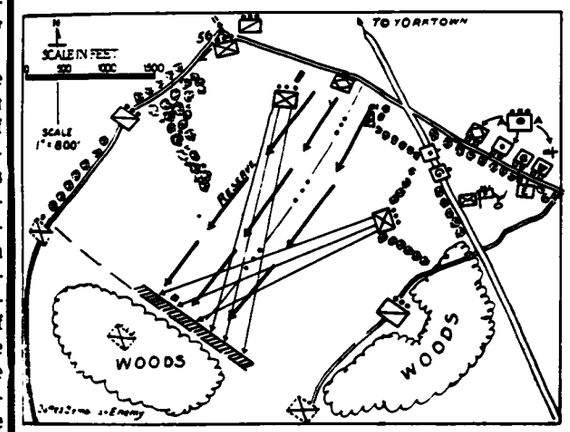
It is the carriers that tie the hands of the Force commander at the present time. With the present equipment he always has to be thinking in terms of protection of his carriers; he is forced to base his maneuver on the protection of this dead weight in its park. It is similar to the led horses in the Cavalry—the burden increases as the distance between the carriers and the fighting force increases. For this reason the carriers are pushed as far forward as possible before the tanks are detrucked. The detrucking of track-laying vehicles is a great handicap to the mobility of the Force. High mobility implies that there shall be no time lost in deploying. The Force should be able to go directly from its march to its approach and combat formations without loss of time. With carriers, the tanks are delayed in unloading at a critical time between the march and approach formations. They are stationary on the road while unloading, and are very vulnerable at that time to air attack and artillery fire. Not only is there the problem of defense, but the problem of parking is a great one. The large tank carriers take room; it takes 47 feet of radius to turn one. They have practically no cross-country ability, therefore the tanks have to be unloaded near good roads.

Entry Into Combat

On the march into the maneuver area near Yorktown, the armored cars reconnoitered the road to the James River Bridge and reported by radio a bad stretch of road about 200 yards long six miles west of Surry. The main body was delayed one hour in this stretch of clay which had been recently plowed for road construction and was soft from the rains of the night before. It was necessary to unload all tanks and have them pull the carriers through. All other vehicles except the tank carriers negotiated the bad stretch without trouble.

After crossing the James River Bridge the armored car platoons reconnoitered all roads leading up the

Peninsula, located the enemy's outposts, and the troop commander reported to the headquarters of the 1st Blue Brigade at 7:00 A. M. At 8:00 A. M. he was given a situation map showing the enemy's dispositions, and information that the Red division had attacked at daybreak with the main effort directed at Halstead's Point and was evidently trying to envelop the right of the Blue brigade. The brigade commander directed the Mechanized Force to seize Yorktown and the high ground in that vicinity. An airplane from Langley Field, attached to the Force for the maneuver, hooked the map and message from an armored car at Fort Eustis at 8:00 A. M., and by 8:10 A. M. dropped them to the Force Commander. He was directly across the James River from Fort Eustis near Bacon's Castle, moving toward the James River Bridge, but was more than 40 miles away by road. With the situation to date in his hand, the Force Commander radioed the plane at 9:00 A. M. to direct the trains at Camp Lee to march to the James River



Special Map.

Bridge. The message was dropped from the plane to the trains.

By 9:40 A. M. the main body had reached the south end of the bridge, and there the Force Commander received additional information of the enemy from the Blue brigade commander, who directed an attack on the enemy's left and rear. The advance guard established a march outpost at the north end of this four and one half mile bridge, and by 10:00 A. M. the main body had crossed and started its advance on Yorktown. From that time on he received continuous information from his armored cars, both by radio and by motorcycle messenger. The enemy was outlined by dismounted men.

At 10:20 A. M. the advance guard made contact with the armored cars two miles south of Yorktown. The Force Commander, now with the advance guard, received the latest information of the enemy which stated that it was a strong flank guard of a division which was in position prepared to deny the advance of the Blue brigade. He decided to attack at once, and immediately sent word to the main body to concentrate at Harris Grove, prepare for action, and the organization commanders to report to him. Upon their arrival the Colonel, after giving the situation up at that time, issued his attack order as follows:

The Force deploys to attack at once.
Preparation for action on that road (pointing to dirt road), carriers remain in place.
Line of departure: This road (the macadam road) from this point to the west edge of that field (pointing to the enemy outlined).
Direction of attack: South, pointing.
Time of attack: At my order.
First objective: The hostile position at the edge of the woods.
Main effort: The tank company less one platoon, which will remain in reserve on this road.
The advance guard will support the attack from its present position until its fire is masked, then load and prepare for forward displacement.
Battery and Chemical Detachment support the attack from initial positions on that road near the corner of that field (pointing).
The Engineers in reserve at the carriers and provide ground security for the carriers.
Antiaircraft provide security for the carriers and for the C. P.
Service elements at BM 64.
C. P. in the edge of that woods (pointing). I will remain here.
Any questions?
Move out.

The armored cars had developed the enemy's flanks and had a platoon in observation on each side and one north of RJ 56 guarding the approach from Yorktown. The Machine Gun Company had gone into action, two platoons each with a cross fire on a half of the enemy's line, and one platoon covering the north flank of the Force. The tanks attacked at 11:15 A. M., the two platoons striking at the center of the position. When they had nearly reached their objective the reserve platoon was thrown in to extend the line to the right. The tanks, attacking over a stretch of about 1000 yards, were exposed to hostile fire for about three minutes. As soon as the first objective was reached the Force Commander received word by radiophone. He then ordered the tanks to reorganize and pursue the enemy through the trees to the back Yorktown road: the machine guns were ordered to take over the ground, and the battery and chemical detachments to displace forward in order to follow the tank attack and be prepared to give close support. He went forward in an armored radio car to the position that was being consolidated. The machine guns were loaded into their carriers, these ran across the field to the former enemy line where the machine guns again went into position. The Field Artillery Battery and the Chemical Detachment followed closely, prepared to go into action again. All objectives having been taken and the enemy dispersed the Commander ordered the tank and artillery carriers to move forward by the road: Yorktown road, RJ 56, back road to Yorktown, and entruck the track laying vehicles for possible further movement.

Conditioning Horses

By Captain William H. Dean, Veterinary Corps

IN considering the subject of conditioning horses for any contemplated work, I would first like to define the term "in condition," as it is understood by the author. For practical purposes a horse is in condition when he is in that state of physical fitness that enables him to perform satisfactorily and without injury the work for which he is conditioned.

It must be realized at the start that it is impossible to prescribe any rule of thumb method of training for all horses. There are, however, certain underlying principles which should govern and which must be followed generally to assure success. The purpose of this article is to set forth and discuss briefly these general principles. Let me caution that each horse which is to be conditioned must be treated as an individual. In conditioning horses, as in any other undertaking, a blanket hit and miss method of training is doomed to failure.

Selection of Horses

Often it is impossible to select horses for any particular contest. We must use those which we have in our military organizations. Where selection is possible, always choose a serviceably sound horse of good conformation and see that the horse is of the type necessary to perform the particular work which he will be called upon to do. One of the most important points of conformation to secure is a long, sloping shoulder. A straight shoulder will often result in undue strain and injury to the horse in prolonged hard work.

There will be no attempt made to define what we understand by "good conformation." This is of general knowledge to all horsemen and varies in different types of horses.

Age of Horses to be Conditioned

The age of horses influences the kind of training and the length of time necessary to put a horse in condition. As a rule, the younger the horse the longer it takes to condition him. After a horse has once been "*in condition*" and let down for several months, it is much easier to again put him in condition than one that has never reached this stage of physical fitness.

Young, immature horses require more time and careful work than mature horses. By young horses, I mean those from three to six years of age. When horses have obtained their maximum growth, which averages around six years, the bones of the legs have developed sufficiently to permit hard work. They may, therefore, be given harder work and can be put in condition in a much shorter period of time.

Care and Feeding

I prefer always to feed grain four times a day. It does not matter whether the horse is getting six pounds of oats or twelve, it is preferable to divide his daily allowance into four parts, the largest amount of grain being given at the last daily feed.

I believe the horse will obtain more nourishment from the same amount of grain divided into four feeds daily, than if fed a like quantity in three. In this way the stomach is seldom, if ever, overloaded: this allows the grain to remain in the stomach a sufficient length of time to permit the stomach and gastric juices to act properly on the food before it passes on into the intestines for further digestion and absorption by the blood.

A small amount of hay should be fed one-half hour before the grain feed in order to take the edge off the appetite and start the flow of gastric and intestinal juices. However, the bulk of the hay ration should be fed at night to allow the horse plenty of time to eat and to properly digest his food.

The amount of feed prescribed for each individual horse will vary. Some horses will keep fat on six pounds of grain and other horses of the same size will remain thin, no matter how much you feed them.

The importance of water cannot be overestimated. Horses should be watered at least four times a day, or better than this is to keep water in the stall at all times.

Condition of Horses to Start Training

Horses should be in good flesh at the start of conditioning, as it is very difficult to build a horse up in flesh and condition him at the same time. *It is much easier to convert fat into muscle than to build up muscle from feed and work.*

Amount of Work

The amount of work necessary to condition a horse will depend on many things, *i. e.*, whether he has been having a reasonable amount of exercise regularly, standing idle in a stall, or been in pasture. Of course, a horse that has been in a stall or on pasture will require more time than one that has been doing regular troop duty.

The following is the schedule of training I prepared for the conditioning of horses for the 2d Cavalry, 13th Cavalry, Battery "D", 18th Field Artillery, and Academic Division of The Cavalry School in preparation for a one hundred mile march which was to have been made in twenty-four hours.

This was submitted as a guide and was followed except on days when tactical demonstrations were staged by these organizations for the Cavalry School. In some instances the work on these demonstrations was more than the training schedule called for and sometimes less.

The one hundred mile march was made very successfully in twenty-three hours and ten minutes.

The following is the schedule for draft horses, riding and pack:

Conditioning for Draft Horses. Since the first of February animals in the battery had an average of about ten hours per week in harness, so that all animals were fairly hard but a bit fat when training for the forced march began. On all marches particular attention was paid to road discipline and to the care of animals at the halts. Enough draft over soft rolling terrain was given to insure building up the hind quarters and loins. Water and salt were available at all times in the corral. When the animals were tied in they were heavily bedded and the mangers kept filled with hay. Grain was fed four times a day. One-half bale of alfalfa per section was fed the first three days, then increased to three-fourths bale for ten days, and finally to a bale until three days before the march when prairie hay alone was fed. The following schedule was used as a guide:

1st Week.
2 hours daily over level roads with one 5 minute trot period in each hour.
Equipment: stripped saddles.

2nd Week.
2½ hours daily over rolling roads with one 7½ minute trot period in each hour.
Equipment: stripped saddles.

3rd Week.
2½ hours daily over rolling roads with two 6 to 7½ minute trot periods in each hour.
Equipment: stripped saddles.

4th Week.
3 hours daily over rolling roads and open fields with two and three 7½ minute trot periods in each hour.
Equipment: Caissons loaded with sand.

5th Week.
3½ hours daily over rolling roads and open fields with three and four 5 to 7½ minute trot periods in each hour.
Equipment: Caissons loaded with sand.

6th Week.
3½ and 4 hours daily, over rolling roads and open fields with three and four 6 to 7½ minute trot periods in each hour.
Equipment: full load on carriages.

7th Week.
3 and 4 hours daily over rolling roads and open fields, with three and four 6 to 10 minute trot periods in each hour. Three days of week only.
Equipment: full load on carriages.

Horses were given rest all day Sunday.

The conditioning period for pack and riding horses of the 2d and 13th Cavalry was approximately seven weeks, and the following schedule was used as a guide:

1st Week. Mar. 9 to Mar. 14.
2 hours slow work at a walk daily with one 5 minute trot period in each hour.
Equipment: stripped saddles.

2nd Week. Mar. 16 to Mar. 21.
2½ hours daily slow work at walk up and down hills (not too steep) with two 7½ minute trot periods (1 each hour).
Equipment: stripped saddles.

3rd Week. Mar. 23 to Mar. 28.
2½ hours daily slow work at walk up and down hills with two 7½ minute periods of trot each hour.
Equipment: Began at this time to gradually increase the amount of load carried.

4th Week. Mar. 30 to Apr. 4.
3 hours daily slow work at walk with three 7½ minute periods at trot each hour. Additional parts of the full pack were added during this week.

5th Week. Apr. 4 to Apr. 11.
3 hours daily with four 7½ minute trot periods during the work hours.
Equipment: Field pack was carried at this time. A march of 20 miles was made on April 9th.

6th Week. Apr. 13 to Apr. 18.
3 hours daily with four 7½ minute trot periods each hour.
Equipment: Full pack.
One march of about twenty-two miles in three and one-half hours was made on April 15th, and twenty-nine miles in four hours and fifteen minutes was made on April 18th.

7th Week. Apr. 20 to Apr. 22.
3 hours daily with three 7½ minute trot periods.
Equipment: Full pack.
Horses were given complete rest on Sundays and one hour under the pack Saturdays.

The above outline of training was prepared especially for military horses that on the march should not move faster than a trot, except in emergency when it may be necessary to gallop.

Indications of Condition

Of course the ultimate test of condition is the ability of the animal to pass a test without undue fatigue.

There are, however, certain indications of the condition of a horse which may be readily recognized. A horse in good condition presents the general aspect of good health. He has alert eyes and ears; a fine glossy coat; soft, flexible skin; good, supple muscular development; well let down in the flanks; a good covering of flesh; a watery sweat which does not lather; lack of undue thirst after hard work; a quick return to normal breathing after severe exercise; a good appetite, and a free, supple, springy gait.

The tendons and joints should be smooth and clean, and the legs should neither puff nor swell after hard work.

Summary

1. The transformation of fat, flabby flesh into hard, tough muscle cannot be forced.
2. Each horse presents an individual problem in feeding and exercise.
3. In the beginning work should be light and feed small.
4. The rate at which work and feed may be increased depends upon the response of the individual horse.
5. Exercise should be light at first and increased as the animal grows stronger.
6. Exercise should never be such as to cause undue fatigue.
7. Tired, overworked muscles are often the cause of sprained tendons or ligaments.
8. Too much fast work runs off flesh and does not change soft flesh into muscle.
9. Treat your horse as you do yourself and you won't be far wrong.
10. The sole recipe for conditioning is a judicious combination of sufficient good food and sufficient healthful exercise, continued over an extended period.

Logic

From the British Cavalry Journal, October, 1930

I.

THE six-wheeler gave one last despairing roar as she topped the rise and took the down gradient on the far side; the driver changed gear with a crash like the slamming of a steel door, and conversation once more became possible.

"There you are sir, that must be Cavalry Division Headquarters, them red and green lights," and the driver pointed in to the valley below already dim with the blue haze of the short Eastern twilight.

The one-armed war correspondent shifted his seat and stretched his legs. Before him was the valley and beyond it a ridge of gravelly hills, the tops of which were coloured a faint orange tint by the setting sun. It was already almost dark in the valley, and innumerable little points of yellow light began to appear, whilst from the growing darkness below came an indefinite murmur, the accumulation of many sounds, men's voices, the neighing and stamp of horses and the hundred other sounds of a bivouac.

At the bottom of the slope the road led through orange groves towards a straggling village. As the six-wheeler passed through these orange groves the war correspondent saw that they were full of vehicles, light tanks, armoured cars and six-wheelers, all covered with branches taken from trees.

"What does 12 A. Cav. stand for on these tanks and armoured cars?" he asked the driver.

"Well, sir, they belong to the 12th Armoured Cavalry. The 3rd Cavalry Brigade must be here; these cavalry brigades now have two horsed regiments and an armoured regiment, you know, sir, and this brigade has the 9th and 17th Cavalry, they are the horsed regiments, and the 12th Armoured Cavalry which you see here. They all used to be Lancers, this brigade, before they were re-organized; I know because me brother is a corporal in the 9th."

A moment later the six-wheeler drew up before a group of khaki-coloured tents, pitched in an enclosure on the outskirts of the village. The War Correspondent was trying to explain to a sentry who he was and what he wanted when a Staff Officer appeared out of one of the tents and, as he saw the War Correspondent, came quickly forward to seize his one remaining hand and say, "Why, Harry, old boy, what on earth has brought you here? I thought you were safe with your old sheep in New Zealand."

"So I ought to be if I had any sense, Charles, but I came back to this war, failed to get passed fit because I am short of a hand, and now find myself out here as a scribe whose job is to bring humour and knowledge to the British breakfast table by recounting what you are doing in the Great War Daddy, as we used to say in the wars of our youth. Now, Charles, tell me what I am to do."

"Well, the G. O. C. was warned we were to have a correspondent for this show. You know the policy in this war; I think we have realized that the secrecy business can be overdone, especially as regards suppressing the names of units which have done well. So you can go where you like and write what you like as long as you let us see it before you send it off. You see the idea, 'tell the bints and so hearten the chaps.' Now for a drink and I'll tell you how we propose to make old Popski sit up."

The War Correspondent had already noticed that the enemy was usually referred to in terms of apparent affection and esteem as "Popski" just as "the most formidable soldiery in Europe" was known as "Jerry."

Charles, the G.1 of the Division, was as good as his word, and, after suitable refreshment, pulled a map towards him and explained.

"Here we are and here are the 1st and 2nd Brigades. We have been going all out for four days turning Popski out of successive positions. Popski is not much of a lad for the open, and hates tanks, and so far has gone at the first threat to his flanks; but now he has got his flanks on good anti-tank obstacles, the hills and the swamp you see here on the map, and is a very different bird once he has scratched a bit of cover and got his machine guns and anti-tank weapons into play. Well, G. H. Q. say we have got to push on and get this bridgehead over the river here which they are so keen on. Popski has got the best part of two Infantry Brigades strung out in front of us, and I fancy doesn't think a mere cavalry division will dare try and turn him out. He is going to get the shock of his life tomorrow morning."

"Well, I am sure I hope so, Charles; but you won't mind if I reserve my enthusiasm. The last contest we took part in didn't exactly teach one to be enthusiastic about offensives, and this looks a bit rash to me unless you are going to spring a surprise."

"Righto, Harry, wait and see; I do believe we have got the goods this time. Now where would you like to go? If you have no special wish I suggest, as you are an old horse gunner, that you go to 'the Troop.' They are with the 1st Cavalry Brigade, and Bonzo has got them now; he was with you on the Somme, wasn't he?"

So off went the War Correspondent to look for his new home; musing to himself that all wars were much the same; eternally looking for something in the dark and wondering where you were going to spend the rest of the night.

II.

Dawn next morning found the War Correspondent picking his way in the half light to the top of a low gravelly ridge, where he found the O. P. of the Troop and the redoubtable Bonzo himself busily engaged in defeating the chill dawn air with a thermos of hot tea.

"If Popski hasn't gone in the night you are going to see some show," said Bonzo. "Ah, there go the patrols now to feel for him."

It was now almost light and the War Correspondent could make out an armoured car stealing along the road which led down from the crest where they were across a valley and up a ridge opposite. This ridge was about a mile away and was covered with patches of scrub and stunted trees, an occasional outcrop of rock and a few dirty white farms and patches of cultivation. The armoured car was across the valley now and had begun to climb the hill, when from the silent ridge opposite came a sharp double report. The armoured car seemed to break in two in a cloud of black smoke and then burst into a sheet of flame as the petrol caught fire.

"Did any of you chaps see where that anti-tank gun fired from?" said Bonzo. "This flashless propellant is the devil; they are just as hard to spot as machine guns. I see the cavalry patrols are now going across; that is in case Popski has left a single anti-tank gun and escort covering the road to stop armoured cars as he often does. No, he's there all right this time. See if you can spot where any of those machine guns are firing from."

For, in what seemed but a few seconds, the cavalry patrols all along the front were galloping back and, after a sudden burst of machine gun fire, the ridge was as silent as before.

"Now for second act," said Bonzo. "You are going to see tanks and cavalry attacking together under cover of a thin smoke screen, about one gun every hundred yards; the mechanized batteries are doing that."

"Hold on," said the War Correspondent, "I seem a bit out of date; do you know I don't even know what you are armed with."

"Oh, the mechanized batteries have the 3.7 gun-how, and we who do close support, the 3.7 light how.; all the same shell."

"But why are you still horsed?"

"Can't explain that now. Look out, the balloon's going up."

As he spoke the still air of the early morning was broken by the thud, thudding of guns behind them, and then the swish and scream of shells going over their heads; the old familiar sounds of the opening of the barrage. Once again the War Correspondent felt that thrill which once experienced is never forgotten; a feeling of wild excitement and enthusiasm as if the shells were shrieking at him "Come on, come on, we've got them;" as if some irresistible impulse was urging everything forward, the steel in the air, the man on the ground.

Then on the slope opposite round white balls of smoke sprang up, grew taller, bulged a little, then toppled over and drifted away across and up the hillside on the gentle breeze. Almost before the first smoke shell had changed from a ball to a drifting cloud another and another arrived at the same spot. Soon the ridge opposite was almost blotted out, not by a thick screen but by an ever-changing veil, a tantalizing veil; in one place the smoke drifted till it became but a thin haze, and the outline of the ridge began to appear again; then more shell would arrive and the thin haze became again a woolly billowing cloud, the edges tinted with pink from the early sun.

The War Correspondent was trying to picture the enemy anti-tank gunners peering into this ever-changing veil, now blinded, now almost seeing clearly, now baffled, when his attention was distracted by the roar of engines from behind.

The light tanks of the armoured regiment came over in waves. As they topped the crest they seemed to hang for a moment and then go bucketting and roaring down into the valley. Half way down the slope was a wire fence, and this they seemed to tear up bodily and carry away in shreds without a pause in their career. Close behind them came wave after wave of horsemen, all widely extended and all at full gallop. The pace of this attack was bewildering: one minute tanks and horsemen were crossing the ridge, the next they were disappearing into the drifting smoke on the opposite slope.

"Here come the moppers up," shouted Bonzo.

These latter horsemen were in little groups with machine guns in pack, and here and there a tank to deal with any enemy still holding out. They also disappeared into the smoke which was now becoming only a haze as the barrage moved up over the ridge. Through this haze the War Correspondent could make out the moppers up, sometimes shepherded by a friendly tank, chasing fugitives and collecting prisoners, or pressing on over the crest in the direction from which the sounds of the barrage still came. To the right, in front of a group of buildings which lay in a slight hollow, were three derelict tanks from which fumes still poured; whilst from all round came the rattle of musketry and the occasional chatter of a machine gun. Here was evidently a post holding out, and the moppers up were working round it dismounted.

"This is where I come in," said Bonzo. "H. E. 106 all three degrees right of zero," and followed it by more of the strange incantations of his trade.

The War Correspondent was admiring the accuracy with which Bonzo's little howitzers were planting round after round into the buildings, when a quiet voice at his side said, "Well, what do you think of this?"

He turned to see the spare figure of the Cavalry Brigadier beside him. "Yes, here you see the logical development of Klip Drift and El Mughar. Yet it is surprising how long it took us to realize the power of the combination of tanks and horsemen. We tried tanks and infantry; that was no good because of the difference in pace. Then we tried complete armoured brigades and found that their operations degenerated into mere raids; and raids in a country as devoid of night clubs as this are not much use. Now you see the ideal, the horseman and the machine combined in one arm so as to get real co-operation. It is after all only logic!"

(Continued on Page 64)

Chasing the "Transvaal Wolf"

By Lieut.-Col. William W. Edwards, Cavalry (DOL), Asst. Chief of Staff, 103rd Division

"SLIM PIET" CRONJE, known to the British as the Transvaal Wolf, had in his veins a strain of blood from those inflexible French Huguenots who at the Revocation of the Edict of Nantes gave up home and fortune, left their country forever and went to the far corners of the world. Bred to the wild vicissitudes of the South African Veldt, he was among the doughty burghers who stopped the Jameson Raid. On the outbreak of the Boer War his natural qualities of leadership brought him to command in the western theatre. Lord Methuen, Kitchener's predecessor, had felt his fangs at the bloody battle of Magersfontein. And there at bay, he still crouched when "Little Bobs" landed at Capetown.

In relieving Kimberley, French passed around Cronje's left flank. The march northward of the British Cavalry division, under General French, depended, however, upon a more far reaching consideration than the relief of Kimberley alone. It was the direct outcome of Lord Roberts' fine conception of a strategical situation, the only solution for which was the independent employment of cavalry. Although the relief of Kimberley was French's immediate mission, "Little Bobs" designed it as a threat at Cronje's flank, the main objective being the ultimate relief of another British besieged town, Bloemfontein. The Kimberley movement cleared the ground on the British flank and put Cronje at Magersfontein in a very uncomfortable position, for the heavy British infantry columns which followed close upon the heels of the cavalry would cut off the Boer communications with Bloemfontein. If the relief of Kimberley had been delayed it would have given Cronje the opportunity to have withdrawn his force to the northward, where he would have been favorably placed for operating against the British flanks and communications. The task for Lord Roberts before marching on Bloemfontein was to capture or destroy Cronje's army.

On the other hand, the problem of General Cronje with the relief of Kimberley was how to escape from the toils which were fast spreading round him. Lying on the defensive along the Modder, he now found himself faced by a large force of British infantry collected by that genius for preparation and organization, Lord Kitchener. The forces of Lord Kitchener had concentrated at Ramdam. French's cavalry had scarcely left Klip Drift before two British infantry divisions occupied it.

About the same time the Boer position at Jacobsdal was attacked and captured. The crafty and tenacious Cronje had the Boer fear of being cut off, which was an hereditary instinct from fathers who had fought on horseback against enemies on foot. Cronje, when he got the rumor of the English upon his flanks, being prompt to realize his danger, lost no time in deciding upon the effort he would make to save himself. The very day upon which Kimberley was relieved—February 15—alert and resourceful, he determined to abandon his position in a bold attempt to break through the converging English columns, and restore his communications with Bloemfontein.

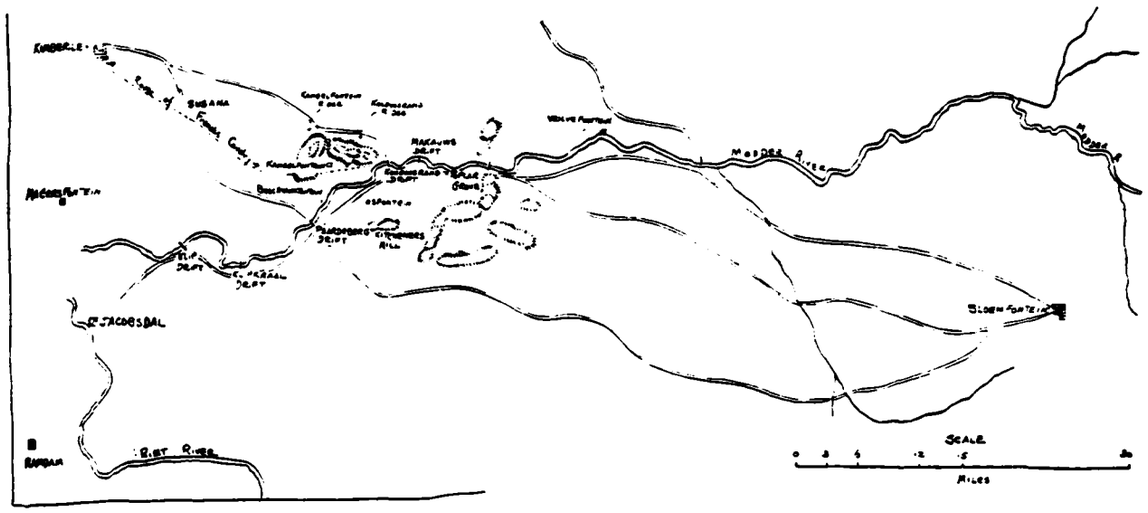
His big guns were despatched to the west, thence escaping around Kimberley, north across the Vaal; while the Old Wolf himself with the remainder of his forces made a hasty dash eastward. With furious speed he drew in his right wing and then one huge mass of horsemen, guns and wagons, in a whirl of dust, he swept through the gap between the rear of French's cavalry bound for Kimberley and the head of the British infantry at Klip Drift. There was just room to pass and there he dashed with the furious energy of a wild beast rushing from a trap.

The movement was miraculously well timed. A rush of thirty miles took him across the plain that stretches down to the Modder River at Klip Drift. So closely did he cross the track of the cavalry in their march to Kimberley that their trail was still fresh upon the open sandy veldt. Cronje depended upon the dark night of February 15 to veil his movement. Had he been a little quicker he might have gotten away before the British were aware of it. But unfortunately for him, he would not leave the ponderous wagons which weighted him down.

A huge rolling cloud of dust on the northern veldt told Kitchener's outposts at Klip Drift more plainly than words that Cronje was slipping through his outstretched hands. Lord Kitchener at once unleashed his mounted infantry in direct pursuit by the south bank of the river to seize Klip Kraal Drift, the next passage beyond Klip Drift, while a brigade of infantry sped along the northern bank of the Modder to cling to the right haunch of the retreating Boers.

Cronje had made a night march of thirty miles from Magersfontein and the oxen which he used for purposes of draught were not fitted by nature either for the speed or endurance of a forced march. His wagon bullocks were practically exhausted. It looked very much as if the only chance which Cronje had for escape was by abandoning his guns and stores. Lord Kitchener, soon close enough to harass his retreat, found the grim old Transvaal Wolf again with his teeth flashing over his shoulder.

South Africa is a land of vast reaches, of boundless plains seamed with ridges and traversed at wide intervals with water courses or ravines and gulches. In other words, the country decidedly favored the defensive tactics of its Boer inhabitants. Undoubtedly that was one of the main contributing factors why the Boers



continued on the defensive during the entire period of the war. Constantly avoiding battle cannot of course possibly win ultimate military success and the Boers threw away their best chances of success by failing to observe this simple military principle.

Being adepts at defensive fighting, it was only to be expected that the Boers would prove themselves past masters in the tactics of the rear guard action. Rear guard, effectively disposed and skillfully handled, may baffle and render of little or no avail the most energetic and determined pursuit.

As Cronje's riflemen paused to fire successive volleys into the ranks of their pursuing enemy, meantime retiring leisurely from kopje to kopje as they did so, the Boer retreating column was hourly gaining headway towards Bloemfontein. They suffered so little delay indeed that by nightfall on the 16th in spite of their slow moving oxen the Boers were well ahead of the British on the north bank of the Modder. The sight of the white tilted wagons in the glorious virile air of the South African morning fading into the distance, fired the blood of every one of Kitchener's mounted infantrymen to put forth every effort of which he was capable. The kopjes ahead, however, were held by Boers and the broad plain across which the British were hurrying was swept with a storm of bullets. All day the grim and weary Boer rear guard stalled off the fiery advance of the British infantry and at nightfall the wagons were still untaken.

The pursuing British force to the north of the river was numerically inferior to the Boers they were pursuing so that at best they could simply hope to retard the Boer retreat. Had Cronje known what would eventually happen he would probably have left his guns and wagons and by a swift dash over the Modder brought his army away in safety. On the night of February 16, Cronje lay on the north bank of the Modder, his stores and guns still intact, no enemy in front of him and Kitchener's mounted infantry behind. It was necessary for the Boer General to cross the Modder River in order to be on the line for Bloemfontein, which being then in the hands of the Boers, was his haven of safety. As the course of the Modder tended to the northward, the sooner he could get across the better. The formidable Modder here ran between very deep banks, which were so steep indeed that they might be described as cliffs. There was no chance whatever for a Boer horseman, far less a Boer wagon, to cross at any other point save where the traffic of years had worn sloping paths down to the shallows. The British knew, therefore, exactly what places had to be blocked. The nearest of these crossings or "drifts" along the river route taken by General Cronje was Klip Kraal, only a mile or two distant, the next, Paardeberg and the next the Koodoosrand, each about seven miles from the other.

Giving his weary army some hours rest after twenty-four hours of marching and fighting, he at length reluctantly abandoned seventy-eight of his wagons, and pushed on before daylight for the farthest of the three drifts which went by the name of "Koodoosrand." If Cronje could reach and cross that drift he was safe. Meanwhile the British mounted infantry had galloped round from the north to the south of the Modder crossing at Klip Drift and securing the southern end of Klip Kraal.

Thither came one British infantry brigade soon followed by another, which finding that Cronje was gone, had marched along the northern bank of the Modder to the same spot. With Klip Kraal Drift safe in their hands, the mounted infantry pushed on at once to the southern end of Paardeberg Drift; here with the fatigue of incessant fighting and marching was found the limit of endurance of troops not acclimated to the country, for mounted infantry have always lacked the soul of cavalry. Koodoosrand Drift was beyond Kitchener's reach.

The British mounted infantry being completely fagged by a stern chase, it had become evident that unless General Cronje was headed, his pursuers would be shaken off.

At the same time that the British mounted infantry

had been sent to seize Klip Kraal, the foresight of Lord Roberts had despatched a messenger to General French, who had just returned from an indecisive action north of Kimberley. French had arrived at Kimberley, with his horses dead tired and seemingly absolutely incapable of any further exertion. On the next morning, at three o'clock two out of his three brigades, afoot, were hard at work in their endeavor to capture one of the Boer encircling positions. That same evening the order came from "Little Bobs" to General French to start immediately from Kimberley as the forlorn hope to head off the elusive Cronje.

So terrible had been the hardships which French's horses had been called upon to perform that out of three thousand, there could be mustered only two thousand emaciated mounts for the expeditionary force now hastily assembled. The Duke of Wellington once said: "In peace time treat your charger as if he were worth five hundred pounds, but in war, as if he were not worth a farthing."

French knew that a swift and trying march was before him, the success of which was dependent upon his beasts and it was better to have a few reasonably dependable ones selected from the freshest of his force rather than a numerous body which would lack stamina and mobility, for it was a clear case of the survival of the fittest. Within a few hours after the hasty orders from Lord Roberts had arrived at French's Headquarters, Broadwood's Brigade with the Carabiniers, selected because of their having had at least a more extended period of comparative rest than the others, started without further ado for Koodoosrand. One squadron of the Carabiniers was detached to carry out a reconnaissance. The remainder of the cavalry division was to follow as soon as General Methuen and his infantry, who had followed French northward, should have reached and garrisoned Kimberley.

Before the cocks began to crow on the neighboring Boer farms the horses of the chosen British cavalry brigade which were to carry a total of about one thousand of all ranks were saddled and bridled and took the road by Susanna and Boshvarkfontein, towards Kameelfontein. General French and his staff accompanied them. They moved on without delay directing their course by the compass upon Koodoosrand Drift. If Cronje's forced march had already brought him nearer Bloemfontein than it was anticipated, it would yet be possible to strike him in the flank or delay his retirement until the arrival of the pursuing infantry.

From twenty Boers captured in some rough country known as the Koodoosrand and who proved to be signallers in Cronje's army, it was learned that the whole force of the unsuspecting Cronje with the wagon train three miles long, (without which he would probably already have been in Bloemfontein), were creeping slowly eastward along the north bank of the Modder. It was quite natural that Cronje neither anticipated nor prepared for the sudden retrograde march of the British cavalry. He regarded Lord Kitchener as his only danger, never dreaming that General French would even hear of his flight, until it was too late. He thought that the British cavalry, which had relieved Kimberley, was then operating north, and believed its intention to be to intercept him in that direction. For this reason Cronje had refrained purposely from moving round the west and north of Kimberley and had deliverately chosen the more daring course of marching directly east between the British columns.

At the very moment when Cronje felt confident that French was engaged in a fruitless campaign to the north of Kimberley, the latter was making his way, as best he could, in his depleted state, on a diagonal line for Koodoosrand, the only Drift now open to the fleeing Boers. It was a question of who would get there first! Thirty-five miles intervened between Kimberley and Koodoosrand Drift. So close was the race indeed that French's troopers reached the drift at midday on Saturday just as Cronje's advance guard was already approaching the kopjes of the Koodoosrand Ridge which commanded it. Like a thunderbolt from a clear sky, French descended upon his adversary just as he was preparing to make the coveted crossing, while with English tenacity his game troopers, still full of fight at the end of their weary march, threw themselves in front of the astonished Boers and seized the position before their very wistful eyes. The last of the Drifts was unexpectedly closed! Cronje's last hope of reaching Bloemfontein hung in the balance!

Would General French, however, be able to hold his adversary for the many hours which were sure to elapse before he could expect the infantry reinforcements from Kitchener? The position of the infantry was only vaguely known to him. His situation was a critical one. It was estimated that Cronje had at his disposal at least 6000 men and several field guns, while French at most could not count more than twelve hundred mounted men and two batteries of field artillery, having left most of his cavalry at Kimberley.

With characteristic rapidity of decision and resolute audacity, typical of the true cavalry leader, General French made bold to attack Cronje before, due to the shock of surprise, the Boers could estimate the weakness of their sudden opponents. A stretch of some ten miles of open flat country extended from Kameelfontein Ridge to the river at Paardeberg, bounded on the north by a semi-circular range of hills connecting Paardeberg and Koodoosrand Drift. About six miles from the central height of this semi-circle and near the bank of the river some small white objects were descried, the head of the Boer convoy. Meantime the small force of British cavalry had moved straight and unhesitatingly forward towards the disputed drift. General French at once sent Broadwood's Brigade with their guns south and detached two squadrons to cover his front and flanks. Owing to the slope of the land, the advanced parties were unable to see what was in front of them until they had covered the low lying country and topped the rise. This brought them to within only eighteen hundred yards of the river bank. The setting framed an intensely dramatic scene. There, directly before their startled eyes, Cronje's leading wagons were just nearing the drift! *(To be continued)*

The Military Situation of Central Europe

A German Point of View Presented by the Editor-in-Chief of the *Militär-Wochenblatt* (Military Weekly)

By Lieutenant General Constantin von Altrock, German Army[1]

FOR more than two thousand years Central Europe has been inhabited mainly by Germans. The German nation, in the heart of Europe, can take advantage of its central location to obtain spiritual and material benefits for it is in a favorable position for the exchange of ideas and materials. Long and intimate relations with peoples in all directions of the compass account for its many-sidedness, its spiritual receptivity, and its speculative as well as productive power. Germany's central location favored international trade, so that during the political upswing she reached great prosperity.

But as Germany never had natural frontiers—and today less so than ever—her insecure central position exposed her to all the convulsions which have shaken Europe during the past two thousand years. Nations with fortunate and secure borders do not at once appreciate the delicacy of such a situation, especially such a country as the United States, which lies between two oceans and cannot be seriously attacked from either sea or from the north or from the south.

As a result of this precarious situation, important parts of the German peoples and of German lands were separated from Germany during the course of centuries. Germany's border today is a torn and separated line of an extremely strange appearance, hardly duplicated by that of any other country. Fragments torn from Germany in the course of history are found today as German minorities in every adjoining country (see Sketch No. 1).

We recall that more than two thousand years ago the Romans made incursions from the south, west, and north, the effects of which were lasting. At the beginning of the Christian era, Rome decided to advance her frontier from the Rhine to the Elbe. But in the year 9 A. D. the most important military leader and statesman of old Germany, Hermann of the Cherusci, Arminius (Armin), annihilated the legions of Varus in the Teutoburg forest, and fiercely and successfully held off the unprecedentedly large armies under the Roman leader Germanicus. This Roman warrior had invaded Germany from the mouths of the rivers of the North Sea, but he was forced back so that the Roman frontier remained at the Rhine.

In the tenth century we see the Hungarian rider peoples under the Hun king, Attila, overrun German districts *(Gauen)* in all directions, leaving behind him a train of ruin and murder. In the final drama of the battle on the Catalaunian fields we note German clans on the side of the Huns, as we also saw them with the Romans.

In the thirteenth century the Mongols from the east reached Silesia where, though victorious, they left the field to the heroic "Dying Franconian Knights."

In the sixteenth and seventeenth centuries the Osmans, the Turks, came from Asia and repeatedly appeared before Vienna, which was barely saved.

In the seventeenth century the Thirty Years War brought a mixture of peoples to Germany. Frenchmen, Swedes, and others came and devastated the German land so thoroughly that many regions had to be rebuilt and repopulated after the war. The armies of Louis XIV of France in his predatory wars mercilessly ravaged the German western districts, cities and country, for which King Louis received the title "Le Grand."

Even in the Napoleonic era, at the beginning of the nineteenth century, Frenchmen and a conglomeration of peoples who followed the eagles of the great Corsican, crossed Germany in all directions. In 1812 the gigantic armies of Napoleon marched from the west through Germany against Russia, only to recross the poor land from east to west after the disaster on the ice fields of Russia in 1812, pursued by the Russians and their allied nations.

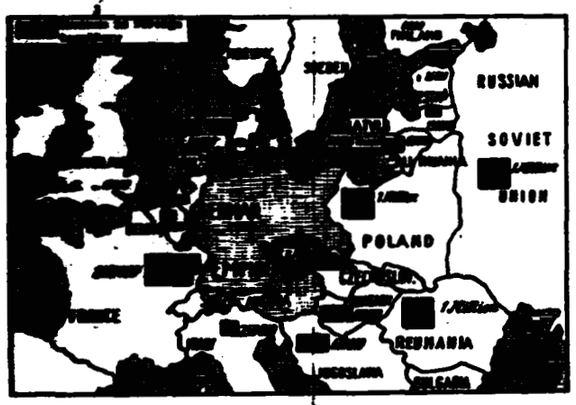
These events of two thousand years show that a state situated like Germany can live only if it is capable of defense. Since Germany has not always been in this condition, her history is an almost continuous record of suffering, relieved only by periods of development under the protection of arms.

After the terrible period of the interregnum from 1254 to 1273, the Hapsburg family secured the German

General von Altrock.

[1] Translation by Colonel G. M. Blech, Medical Reserve.

imperial crown and held it until 1806. This family could have been destined to work for Germany's salvation if it had maintained itself as German, but its outside interests and the terrible religious wars brought Germany to the verge of ruin. One can recall these historical epochs only with a shudder.



Sketch No. 1.—The German Minorities in Foreign Countries.

It remained for the Hohenzollerns, who had reigned in Brandenburg-Prussia since the beginning of the fifteenth century, through five hundred years of mighty effort, to build the new German Empire. It was an especial favor of fate that the four greatest Hohenzollerns—Frederick William, the Great Kurfuerst, King Frederick William I, Frederick the Great, and King William I, later the first German emperor—came in a succession of about 150 years, which left their impress on the empire.

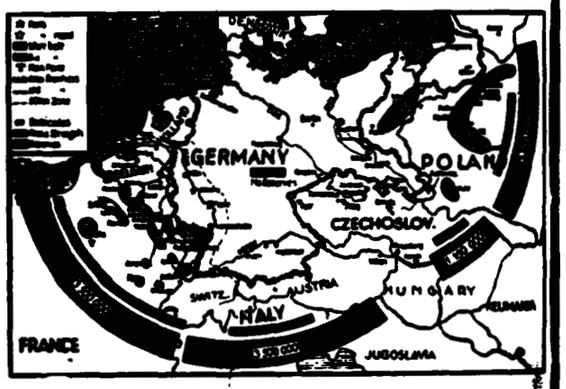
It was particularly King William I who fulfilled the age-old desire of the people for a German kaiser and thus brought to a realization the politics of his ancestors. This rare man, possessed of the experience of three generations, was a great character and one of the sages of the world. He realized that the Prusso-German state would perish if it lacked adequate defensive strength. As advisers he called Bismarck, Roon, and Moltke—world renowned names today—and risked his life and crown by forcing the resisting representatives of the people to provide for the organization of the Prussian army. The danger that threatened Prussia is proven by the wars of 1864, 1866, and 1870-71. These were concluded successfully. The foresight of King William I led the Empire securely through all perils from without. The unerring political sense of the epoch of William I was lost with his successors. Germany remained numerically inferior her neighbors. In the World War, having often to fight at a ratio of one to ten, she long held her own with honor against twenty-five nations whose enormous superiority in man power and materiel finally crushed her. The treaty of Versailles forced the German people into helplessness. Only a torso was left of the old German empire.

The effects of that treaty being generally known, there is need here only for a brief sketch. The German borders were rent and Germany was transformed into a country without a defensible frontier. Surrounded by nations with compulsory universal military service, Germany has only 100,000 soldiers enlisted on a pay basis for a long period. All European nations except Germany, Austria, Hungary, and Bulgaria, are much better armed than they were before 1914. They can at any time mobilize 10,000,000 trained men exclusive of reserves, against Germany's 100,000, as they lie around Germany in readiness.

Sketch No. 2 shows that in all probability it will be German territory over which the future European wars will be waged. God help a country in such a situation! Even the best prepared country is weak in a struggle of one against a hundred, and especially when all opponents command the modern armament and equipment that is barred to Germany. In addition, France is protected by a double belt of forts, part of which have modern subterranean installations (see Sketch No. 2), while the German demilitarized region of the Rhine is open and exposed to attack.

France, Belgium, Italy, Poland, and Czechoslovakia, even small Lithuania, have built effective nets of roads for a strategical concentration against Germany. The German frontier railroads, on the other hand, have been destroyed.

The German army lacks light and heavy artillery,



Sketch No. 2.—Defenseless Germany.

tanks, flyers, military aviation equipment and preparation, machine guns and ammunition, modern motorization, submarines, and an adequate fleet. Germany has none of her colonies to this day.

The danger from long range hostile fire from the open German frontiers is so great that only four of the larger inland cities can be safe from it. Every other part of German territory is theoretically in the zone of hostile long range fire (see Sketch No. 3).

Germany's critical danger on account of her helplessness in air defense cannot be emphasized enough. The latest day bombers can cover over 300 kilometers in an hour. Berlin is only 175 kilometers from the Polish frontier, 185 kilometers from the Czechoslovakian border, and 300 kilometers from the sea. The capital of Germany is absolutely open to air attack.

There is not a single locality in Germany that cannot be seriously menaced by air (see Sketch No. 4).

After the war Germany was forced to abandon railroad improvement and construction that had been planned west of the Rhine, such as four-tracking of the Cologne-Dueren and Coblenz-Trier lines, and double tracking of the Juenkerath-Losheimergraben, Gerolstein-Lommersweiler, and Bad Muenster am Stein-Odernheim lines. At the same time her neighboring nations improved their railroad nets by a great deal of new construction which has great military importance, calculated especially to improve the conditions for concentration against Germany.

In Belgium the four-track Luttre-Charleroi-Namur line and the local Liége-Chenée line increase the railroad capacity of Liége, which had been very limited. Better connection between the Belgian and German nets was secured by the development of the double track Herbesthal-Raeren and Gouvy-Trois Ponts lines, while the newly constructed Houthaelen-Liége line improved the connection between the north Belgian railroads with the lines towards Germany.

France carried out new railroad construction along her eastern frontier that is no less important from a military point of view. In this belong the four-tracking of the Lunéville-Sarrebourg line, the two-tracking of the Verdun-Metz and Nancy-Bensdorf lines, and the construction of the Lérouville-Novéaut-Metz line, which improve the connection between the railroads of Lorraine and the older French roads.

Improvement of the connection with Alsace via Mulhouse-Belfort is secured by the construction of the cuts through the Vosges: St. Dié-Saales-Strassburg;

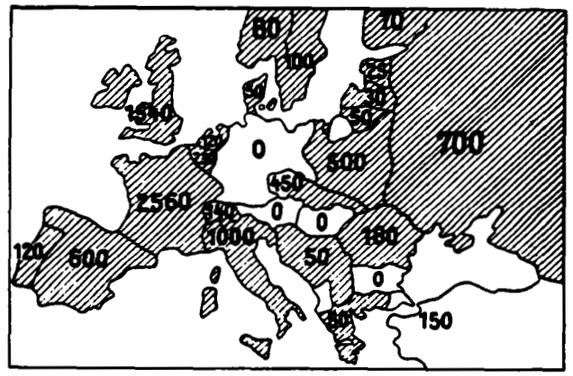
Sketch No. 3

The shaded circles denote the radii of hostile distance fire from the frontiers of Germany's neighbors. This sketch shows better than lengthy descriptions that Germany is "a country without frontiers."

St. Dié-Markirch-Schlettstadt; Epinal-Cornimont-Metzeral-Colmar; and Epinal-St. Maurice-Wesserling-Mulhouse. This construction will facilitate a French concentration on a wide front against the upper Rhine.

Italy's extensive two-tracking of the line from Verona via Bozen in the direction of Innsbruck gives her an essential increase of military protection of the new frontier territory of South Tyrol.

Czechoslovakia's construction of an effective road of communication towards Germany, improved transportation facilities from Carpatho-Russia by the development of the Prague-Pilsen line and the lines of the valley of the Elbe, Prague-Bodenbach and Vstaty-Leitmeritz-Teschen.



Sketch No. 4

The numbers show the thousands of manned military aeroplanes which encircle the former Central Powers of Europe.

Poland has invested vast sums to establish a new north-south connection by building the Kattowitz-Hohensalza-Bromberg-Gdingen line. This is of great importance for her defense. In addition a new road of concentration against Germany was obtained through the construction of a track from Warsaw to Stralkowo, connecting with the existing line to Posen.

Even Lithuania has improved her railroad net by enlarging the line from Dunaburg via Abeli-Schaulen (Shavli) to Tilsit and by constructing the Schaulen-Telschi-Memel line, all of which provide her with greater facilities for transport towards the German frontier.

If one surveys the railroad construction of the above named states since the end of the war, the general view shows that all have much military significance, especially in the improvement of the conditions that would affect a concentration against Germany. These countries have applied a lesson of the World War, that the successful conduct of military operations is possible only with the aid of effective railroads, and they have spared no expense to obtain such facilities on a large scale. On the other hand Germany, through the dictate of Versailles, as well as through financial emergency, is not able to alter her railroad net to meet the new conditions, nor even to satisfy the most pressing demands of national defense.

What the dictate of Versailles and the other treaties have done to Germany, Austria, Hungary, and Bulgaria, has been done to a people but once before in the history of the world when Carthage was disarmed before the third Punic War then—Carthage was destroyed!

North of Sixty-Three

By Frances Stuart Kobbé

GOLD! GOLD!! GOLD!!! When the last boat from Alaska's icebound harbors steamed into San Francisco in the Autumn of 1897, she carried among her passengers sixty worn but triumphant prospectors. To an astonished populace they displayed their little buckskin bags with the irrefutable evidence, the precious, yellow "dust." Immediately a wave of wild excitement, of gold hysteria travelled eastward over the telegraph wires overwhelming the entire nation. "Alaska" was the word on everyone's lips. "Uncle Sam's Icebox" at last had come into its own.

On May 28, 1867, the Senate confirmed the treaty to purchase Alaska from Russia for the sum of $7,200,000. In spite of the vast extent of the acquisition which is a third greater in area than all the Atlantic states from Maine to Florida, this seemed to the layman a large price to pay for a country whose mineral wealth was only suspected, and whose chief value seemed to be that since it was situated only 150 miles from the Siberian mainland, it could be used in case of war in the Pacific. For thirty years its possibilities lay dormant. From the first, the Army was supposed to be responsible for Alaskan affairs, but without legal standing or the necessary power. In 1884 a shadow of government was granted by Congress when the laws of Oregon were extended to the largest territory of the United States. Regulations were made regarding the seal fisheries, the importation of firearms and the exclusion of intoxicating liquors. Customs, commerce and navigation laws were drawn up. Some judges were appointed, and a marshal and some commissioners, but the territory was so vast and so sparsely settled, and communication was so difficult that the only law in the country was still represented by the small military force maintained there.

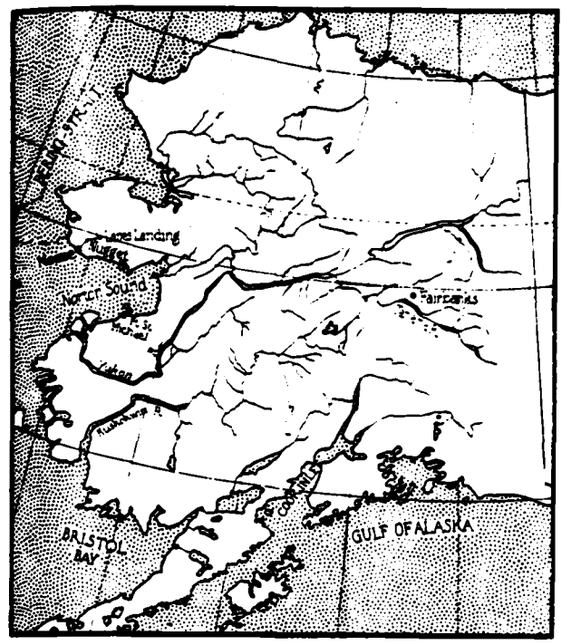
With the discovery of gold, 18,000 people rushed to Alaska. They came from all walks of life. Beside the adventurers, there were sober, hard-working citizens who gave up dependable jobs to invest all their savings in the quest for quick riches. There was also the inevitable riff-raff, drawn by the direct communication with the West Coast ports and the freedom from the restraint of law and order. Canada took quick action to protect its section of the goldfields by installing four hundred Northwestern "Mounties." Undesirable characters were forced without ceremony over the border into United States territory. This made a desperate situation of lawlessness, and representations were made to Washington to protect adequately our citizens and property by military control of the Yukon district.

In September, 1897, the Secretary of War telegraphed an order for Lieutenant Colonel Randall with two other officers and 25 men of the 8th Infantry to proceed at once to St. Michael for the purpose of preserving order and protecting property. Here Fort St. Michael was established by a War Department order authorizing "the use and occupation of all contiguous lands and waters within 100 miles of the flagstaff of Fort St. Michael on the island of St. Michael, Alaska." It stated further that the soldiers would be responsible "in the absence of other provisions of law and of all local civil officials within the limits of the country surrounding the island of St. Michael and the mouth of the Yukon River, for the security of life and property, the preservation of order and the protection of property and business interests."

It was a barren, wind-swept land in which Colonel Randall and his men found themselves. The island was bleak and treeless with grim outcroppings of rock, facing an equally bleak and treeless mainland. What vegetation there was, was brown and dead-looking. A foot under the surface of the ground, there was ice the year around. The climate was not as severe as might have been expected within the Arctic Circle, but sudden violent storms were frequent. During February, the worst month, the thermometer hovered between 25 and 50 degrees below zero. It was a dry cold however, so deceptive that it was necessary to issue an order forbidding the soldiers to go out of the barracks without full winter clothing lest they should be overcome by numbness before they realized their danger. The glare on the snow, causing snow-blindness, was one of the difficulties to be contended with. The soldiers wore dark glasses in the winter and even a special kind of eye-protector made by the Eskimos which consisted of rounds of thin wood with a narrow slit for vision. They adopted the kind of boots which the Eskimos made, fashioned of reindeer skin with soles of walrus hide. In the winter they travelled with dog-sledges. The sledges were made of wood and skins, without any metal, the parts being bound together by rawhide thongs. The last boat went out of the frozen harbor early in October and there was no further communication with the States by water until the ice went out in one big sheet around the middle of June. Except for the cold, travelling was easier in winter than in summer. The summers were rainy, and after the first of May, the tundra was converted into a huge, semi-frozen swamp which made travel by land impossible.

Colonel Randall found conditions pretty bad. Along the Yukon the old miners and pioneers had been accustomed to settling difficulties by so-called "miners' meetings" which were more or less mob gatherings.

They viewed the advent of the military with suspicion and disfavor. This attitude was deliberately encouraged by the lawless element who had drifted in since the gold strike. Then, too, the rush of miners



Alaska.

to the interior had rendered the food supply inadequate, and starvation faced hundreds of men stranded along the Yukon by the freezing of the river. Large numbers of passengers en route for the upper Yukon were caught at St. Michael due to the loss of some river steamers that were being sent from Pacific ports. Many had no money and no way of leaving St. Michael for the "outside," as going back to the States was called. Prices were exorbitant. Gold seekers in Alaska needed a substantial stake to start on. Lumber for houses was $200.00 a thousand, and other material and labor was in proportion. Room and board in any sort of tent or shack was five dollars a day. Meals at restaurants were a dollar for the plainest sort of fare.

Back in San Francisco, Battery A of the 3d Artillery received orders in August, 1898, to proceed within a week's time to St. Michael, fully equipped for a year on Arctic service. This would seem to be quite a large order for any commanding officer, but in this case, it fell upon Lieutenant George H. McManus who commanded the battery and who had been in the Army about three years, and his second-in-command, Lieutenant Oliver L. Spaulding, Jr., just commissioned, who had reported for duty three weeks before the order came. Well aware that it was "theirs not to question why," these two young men set about the task of outfitting 200 men for a year in the Arctic with all necessary supplies and clothing, and in addition, 100 tons of extra food for issue to destitute gold-seekers. They embarked at the appointed time on the "Humboldt," a small coasting steamer, for the ten-day trip to St. Michael, almost 3000 miles north. They were terribly overcrowded and most of them were seasick, but eventually the foggy trip was over and they arrived to reinforce the 8th Infantry detachment which was then under the command of Captain Wilds P. Richardson and Lieutenants E. S. Walker and Edwin Bell. The troops were at once distributed the whole length of the Yukon, Lieutenants Walker and Spaulding with seventy men taking station at St. Michael.

About this time, H. O. Hultburg, a prospector, was blown ashore in his skiff in one of the sudden storms. He landed at Cape Nome at the mouth of the Snake River. There, in the creek-bed, he discovered distinct "color." For some reason however, he did not stay and the first claim in this district was recorded in September of that year. A few weeks later some prospectors brought the news to St. Michael of the opening of the new district at Cape Nome. They were hurrying with dog-teams to reach the harbors of southeastern Alaska which the warm waters of the Japanese Current kept open, so that they could place their orders for supplies which would be shipped up from the States on the first boats to come in the following summer.

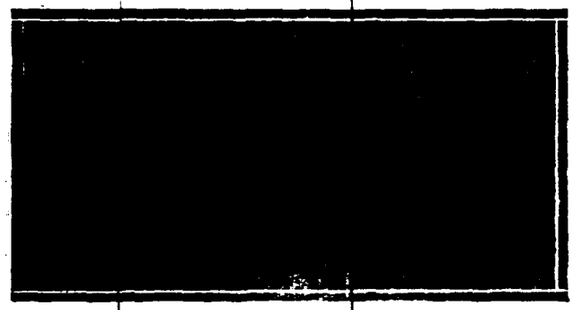
All winter long men were coming through St. Michael, some with dog teams, some carrying their own equipment, but all bound for the new district at Cape Nome. Reports began to come in of lawlessness and claim-jumping from the Golovine Bay section. The soldiers at St. Michael had found out already that the greatest difficulty with which they had to contend, was the legality of titles to property. The United States mining laws in Alaska were too loose and liberal. A person was permitted to locate and hold as many tracts of ground as he desired, each not exceeding twenty acres in area, provided: (1) that there be a bona-fide discovery of gold, (2) that the ground be properly staked or marked out, (3) that at least one hundred dollars worth of work be done annually on each claim. It was always a fine

Nome from Lane's Derrick, Snake River.

point as to just how much authority the military should assume for they could not settle titles, but were supposed to supervise the setting of stakes and preserve order.

Lieutenant Spaulding was ordered to the Golovine Bay district with four or five men "to use his good

offices to adjust matters according to law and order, and put an end to illegal claim-jumping and the destruction of locations, notices, stakes, etc." He was to endeavor to induce the miners to readjust local affairs upon a just and businesslike basis to prevent uncertainty and insecurity of land titles, which had



Commanding General and Staff, Dept. of Alaska, Ft. St. Michael, Jan. 17, 1901.

hitherto retarded the development of that country and caused loss and suffering. He was to relieve the necessities of the destitute in the district, and arrest criminals and bring them to St. Michael. Since it was impossible to give full details of instruction to meet all emergencies, Lieutenant Spaulding was ordered to use his own judgment and take such action as he deemed necessary for the cases that came under his observation.

Undismayed by the scope of his orders, Lieutenant Spaulding set out in February, the worst month of the year, with a reindeer caravan and five men, for a district already conspicuous for its lawlessness. The reindeer were in bad condition and some of them had never been broken to harness. It was not only difficult to drive them, but dangerous to harness them, for they struck out savagely with their sharp forefeet whenever the soldiers approached them. The journey was made around the shore under these adverse conditions and the lieutenant thought he was fortunate when he could make 30 miles a day, taking 15 hours to do it. On the way he was passed by a speedier dog-team which took the news of his impending arrival ahead of him to Golovine Bay. When he arrived, he found a case already awaiting his decision.

Two men had deliberately jumped a claim. Knowing that this was really a case for civil authority, they brazenly waited to see what the young lieutenant would do about it. They soon found out, for he promptly placed them under arrest. There was no jail at Golovine Bay, and in the winter it was impossible to send the prisoners to Sitka for trial before the proper civil authorities. A trader gave the young officer the use of a log hut as a guardhouse until they could start back to St. Michael. Finally the caravan set out on the return trip, Lieutenant Spaulding and the soldiers with their reindeer and sledges taking the lead. The prisoners were furnished with a reindeer and a sledge but no supplies. Their orders were to follow. After the first day they needed little guarding, for they were too wise to attempt to escape into the dreary winter wilderness. When the march was completed, the prisoners were held at St. Michael until summer. The case was dropped but they made no effort to make good on their claim-jumping.

All during the winter a camp had been growing up at Anvil City, at the mouth of the Snake River and at the foot of Anvil Mountain, so named because of its peculiar shape. There was no government there at all except a recorder of the mining district, who had been installed as soon as the strike was made in that vicinity. Before summer 2000 claims had been recorded and the area was found to be as rich as the Klondike. Colors were found everywhere. In the creeks they ran from one hundred colors to twelve dollars a pan. Gold was being taken out at the rate of from twelve dollars to two hundred and fifty a day per man, with rockers. It seemed fertile ground for all sorts of disorder, so Captain Walker ordered Lieutenant Spaulding to go to Anvil City, with about a dozen men, to take charge of the situation as he had at Golovine Bay.

As soon as the ice permitted, the lieutenant and his detail set out in a little sternwheel riverboat to cross Norton Sound. It took them twenty-four hours to reach their destination. As they drew near the open beach at Nome Harbor, they could see the tents huddled along the shoreline with the brown, level tundra behind, stretching away to the barren hills. Although the calendar testified that it was summer, not a vestige of green was to be seen, not a tree nor a blade of green grass.

At the beach were scenes of confusion. The population was increasing at the rate of two hundred and fifty a week, with three thousand already encamped there in the district. The ships, coming in, were unable to come near the shore because of the shallowness of the water, so flat-bottomed lighters met the steamers. These would come in still closer and finally the passengers would have to wade ashore carrying their belongings on their shoulders, for at that time

Bartlett Glacier on the Alaskan Railway.

there was not a horse or wagon in the district. There was no provision for guarding the outfits until the owners could get settled, so most of the gold-seekers joined forces with other newcomers, and took turns standing guard over their possessions.

Lieutenant Spaulding's first order was to forbid the carrying of firearms, and his men were told to confiscate any that were displayed, giving their owners receipts by which they might redeem them when they could show a return ticket for the "outside." He also ordered all saloons to close except those that could show a license from the United States Commissioner. Anvil City was a community of adults, with several thousand men encamped in the town and immediate vicinity. This number was increasing almost daily. Most of the adventurers were men but a few had brought their wives, and there was a sprinkling of dance-hall girls. The main thoroughfare consisted of a long, muddy street, flanked on both sides by shacks, with canvas roofs and sides, that were used for saloons, gambling houses, restaurants and lawyers' offices. Although there was a law against the sale of liquor in Alaska, it had never been enforced, and the first ships to come in carried large cargoes of whiskey. Being midsummer, there were twenty-four hours of daylight, the sun hanging like a red plate in the midnight sky, but Lieutenant Spaulding issued an order that the saloons and gambling houses must close at night, and he set hours for opening and closing. If he expected trouble from this edict, he was pleasantly disappointed for the saloon keepers and gambling-house proprietors obeyed without question, and aided in the preservation of order as much as they could.

As the thousands of gold-seekers poured in, many of the newcomers were unable to find any unstaked claims to locate: This caused discontent which afforded the shyster lawyers who hovered like buzzards over the rush, an opportunity to foment trouble. They advised the disappointed ones to challenge the legality of the mining district's organization, which, it will be remembered, had been hastily installed at the beginning of the strike. Around the Fourth of July, the trouble seemed liable to come to a head. The soldiers were ready to act, but the holiday passed with only a

Infantry Right of Way Party Mess.
Valdez-Gulkana Telegraph Line, 1908.

harmless celebration. Rumors came to Lieutenant Spaulding however, that, on the tenth of July, a meeting was to be held at the Northern Saloon which would declare all previous claims void, and then reorganize and restake everything.

When this intended move was reported to Lieutenant Spaulding, he realized that some instant decision on his part must be made. His detachment was short of men, as some were out settling a disturbance on a distant claim. He took the men he had left, a corporal and five soldiers, and, at the appointed time, he went to the hall. It was a little early and the hall was not filled. He placed his men in the rear of the hall farthest from the door, the only exit. The huge, smoky room was soon filled to overflowing with five

Scene at Cordova Sound.

or six hundred roughly dressed, milling figures. At last the meeting was called to order. A resolution was passed declaring the mining district's organization void. Suddenly above the crowd, Lieutenant Spaulding's uniformed shoulders were seen, as he climbed on a bench. In a clear voice of command, he announced to the crowd that the resolution must be withdrawn. He said he did not wish to break up their meeting, and that after the withdrawal of the resolution, they could go on with any further business, but that if this order was not obeyed immediately, he would give them five minutes in which to clear the hall. The uproar was terrific. Threats of violence flew back and forth, but a few of the more law-abiding element began to drift toward the door. At the end of the allotted time, Lieutenant Spaulding ordered his men to advance in a line with fixed bayonets, pushing the recalcitrant miners ahead of them out of the hall. The milling crowd loitered around the door outside, but the soldiers, refusing to argue, broke up the knots of men. Within an hour or two the revolt was at an end. The bonfires were never lit which had been prepared to signal the waiting conspirators in the hills that the resolution had been passed, and that the time had come to jump in and relocate all claims in defiance of law and order.

The camp at Anvil City became permanent and grew into the city of Nome. Nome was "summer diggings." Bed rock was very shallow and there was a saying that gold began in the grass roots. One of Lieutenant Spaulding's soldiers, when he first arrived, was sitting idly on the beach one day, panning sand in a wash-basin. Suddenly in the bottom of his pan, he found "color." Lieutenant Spaulding, calling upon an old law that land within fifty feet of high-water mark belonged to the Government, declared that the beach was free to all, and allowed no claims to be staked there. The gold on the beach never became "pay dirt" however, although it sometimes ran as

high as seventy cents a pan. All around Nome it was unnecessary to work the dirt more than once owing to the shallowness of bed rock. Mining went on only during the two summer months of July and August in contrast to the "winter diggings" in the Klondike where the miners worked the year around, thawing and excavating during the winter and washing the "dump" during the summer.

During the summer Lieutenant Wallace Craigie and a detachment of the Seventh Infantry from San Francisco arrived to relieve Lieutenant Spaulding. Before Lieutenant Spaulding left the new officer in charge, they held conferences in his tent and Lieutenant Spaulding passed on to the newcomer the results of his year of experience in the North and much valuable information about the community in general, and all notorious characters in particular. By this time Lieutenant Spaulding felt like an old-timer, a full fledged "sour dough," and all that had gone into making him this, must have given him a keen appreciation of that part of his commission which reads: "He is therefore carefully and diligently to discharge the duty of second lieutenant by doing and performing *all manner of things* thereunto pertaining."

On September 1, 1900, the military forces at Nome, Rampart, Fort Yukon, and Circle City turned over the control of their districts to the newly organized civil authorities. This met with a protest from many citizens who signed petitions asking for the soldiers' retention, since they knew that the military jurisdiction was honest and impartial, but the time had come for the civil authorities to take charge. So ended the successful experiment of remote control from Washington extended north of Sixty-Three.

A New Infantry Drill

"AMONG the oldest, the most valued, of our tools is close order drill. Dating back to the time of Frederick the Great, when troops actually wheeled and marched with precision on the field of battle, this system was once the direct connecting link between the drill ground and the battlefield. High powered firearms soon prohibited these mass evolutions in war; infantrymen were forced to disperse and fight more as individuals than as massed groups. Yet the basic drill remained only slightly changed, chiefly because of its disciplinary value and the spectacular parades and reviews it made possible."

Thus does Captain J. Lawton Collins, Infantry, preface an article entitled "A New Infantry Drill" in the *Infantry Journal*, July-August, 1931. The writer originally suggested the system and worked out most of the details. The drill, which has been undergoing a six months' test at Fort Benning, Georgia, is of extreme simplicity and adaptability to the exigencies of active service. A brief description follows:

The squad lines up in single rank with arm's length intervals (28 inches) between men and is marched to the right by the command: 1. Right; 2. FACE; 3. Forward; 4. MARCH. To all intents and purposes, squad drill begins and ends right there.

The section forms in three ranks, one squad in line in each rank, with forty inches between squads. Faced to the right, the section is in column of threes and so marches.

The platoon forms with sections abreast, three paces interval between sections. At drill and on the road the platoon usually moves in column of threes; at ceremonies it marches in mass formation, which is a column of sixes with close interval (4 inches) between squads.

In the mass formation of the company used for reviews and parades, the eighteen squads of the company, each in single file, are abreast of each other with four inches interval between men. All non-commissioned officers, except seconds-in-command of sections, are at the head of the company in order to add to their prestige and sense of responsibility.

One of the main purposes in developing a new system of close order was to link it more closely with extended order. Thus, to change the squad from its close order drill formation to its usual approach march formation, the corporal commands or signals: Squad Column. The leader moves in the desired direction, the men simply increasing their distance in file. In deploying as skirmishers, the first four men behind the corporal move to his right, the last three men to his left. The men deploy in an irregular wedge, instead of the old skirmish line.

"One of the many advantages of the column of threes is that it offers the fastest method of deployment in case of aircraft attack. The right squad moves off the road to the right, the men in mid column going the farthest, so that the squad forms a rough semi-circle. The squad on the left moves to the left of the road in a similar manner. The men of the center squad take the ditches on either side of the road."

The Development of War Department Organization and Plans for Industrial Mobilization[1]

By First Lieut. H. S. Bishop, Jr., Corps of Engineers

THE importance of supply to the success of a military operation has long been established and realized. Until recently, however, little attention has been paid to the question of the source of supply or of the effects of a great war on the industrial and commercial life of a nation. It took the World War, with its unprecedented demands, kaleidoscopic changes and far-reaching effects, to focus attention upon these matters. Our experiences therein led us to attempt, by organization and plans, to overcome in future conflicts our difficulties in the past. We seek by legislation and the adoption of sound business principles to better the administration of the army in peace, in planning for war, and in coordinating the needs of our armed forces with those of our civilian population in war.

Under Section 5*a* of the National Defense Act, as amended by the Act of June 4, 1920, the Assistant Secretary of War is charged with the supervision of the procurement of military supplies and with the "assurance of adequate provision for the mobilization of materiel and industrial organizations essential to war time needs." To this end, "the chiefs of branches (services) of the army charged with procurement of supplies," report directly to the Assistant Secretary in all matters pertaining to procurement. A better understanding of the importance of this act, and what it is intended to accomplish, may be obtained from a review of the steps that have led to the present situation.

The creation on August 7, 1789, of the War Department as an executive department gave us a civilian-controlled agency to administer the military affairs of the nation, administrative, technical, and supply bureaus, militarily controlled, were organized as occasion for their use arose. By virtue of orders of the President, there likewise came into being the office of the Commanding General of the Army. With no particular statutory duties, this officer gradually assumed control over disciplinary and military affairs of the Army. Through the process of absorption, but without specific legislative sanction, the Secretary of War became charged with direct control of the supply bureaus, as to purchases and fiscal affairs. This apparently unintended situation gave rise to frequent conflicts, due to the lack of a proper line of demarcation between the duties of each and to friction between strong personalities. With the exception of the bureau chiefs, there was no general staff or supervising agency to make plans, coordinate activities, or give advice.

The system of procurement by five separate and distinct supply branches (Quartermaster, Engineers, Ordnance, Commissary, and Medical) loosely coordinated by The Adjutant General's Department, became firmly established. Our early wars profited us little in improvement of the system. In the Mexican War, the current attitude toward the problem was reflected in the instructions by the Congress to Generals Scott and Taylor to "make the war pay for itself." This was accomplished in part by the use of local resources. The service of supply of the armies in the field in the Civil War furnishes examples of successful supply which have been studied by the world. Procurement, however, was by the separate branches; the action of these branches was not coordinated; the situation was further complicated because the several States themselves made purchases, and independent action on purchases was authorized and exercised by some of the eight territorial department commanders. The lack of a general staff or other super-control agency, and of plans for the organization of the country's resources as well as for the use of rail and water transportation, so crippled the North that it took two or three years to secure independence of foreign sources of supply.

Despite the opportunities afforded to profit by the experiences of the Civil War, no marked improvement in the supply and procurement system was noticeable in the post-war period. As far as the Army was concerned, this period has been characterized by some writers as one of "dry rot." During this time, the Signal Corps was added as another supply bureau, and the office of the Assistant Secretary of War came into permanent being (1890). This office had been created in 1861, only to be abolished in 1866. None of the present duties attached to the office and the Assistant Secretary performed only such duties as the Secretary of War directed. Another development during this period, with an important bearing on later events, was the gradual ascendancy of the Adjutant General of the Army over the other bureaus.

Precipitated into the Spanish-American War without plans or foresight, the supply bureaus, well entrenched and operating satisfactorily for the supply of an army of 25,000, entered the field of procurement in competition with each other. The resulting inefficiency and great waste are only too well known to students of military history. Such organization as we had, uncontrolled and uncoordinated, broke down under pressure.

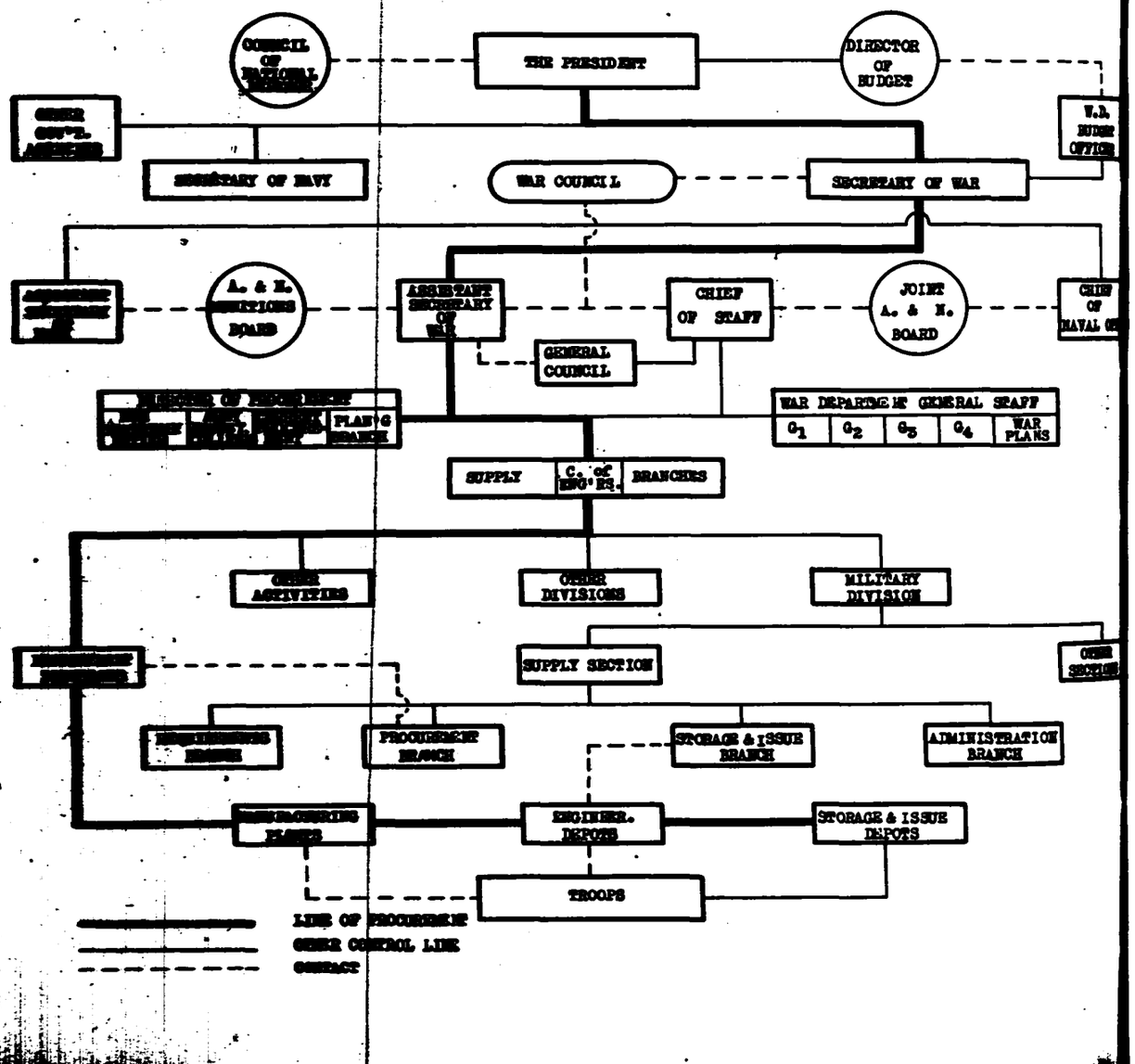
The new century, however, brought some ray of hope. Through the foresight of Mr. Elihu Root, then Secretary of War, a General Staff Corps was created

[1] The general aspects of Industrial Mobilization are discussed in General Moseley's articles that appeared in the Infantry Journals for January, February, March, April, May and June, 1931. This discussion is based on the solution of a problem studied in the 1930-31 course, at the Army Industrial College.

by the Act of February 14, 1903. The office of the Commanding General of the Army was replaced by that of the Chief of Staff, who was charged under direction of the Secretary of War, with supervision over all troops, staff departments, and supply bureaus. The General Staff Corps, headed by the Chief of Staff, was to combine the duties of making plans for the national defense and the mobilization of the military forces in time of war, with those of furnishing professional advice to the Secretary of War and superior commanders, whose agent it became for informing and coordinating the action of all under their control. No specific reference, as yet, was made to the mobilization of industry or the material resources of the country. Thus, in part, the existing evils in administrative functions were rectified and corrected. There were still left, however, seeds of contention and sources of inefficiency.

Failure to define or limit the duties of the General Staff Corps resulted in its attempt to assume authority in the actual administration of the separate bureaus. The latter naturally resented such interference and resisted this control. The bureaus, except for the absorption of the Commissary and Pay Departments by the Quartermaster Department in 1912 and the reduction of the influence of the Adjutant General's Department,

CHART
OF
WAR PROCUREMENT AGENCIES



remained as before and continued to function independently of and in competition with each other. The army carried on with limited appropriations, and reduced numbers, there was no sound military policy with a definite scheme of organization, the General Staff Corps did not plan for or solve the supply problem.

We created a military policy in the National Defense Act of June 3, 1916, and at the same time limited the duties of the General Staff Corps to planning and giving advice. Official recognition was given to the need of coordinating the industrial with the military aspects of war, by charging the General Staff with the preparation of plans for the "mobilization of the manhood of the nation and its material resources in an emergency." Also, the President was given the power to appropriate property for government use in war in return for just compensation, and the Secretary of War was directed to make a survey of plants equipped for or capable of transformation into facilities for the manufacture of arms and ammunition.

The same year, the creation of a Council of National Defense was authorized by Congress for the purpose of the "coordination of industries and resources for the national security and welfare." It was to consist of the heads of the departments of War, Navy, Interior, Agriculture, Commerce, and Labor, and to be assisted by an advisory commission of seven leaders in industry. This latter body became the nucleus of the strong War Industries Board that eventually took over and ran the industrial side of our part in the World War.

The provisions of the National Defense Act were not realized before we were drawn into the World War and forced to expand our still inadequate bureau system in order to meet the demands of the supply problem. Competition with other bureaus and with our allies, congestion of contracts, paralyzation of transportation, high prices, and shortages of materials and labor resulted. Attempts to create order out of chaos brought on, in the winter of 1917-18, Congressional discussion centered around whether to adopt the British scheme of a ministry of munitions or to maintain but rectify the existing system. The latter procedure was adopted. The corrective measures involved the reorganization of the War Industries Board, which had meanwhile evolved from the Advisory Commission, the Munitions Standards Board, and the General Munitions Board; and the reorganization of the General Staff to include the Purchase, Storage and Traffic Division. The latter body became the central agency of the War Department to coordinate the purchasing activities of the supply bureaus. The Overman Act of May 20, 1918, which confirmed the war-time powers of the President by authorizing him "to make such redistribution of functions" as he deemed necessary, greately facilitated this reorganization. The civilian control of the War Department was further increased by the appointment on August 28, 1918, of Mr. Benedict Crowell, the Assistant Secretary of War, as Director of Munitions to supervise all procurement activities of the army except for aviation. Two other assistant secretaries were in office, one for aviation, and the other charged in part with supervision of welfare activities. The details of operation, the advantages and disadvantages of the system of procurement set up, are too numerous to be included here; the success of the system is reflected in the final outcome of the war and in the fact that it forms the basis for our present-day activities.

After the war, the steps taken to translate into legislation the lessons learned, revolved around the old conflict between the General Staff Corps and the supply bureaus. The omission from one proposed bill of the clause forbidding the interference of the General Staff in administrative details brought down a storm of protest. The General Staff maintained that no controlling or planning agency other than itself was necessary to handle procurement of supplies. Mr. Crowell proposed setting up a civilian head, trained in business, as Assistant Secretary of War, to coordinate directly the procurement work of the supply bureaus, leaving the General Staff to continue to plan and advise in military matters only. This plan met opposition on the grounds that suitable men for the position were hard to obtain, and that it would be better to leave to the Secretary of War the distribution of tasks to his assistant. Further, it was believed that giving to the Assistant Secretary such powers of control would create too powerful an official, junior to the Secretary and to the President.

The resulting legislation of June 4, 1920, in the form of an amended National Defense Act, gave us the system under which we are now working. The Assistant Secretary of War became supervisor for the procurement of supplies, and business adviser to the Secretary of War. The offices of second and third assistants were abolished. (The second has since been revived as Assistant Secretary of War for Aviation). The Chief of Staff, as military adviser, was charged with the coordination of the bureaus (services and arms) as to military matters. The General Staff Corps was restricted as before to planning and advisory functions. The War Council of December 1917, was given legal standing as an agency for settling the divergent views of the Assistant Secretary of War and the Chief of Staff as to the business and military interests of the army. The recent creation of the General Council furnishes an additional agency promoting coordination and harmony.

The respective duties of the office of the Assistant Secretary of War and of the General Staff, under provision of the new bill, were clarified and promulgated to the services in General Order Number 41, War Department, 1921, as the result of the recommendations of a board headed by General Harbord. There followed the reorganization of the General Staff, and the office of the Assistant Secretary of War as we now have them. The retention in Section 5 of the National Defense Act, either inadvertently or otherwise, of the clause giving the General Staff authority to plan for the mobilization of the "material resources" of the county, leads to the opinion that duplication of authority exists. Without a working agreement such as now is in operation this overlap would be a source of friction.

The organization for carrying out War Department

procurement plans is shown, in part, in the accompanying chart, from which it can be seen that the duties performed are divided along industrial and military lines, each with control and advisory functions. Each of the supply services reports directly to the office of the Assistant Secretary of War on procurement matters, and to the Chief of Staff in those concerning military affairs. The General Staff, through its plans and advice, assists in the furtherance of the work of the Chief of Staff, while the Planning Branch performs the same work for the office of the Assistant Secretary of War.

For war planning, the General Staff furnishes, through its General Mobilization Plan, a directive that provides policies, sequences, and procedure for the mobilization of the Army of the United States, while the office of the Assistant Secretary of War, in the Basic Plan for Procurement of Military Requirements, furnishes a plan for guidance and control in the procurement of supplies for war. The two plans together form the basis for the separate branch mobilization plans, the corps area and other plans, and for mobilizing the manpower and the material resources of the country.

The war procurement planning program, coordinated with the basic strategic and tactical plans of the General Staff, provides an assurance of reasonable freedom from the evils of unpreparedness of past wars. Progress is being made in the figuring of requirements, standardization of types and specifications, allotment of priorities, and the allocation of facilities in coordination with the Navy. Studies are being made and measures taken to secure the cooperation of industry in war, in the matter of price fixing, conservation of materials, transportation, labor and power, which minimize the possibility of competition, confusion, and inefficiency.

Conclusions

From "A New Infantry Drill" Captain J. Lawton Collins, Infantry Journal, July-August

CHANGES in army customs and methods have always met opposition from conservatives, who feel that what has proved itself in the past has continued merit for the future. These conservatives are our best guarantee against unsoundness in our progressive development. The chief question which these gentlemen will ask in conjunction with the new drill will be: What is its value in building up discipline and esprit? The advocates of the new drill answer unhesitatingly that it has equal if not greater disciplinary value than the old system. In this connection it may be well to quote Baron von Steuben, the father of our present drill, and a disciplinarian par excellence. Von Steuben, in writing about America to a friend in Prussia, in 1778, said:

"The genius of this nation is not to be compared to that of the Prussians, Austrians or French. You say to your soldier, 'Do this,' and he doeth it. But I am obliged to say, 'This is the reason why you ought to do that,' and then he doeth it."

The new drill is simple, logical, and sound. Soldiers will be quick to sense this, and will willingly give it the snap and precision which are the marks of well-disciplined troops at drill.

The objection may be raised that the column of threes will increase the road space of a division by twenty-five per cent. This is not the case. The major part of the division's column is made up of motor and animal-drawn transportation. The total increase in length for the twelve battalions of infantry in the division is less than 500 yards.

Another point, one that has actually been raised, is that the drill is so simple, will take so little time to teach, that there will be scarcely anything for regular troops to do at small garrisons. The answer to this charge is evident to any one who merely reads the list of arms with which the infantry is now equipped, or considers for an instant the complex duties of modern infantry in combat. Long periods of close-order drill never have improved the training or morale of any troops.

Frankly, this drill was designed less for the peace-time needs of the Regular Army than for the more pressing demands of a hurriedly mobilized National Army. It should be a boon to the National Guard which has so little time for training during peace or war. Troops can be made expert at this drill in a few days and can then proceed with the more important and more difficult tasks of learning to handle their weapons and to attack and defend by that combination of fire and movement which is so easy to talk about but so difficult to achieve. The new drill will quickly clear the way for this essential technical and tactical training. So it is that the writer, with confidence born of six months' practical tests and experiments, believes that this modern system of drill offers to the service another contribution of the infantry to the progress of the Army.

A Cavalry March

By Commander Holloway H. Frost, U. S. Navy

EDITOR'S NOTE: *This article is published by the courtesy of the Washington Post. It shows that the author is no stranger to the "quarterdeck" of a horse and that he has the makings of a Cavalryman himself. This is an excellent picture of a forced march and a real tribute to the Cavalry spirit.*

IT was ten minutes to four on a raw November morning. From the wide doors of the stables rectangular beams of light infiltrated a few yards into the defenses of a dense cold fog. Two widely spaced electric lights diffused a faint glow over the animated scene along the stable road. Dim shapes moved to and fro as men and horses exercised their muscles in preparation for their long journey. Iron hoofs clattered on the hard pavement. Sallies of soldierly wit or words of advice and admonition to the horses came through the darkness.

Here and there troopers led their mounts aside for a last inspection of their complicated equipment. Bits and curb chains were given their final adjustment. Once again saddle blankets were smoothed out. A gentle strain was taken on cinches. Last minute additions were made to the contents of the already closely-packed saddlebags. Rifle, sword, pistol and ammunition were adjusted in a last-minute attempt to make the carriage of their heavy weight easier to horse and man.

Gradually movement diminished. Order grew out of seeming confusion. Men and horses began to take their accustomed posts in the troop formation. The time to start was now at hand: 4 o'clock. "Tighten cinches," came the word. Then: "Stand to horse." When there was one minute to go, "Prepare to mount" passed along the platoons. And finally—at the very hour—"Mount." Here there was a dim confused upward movement, a creaking of leather, and a clatter of hoofbeats as a horse or two surged forward a few paces in his eagerness to be off. They had not long to wait, for immediately there followed the troop commander's command: "Forward Ooooo!"

Let us watch the troop as it passes in dim review before us. Ahead rides the troop commander. Then come his orderly and the stable sergeant. The latter carries, in lieu of sword, a wooden lance, below whose spearhead floats the guidon—a burgee pennant of red and white.

Close after the guidon marches the first rifle platoon. After an interval of some fifty yards there follows the machine rifle platoon. Its led horses step out briskly under their heavy loads. I wonder if they know quite what is in store for them. Last comes the second rifle platoon. At its rear ride the first sergeant and a lieutenant. Today the march will be a long one. The horses carry, in addition to their riders, about one hundred pounds of equipment. So it has been necessary to eliminate a few of the oldest horses and the most recently received remounts. In all, three officers fifty-six soldiers and about sixty-five horses today compose E Troop, 3d Cavalry.

For about fifteen minutes the troop proceeds at a walk to shake down the equipment. Then it halts and the men dismount. In the darkness there is a careful examination and readjustment of equipment. A further tightening of cinches is in order. This last item is of paramount importance. If the cinch is too loose, the saddle chafes the horse's back. The blanket gets wrinkled under the saddle and there is more chafing. A sore back is the result. On the other hand, if a cinch is too tight, it interferes with the breathing, circulation and muscular play of the horse. A correct adjustment is had when, with the back of the hand against the horse's side, all four fingers can be run inside the cinch. During this ten minute period of rest the officers move through their commands with flashlights to make an inspection of each man and animal.

Now all is set for the real work of the day: a hike of 50 miles by map—certainly 2 to 4 more if all the turns of the road are counted. The time allotted is between eleven and thirteen hours, including all halts. Allowing two hours for the midday halt, this requires a rate of about five miles per hour. And this is a real good speed to be sustained for over 50 miles.

The troop sets out into the darkness, each man leading his horse. The rate of march is about three miles. After leading for fifteen minutes there is a halt for a few seconds—just long enough to get the troop closed up and the men into the saddle. Then comes the command, accompanied by flashlight signal from the head of the column, to trot. Each platoon takes up the increased gait in turn. We are now on a hard highly-curved macadam road. The fog has made its sloping sides wet and slippery. To obtain surer footing and leave a path for passing cars our column has split into two files along the edges of the highway. Here despite the slope and uneven ground, the horses find softer and more secure footing. They trot along at a steady eight-mile pace—three feet from nose to tail. Their riders have a short and firm grip on the reins to give them instant support if they should stumble.

A quarter moon rides high in the sky. As it appears through breaks in the clouds, a dim silvery light is diffused through the fog. Ahead I can see the blurred shapes of a single horse and man. To the right across the road four or five move ghostlike—except for the pounding undertone of the hoofbeats. When iron hits stone, red hot particles of metal fly off meteorlike and lie glowing in the roadbed. To me it is a scene of intense interest, but there is little or no opportunity to

enjoy its beauty. Concentration is the watchword—unless you wish to find yourself in the gutter. Yes, everyone now to his own job—which is plenty. My splendid mare has not yet quite found her place in this troop of strange horses. She has a tendency to come out into the middle of the road, where her feet may slip on the wet sloping pavement. So a slight steady pressure of my right rein against her neck and a slight shifting of my weight off-balance to the left must hold her out in her proper track at the left edge of the road. Also, the cool night air and her own eager spirit carry her forward a bit too closely upon the heels of her comrade ahead. This must be counterbalanced by occasional very gentle touches on her curb rein, while a constant pressure on the snaffle rein give her support and confidence in her rider. Her pace must be slowed without causing loss of energy, every ounce of which must be saved as a miser hoards his pennies. In my case this was doubly essential, for my mare had been borrowed from another troop and had received no training for her long march.

After a twelve-minute trot we slow to a walk, dismount and lead, turning off into a small gravel byroad. The footing here is better. But sometimes, particularly on the all too frequent hills, rains have washed away the sand and exposed a thick layer of large stones. Fortunately the horses seem to pick their way through them unerringly in the dark. Now we again take up the trot, riding, as it were, boot to boot. Ahead are the glaring headlights of a car. Its driver, with the true spirit of the horse-loving Virginian, waits patiently as we file past.

As the first hour of the march draws to its close there is the customary eight-minute halt. As the animals graze quietly at the edge of the road, cinches are loosened and rifles lifted from their holders. With the aid of the officers' flashlights each foot is lifted in turn to see if shoes are coming loose or if stones are wedged between them and the frog. When seven minutes have passed the order comes to cinch up. We mount by platoons, walk for a hundred yards or so, and then come to the trot. From now on it will be trot and lead, except for an occasional short walk and the regular hourly halt. These last are essential in cavalry marching. The short time lost is more than counterbalanced by the energy which the horse regains. It is surprising how much a tired horse can come back in just eight minutes.

About six o'clock the first welcome evidences of dawn appeared, but the fog was not dissipated for nearly two hours longer. The road now was much better. For miles we had fine hard-packed moist sand to march over. But now a new difficulty began to make itself felt: a continuous succession of rather steep hills. These probably doubled the expenditure of energy per horse per mile. A troop or larger unit is much more affected by hilly country than a single horseman. The latter can pick the down grades and level stretches for his trots and can walk or lead up the hills. A troop, spread over several hundred yards, cannot do this. Where the country is fairly level its commander can frequently adjust his gaits to the ground. But where the hills follow in continuous succession he must virtually stick to a time schedule and take them as they come. So in the course of a twelve-minute trot we might have to climb and descend four or five fairly steep and high hills. This punished the horses terribly. Despite the cool morning their sides were lathered in sweat. All signs of friskiness now had worn off. There was no energy to be wasted. Each horse had settled down to his work and each one stuck to his post with a pride and gallantry which went to my heart. Ahead of me were two little four-year remounts. One of them was carrying three hundred and ten pounds of rider and equipment. Already he was tiring, but as every trot began he was off with the rest without any need of urging. I began to sense again, as many times before, that magnificent esprit and splendid cohesion which hold together the horses and men of a cavalry troop. I began to feel the spirit of cavalry. Amid such reflections the column turned to the right. And now for the first time that day I saw the fluttering red and white of the guidon and the troop moving at a trot in an indescribable poetry of motion. Ah, you should have seen it!

We were now nearing our mid-day halt. We dismounted, loosened cinches and led the horses in for the last mile. Passing through a village, we crossed the tracks of the Southern Railroad and marched in single file into a wide field, along the edge of which flowed a stream. It was nine o'clock. We had covered 23.3 miles by map.

At the edge of the field we found a motor truck in which were picket lines, forage and food. In a few minutes three-foot iron stakes were driven into the ground at 50-yard intervals and a stout line strung along their tops. Under this picket line were spread three bales of hay. Bridles were removed and the halter ropes secured to the picket line. As the horses turned to on the hay their saddles were taken off. The saddle blankets were left on to prevent the horses' backs from being dried too quickly in the cool air. Sergeants produced from their saddle bags bottles of red liniment. We rubbed this into the horses' legs while they munched away calmly at their well-earned hay. After ten minutes of this massage the saddle blankets were removed; then the backs were patted and rubbed until entirely dry. A thorough grooming was next in order.

Each squad in turn now led its horses down into the stream. The quantities of fallen leaves which choked its channels had made the water dark and bitter. So the horses did not enjoy their drink. When they were again secured to the picket line nose bags were filled with oats and fastened over their heads. I had carried no nose bag, so my mare had to wait until we could extemporize one for her. This "bad staff work" did not meet with her approval.

All this work on the horses had taken about one hour and a half. Now it was time for the soldiers to get their lunch. This the mess sergeant had provided in rare abundance; red-hot coffee, fresh milk, sandwiches, juicy red apples, and pie. After the food had been gulped down we went back to the picket line. It was almost time for us to take the road again. Horses were saddled and bridled. Equipment was adjusted. Platoons were formed. We led out into the road for our return journey, twenty-seven miles.

Just as we started the rain began. It continued during all the march: sometimes it diminished to merely a disagreeable drizzle but always it increased again to a really penetrating, though not very heavy, rain. Soon the red clay roads which had made such fine footing earlier in the morning were covered with an inch or more of slippery mud. This layer became thicker and thicker as we marched on. On the steep grades, where the mud was thin, the horses' feet slipped with every stride. On the level stretches, where the mud was deep and sticky it gripped their feet like glue. As we dismounted to lead we stumbled and slid through the mud alongside our horses. Boots were caked with sand and clay. Frequent inspections of the horses' feet had long since covered our hands with grime and grit. The cool wind drove the rain into our faces and through regulation khaki-colored woolen shirts. Saddles were wet and slimy when we mounted up.

But all this was a picnic for us compared with the work of the horses. The rain and mud must have doubled their toil—already severe enough. Those long trots over that continuous roller-coaster of slippery hills must have been a very hell for them. I remember when we reached the forty-mile mark. Every horse was tired now, but each stuck gamely to his post and would, we know, until he was ready to drop. I was riding now behind the machine rifle platoon. Its led horses were carrying dead weights of two hundred pounds. And these weights, except for our midday halt, had never been off their backs. During the leads and rests the other horses had some chance to regain their energy—but not these poor fellows. Ahead of me rode the bugler on a beautiful little remount mare—one of my friends on many a long ride. The gentle remonstrance I saw in her brown eyes reminded me of that legendary protest of the Prussian grenadiers on the field of Kolin: "Fritz, haven't we done enough to day for our eight groschen?"

Picture us as we trot along this woodroad. The troop now would not make a favorable appearance as a presidential escort. But every horse and man is in his place and every platoon is well closed up. There is an appearance of efficiency and cohesion in this rain and mud which the experienced eye does not see in a formal parade through the streets of the capital.

Listen to the music we make: the crackling and crunching of the gravel: the rustling and creaking of the leather: the dull flopping of the saddle bags against wet coats; the jingling and chinking of the bits and curb chains: the sharp cracking of iron against stone: and the muffled drumming reverberations of a hundred hoofs beating rythmically upon the ground. These sounds blend into such a symphony as no orchestra could ever play. It still rings in my ears!

These last miles were hard ones. As we reached each crossroad or other point on our schedule of distances we figured out the remaining miles—even the tenths—and passed the word back along the column. Before we came to each hourly halt the troop commander at the head of the column would dismount and watch the troop file before him. His quick eye took in the condition of each horse. From this he made an estimate of their collective reserve power and decided how hard he could push them and still keep them all in ranks. When we commenced the return march, he had about half an hour's leeway over the planned schedule. He had kept this intact until now, but when we had only five or so miles to go the pace was slowed gradually so as to make certain of bringing all horses through in good condition.

As the horses began to recognize familiar landmarks their spirits rose and the old spring came back into their muscles. During our last trot we had a good road and made the distance fly. For the last mile we led, with loosened cinches. At 4:45 P. M. we marched into the stables with every horse in ranks. Here the mess sergeant was waiting with an immense can of red-hot coffee. You can imagine what a good business he did. Afterward there appeared the familiar bottles of red liniment—only larger ones this time—and the massaging and grooming of horses was again in order.

Excluding our two-hour midday halt, we had covered about fifty-four miles in ten hours and three quarters. This average of five miles an hour is a very good rate of march for cavalry with full equipment. But under our difficult conditions of hilly country and muddy roads the troop had made a highly creditable performance. Next morning a board of three officers inspected the horses and pronounced all fit to continue the march.

I have endeavored to present rather an intimate picture of cavalry on the march. In addition to showing the methods used by a troop in making a long hike, I have tried to give you an insight into the spirit of cavalry. From the early days of history the combination of horse and man has generated a spirit of alertness and confidence. Every horseman has felt this indefinable influence and has acquired something of this spirit.

But when a number of horses and men are massed together and welded into a unit something even finer develops. Alertness still remains. Confidence becomes resolution. Cohesion appears. And finally there comes a spirit of movement—no, more than movement: momentum. There is a feeling that when cavalry is set in motion, its momentum will carry it forward, long after the influence of its commanders has ended. This has been proved on many a battlefield. This march proved it to me. When a final limit is set to its efforts, it can always do just a little more—go a little farther. Its momentum carries it along after its strength has been spent. That is how I interpret the spirit of cavalry. And that spirit has decided the issue on many a gridiron and battlefield.

Evaluating the Reserves

By Lieutenant Colonel H. A. Finch, Corps of Engineers

AFTER more than a century of national life without any complete or comprehensive law providing for our defense, our Government for only a little more than a decade has been testing such a law, the National Defense Act, originally enacted in 1916 and revised in 1920. Those who have studied our history and can appreciate how our heritage has affected our attitude toward the military arm, have been astonished, not at the difficulties encountered in applying the provisions of this basic law, but at the successes achieved under it. This statement may best be illustrated by considering the peace time operation of a single provision of the Act, that covering the formation of an officers' reserve corps.

Among our many deficiencies in 1917-18 none was brought home to us more forcibly than the necessity for advance preparation for the future officers of the Army if we were to count on placing forces in the field with speed and efficiency. The Officers' Reserve Corps provision of the National Defense Act was, of course, designed to make possible such advance preparation. Let us consider what has been accomplished in this respect, starting with a brief tabulation of basic statistics:

Total Officers, Reserve Corps enrollment on June 30, 1930	113,273
Deduct National Guard officers with reserve commissions	11,891
Officers holding reserve commissions only	101,382
Reserve officers carried on "unassigned" list	21,300
Reserve officers carried on "assigned" list, approximately	80,000

The "unassigned" group members are not eligible for active duty or promotion so long as they occupy that status. Of the 80,000 "assigned" Reservists, approximately 42,000 enroll annually for some form of military training, this total being subdivided as follows:

Active-duty training	22,393
Conference courses (with no active duty)	9,714
Extension courses (with no active duty)	5,270
Conference and extension courses (with no active duty)[1]	4,899
Total	42,276

[1] Includes those who enroll for both the extension and the conference courses. Half of the active-duty group (22,393) enroll also for inactive training.

The annual cost of 14-day active duty training averages $235.53 per trainee, and the yearly federal appropriation to cover all reservist training now totals around six and one half million dollars.

For instructing reserve officers the War Department furnishes 469 officers and 538 enlisted men from the permanent establishment. To insure the maintenance of certain standards, the War Department also prescribes limitations as to promotion of reservists and duration of reserve commissions. These are:

a. That commissions shall be issued for periods of five years only, subject to renewal upon evidence that the officer has performed not less than 200 hours of military work during that period.

b. That an individual must serve not less than three years as a second lieutenant, four years as a first lieutenant and five years as a captain before he is eligible for promotion to the next higher grade.

c. That before a reserve officer may be promoted he must either pass an examination or complete satisfactorily a designated series of army extension courses.

While the total enrollment in the "straight" Officers' Reserve Corps (101,382) is quite imposing, the facts that 22,000 are carried on the unassigned list and that only 41 per cent of the full enrollment are active in taking any form of military training have not escaped notice. In fact the situation has disturbed many observers, both among Reservists themselves and in the Regular Army, that organization which is held responsible for the standards of training applied to their brother officers.

A reserve officer writing in a recent number of the *Coast Artillery Journal*[2] emphasizes his conviction that the ORC is suffering from what might be called inanition. Diagnosing the ailment he, as all good doctors should do, prescribes what he considers to be effective remedies. The subject is seriously treated and the remedies suggested are entitled to respectful inspection. No one familiar with the plan for our country's protection in war can remain indifferent to any deficiency in an organization from which the bulk of officers for war duty must necessarily be drawn.

The writer referred to cites four major causes that, in his opinion, are responsible for the failure of the majority of our Reservists to take any interest whatever in military training.

a. Length of Service in Grade. With seven years to serve in the lieutenants' grades and five as a captain, a young reservist, starting at 25 years of age, will be at least 37 years old before he can attain field grade under the present regulations. Consequently, it is argued, to the energetic, impulsive, aggressive young man of the current generation the outlook is discouraging from the very start.

To offset this feeling the remedy proposed by the writer quoted is to remove all time limitations on service in grade and to promote the Reservist as fast as he can qualify for the higher grades before examining boards composed of not less than 50 per cent of

[2] "What's the Matter With the Reserve?" by Major F. J. Bunn, 605th Coast Artillery, in the February, 1931, *Coast Artillery Journal*.

reserve officers. The one restriction imposed would be the stipulation that a vacancy had to exist before the promotion could be made.

With due respect for the evident sincerity behind the suggested procedure, it appears ill advised, to say the least, to promote young officers in the fashion indicated. Since no practical tests in leadership or the management of men can be imposed by the boards referred to, the result would doubtless be the promotion of "book soldiers" who happened to have the time to do the studying required and possessed the intelligence to pass the book tests. One may be permitted to question the soundness of the writer's belief that, "immature and unsatisfactory officers could easily be held back by the board." Evidently he has had limited experience with board "technique"! How could the board function adversely on the "immature" aspirant for a major's leaves if he passed the tests required? How could his immaturity be gauged?

The curious point about this "remedy" is that the reserve officer suggesting it admits that regular officers have to serve much longer periods in the grades indicated and that such service is needed to fit the individual for his increasing responsibilities. But it is nevertheless argued that the Reservist should be promoted anyway because he is *not* a professional and will become impatient if he is not advanced promptly. If it is admitted that an officer's responsibilties in war are heavier than in time of peace, what would happen to us if we went into a war with officers who had been so sketchily prepared for their duty, who had been permitted to attempt to run before they could walk?

b. Life of reserve commission. Another deficiency noted by the writer referred to is the short life of the present reserve commission. To quote, "A reserve officer holds a commission which expires in five years. To enable him to renew it, he must do a certain amount of work. When he begins to drop behind due to extra business activities which directly affect his income, he contemplates the long hours of strenuous work required of him before the date his commission expires, and feels that he can never devote the necessary time to the work. So he shrugs his shoulders and drops all activities. 'What's the use?' he argues, 'I'm bound to lose my commission in another year or two anyway.'"

The "remedy" proposed for this evil is to issue to the Reservist a commission good for life, assuming "decent conduct," and with the proviso that the officer shall pass a physical examination each year and do a certain number of hours in school or extension work annually or pass to an unassigned status. It would also be provided that he could escape from that status by "catching up" on his work.

Beyond any question it will be conceded that the living which the Reservist must make should be placed before any obligation he may have assumed in the field of military work, but an examination of the time involved reveals little basis for the expression "long hours of strenuous work" quoted above. Explicitly, a Reservist, in order to qualify for a renewal of his commission, must perform not less than 200 hours of military work in five years' time, an average of 40 hours per year or less than one per week. Each encampment attendance of two weeks is counted as 100 hours, hence a Reservist has but to attend camp twice in five years to acquire the necessary credits. Or he may (if his branch provides the instruction) solve five map problems (one a month) and attend five meetings of a reserve class each year to receive 40 hours credit annually. A reasonable allotment of time to extension course work by mail, say one hour per week over the autumn, winter and spring months, will also put the Reservist on the right side of the time-credit ledger. Considering these basic figures, it appears that the evil lies not in the fact that the hours are too long but that the duty required is too uninteresting. As a general rule it may be stated that men can nearly always find time to do what they really *want* to do, assuming only that it is within their financial means and mental capacity.

c. Lack of sufficient active duty to hold the reservist's interest. According to the writer quoted herein, it is active duty that has the greatest pulling power with the Reservist, and the statement is advanced that if the average officer gets to camp once in three years with his organization he is lucky. The wide applicability of this statement is open to question, since in a number of branches it has been established that the regiments attend camp every other year, if not each year, and that from 50 to 75 per cent of the trainees are "repeaters" of several years standing because not enough new men will enroll. For the ORC as a whole, 25 per cent of the active-duty trainees are repeaters. One may enthusiastically endorse the contention as to the greater interest carried by active field training as compared with home or classroom study, but how can the latter be eliminated with safety. The reserve officer quoted states that "most of the extension course work, *while very essential*, is dry and uninteresting." Consequently he would merely replace much of it by field training. Granting that the impatient American looking for a "get-trained-quick" military course will find home study work quite uninspiring, the sober fact remains that much theoretical classroom work must precede the practical work if any degree of progress is to be made in the latter.

To correct the situation just described, it is proposed to pay each Reservist "a nominal monthly sum provided he has completed a satisfactory number of hours work in the extension courses, or unit and group schools during the current month." It is further proposed to give each Reservist the opportunity for two weeks' field training each year. These proposals are sound, if the assumption is made that the money will be forthcoming from the public treasury. The fact that the federal Government now pays out upwards of 32 million dollars annually on the support of the National Guard is doubtless the most important single factor in holding the Guard together as an effective force. There is no question but that additional millions added to the millions now expended annually by the taxpayers on Organized Reserve training would have a beneficial effect, but it is also certain that no amount of money compensation can alter the fundamental relationship that should exist between theoret-

inal and practical military training. Considering the nature of this training, together with the non-military tendencies of the average American, it is doubtful, however, if "nominal monthly payments" would add greatly to the number of Reservists who take advantage of the training that is offered; it is more likely that those who already take some training would find time to increase this amount.

Two other contributing causes for reservist indifference are cited by the writer quoted. They are, the tendency to allow "dead wood" to remain assigned to organizations, and the all-pervading talk of permanent peace. The remedies proposed are sound enough. In the first case, discontinue the practice of making such assignments, and in the second, merely recall the history of this nation. In connection with the first of these two points it may be said that, so far as known, there are no cases in which a commander of a reserve unit needs to tolerate "dead wood" among the officers assigned to his organization. A request to the corps area authorities for relief from such encumbrances is usually all that is required to be rid of them.

If a canvass were made it would no doubt disclose a great mixture of motives that underlie the action of upwards of a hundred thousand Americans in enrolling in the Officers' Reserve Corps. Patriotism in some form or other unquestionably plays a part; other incentives probably include the spirit of fellowship, a consideration of the local advantages inherent in membership in some military organizations, and a natural desire for self-improvement or self-aggrandizement. It has been alleged that some reserve officers drop out after a brief commissioned service on the theory that, having once been members of the Reserve, they will receive commissions anyway in the event of war. Clearly such men are animated less by love of country than by hope of gain.

Whatever the motives that underlie reserve membership in the individual cases, it may be said that, taken together, these hundred thousand men represent a fine element in American citizenship. At the same time it may be admitted that many of these officers run true to American form in their impatience with the slow attainment of proficiency in military work under intermittent and inadequate instruction. Refusing to admit that there is no royal road to such proficiency, they cast about for "remedies" and "short cuts." If certain training is uninteresting, however essential it may be, by all means throw it out and bring on something interesting.

The truth appears to be that no system of military training will ever make a wide appeal to our people, and certainly the appeal will lose force to the same extent that the regular, the trainer, does his job in a perfunctory spirit. Inactive training, home study or classroom work, is necessary to make the field training worth while. And the one sure way to make inactive training draw attendance is to organize in all of the larger towns and cities, reservist branch classes for work on map problems that apply to their arms, and for participation in war games prepared by the professional who is guiding the group. Lectures are often so much wasted time; extension courses are uninspired; smokers and such semi-social gatherings have no military training value; but class assemblies for working out map problems once a month under competent leadership—these have the necessary pulling power and are worth the effort put into them.

A stern business, this matter of preparing one's self and others for war duty. The regular army man on instructor duty with the civilian elements of our army needs in his equipment something else beside technical proficiency in his branch specialty. He must have the ability to carry classes with enthusiasm through the study of problem after problem; he must compete cheerfully with a multitude of diversions and amusements, not to mention the customary "tired-business-man" inertia; he must cultivate and exercise plenty of patience; he must be willing to devote hours of labor to the work for which he is paid.

Everything considered, the present situation is not so bad. Under the current regulations if a reservist does not report for training he at least costs the country nothing. We have today, thanks to the National Defense Act, a group of 42,000 reserve officers who are receiving some military training each year—and as our instructors become better the number will increase.

Bits and Bitting

By Captain R. S. Ramey, 9th Cavalry

HOW often we see a horse led from the stable by the groom, the rider mount without even a cursory glance at the adjustment of the equipment, particularly the bridle and the bitting! And almost as often we see a horse, ridden by one accepted as a horseman, restive, throwing its head and otherwise trying to announce its discomfort when a glance is sufficient to note that the trouble arises from an uncomfortable, evilly adjusted bit. Under such conditions how many riders have we seen mistreat their horse and call him all sorts of names! Yet the fault was all the rider's, his negligent failure to note, before mounting, the poorly adjusted bridle or bit and later to understand the distress signals of his mount. I venture to state that all of us have noted at some time an example of such carelessness.

So, in the hope that the number of such unfair and unpleasant experiences may be lessened and that a little more thought and discussion of this extremely important phase of horse management may be excited, the following paragraphs on bits and bitting the riding horse are written.

It is realized that this subject, like all others associated with the horse, is controversial; colored by the personal likes and dislikes and, too often, by the idiosyncrasies of the individual. For these reasons let it be understood that we are, in this article, to look at bits and bitting from a practical point of view, to deal with that which is generally accepted and advisable for the average run of riders and mounts, and to talk about bits recommended for the average horse ridden by the average rider.

Before undertaking an examination of the various types of bits, their uses and application, let us clearly understand the action and effect of any bit on the mouth of the horse. Generally speaking, all bits, excepting outlandish contraptions, of which there are many, transmit their effect to the bars of the mouth of the horse. The contact with the bars will vary with the structure and conformation of the particular mouth. Some mouths have the bars, that area of each side of the lower jaw which is devoid of teeth, covered with a much thicker membrane than others. The sensitiveness of the mouth is directly in proportion to the thinness of this membrane. In other words, the thinner the covering over the bony structure called the bars the more sensitive the mouth of the horse and the more rapid is his reaction to any bit. The action of the bit is also affected by the thickness of the lips and of the tongue and by the conformation of the mouth.

Of course, it may be truly said that this is something over which the rider has no control. Nevertheless, appreciation and knowledge of the foregoing may aid in the selection of a mount and certainly in the bitting of one sensibly. Subscribing to this, let us examine the construction and effect of the most common and most useful of all bits—the snaffle.

The ordinary snaffle (see figure 1) is a bit composed essentially of two pieces of metal varying in diameter from very small to the large diameter as found in the so-called hunting snaffles. The mouthpiece of the snaffle is composed of two slightly curved, conical sections linking together at the small ends, uniting them but leaving them mobile one on the other. The two sections of the mouthpiece are technically known as cannons. The larger or outer extremity of each cannon is pierced with a hole into which fits a ring of which the diameter varies with the type of snaffle. In any type the rings should be large enough to permit the inserting or mounting of the reins.

The snaffle bit is very mild in its effect acting as it does, for the most part, on the lips and very slightly on the bars of the mouth of the horse. Consequently, it is with the snaffle that we should commence the bitting of the young horse. For like reasons, the beginner and the average rider should normally bit his horse with a snaffle. The mildness of the snaffle renders its effect less irritating to the mouth of the young horse or to the faults of the hands of the inexperienced rider. Naturally there is, in both cases, less chance of physical injury to the mouth of the horse. For the young horse or the beginner rider, a snaffle with a mouthpiece of large diameter is advisable. As the young horse becomes more accustomed to the metal in his mouth, or as the beginner rider becomes more adept in his handling of the reins, as a result of a more secure seat, we should progress to two snaffles of smaller diameter, commonly called double snaffle, which will give the rider more effect on the mouth of, and control over, his horse. But let me reiterate, the young horse will accept much more calmly a large snaffle at the beginning of training; will begin the much to be desired mouthing of the bit more rapidly; and there will be infinitely less danger of injuring his sensitive lips and the bars of his mouth.

The double snaffle has the advantage of permitting different combinations in the application of the reins. The effect of one rein may be applied directly, the other diagonally. Or three reins may be used in one hand, the fourth in the other, to raise the head of the horse, to turn his nose, etc. Furthermore, various applications of the reins may be used to teach the horse the flexions and decontractions of the jaw and poll.

So much for the ordinary snaffle under normal conditions—the horse going quietly without resistance. In case he resists, refuses to turn for example, if we apply unequal tension on the reins, the bit will probably slip laterally; one of the rings of the bit may pass

into the mouth of the horse. To prevent this, which would only serve to further irritate and upset the mount, we may have recourse to one or more of the following arrangements:

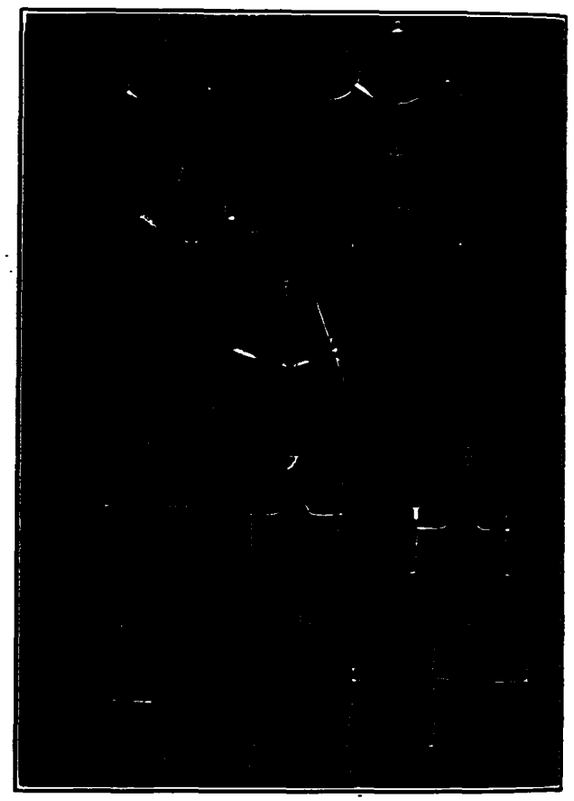
1. Rings with very large diameter. (See figures 2 and 3).
2. Shanks tangent to the rings and a part thereof and extending on both sides of the rings so as to fit across and against the lips of the horse when the ring tends to enter his mouth. (See figures 4 and 5).
3. A shank which projects from one side of the ring only.
4. A large disk of rubber or leather placed over the outer extremity of each cannon and resting between the ring and the lips to prevent the ring from pulling into the mouth. (See figure 4).

Then, too, in the case of a horse with a very sensitive mouth, it will often be found advisable to cover or wrap the bit with either leather or rubber, preferably the latter. The large, soft feeling mouthpiece will often serve to quiet a horse otherwise inclined to become restive from an uncomfortable bit; it will certainly induce in the young horse the much to be desired mouthing of the bit.

Occasionally it happens that a young horse develops the unfortunate habit of slipping the tongue over the bit or behind it. When this happens—and with the young horses the trainer should be alert for the first indication thereof—radical means may have to be resorted to in order to correct the vice in its incipiency because the bit is immediately more painful and the horse will become more and more unmanageable as a result of the pain and the attitude of resistance induced. First, be sure that the bit is well up in the horse's mouth. Frequently, the young horse will get his tongue over the bit for the simple reason that the bit is improperly adjusted.

One of the most successful means tried by the writer to prevent getting the tongue over is as follows: punch a hole in each cheek strap of the bridle midway between the attachment to the snaffle ring and the browband; next tie a thong around the ring and cannon at one side of the bit, pass it across the nose of the horse leaving the thong long enough to be able to pass it across the nose well above the nostrils to avoid interference with the breathing process; now with another thong tie the one attached to the bit well up on the front of the nose, utilizing the holes punched in the cheek straps as points of attachment for the second thong; finally fasten the throat latch a little more securely. In most cases this arrangement will cure the habit in a few days. Another method is to attach the middle of the thong to the joint of the two cannons and then tie the two ends, one coming out of each side of the mouth, directly to the middle of the noseband in front. The noseband should be adjusted high enough to obviate interference with nostrils. Where the habit has been allowed to persist for sometime, it may be necessary to resort to the device for some weeks. In persistent cases resort may also be had to a concurrent aid; *i. e.*, allow the horse when eating to carry in his mouth a snaffle of very small diameter mouthpiece. By this means he will come to realize that the bit is more comfortable over than under the tongue.

Now let us turn for an instant to the important consideration of the adjustment of the snaffle bit in the mouth of the horse. It would seem superfluous to say that the snaffle or snaffles are placed on the bridle so that, when tension is placed on the reins, the rounded parts of the cannons convex forward. In other words, when the bridle is held in the hand, the two cannons form a slight curve to the front of the bridle. With the bridle properly adjusted, the cheek straps of proper and equal length, the mouthpiece of the bit rests lightly against the corners of the mouth in such a manner as



to barely wrinkle the angle formed by the junction of the lips. If this is not so the bit will fall too low and strike the incisors or tusks of the horse. Even though not low enough to strike the tusks, the play of the bit in the mouth will cause the horse to throw its head. In either case the tendency will be to affect adversely the calmness of the mount. Again, with the bit too low, the cheek straps will bulge and loop out from the cheeks when tension is put on the reins. If the cheek straps are adjusted too short, that is, with the bit too high, the corners of the lips will be severely wrinkled and pinched and the horse, correspondingly uncomfortable, will be restive and prone to fail to respond to the demands of his rider. The adjustment of the double snaffle should follow generally the same rule as for that of the single snaffle with this slight variation: the cheek straps should be adjusted so that one bit will lie snugly against and underneath the other in the horse's mouth. The upper bit will be the one carrying the reins which correspond to the snaffle reins of a bit and bridoon bridle.

There are numerous variations of the snaffle bit ranging from one with a double jointed mouthpiece to the ones with branches on either or both sides of the ring. But whatever may be the addition to it in the way of branches, the common smooth single-jointed snaffle with the mouthpiece of fairly large diameter is unquestionably the most acceptable and useful of all bits. (See figures 2, 3 and 5).

Now let us consider the next most common and useful type of bit for the practical horseman or horsewoman—the curb. But, in order to do so intelligently, first let us look at the construction of the lower jaw of the horse. His lower lip and muzzle are covered with a thick skin beneath which are found the roots of the beard and the membrane. This structure is continued up into a depression underneath the chin known as the chin groove. The smooth bone of the chin groove being protected by thick skin is not very sensitive. It is the point where the two branches of the jaw begin to unite and is flat and rounds off in all directions. A curb chain acting in this groove can exert considerable pressure without inflicting unreasonable pain on the horse. Just above the chin groove the character of the bone and skin covering changes radically; the bone has sharp edges, and the skin is thin and sensitive. The slightest pressure on this area will cause considerable pain. In bitting a horse with any form of curb, the foregoing points should be fully understood, appreciated and remembered. If the curb chain rests too high, there is every danger of cutting the skin and of breaking off small particles of the thin edges of bone; at the least, of unnecessarily paining the horse. The ordinary curb bit (see figure 6) is composed of two shanks called branches, completed at one extremity by an eye to which is attached the cheek strap of the bridle and at the other extremity by a movable ring to which is attached the rein. The branches are united by a mouthpiece of metal, the length of which varies with the width of the mouth of the horse for which intended. Each side of the metal piece is called a cannon and bears on the bars. The cannons are cylindrical and may be continuous or, as in the regulation curb of our Army, be separated by an elbow called the port in which the thickness of the tongue may play, thus permitting the cannons to bear more strongly on the bars. It follows, then, that the greater the liberty of the tongue the more severe the bit. Conversely, the mildest curb is that one which gives the least liberty of tongue either as a result of the absence of a port or of curvature of the mouthpiece. In addition to the parts already enumerated and described, the curb bit is completed by the curb chain which may be of varying sizes and types of links and is attached to the upper part of the branches by hooks fixed in each eye. The chain, in turn, should be held low, in the curb place of the chin by a thong attached on either side to an eyelet in the lower portion of each branch and passing through a ring added in the center of the curb chain.

It goes without saying that the curb is decidedly more severe than the snaffle and, consequently, demands to be used with greater precaution. It should not be employed by any rider until he is master enough of his hands to manage it with delicacy. The less secure the rider is in his seat, the more likely he is to injure the horse's mouth; hence, there is only one type of bit for him to employ under the circumstances, the snaffle or double snaffle. Even when the fixity of seat is sufficient, there is no rush to adopt a more severe bit except where the trainer requires; the mildest bit that can be employed to obtain the necessary obedience is certainly the best. Before resorting to a more severe bit, remember that there is always a chance that the horse is already too severely bitted and that a more severe bit will only serve to increase his resistance.

One more caution with reference to the choice of a curb: one that is too narrow for the particular mouth will vitiate the effect because the branches will rest along the lips of the horse. Also, the horse is likely to adopt the vicious habit of taking the branch on one side between his lips or teeth. This may happen, too, where a thong is not used in connection with the curb chain. On the other hand, with a mouthpiece too wide, the curb chain will tend to rest on one point and be correspondingly more severe and the bit will have lateral play. In general, the curb should rest in the mouth of the horse with the mouthpiece not nearer than one inch to the tusks of the male or about two inches above the corner incisors of the mare and, where the length of the mouth renders this possible, approximately opposite the curb chain groove.

As in the case of the snaffle, there are an infinite number of variations and applications of the principles of the curb bit. But, generally speaking, it can be taken for granted that the more complicated the bit the more likely it is to be evil. An excellent rule to follow is to leave to the other fellow the freakish and outlandish contraptions sometimes denominated as bits and always claimed as capable of producing wondrous results. It is painfully easy to injure or affect the sensibility of your mount's mouth but discouragingly difficult to reclaim or make over the mouth once injured.

There are some special bits which will be found useful and effective. But before adopting one or more, assure yourself just what it is you desire to accomplish. Having carefully studied the temperament and mouth of your horse and, equally as important, your temperament and hands, select a bit which, by its construction, promises to act on the mouth of your mount in a manner to secure the result which you seek.

Let us, therefore, briefly consider a few of the more common special bits—those generally accepted by

practical horsemen—and see what is their special utility.

First on the list are any curbs, of which there are several, whose branches are shorter (see figures 7 and 8) than the normal or regulation curb (see figure 6) which will be used as a medium of comparison. Recall that we found that the severity of the curb varied, among other factors, directly with the length of the branches. Accordingly, any curb bit whose branches are shorter than the regulation curb will be found to be milder, provided that two other parts remain unchanged: *i. e.*, the port and the diameter of the mouthpiece. Remember that with a wider port or smaller mouthpiece the bit becomes relatively more severe. For hacking, hunting, and, in some cases, for polo, where a little more prompt response to the bit is demanded and where the horse does not respect quite enough a snaffle, we may very successfully bit our mounts with this very mild short-shanked curb. The leverage action is much more mild than that of the regulation curb, but the bit is more powerful than any of the snaffles.

Another variation of the same type of curb is one where the mouthpiece slides up and down on the branches (See figure 8). Different ones of this type bit have different degrees of mobility of the mouthpiece. This style of bit is particularly suitable for a horse inclined to be stiff jawed or to set his jaw when tension is put on the reins. The mobility of the mouthpiece will often tend to induce relaxation of the jaw.

Next in order of severity (still comparing with our regulation curb) come the curb type bits with less than the normal sized port down to those having no port whatever. Some of the latter are constructed with the mouthpiece curved so as to allow tongue space. Depending on the degree of this curvature, the bit may be more or less severe. Let us remember that we found that one of the factors influencing the severity of the curb bit was the smallness or largeness of the port; whether the pressure of the mouthpiece was tempered by the tongue or if the cannons pressed directly on the bars. In general, then, any bit with larger than the normal port is relatively more severe.

A very severe type of curb bit and one to be used only as a last resort is any form of the curb principle whose lower branches are proportionately longer than normal. A few bits of this type found on the market are murderous. Recall the principle of mechanics; roughly put, the force exerted by a lever varies directly with the length of the lever arm. The lengthened lower branches increase tremendously the force exerted by the rider on the jaw of the horse. For this reason, every other means should be exhausted before resorting to a bit of this extreme construction.

In addition to the common type curb bits there are a number of other special bits which conform, in varying degree, to the principles of the ordinary curb; some are more severe, some less severe than the ordinary curb. The more common of these special bits are a group known under the trade name of Pelham.

1. Probably the most common and, certainly in our Cavalry Service, the most widely used of the Pelham bits is the Rugby. (See figure 9.) It is particularly recommended for polo. By its construction with short branches, medium large, slightly curved mouthpiece, and the additional mounting rings permitting the application of the snaffle effect, this Pelham is only slightly more severe than a snaffle. With the Rugby Pelham, one of the disadvantages common to all Pelhams, can be corrected. I refer to the action of the curb chain whose effect on all the Pelham bits is transmitted too high on the jaw of the horse. With the Rugby Pelham the curb chain, which, for this purpose, will have to be longer than is normally necessary, can be passed over and under the snaffle mounting rings, thereby keeping the effect low.

One of the advantages claimed for all Pelham bits is that by using the upper rein attachments the snaffle effect only may be used, leaving for emergency use the lower or curb set of reins. This is not strictly correct because, in place of a true snaffle action, the upper reins exert a pincer effect. An objectionable feature of most Pelhams, the Rugby excepted, is the disproportionate length of the branches. The use of such Pelhams is open to serious question. The disadvantage is counteracted, however, by making the mouthpiece large enough to offset the extreme length of branch, (see figure 10), and by covering it with rubber or some composition.

2. A very widely used, yet one of the most objectionable Pelhams, is the so-called broken Pelham. (See figure 11). This bit is constructed with a jointed mouthpiece of small diameter. It is very generally claimed for this bit that it is only slightly more severe than a snaffle with mouthpiece of the same size. Unquestionably this is true if no curb chain is attached. But with a curb chain, it is impossible to place the chain in its correct location and, at the same time, have the mouthpiece properly placed in the mouth: the effect of the chain is transmitted too high on the sensitive points of the jaw bone. The only use of the broken Pelham recommended is for a horse that habitually carries its head too low; this bit will be likely to bring the head up. But most horses will only be irritated and made restive by this particular Pelham, because of the undue pain caused by the curb chain.

3. Without doubt the most severe of all the Pelhams is the Hanoverian. It differs from the others in having a jointed mouthpiece united by a high port and the sides covered with rollers. This bit is not recommended for any horse.

In conclusion, let us repeat four simple maxims of bitting: First, use the simplest and mildest bit that the horse will respect. Second, as a general rule, the more complicated the bit the more evil it is likely to be. Third, progress to a more severe bit with the greatest hesitation; a little study will probably result in the rider's changing, not the bitting, but his own manner of using the bit. Finally, if your mount is resisting the bit, it may be either because of the poor adjustment of the bit, the faulty action of the rider's hands or because the horse is already too severely bitted.

Foreign Views on Mechanization

England

THE Journal of the Royal United Service Institution for May, 1931, prints a lecture by Colonel Sir Frederick Pile, Bart., D. S. O., M. C., on "The Development and Future of Armoured Fighting Vehicles."

According to him, the British Army stands very well ahead in matters of mechanization generally, and particularly in the development of armored fighting vehicles. To quote him, "Indeed, it might be a matter of difficulty for most other nations to reach in peace time the level which we have now attained. It would involve converting the ideas of those nations to armoured war, and it would entail the expenditure of a great deal of capital, apart from a very considerable outlay in trial and research. It seems probable, therefore, that in the event of war, we should now be ahead of other nations as regards both the quality of our armoured fighting vehicles and the ideas underlying their use." He thinks, however, that this advantage would be neutralized by the vast production capacity of countries like Germany, if England were caught by an outbreak of war with too few vehicles.

With reference to the purpose of the armored fighting vehicle, he states simply that the tank came into being in order that men in battle might cross the final 200 or 300 yards of a zone, bullet swept and protected by barbed wire, without danger to themselves. "And from a tank which originally developed as a means of *crossing* bullet-swept zones has now evolved a machine capable of *avoiding* bullet-swept zones, of travelling great distances and fighting battles at the end of them."

Colonel Pile discusses four types of vehicles: the medium tank, the light tank, the armored car, and the machine gun carrier.

The Medium Tank

The medium tank weighs 16 tons; it has a 180 h. p. Armstrong-Siddeley air-cooled engine. It has stamped steel tracks with a life of 2000 miles or more. The suspension is much improved. Three turrets are fitted. The middle turret has a 3 pounder and a .303 coaxially mounting. The two smaller turrets have .50 or .303 machine guns. Arrangements for control by the commander have been simplified, and the tank provides a very steady gun platform. Among various safety devices, there is a Pyrene extinguisher system, which either the tank commander or driver can loose at will. A direction indicator now being tested is giving good results. The gasoline system is situated on the top of the mud guards.

The ingress of poison gas is prevented by an electric fan which maintains a small positive pressure.

The Light Tank

"To understand the difficulties in the way of the construction of a light tank, it is essential to maintain a clear picture as to the rôle of such tanks. First of all they are scouts; so that their duty is to precede the medium tanks, to send back information as to the situation, to discover possible opposition, and to be able to put up such defense as would allow the medium tanks to arrive. Then in the attack, they must be capable of producing a high rate of well-aimed fire. As they are the skirmishers of the armoured brigade, they will be required in great numbers and, therefore, they must be cheap. This, then, is the problem: to build a cheap vehicle, a fast vehicle, a vehicle containing radio, a vehicle possessing sufficient stability to enable a gunner to aim accurately, and, lastly, a silent vehicle."

There is controversy as to whether this light tank should be a 2- or 3-man vehicle. At the moment, the 2-man light tank holds the field.

The Carden-Loyd chassis of today has a very short track base, but in spite of this fact, a system of suspension has been produced which, while not perfect, enables the gunner to keep his eye to the telescope while crossing most sorts of country and makes the vehicle more comfortable to ride in.

"As regards speed, a Meadows engine which develops 60 h. p. has been adopted, and the tank thus possesses just enough speed to scout in front of the 16-ton tank. Actually one of these light tanks recently covered ninety miles in three hours exactly. The track life is good. The armament is either a .303" M. G. or a .5" M. G.."

The Armored Car

After the war, the requirements laid down by the General Staff visualized a heavy armored car and a light armored car, with the idea of supporting the latter by the former. "With the advent of the light fast tank and the medium tank, capable of covering great distances at high speed, the need for supporting the light armoured car with a heavy armoured car became less apparent. All wheeled vehicles possess inherent disabilities in crossing rough country. On mud they develop wheel spin and dig themselves in, while a small ditch into which the front wheels can drop is a complete obstacle to them. At the best the cross-country capability of a wheeled vehicle is limited. If, therefore, a track vehicle could be brought up in support of light armoured cars in reasonable time, it would prove a much more efficient support than a heavy armoured car. At the same time the views of the General Staff as to the number of men required to man an armoured car have been modified. It is now agreed that three men—a driver, a gunner and a car commander—should be an adequate crew. As a result of this opinion, a light armoured car has been built. This is a three-man six-wheeled armoured car built on a Crossley chassis, which is a modified commercial chassis. The vehicle is thus altogether much cheaper

than the car mentioned above (Lanchester heavy). Putting aside the fact that it is cheaper, there are many points in favour of a light armoured car; for instance, it can cross bridges that would not bear heavier types; it carries enough petrol for about 200 miles.

"The armoured car is in a different position from almost any other fighting vehicle, in that only limited numbers could be employed. The essential characteristics of an armoured car are speed, silence and reliability. At the beginning of a war it is certain that armoured cars will be over-worked. But very shortly, as the forces begin to get into contact, there becomes less and less room in which to use such cars."

The Machine Gun Carrier

With the Mark VI Carden-Loyd machine gun carrier, the machine gun can be fired from the carrier or can be lifted out and fired from a suitable spot on the ground. The crew of four men is conveyed on a trailer and is unprotected. The vehicle itself is sufficiently armoured to resist ordinary machine gun fire except from the air.

The Future

"We can only retain this position of superiority if we continue to experiment with these vehicles, and when we have decided to adopt a new type, we put numerous examples of that type into service so that those defects which can only be revealed under the 'iron hand of the soldier,' should be brought to light. This policy not only commends itself from the military point of view but from the financial point of view also, since every year we are saving money by finding better methods of preventing wear, better methods of maintaining vehicles, better methods of training personnel to handle the vehicles without doing them avoidable damage.

"The trend of present design is towards a tank that is very fast and exceedingly powerful, capable of traversing long distances without refuelling and endowed with what for the want of a better word I call great stamina. This tank is as different from the tank of the Great War as modern artillery is different from the muzzle loaders from which Napoleon and Wellington threw bits of iron at each other across the fields of Waterloo. That muzzle loading period was the end of an epoch—the epoch of beautiful uniforms and devastating inefficiency. The tank of 1918 saw the end of another epoch of war, the epoch of mud and blood. The tank of that day was a last desperate expedient to bolster up that bludgeon type of war, and indeed it only just won through, for on the 5th of November, 1918—the last occasion on which tanks were used—only eight machines were available.

"The modern tank introduces a new epoch. Like the rapier wielded by those heroes of our boyhood's storybooks, it can strike the enemy's body where we will and, as it were, in the twinkling of an eye."

Note: In the discussion following the lecture, the Chairman said: "If we have the misfortune to be engaged in another war, it is to my mind obvious that, for reasons of finance, we shall begin with a very limited number of fighting vehicles. • • • Consequently, these must be of as few types as possible and must be thoroughly reliable." He advises standardizing each machine as soon as it becomes really dependable.

Belgium

A German officer (Major A. D. von Hartlieb) wrote two or more years ago. "In Europe the value of cavalry is appreciated more as one moves from west to east. This is easy to explain. In the west the field of operations is restricted; the network of good roads is very complete; the space required by the cavalry for its deployment will be frequently lacking; and finally the network of roads frequently permits the accomplishment of cavalry missions by mechanically transported infantry." It is, perhaps, then, not surprising to find Belgian comment extremely enthusiastic about the possibilities of mechanization.

In an article in the *Bulletin Belge des Sciences Militaires*, February, 1931, entitled "Why is it Necessary to Motorize?" Général-Major Semet and Major B. E. M. Willems say:

"Three arguments imperatively demand this motorization:

1. The present impossibility of protecting the horse against toxic gases, vulnerability of teams.
2. The economy in the use of the internal combustion engine as compared with the horse-drawn tractor.
3. The rapid diminution in the number of horses that can be requisitioned."

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The armies of the world should have accepted the coming of the internal combustion motor in the same way they have the bicycle, wireless telegraphy, etc. But the motorized vehicle—as a combat element—took its place in the army only after a long period of trials, of gropings, and this is easily understood. They break the homogeneity of action and the harmony of movement of the large units.

In the maneuvers of a neighboring country, where a large unit had the mission of testing motorized engines alongside mounted troops, cyclists, horse artillery, portée artillery, etc., in the critique on the maneuvers the thought was expressed that all these combat elements of different speeds spent their time mutually waiting for one another in order to participate as a whole in the combat. We cannot conclude, then, as to the necessity for motorizing without much study of the manner of coordinating this motorized force. Perhaps we shall be led to break deliberately with the large units of the old type and to create an exclusively motorized organism. The field seems open to a tactics inspired by Napoleon's cavalry.

Such studies and tests are far from being completely achieved, even in England. This should be a comfort to the armies which have not radically taken up motorization, but the alert observer will follow attentively the tests made in armies whose financial ceiling is higher than ours.

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The attack and defense of States will have to take

(Continued on Page 64)

Cloth Maps for Field Use

By Brigadier General W. C. Brown, U. S. A., Retired

ORDINARY paper maps are so unsatisfactory for field use that the writer, after unpleasant experiences with them in Indian campaigns, Spanish War, Philippine Insurrection and Mexican Punitive Expedition, sought, for this purpose, some years ago something more substantial than paper.

Inquiry developed the information that cloth maps were used in our service as far back as the Civil War, but the trouble and expense involved in supplying them were such that since then, save as appears below, they seem to have been practically unknown, and we have had to resort to the unsatisfactory method of cutting a map into squares and, by means of paste, mounting it upon cloth.

The usual alternative has been the Map Case, now a regular article in an officer's field equipment. This, however, adds just one more article to the officer's already long list of field impedimenta.

It is precisely this which we wish to avoid, for when worthwhile field service is being performed, it is just the time when transportation is very meagre and all too frequently entirely non-existent, as, to our sorrow, we have had occasion to frequently experience.

For our use in the Sioux Campaign of 1890-91 an enterprising Department Engineer Officer (Lieut. Haydn Cole) supplied a limited number of maps blue printed (white on blue) on finely meshed linen. This was so much of a novelty that it attracted considerable attention. We have since learned that linen is not essential; cotton which is less expensive answers perfectly.

Following our experience in Mexico we determined in future to have our field maps on cloth. The General Staff Map of northern Mexico of 1913 supplied to troops in 1916 was printed on tolerably good paper and fortunately for our purpose, fairly thin. We had no difficulty therefore in coating finely meshed cambric with the ordinary blue print solution and by means of a large home-made printing frame, very acceptable white on blue prints on cloth were made. We might state here that sized blue print cloth already prepared is a commercial article. If unsized fabric is desired it is easily prepared using a finely meshed cambric cloth.

A blue background, however, is open to the objection of being somewhat difficult to read, and is unsatisfactory where notes or additions have to be made on the surface of the map.

A step in advance, therefore, is to have a Van Dyke or reversed negative prepared from which excellent *blue line* prints can be made. The latter, however, involves recourse to a plant having the necessary expensive machinery for producing negatives.

All of the above was, for the benefit of officers desiring to make their own cloth copies, written up in detail and published in the U. S. CAVALRY JOURNAL for April, 1925.

For several years past the U. S. Engineer Map Reproduction Plant at Washington Barracks has been turning out excellent cloth maps in several colors.

Black on White Maps By "B W" Process

Recently our attention has been called to and we have been experimenting with the so-called "B W" (Black on White) Direct Printing Process which, although it has been on the market some two years, may not be familiar to many of the readers of this Journal. It seems to be the latest development of this art.

The following description contemplates reproduction by an amateur whose sole apparatus is a printing frame and sunlight, and where the matter to be copied is *black* and *on one side only* of the sheet.

The process is chiefly used in machines primarily designed for blue printing in quantity by electric light.

This is a marked step in advance of any Blue Print method, and moreover has the distinct merit that even in the field with no other apparatus than a printing frame copies can be made by an amateur of maps and various other kinds of written and printed matter, when, as stated above, the matter to be copied is on one side of the sheet and on fairly thin paper.

Its only objection (not a serious one however) is that the amateur cannot himself coat the material (paper or cloth) which must be bought already prepared. The B W Process material supplied either in the shape of paper or cloth comes already coated, the wholesale prices being approximately 15c per yard for paper, and 65c per yard for medium, and 90c per yard for thin cloth. Cost of developer 1c (or less) per square yard of surface treated.

The copies are made by *direct printing*, just as in ordinary Blue Printing, and as the results are black lines on a clear white background, no recourse to Van Dyke or reversed negatives is necessary.

Best of all, this obviates having to resort to the expensive photostat process which, to obtain the same result, requires two operations while the B W Direct Printing Process calls for but one—the *direct printing*. The time of exposure is essentially the same as required for rapid blue printing.

What we are here attempting to describe is the use which can be made of this process by the amateur—the young officer or soldier in the field, with no other facilities than a printing frame and sunlight.

In commercial establishments where such work is done in quantities, the B W Process is accomplished simply by securing a special attachment to the ordinary blue printing machine, the changing from blue

printing to B W Process being accomplished in a few minutes.

Making a negative from another negative. A specially prepared thin paper is used for this purpose and its use frequently saves much time and labor, as for example when it is discovered that changes should be made in an original negative (tracing).

When taken out of the printing frame the side which has been exposed to the sun should be immediately mopped over with the developing solution, usually done by dipping a wad of cotton in the developer and passing it back and forth across the exposed surface when the black lines appear as if by magic on the chemically coated surface which, under the exposure to light, changes from a pale yellowish tinge to white.

Manufacturers advise that the prepared paper or cloth (which must be kept in the *dark* in a cool dry place) will keep well for a month. However, in the cool dry climate of Colorado, we have had paper which has been on hand for six months and which is still good.

The developer comes in the form of two powders, and for use each is dissolved in lukewarm water as per directions. These call for the two solutions being mixed in equal quantities as required for use. Although we have been able to do fair work with developer mixed and kept in the dark for weeks, the results are by no means as satisfactory as those secured through *freshly mixed* developer.

The prepared paper or cloth evidently keeps good longer than mixed developer.

As the developer comes in shape of two powders; it is well adapted to military use in the field.

Experiment shows that there are many convenient uses to which either the B W Process, cloth or paper, can be put, such as:—

(a) Making copies of maps when printed on fairly thin paper.

(b) *Copying letters.* If typed, the typewriter ribbon must be *black*. If written with pen and ink, the ink must be *black*.

(c) Even better results are secured in copying any printed or written matter on tracing paper or tracing linen; where the matter is written, India Ink is preferable.

(d) Making a negative from another negative (see above).

(e) Copies of printer's proofs where made on onion skin paper or its equivalent are readily and inexpensively copied.

(f) Even fair copies of photographs can be made when the original is on *very thin* paper and the subject gives marked contrasts of light and shade.

EDITOR'S NOTE: Sample of maps on cloth prepared by the methods described in the above article by General Brown have been examined and the results are quite striking. Cloth prepared for the B.W. process may be obtained from the Charles Bruning Co., 96 Reade St., New York City; Branches in Chicago, Los Angeles, Newark, Boston, Detroit, Pittsburgh, Miami.

Remount Depot Horses

Their Sale to Officers and Selection for Schools

THERE have been some changes of policy in the Remount Service as regards issue and sale of government horses, due in part to congressional action which has reduced the number of authorized private mounts from two to one. It is believed that Cavalry officers will be interested in the following explanation of the Remount Service policy in this connection.

In June or July of each year, all four-year-old depot-mined animals, except those selected for breeding, are available for selection by representatives of the Cavalry and Field Artillery Schools and by the Remount Depot Commanders, who reserve a certain number for sale to officers. Selections of particularly well-bred horses will not be made for sale to officers, except upon special authority of the office of the Quartermaster General. An officer can purchase only one mount from the government and cannot do that, if he already has an authorized mount.

Remount Depot Commanders, after the annual selection has been made, are required to submit a list of horses which they are holding for sale to officers to the Quartermaster General, giving name, brand number, breeding, size, and rating of each animal. Approved applications of officers for the purchase of government animals are forwarded by the office of the Quartermaster General to Remount Depot Commanders, the date of approval in all cases determining the priority of an officer's application. Depot Commanders will indorse the officers' application blanks back to the Office of the Quartermaster General after selection and authority for sale have been approved, and the entire transaction (payment, etc.) must be consummated within thirty days of the approval of the sale. Army Regulations 605-140 define whether an application may be considered.

Any officer so desiring may delegate the selection of the horse he is about to purchase to the Depot Commander or another officer or, of course, he can make his own selection, if he can arrange to be present at the Remount Depot. However, if the officer does not go to the depot to select his horse for some time after his application has been approved and he still desires to make his selection personally, he will lose his right of priority between the date of approval and the date he goes to the depot to make the selection.

An officer may designate a special animal for selection by mail or otherwise and, if the animal is available and the officer is entitled to the animal by priority, his selection will be approved.

Events Overseas

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

War Debts and Reparations

AMERICAN isolation is a thing of the past. It matters nothing whether the American public approves or disapproves. It matters little whether President Hoover's sudden bold stroke of policy in offering generous relief to a debt-burdened world results in complete success or compromise. The fact of his offer, coupled in logical sequence with the presence in 1918 of two million American soldiers in northern France, there to defend American rights, registers inescapably the fact that the dominant economic nation in this world cannot safely stand aside while her friends (and rivals) are slipping into ruin. "It is 1917 repeated," announced one speaker before the British House of Commons on the day following the Hoover offer, asserting further that every international crisis henceforward will find the United States playing its part to the full. In short, the futility of pigeon-holing Europe's news as something detached from American affairs, must be apparent to all.

The picture is clear if we examine briefly the facts which swept to the crisis in late June. Since the inception of the Dawes Plan, it has been evident that national prosperity alone would put Germany in a position to meet the obligations which she had accepted under that instrument. But a world submerged in a depression of unprecedented severity and duration left no room for German solvency, let alone prosperity. To make matters worse, the Right Wing (Nationalists and Hitlerites) and Left Wing (Communists) enemies of the Bruening Government were not at all averse to inviting national disaster if by that means they might secure power.

In May it became apparent that the crisis was at hand. Taxes had been moved up by stages to a limit where a further rise would only have throttled industry and commerce; expenses had been cut until a coalition government would go no further, and yet the national budget failed to balance. Two doors were still open—each leading to disaster. Would Breuning invoke Germany's right to a moratorium on reparations under the Young Plan? It would mean temporary surcease, but only at the almost certain cost of destroying Germany's international credit. And should she thus lose her standing among the capitalistic Great Powers, it would require but a slight slip further to plunge her into Communism. A second way out involved the calling of Hitler's Nazis to power, with their program of repudiation, and the ultimate consequence of turning Germany into the battleground of a new Continental War. There was a third door, but it could be opened only from the outside. If Germany's creditors could be made to see the consequences to themselves of a German breakup, perhaps foreign help might be forthcoming on such terms as would leave German integrity and sovereignty unimpaired

At the invitation of Premier MacDonald, Chancellor Breuning and Foreign Minister Curtius went to Chequers June 6, to lay their case before the British. In the meanwhile, our own government had for months past kept a close eye on the situation; and June found Secretary of the Treasury Mellon in England and France, checking the facts which had been gathered. Even as the parleys progressed, a "flight from the mark" was under way. In a single month the Reichsbank lost $240,000,000 in gold and foreign currency, as foreign financiers withdrew their short term credits and German citizens rushed their movable wealth across the frontier. In sympathy with the situation, commodity and security values on every market in the world were dropping at an accelerated pace.

The situation was at its worst when President Hoover, on June 20, threw wide the door for international cooperation toward German restoration. His proposal, the opening paragraph of which is quoted below, leaves no room for quibble or evasion:

> "The American Government proposes the postponement during one year of all payments on intergovernmental debts, reparations and relief debts, both principal and interest, of course not including obligations of Governments held by private parties. Subject to confirmation by Congress, the American Government will postpone all payments upon the debts of foreign Governments to the American Government payable during the fiscal year beginning July 1 next, conditional on a like postponement for one year of all payments on intergovernmental debts owing the important creditor Powers."

Reduced to dollars and cents, we find that acceptance in full by all the Powers involved would relieve the German treasury of an outgo totalling about $400,000,000 during the fiscal year 1931-32, the bulk of its reparations payments. The United States in turn, would lose an income on war debts accounts amounting to $246,566,806. Next to us, France would make the heaviest immediate sacrifice, in that she would forego a net balance of $96,756,840 due under her normal operations in reparations and war debts.

How far was the President's action necessary? We may look to the reaction in the legislative and executive chambers of the Great Powers, to the press, and finally to the world's markets for an answer. In Britain, Laborite, Liberal and Conservative responded with immediate and unqualified approval; in Germany a tottering coalition cabinet regained its seat in the saddle; Italy forgot its domestic political troubles long enough to shout enthusiastic indorsement; Japan

gravely acquiesced. If possible, the press outdid the statesmen in their enthusiasm. Nor was this reaction limited to the countries immediately concerned. In both hemispheres the Hoover offer was hailed as "the dynamite to break the crust of despair which is slowly choking us all," to quote a Swiss editor. The action of the world's markets leaves an even clearer record. So far had confidence in the future forsaken both buyer and seller since the turn of the year that quoted prices were no longer a measure of values—but rather a barometer of hopelessness.

Since the inception of the Dawes Plan in 1929, the average prices of wholesale commodities had fallen by more than a third. The rebound from that bottom was instantaneous, as the cables flashed the news. A broad, vigorous rise followed, suffering no interruption till France began to interpose difficulties to the execution of the plan. In brief, the world was beginning to regain a measure of its lost confidence.

Discordant notes are not lacking in the chorus raised by the President's proposal. France threatened for a fortnight to be a stumbling block. Unfavorable action on her part would probably have given the cue for a similar course on the part of the Little Entente and Poland. The storm in the French Parliament, heightened as always by internal political considerations, brought the usual bitter denunciations of the United States. But for once in a decade the cry of "Shylock" was not hurled at us. Through it all, the opposition in both chambers realized that France must inevitably keep step with the world in this crisis. Otherwise—isolation. At this moment the prolonged negotiations between the representatives of the United States and France seem to have found a middle ground for compromise. In substance, Germany will have her respite. By means of a bookkeeping transaction she will transfer to the Bank for International Settlements, the French share of unconditional payments. That sum is then to be placed to the credit of the Reichsbank and will revert through that intermediary to the German government. Moreover, Germany is given a reasonable period of years in which to make good the 1931-32 payments. The arrangements keep intact the machinery of the Young Plan. Acceptance of the accord, however, still awaits the action of the French Parliament, and of the American Congress.

The German extremist press, both Right and Left, are one with the mouthpieces of Soviet Russia in their vicious attacks on the scheme. Cheated of an issue, they denounce it as an effort of Wall Street to help the speculator. Speaking more soberly, the Soviet-controlled press declares partial fulfillment of its earlier prediction that the capitalistic world would at last pool resources to meet the economic attack of Russia, and that it is now but a short step to the point, where the issue will be joined on the battlefield.

In the final analysis, America's presence as prime mover in the reparation question indicates no reversal of policy. At most it is a change in trend. The American merchant and the American investment dollar have long since made impossible the isolation desired by an influential minority of our citizens. The President's action does no more than openly register the fact that the political and economic well-being of the world is at all times a first concern of the American people.

Disarmament

In the seven weeks preceding President Hoover's debt proposal, the disarmament issue received setbacks so severe that its backers were all but ready to postpone indefinitely the February (1932) Arms Conference, as more apt to lead to war than to prevent it. The "storm over Europe" grew imminent as German bankruptcy apparently became a matter of days. An even greater threat loomed with the realization that Russia's feverish efforts were building a sound industrial foundation for the world's largest military machine. The Continent did not blink the bald facts placed before it by President Hoover in his address to the International Chamber of Commerce. The individual countries simply could see no way of dropping their share of the arms incubus without imperilling their individual safety. Ready to admit the existence of standing armies totalling 5,500,000 men,—70% higher than in 1913, maintained at a cost of five billions of dollars a year, they were yet unwilling to accept the Kellogg Pact as a substitute safeguard.

Germany's announced intention of rearming, in view of the failure of the World War allies to live up to their "disarmament obligations" under the Treaty of Versailles found direct expression at Breslau. There Stahlhelm, German war veterans' organization, assembled for its annual convention. At a given signal the army, 150,000 strong, faced east toward the Polish frontier, a bare thirty miles distant, and voiced its oath to "redeem" the lost territory. Meanwhile, the Franco-Italian naval negotiations remained wedged in the impassé created when the Italians discovered the French replacement joker. A conference in London did no more than keep the door open for further negotiations. The problem has now been passed to the representatives of the three Powers concerned at Geneva. In brief, France insists on getting her rebuilding program under way in mid-1935, 18 months before the expiration of the London Naval Treaty. Under her projected schedule she would attain a superiority over Italy in new ships totalling 225,000 tons before the end of 1936, as compared with a present margin of 170,000 tons. Great Britain has aligned herself with Italy in the rejection of the French plan.

Another difficulty arises from the British realization of the peculiar vulnerability of London to a gas attack from the air. The scaling down of normal national armaments fails to reach this problem. As one government speaker declared before the House of Commons, "any nation with a developed chemical industry has high war potential." In consequence we may look for British insistence that lethal gas be eliminated from war, whatever her expectations as to the good faith of nations in adhering to the principle when faced with the fact of war.

Finally, none of the former Allies feel that the Zollverein-Anschluss-Mittel Europa issue is shelved, in spite of the efforts towards its entombment in the World Court and the League.

With so many fears and ambitions separating the European peoples, cooperation toward the elimination of armaments was rapidly becoming impossible in the opinion of most European statesmen. The appointment of Arthur Henderson, British Secretary of State for Foreign Affairs, as president of the coming Conference made it clear that all possible channels of conciliation would still be explored. But hopes of success were close to zero. At that juncture, President Hoover's action, calling for international cooperation in matters economic, cleared the atmosphere. Premier MacDonald followed with what is described as the greatest speech of his career, delivered before the House of Commons June 29. In substance, it is a powerful plea to all the Great Powers. He indulged in neither optimism nor pessimism. In particular, he extended the olive branch to France, a necessary gesture in view of that country's growing bitterness over the recent Anglo-German rapprochement. The prospects for the calling of the February conference are linked to the outcome of the postponement in debt payments. The larger question of a successful conference remains an open question.

World Wheat Conference

How to restore the production of bread grains to a profitable basis was the problem confronting the representatives of the great wheat-growing countries in a brief (and abortive) conference at London, May 18. The problem appears in part from the following table (1930 statistics):

Production		*Exports*	
Russia	1,032	Canada	186
U. S. A.	851	Argentina	151
Canada	398	U. S. A.	140
India	387	Australia	63
Argentina	239	Russia	93
"Little Five"	334*	India	3
Australia	205		
Totals	3,446	*Totals*	636

*Poland, Hungary, Jugoslavia, Bulgaria and Rumania. 1930 export figures for the "Little Five" are not yet available.

Add to the above the fact that the hungry Chinese, to mention one group in the hundreds of millions of underfed, cannot afford to buy wheat even if the price drops to 25c the bushel, and it appears that no profitable market can be created for the estimated 1931 North American surplus of more than a billion bushels. Acreage reduction was proposed by Samuel R. McKelvie, chief delegate of the United States Federal Farm Board. Russia countered with export quotas, blandly adding that they must be based on 1913 export figures. His object is clear when we realize that:

1. 1913 was the year of an abnormal bumper Russian crop, greatly exceeding all other figures except those of 1930.

2. The United States, Canada, and the Argentine developed their great export wheat markets during Russia's enforced absence from 1914-1929.

"What is dumping?" blandly asked the Russian delegate when the subject arose, knowing that neither a Russian nor anyone else can reduce production cost data for his country to terms of currency. Eventually, a few meaningless resolutions were adopted, a few committees were assigned mission even more meaningless, and the law of supply and demand was left to work out its ultimate surgery.

The British Empire

United Kingdom. Labor paused long enough in its efforts toward a solution of Europe's problems to serve notice on the House of Lords that that body's days are numbered. The Prime Minister reflected Labor's attitude in his words "It (the House of Lords) acts as may a subordinate or subcommittee of Tory Headquarters." He went on to threaten the Upper House with the creation of a sufficient number of new peers to ensure the passage of Labor legislation.

The particular issue developed from the efforts of Mr. Snowden, Chancellor of the Exchequer, to ensure a balanced budget for the new fiscal year. To that end he had proposed his Land Agricultural Utilization Bill, involving a levy of one-half of one per cent on the capital value of land. By a technical maneuver he sought to introduce it as a Finance Bill, therefore not subject to veto by the Lords. Here was a direct drive on the aristocratic land-holding class, "pure socialism unmasked" as one Conservative put it. Both wings of Labor united in support of the measure, in spite of the objections of the Left Wingers that it was not drastic enough. The Conservatives were equally united in opposition, leaving it to the Liberals to use their balance of power in deciding the outcome. To date, Lloyd George had gotten little from his alliance with Labor beyond hope and small comfort. And now to challenge the British land-holder seemed a sure road to the extinction of his party. Eventually, he offered Liberal support for the measure, but only on the adoption of certain emasculatory amendments. The whole preposterous business appears to be vanishing into thin air,—a case of political futility at its worst.

With the army of unemployed holding stubbornly at a 2½ million level, all parties show deep concern over the interim report of a special committee on the dole problem. By reducing the individual allowance in proportion to the drop in the cost of living, and by increasing the payment quotas of employer, employee, and government, it is hoped to restore the pre-war actuarial basis of the unemployment fund. The attainment of that goal depends finally on a substantial reduction in the average unemployment figures. However, even if they should remain at the present level, it is estimated that the annual deficit in that fund would be cut by eighty per cent. Labor, losing steadily in the by-elections, hesitates to support the measure, particularly with its Left Wing radicals ready to leave the reservation on the issue.

The Beaverbrook press has been making merry in the typical Beaverbrook manner with a sensational attack on the League of Nations, denouncing it as a

more teal of France. From mid-May on, the campaign raged until its very monotony forced a subsidence. If Beaverbrook is to be believed, Downing Street has shown such deference to the army ascendancy of the French system, that she is losing her sovereignty, is no longer the mistress of her own destiny. The French press replied in kind, with the ultimate result that the strain produced in Anglo-French relations by the Anglo-German rapprochment and the British part in the Franco-Italian negotiations has grown more acute. Such embarrassments in the exchanges across the Channel are more or less chronic. The real mischief occurs in the drag they have placed on the government's efforts to prevent Russo-German collaboration —or something more dangerous than collaboration.

In the military sphere there are few developments of importance aside from the stand taken on the use of lethal gas in war, referred to above. Experiments with mechanization continue so far as the budget permits. The attempt to mechanize the Cavalry leaves the horse still in the picture. So long as the use of that arm must envisage the conditions faced by Allenby in Palestine, gasoline will not replace oats. In the meanwhile, the fire power of Cavalry has undergone great development in the reorganization which began in 1928. Armored car protection is afforded to safeguard fully the mobility of the Cavalry units, and to prevent surprise attacks by delaying bodies. Another conclusion of importance appears in the finding that no mechanized unit can hold ground, mop up, or take cover from artillery, with the result that infantry as such still plays its leading rôle in British war plans.

The Dominions. Do we read retaliation and reprisal for the Smoot-Hawley tariff in the recently announced increase in the Canadian tariff? Premier Bennett says no, declaring that his ministry (dominantly Conservative) is merely following its normal policy of furthering the Dominion's best interests without regard to the action of foreign powers. Whatever the object, there can be no doubt of the effects on American exports. Some 200 items are affected, involving Canadian imports totalling $200,000,000. The heaviest blow falls on our coal mines, which face the loss of exports to the value of $52,000,000. To put teeth into the measure the Ministry seeks authority for an Order-in-Council which can effectively meet foreign retaliation and dumping by the imposition of further customs as they appear necessary. The American manufacturer, hard hit by many features of the measure, is nimbly jumping the wall by erecting branch factories in Canada. Arrangements for no less than 74 such were completed within a few weeks after the tariff announcement.

The financial difficulties of Newfoundland, unable to float an $8,000,000 loan, led in May to a widely accepted report that Labrador was for sale. Premier Sir Richard Squires put an end to the flurry by announcing on May 25 that "Labrador is a portion of the sovereignty of his Majesty the King, and under no circumstances would any negotiations be undertaken contemplating a change of flag, nationality, or allegiance." A further report that Newfoundland was ready to abandon its Dominion status and seek cover under Canada's protecting wing was scouted June 4 by a denial in both capitals.

The hope of resuming the fruitless efforts of the London Imperial Conference of last fall toward reaching a workable trade agreement for the Empire is gone for the time being. Canada, prime mover for such a gathering in Ottawa this summer gave up when New Zealand slammed the door in her face. The latter incensed over Canada's action in shutting out New Zealand's farm products with her new tariff wall, replied with abrogation of their joint trade agreement. It is a poor augury for imperial trade relations in the near future.

The Australian "Navy," a substantial flotilla not long since, has now sunk to two cruisers, a small aeroplane carrier, and one flotilla leader. The bulk of the fleet has been laid up in reserve or presented to the British Navy, as the government cut expenses to the bone. Reorganization of the land forces on a voluntary basis tells a similar story. A small, highly trained permanent nucleus will be maintained for peace administration, and the training of territorials and cadets.

In the nine months ending March 31, the seven Australian governments had registered a deficit of £132,000,000. A further repudiation by New South Wales at the direction of its radical Premier Lang, threw a further load on the Commonwealth. A glimmer of hope appears in the fact that the 1930 wheat crop is all but sold, even though the price has been ruinous.

How utterly divided Australia has become on the subject of its difficulties appears in the formation during the past few months of no less than a dozen organizations, with announced objectives varying all the way from revolution and Communism to military support of the present government. So fraught with danger is the situation that the United States Consulate has seen fit to inform residents of American citizenship that it looks with disfavor on their joining any organization whose objectives might result in the use of arms.

The House of Assembly of the South African Union witnessed a heated scene in connection with a recent debate on the use of native troops for the defense of the country. The Premier closed the debate by calling attention to the fact that any native prisoner caught with arms under the British flag during the Boer war was summarily shot. Of greater importance is the rapid development of the Cairo-Cape Air Route. Twenty-seven main and thirty intermediate stations already mark the course. Radio communications are ample throughout, hotel facilities are being provided, and costs to Central African points have been cut below those of the surface routes from London.

NATIONAL GUARD NOTES

Chief of the Militia Bureau's Rifle Team Match

THE Chief of the Militia Bureau's Indoor Rifle Team Match for 1931 was won by the team of Company G, 163d Infantry, Montana National Guard, with a score of 3,726 points. The company is stationed at Glasgow, Montana, and commanded by Captain Carl E. Hammerness. The members of this excellent shooting team are:

Corporal Frederick H. Weber
Sergeant Warren R. Gamas
1st Lt. Arthur O. Stensland
Sergeant David K. Boyd
2nd Lt. John L. Hoffman
Sergeant Orville S. Stomsvik
Pvt. 1cl. Chester E. Anderson
Pvt. 1cl. Clinton Stomsvik
Sergeant Frank O. Schuster
Sergeant Charles M. Hoffman

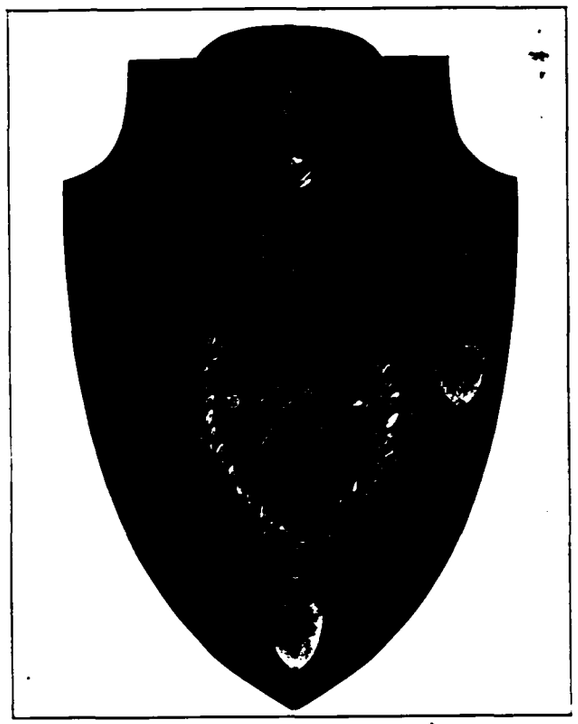
The runner-up team was that of Company G, 168th Infantry, Iowa National Guard, commanded by Captain Cuthbert F. Sandstrom.

Thirty-four teams representing the same number of States participated in this nation-wide rifle marksmanship event. The scores were:

1.	Company G, 163rd Infantry, Montana	3726
2.	Company G, 168th Infantry, Iowa,	3680
3.	Company F, 122d Infantry, Georgia	3596
4.	161st Motor Transport Company Washington	3592
5.	Company A, 298th Infatry, Hawaii	3587
6.	Company C, 153d Infantry, Arkansas	3581
7.	Company L, 143d Infantry, Texas	3543
8.	Company E, 121st Engineers, Washington, D. C.	3524
9.	Company D, 120th Engineers, New Mexico	3499
10.	Company H, 185th Infantry, California	3492
11.	107th Ordnance Company, Michigan	3453
12.	Company I, 129th Infantry, Illinois	3442
13.	Company C, 150th Infantry, West Virginia	3441
14.	Company I, 185th Infantry, Minnesota	3439
15.	Company B, 186th Infantry, Oregon	3422
16.	Troop I, 115th Cavalry, Wyoming	3401
17.	Company B, 158th Infantry, Louisiana	3398
18.	Company B, 140th Infantry, Missouri	3394
19.	Company F, 124th Infantry, Florida	3363
20.	Company K, 152d Infantry, Indiana	3351
21.	Company A, 127th Engineer Bn., Alabama	3341
22.	Company E, 116th Engineers, Idaho	3336
23.	Company C, 102d Infantry, Conn.	3327
24.	Company I, 101st Infantry, Mass.	3325
25.	Company F, 1st Infantry, Maryland	3308
26.	Company K, 164th Infantry, North Dakota	3248
27.	Company E, 180th Infantry, Oklahoma	3245
28.	Hq. Co., 158th Infantry, Arizona	3227
29.	Company B, 120th Infantry, North Carolina	3213
30.	Company I, 113th Infantry, New Jersey	3176
31.	Hq. Co., 3d Bn., 112th Infantry, Pennsylvania	3144
32.	Company I, 127th Infantry, Wisconsin	3102
33.	Company F, 157th Infantry, Colorado	3038
34.	Company D, 118th Engineers, Rhode Island	2711

The national championship team will be awarded the trophy provided for this event and each member will be awarded a silver medal. Each member of a state championship team will be awarded a bronze medal.

This match was founded by Major General William G. Everson and it was fired for the first time this year. Its object is to provide a form of rifle marksmanship training which can be carried on at home



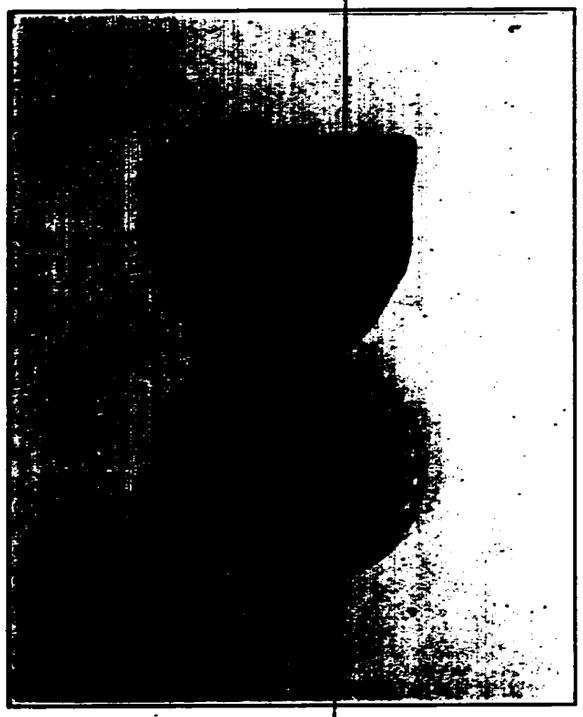
The Chief of the Militia Bureau's Trophy.

stations of units and in which the principles of the subject may be taught and demonstrated. There has been much enthusiasm over it. It is contemplated that next year every State will have a team to represent it. That all are not represented this year is due to the fact that a number of the States had already made arrangements for their small-bore competitions and could not make a change in their plans.

Every unit in the National Guard whose principal weapon is the rifle is eligible to compete in the match. Regiments and separate battalions conduct preliminary shoots to determine the composition of the team to represent them in the state competition. The teams thus selected compete among themselves in each State when the match is fired on official targets supplied by the Militia Bureau. The winner of the match in each State is certified to the Chief of the Militia Bureau

and the targets made are forwarded. The high team of all these is the national champion, and the others are state champions.

The handsome trophy goes to the national champion to be held for a year or until the succeeding year's match has been fired and another winner determined.



The Medal Awarded to the Members of Teams Who Won the Chief of the Militia Bureau's Indoor Rifle Team Match.

All targets forwarded to the Militia Bureau are checked and marked by the experts in the office of the Director of Civilian Marksmanship in Washington, and the awards are made on their findings.

The course consists of 10 shots prone; 10 shots sitting; 10 shots kneeling and 10 shots standing on the N. R. A. official 50-foot gallery target, at a range of 50 feet from the front edge of the firing point to the target. Complete regulations that prescribe the conduct of the competition are issued by the Chief of the Militia Bureau.

Camp Inspections

TO be forewarned is to be forearmed. This paragraph tells you some of the things that the inspector looks for during the field training camps of the National Guard.

He is out and around camp before reveille noting whether the ventilator hoods at the tops of the pyramidal tents are opened.

He is looking for the man who goes down to the latrine before reveille and on his way back awakens most of the company. Men who want to sleep until first call are entitled to that privilege.

The inspector watches the formation for reveille. He notes how many men scramble into ranks after assembly has sounded. He watches for orderliness and precision, every man in his place, in proper uniform, and at attention at the command "Fall In;" every man answering "Here" to his name at roll call in a proper tone of voice—no yelling it out; steadiness in ranks—no slouching, moving about, bringing hands up to the face, or anything to mar the formation; how the first sergeant reports the company to the officer who is superintending the formation and how he in turn reports it to the officer of the day; how the company is dismissed and enters upon the activities of the day. A company shows its real character by the way in which it does these things.

After reveille the inspector visits a number of the kitchens to see how the morning meal is being prepared. He observes the serving of breakfast at some of the dining rooms.

At about nine o'clock he makes another round. First come the latrines and bath houses. These must have constant sanitary care. He notes whether or not the seats have been scrubbed, the urinals oiled, the night can emptied and scrubbed and placed so that the sunshine can get into it, bath houses policed, leaky plumbing repaired, and hot water heaters working so there will be a supply of hot water when the men return from their morning's field exercises.

Next comes a trip through the tent area and an examination of the tents and company streets. He notes whether or not everything is policed up and orderly; the tents rolled up and neatly furled when so ordered.

At the company kitchens and mess halls he examines the cleanliness of the whole establishment. When he enters he expects the first man who sees him to call "Attention" in a voice loud enough to be heard by all the men in the vicinity. Failure to do this little act of military courtesy is bound to be noticed. He looks into the cleanliness of the ice box and its contents. A whiff of a disagreeable odor will lead to a further investigation. He notes the presence of flies, and he will not stop until he finds what attracts them. He sees the condition of the floor. Most cooks and kitchen police use entirely too much water on the floors. He looks over the stove, the kitchen utensils and all other tools in the kitchen. He examines the food storeroom for cleanliness and order. He asks for the menus and inquires into the details of handling the rations. Organizations that make proper use of the ration have no trouble in getting along with the allowance provided by the Militia Bureau; those that go about it in a haphazard manner, and with little or no system, have trouble in making ends meet.

Out in the mess hall orderliness and cleanliness are the things that strike the inspector. It takes only a short time to police up after breakfast if it is gone about in a systematic manner—every man having his job and getting about it. Lost motion and wasted effort are the things that will prevent its accomplishment on time. Then too, some kitchen police make about as much muss as they clean up. Consequently they make no headway. The secret lies in teaching them to clean as they go, to be careful and not slop water all over the place and they will be able to accomplish twice as much in half the time.

The considerate camp inspector does not continue his inspections after the men return to camp from their forenoon's work in the field. Then their tents are their castles and they should be free to live in them in a comfortable way.

At retreat the inspector is out again to see how the formation is handled and he will note things much as he does at reveille. After dark he may make a round of the camp to see if everything is moving along in an orderly manner.

The company that wins the honor flag for excellence at these daily inspections is the one that is organized to do the policing with order and speed but without lost motion. It is the company that is trained, that pays attention to details.

Recruits at Training Camps

COLONEL E. J. STACKPOLE who commands the 104th Cavalry, Pennsylvania National Guard, has taken definite steps to eliminate recruits from his outfit at the field training camp this summer. This is in accord with a letter sent out to the States from the Militia Bureau on the subject.

A survey of the camp attendance last year showed that there was an average of nearly 16% recruits with organizations throughout the National Guard. In some States it ran over 20%. As a consequence, it was necessary to maintain a recruit training detachment which took officers and noncommissioned officers away from their field training in order to conduct the basic training of recruits.

In a General Order Colonel Stackpole announces that there will be no recruit detachment in his regiment during the 1931 encampment at Mount Gretna. In order to effect such a policy all original enlistments were discontinued on May 1st. A survey of all troops was made prior to that date, and men whose enlistments were to expire before the end of the field training period were discharged to make room for new men who would be able to get in at least 12 armory training periods before going to camp. Of course, those in the above category who desired to reenlist were given the opportunity and urged to do so. By carrying out this plan over a period of three years Colonel Stackpole will have no men whose enlistments expire during the period of the camp or the period of intensive armory training in preparation for that tour of service.

The Adjutant General of Pennsylvania has authorized the experiment initiated by Colonel Stackpole and the results will be watched very carefully. If it proves to be a success it will doubtless be adopted in other organizations of the National Guard.

In his communication to the States on the matter the Chief of the Militia Bureau placed no limitations. He merely suggested that the subject of elimination of recruits be given consideration and left it to the several State authorities to meet the situation in accordance with the needs of local conditions.

Volunteer Attendance at Army Service Schools

IN their enthusiasm to attend the National Guard courses at the Army Service Schools officers and enlisted men occasionally volunteer to attend at their own expense and without pay and allowances from the Federal Government. This whole proposition has been given most careful consideration by the Chief of the Militia Bureau as to its practicability and its legality, and it has been decided that approval of such a course cannot be approved. It looks like a very simple proposition but there are many angles that introduce a multitude of complications and the policy of authorizing only those who are regularly detailed to take the course must be followed.

Damage Claims Incident to Field Training

AN idea prevails in many sections of the country to the effect that the Federal Government may be held liable for damages to persons or private property resulting from accidents incident to the field training of the National Guard. Such is not the case.

The Comptroller General of the United States has consistently held that the National Guard, except when actually called or drafted into the service of the United States, is not a part of the Army of the United States and the Federal Government cannot be held liable for damages incurred by the National Guard or any member of that organization. No funds to pay such claims are in the budget of the National Guard.

In view of the fact that the National Guard are State troops, except when called or drafted into service of the United States, any damage sustained is a matter for the state authorities to adjudicate.

Loss of Hired Animals

MANY animals are hired for the use of the National Guard during the field training period. Occasionally one of them is injured to such an extent that he must be destroyed and a claim is made for reimbursement by the owner.

The procedure to be followed in such a case is covered in National Guard Regulations No. 60, paragraph 6. In this connection reimbursement from Federal funds can be made only in those cases in which it appears that ordinary care was not exercised while the animal was being used by the National Guard and for the purpose for which it was hired.

It is consequently inconsistent for a board of officers to state in their proceedings that the death of the animal was due to no fault of the National Guard and then recommend that reimbursement be made.

In the hiring of animals it would be well for contracting officers to have owners understand the provisions of paragraph 6 of the regulations referred to here. It would do away with many vexatious questions regarding the responsibility for losses of hired animals.

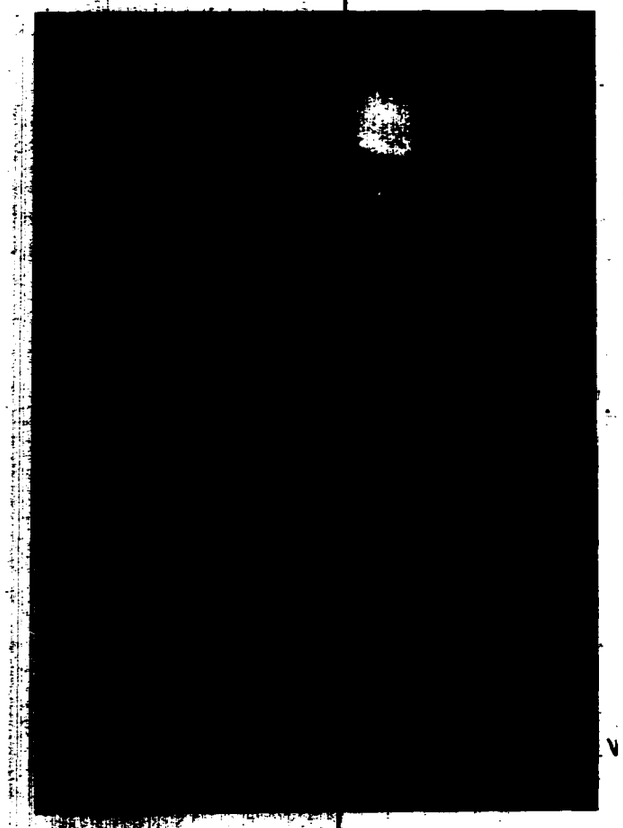
CURRENT TOPICS

A Correction

IN the article entitled "Some Experiences and Impressions—Santiago Campaign" by Brigadier General S. D. Rockenbach, U. S. A., March-April, 1931, issue of the CAVALRY JOURNAL, page 38, 14th line from the bottom of the left-hand column, "commanded by Colonel Charles Dick" should read "commanded by Colonel Curtis V. Hard."

The Retiring Secretary-Treasurer-Editor

ON June 15, 1931, Major Oliver L. Haines, Cavalry, was relieved from his duties as Secretary-Treasurer of the Cavalry Association and Editor of the



CAVALRY JOURNAL, and will become a student at the Command and General Staff School in September.

For three years Major Haines has carefully and successfully guided the affairs of the Association through a period of general financial depression and unfavorable legislation. His efforts have been directed towards the maintenance of a high standard for the JOURNAL and towards the publication of material of professional value.

To Major Haines are extended the thanks of the Association and best wishes for his continued success.

The Cavalry Rifle Team

THE Annual caliber .30 matches of the United States Cavalry were fired on the Camp Perry Range during the week ending June 27th 1931. The results of these matches were highly satisfactory to Lieutenant George A. Rehm, Cavalry, the Cavalry Team Captain, who stated that the prospects for the Cavalry in this year's team competition were favorable.

The Individual Rapid Fire Match consisting of the rapid fire stage of the National Match Course was fired June 22, 1931. The winner, Lieutenant R. D. Palmer, bested Sergeant Yerzserski by having the greater score at 300 yards. Both men had a total score of 96. First place received a silver medal, second place received a bronze medal.

The Off-Hand Match, consisting of 20 rounds fired at 200 yards, was won by Sergeant Wilzewski, with a score of 93. Sergeant Jensen placed second with a score of 92. First place received a silver medal, second place a bronze medal.

Sergeant Jensen and First Sergeant W. P. Jackson, of the Seventh Cavalry won the Regimental Team Match with a score of 564 fired over the National Match course. They received a handsome silver cup and bronze medals.

The Fort Bliss Trophy Match, consisting of 20 shots fired at 1000 yards was won by Sergeant Wilzewski with a score of 99. Staff Sergeant Hedglin placed second with a score of 95. The winner of this match received a silver cup and medal; second place received a bronze medal.

The Cavalry Individual Trophy Match of once over the National Match Course was won by Staff Sergeant Ehardt with a score of 286. Staff Sergeant Hedglin placed second and Corporal Wilson third, both men with a score of 277. First place received a silver cup and a gold medal. Second and third places received a silver and bronze medal respectively.

The Holbrook Trophy consisting of a silver cup and a gold medal was awarded to Corporal Kellerman, 12th Cavalry, for firing the highest total score five times over the National Match Course. His score was 1390. Staff Sergeant Ehardt won second place and a silver medal with a score of 1389. Staff Sergeant Hedglin won third place and a bronze medal with a 1377.

All medals were donated by the United States Cavalry Association.

Professional Notes and Discussion

The Origin of the Hussars[1]

By Alexander L. P. Johnson, Major, Infantry.

THE term "Hussar," in one form or another, is the common designation of light cavalry organizations in the armies of most nations. Wherever there are Hussars, they are distinguished by their brilliant, heavily braided uniforms of which the dolman and busby are generally conspicuous features. The Hussars' chief claim to distinction, however, rests upon the well-founded boast that they are the traditional *beaux sabreurs* and horsemen *par excellence*. Indeed, the term "Hussar" conveys the idea of an intrepid, dashing, daring Cavalryman.

Strangely enough, wide as is the acceptance of the term "Hussar," its origin is not generally known. Webster, for example, traces it to the Hungarian "huszár," which he defined as meaning originally "freebooter," and which was derived through the Slavic "gusar," "husar," "kursar" from the low Latin "cursarius" or the corresponding Italian form. Others sought to connect the term "Hussar" with the Turkish word "corsar" having a similar meaning. Still others attempted to trace it to the Latin "cursor," which signifies something that moves very rapidly. None of these derivations and interpretations are correct.

The term "Hussar" is indeed a derivative from the Hungarian "huszár," as Webster rightly held. This eminent authority erred, however, in his interpretation of its original meaning, as well as in his attempt to trace its origin to Slavic and Latin sources. The word "huszár" never signified "freebooter," although the characteristic foraging expeditions and raids of the early Hussars, which brought terror to various parts of Europe, have amply earned for them such appellation. The origin of the term "Hussar" or "huszár" is purely Magyar. King Mathias Corvinus of Hungary (1458-1490) decreed that, in time of war, every twenty peasant homesteads would furnish one light trooper. These troopers he organized into light cavalry squadrons, in contrast with the heavy cavalry units maintained by the royal exchequer. In the Hungarian language "husz" (hoose) means "twenty." The ending "ár" is, in the Hungarian language a noun-forming prefix, hence the word "huszár" really denotes "one derived from twenty."

Although light cavalry was a typical Hungarian formation whose existence is traceable to the very beginning of recorded Magyar history, the term "huszár" was applied to these organizations only after the middle of the Fifteenth Century, while in other European countries the term "Hussar" did not gain currency until the Eighteenth Century. France, as a matter of fact, was the first country outside of Hungary to organize Hussar regiments. This took place during the first half of the Eighteenth Century, when, as a result of the collapse of the Hungarian wars for independence, large numbers of Magyars sought refuge in France and elsewhere. The original French Hussar regiments were actually recruited among these Hungarian refugees.

Frederick the Great, after the raid on Berlin by the Nadasdy Hussars of Maria Theresa's army, induced large numbers of Magyar troopers and officers to enter the Prussian service. Several Hussar regiments came into existence as a result of these efforts, and one of them continued in existence to the conclusion of the World War. Although the Prussian Hussar regiments have long ago ceased to be Magyar in personnel, regimental tradition required that the regimental commander should have some knowledge of the Magyar language.

Wherever Hussar regiments were organized, their uniform generally followed the traditional Hungarian pattern. With the adoption of this uniform and accoutrement, the Magyar nomenclature also found its way into practically every European language. Thus we have in English the term "dolman" from "dolmány," "shako" from "csákó" "soutache" from "sujtás," and "sabre" from "szablya."

It is interesting that the Hungarian peasant uses the word "huszár" indiscriminately to designate any kind of a cavalryman, while he differentiates the various types of cavalry by prefixing the term "dragoon-huszár" and "ulan-huszár." He refers to the cavalryman of any nation who wears the Hungarian pattern of braided uniform as a "Magyar huszár" without apparently feeling any sense of incongruity in speaking about a German, French or Russian "Magyar Hussar."

[1] Based upon an article in the "Hungarian Military Review," March, 1931

Conservation of Forage

WASTE of forage and the consequent loss of condition of the animals, as well as unnecessary expenditure, can be avoided by particular attention to the following factors:

Supervision. The feeding and care of animals must not be a purely routine matter. Of course, a certain amount of routine is necessary and desirable, but this routine must be carefully planned and executed. The feed of each horse should be prescribed individually by the troop commander. In general, there is a tendency towards over-feeding of grain and under-feeding of hay. Lack of sufficient water and salt is inexcusable.

Oats. The galvanized iron feed box now in general use throughout the service may become a prolific source

of waste. The size and shape of this box necessitate what is known as "deep feeding" with the result that many greedy horses, through a motion of their heads, throw out a large amount of the feed from the box. Furthermore, these animals grab deep in the feed and gather more oats than they can possibly masticate. While attempting to masticate oats the animal carries his head out from the feed box and showers the oats all over the ground. Also, many oats are taken into the horse's stomach before being properly masticated. Had this same feed been placed in a box of the proper proportions, the horse would have been forced to gather his feed slowly and in small amounts and would have masticated it as he gathered it.

In many cases mangers can be modified so as to do away with the feed pan. The Field Artillery School has some stables in which the lower part of the manger is boarded up tight. The oats and hay together are placed in the manger, *effectively* preventing the animal from eating his grain too rapidly. The mangers are made continuous and corners are avoided in order to facilitate cleaning.

Crushed oats, it is claimed, save about 20% of this ingredient of the forage when this procedure is practicable. However, there are objections to crushing the oats. The paraphernalia necessary for crushing oats is not suitable for field service. Thus, many animals which have become accustomed to crushed oats in garrison suddenly get their type of grain changed upon taking the field and the result of this may be injurious. Furthermore, the handling of crushed oats within the organization and prior to its arrival thereat present many objections. It is much more difficult to supervise the distribution and checking of crushed oats than sacked uncrushed oats.

Storage. Constant attention must be given to avoid wastage of all grain due to inroads of rats, mice, small birds, and loose animals.

Bran. Dry bran should be fed with each feeding of oats. In addition to its other qualities, it is an excellent slow feeder.

Hay. Perhaps the greatest wastage in hay comes about through the failure of stable police to shake out the hay properly before it is placed in the manger. If two or three compressed layers of hay are placed in the manger without being properly shaken out, the animal may, in his effort to break up the compressed hay, lift the whole compact out of the manger and drop it under his feet where it is out of reach and becomes soiled. In the field great wastage of hay may be caused by the whole or a large part of the hay ration being fed at one time instead of in small amounts and often. Of course, there are many times in the field when it is impossible to feed the animals hay at frequent intervals due to their being in use most of the time. The purchase of low grade No. 2 hay is uneconomical although it is believed that a good grade No. 2 hay is quite satisfactory. It is very doubtful if the additional expense would justify the purchase of No. 1 hay at all times. It behooves all officers to keep a close watch on the hay issued to their animals. Contractors soon become expert in striking close to the border line between low grade and satisfactory No. 2 hay.

Grazing. Every advantage should be taken of local grazing facilities. The saving in forage as well as the improved health of the animal is important. On many reservations a great many tons of hay can be, and are, cut and baled each year. The cost of this hay to the government is always below the market price. Great care should be exercised in the selection of plots to be cut, otherwise many tons of inferior or useless hay are baled and issued to organizations.

Amount of Forage to Be Fed. Through many months of the year a large number of the animals of the mounted organizations can be put on maintenance ration resulting in a large saving of forage, especially in grain.

Par. 3d (2) AR 30-480 permits variation of amounts of hay and grain and provides for the purchase of special classes of forage to meet special conditions "provided a saving can be effected thereby or the cost of the ration for the station concerned is not increased." This regulation permits the increase of the hay component in relation to the decrease of the grain component. W. D. Circular 14, April 11, 1927, goes deeply into the subject of feeding and should be stressed in each animal organization so that all officers may become acquainted with its provisions.

Notes from the Cavalry Board

OFFICERS' FIELD SADDLE

The Cavalry Board, in December, 1922, recommended that the De la Clos model French saddle manufactured by H. Marquis, Saumur, France, be copied in making the American officers' field saddle. In November, 1923, four of these saddles were received, and after a test of two years one was shipped to the Jeffersonville Q.M. Depot to be used as a model.

In the early part of 1929, five officers' field saddles were received by the Cavalry Board from the Jeffersonville Depot for the necessary test to determine the suitability of the copy for adoption by the service.

After approximately a year's test, it was found necessary to recommend certain changes in the test saddle in order to make it conform more nearly to the specifications of the French saddle submitted as a model. On April 3, 1931, a saddle manufactured according to these specifications was received by the Board and immediately put in test.

This officers' field saddle has been in the hands of the Department of Horsemanship, The Cavalry School, for the past four months, and has been generally favorably commented upon as a comfortable and excellently made article. The test will continue for a period of six months by the School, and then the saddle will be turned over to the 2d and 13th Cavalry regiments in turn for further test.

(Continued on page 62)

SPORTS

Winners, Graduation Week-May 24 Cavalry School, Fort Riley, Kansas

Event I. Non-Commissioned Officers' Class Night Ride.
Corp. Cecil A. Anders, Tr. A, 13th Cav.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.
Sgt. William H. Finley, Hq. Tr., 113th Cav., Iowa N. G.
Corp. Wendell F. Leap, Tr. E, 2d Cav.

Event II. Non-Commissioned Officers' Standard Stakes.
Corp. Ivan L. Ryerson, Tr. F, 2d Cav.
Corp. Wendell F. Leap, Tr. E, 2d Cav.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.
Mr. Sgt. Joseph C. Jackson, Hq. Tr., 109th Cav., Tenn. N. G.

Event III. Troop Officers' Class, Jumping.
Capt. Maurice Rose, Cav.
Lieut. Harrison W. Davison, Cav.
Lieut. Paul G. Kendall, Cav.
Capt. John W. Blue, Inf.

Event IV. Non-Commissioned Officers' Class, Jumping.
Sgt. Frank J. Jahemiak, Tr. A, 2d Cav.
Pvt. Theodore J. Nails, Tr. G, 9th Cav.
Sgt. McMains, D. M., Hq. Tr., 112th Cav., Tex. N. G.
Corp. Ival L. Ryerson, Tr. F, 2d Cav.

Event V. National Guard and Reserve Troop Officers' Class, Jumping.
Lieut. Hal G. Saunders, Cav. Res.
Capt. Harry E. Kistler, 117th Cav., Col. N. G.
Lieut. John L. Lee, 102d Cav., N. J. N. G.
Capt. Ellis W. Conkling, 113th Cav., Iowa N. G.

Event VI. Advanced Equitation Class, Green Jumpers.
Lieut. Peter C. Hains, III., Cav.
Lieut. Robert L. Howze, Cav.
Capt. Fred W. Koester, Cav.
Capt. George I. Smith, Cav.

Event VII. Advanced Class, Jumping.
Capt. Henry H. Cameron, Cav.
Capt. Charles J. Booth, Cav.
Capt. William R. Hamby, Cav.
Major Arthur H. Truxes, Cav.

Event VIII. Hunt Teams.
Lieut. Paul G. Kendall, Cav.
Lieut. Norman M. Winn, Cav.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Charles H. Valentine, Cav.
Lieut. Clovis E. Byers, Cav.
Lieut. Thomas L. Robinson, Cav.
Capt. Sexton Berg, Cav.
Major Arthur H. Truxes, Cav.
Capt. Charles J. Booth, Cav.

Event XII. Advanced Equitation Class, Olympic Prospect Competition, All Phases.
Lieut. Joseph K. Baker, Cav.
Lieut. George E. Mitchell, Jr., F. A.
Lieut. Carl W. A. Raguse, Cav.
Lieut. Frank DeK. Huyler, Cav. Res.

Event XIII. Advanced Equitation Class, Green Schooled Horse Competition.
Capt. George I. Smith, Cav.
Lieut. Thomas Robinson, Cav.
Capt. Fred W. Koester, Cav.
Lieut. Laurence K. Ladue, Cav.

Event XIV. Swordsmanship Competition.
Lieut. August W. Farwick, Cav.
Lieut. Paul G. Kendall, Cav.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Malcolm D. Jones, Jr., Cav.

Event XV. Combined Pistol and Saber Competition, Troop Officers' Class and National Guard and Reserve Troop Officers' Class.
Lieut. Charles A. Sheldon, Cav.
Lieut. Malcolm D. Jones, Jr., Cav.
Lieut. Paul G. Kendall, Cav.
Lieut. Raymond D. Palmer, Cav.

Event XVI. Combined Pistol and Saber Competition, Non-Commissioned Officers' Class.
Sgt. George J. Burns, 103d Cav., Pa. N. G.
Corp. Carl S. Brush, Tr. A, 6th Cav.
Sgt. Frank J. Jahemiak, Tr. A, 2d Cav.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.

Event XVII. Troop Officers' Class Jumping, Indoor.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Charles A. Sheldon, Cav.
Capt. Frank C. Hershberger, V. C.
Lieut. John L. Ryan, Cav.

Event XVIII. National Guard and Reserve Officers' Class Jumping, Indoor.
Lieut. Dean C. Morgan, 115th Cav., Wyo. N. G.
Lieut. Harry C. McNew, 104th Cav., Pa. N. G.
Capt. William C. Lyda, 109th Cav., N. C. N. G.
Lieut. William T. Starr, 112th Cav., Tex. N. G.

Event XIX. Non-Commissioned Officers' Class Jumping, Indoor.
Corp. Raymond J. Tibbetts, Tr. A, 13th Cav.
1st Sgt. George J. Burns, 103d Cav., Pa. N. G.
Corp. Henry S. Dugdale, Tr. B, 8th Cav.
Sgt. Thomas Sapash, Tr. A, 11th Cav.

Event XX. National Guard and Reserve Advanced Troop Officers' Classes Point to Point Ride.
Capt. Robert M. Blair, 110th Cav., Mass. N. G.
Lieut. Frederick M. Warren, 123d Cav., Ky. N. G.
Lieut. Mayer H. Halff, Cav. Res.
Lieut. Andrew S. Paterson, 122d Cav., Conn. N. G.

Event XXI. Advanced Equitation Class, Green Polo Pony Competition, All Phases.
Capt. George I. Smith, Cav.
Lieut. Peter C. Hains, III., Cav.
Lieut. Charles H. Valentine, Cav.
Lieut. John H. Stadler, Jr., Cav.

Event XXII. The Norwich Stakes.
Capt. Ernest A. Williams, 9th Cav.
Lieut. Theodore C. Wenzlaff, Cav.
Lieut. Paul G. Kendall, Cav.
Capt. Henry E. Cameron, Cav.

Event XXIII. Horseshoeing Judging Competition.
Lieut. Norman M. Winn, Cav.
Lieut. Basil L. Riggs, Cav.
Lieut. Milo H. Matteson, Cav.
Lieut. Leslie M. Grener, Cav.

Event XXIV. Student Officers' Night Ride.
Lieut. Milo H. Matteson, Cav.
Lieut. Leslie M. Grener, Cav.
Lieut. Rufus L. Land, Cav.
Capt. Catesby ap C. Jones, Cav.

Event XXV. Troop Officers' All Around Equestrian Championship.
Lieut. Theodore C. Wenstaff, Cav.
Event XXVI. Cavalrymen's Cup.
Lieut. Raymond D. Palmer, Cav.
Event XXVII. The Lorillard Cup.
Lieut. Peter C. Haine, III., Cav.
Event XXVIII. The Platoon Leaders Trophy.
Capt. William C. Lyde, 109th Cav., N. C. N. G.
Event XXIX. The Non-Commissioned Officers' Trophy.
Sgt. Russell B. Huckstep, M. G. Tr., 14th Cav.

BOOTH BOWL

The Booth Bowl has been awarded to Lieutenant Colonel Charles L. Scott, Cavalry, for outstanding interest in, and untiring efforts for, all forms of Cavalry activity, sports and competitions throughout the year. Through his active leadership of, and participation in, most of these activities, and particularly by organizing, leading and supervising successfully the forced march of 100 miles participated in by students and vital elements of school troops, Colonel Scott contributed materially to the knowledge and enthusiasm of other officers of the command.

Cavalry School Horse Show and Race Meeting, May 27-30, 1931

OLYMPIC JUMPERS:
Lt. R. P. Thomson, *Mussolini*
Lt. J. W. Wofford, *Juror*
Lt. A. A. Frierson, *S-3*
Capt. W. B. Bradford, *Starfinch*
OLYMPIC TEAM JUMPERS:
Lt. R. W. Curtis, *Assonia*
Lt. J. W. Wofford, *Peter Pan*
Lt. A. A. Frierson, *S-3*
Capt. J. T. Cole, *Avocate*
CHAMPION HUNTER:
Mrs. R. N. Hardy, *Knockmegowan*
RESERVE CHAMPION:
Lt. I. P. Swift, *Alexander*
CHAMPION SADDLE HORSE, 3-GAITED:
Maj. C. R. Cravens, *Astral Bellrose*
RESERVE CHAMPION:
Miss M. Sprockert, A.N.C., *Wildfire*
OFFICERS' CHARGERS:
Mrs. I. T. Wyche, *Krippalong*
Capt. F. W. Koester, *Ermite*
Maj. D. S. Perry, *Black Bart*
Capt. F. W. Koester, *Show Girl*
CHILDREN'S HORSEMANSHIP CLASS:
Billy Koester, *Follow Me*
Patsy Smith, *Rio Rita*
Arly Jane Barnett, *Burgess*
Betty Augur, *Howick*
ENLISTED MEN'S JUMPING:
Pvt. L. Hargon, Tr. E, 9th Cav.
Pvt. C. C. Carpenter, Tr. E, 13th Cav.
Pvt. J. E. Bass, Tr. E, 9th Cav.
Pvt. L. W. Roberson, Hq. Tr., 13th Cav.
BEST TURNED OUT INDIVIDUAL TROOPER:
Corp. B. Galstad, Tr. A, 13th Cav.
RIFLE SQUAD COMPETITION:
Corp. C. Costigan's Squad, B. 2nd Cav.
MACHINE GUN SQUAD COMPETITION:
Corp. N. F. Kline's Squad, M. G. Tr., 13th Cav.
BEST TURNED OUT ESCORT WAGON:
Pvt. A. Van Horn, Tr. E. 2nd Cav.
BEST TURNED OUT LIGHT WAGON:
Pvt. E. G. Wright, M. G. Tr., 2nd Cav.
BEST TURNED OUT ARTILLERY GUN CARRIAGE:
Battery D, 18th F. A.:
2nd Section, Sgt. Dale A. Young
RIMROCK FLAT RACE:
Midget, E, 2nd Cav., Pvt. Ouellette up
LIFE O'RILEY STEEPLECHASE:
Llewellyn, Cav. School, Capt. J. C. Macdonald up
GEARY COUNTY FLAT RACE:
Lady Amorous, ridden by E. P. Tully, owner
OLYMPIC STEEPLECHASE:
The Squire, Cav. School, Lt. J. K. Baker up
SMOKY HILL FLAT RACE:
Rosefield, Capt. Heavey, Lt. C. L. Ruffner up
CAVALRY SCHOOL HUNT STEEPLECHASE:
Reno, R. L. Jurden, ridden by W. W. Gurnsey
KAW FLAT RACE:
Spencer, Cav. School, Pvt. Schima, B. 2nd Cav. up
CAVALRY SCHOOL STEEPLECHASE:
Reno, R. L. Jurden, ridden by W. W. Gurnsey
GRASS RIDERS' GRUB STAKES:
Brown L., ridden by W. J. Weisner
QUIVIRA STEEPLECHASE:
Frills, Cav. School, Lt. C. B. Hutchinson up
PAWNEE FLAT RACE:
Lord Sabin, Cav. School, ridden by Lt. P. C. Hains, III
CAVALRY MEMORIAL CUP STEEPLECHASE:
Lady Finn, Cav. School, Lt. E. R. Tausch up

Organization Activities

1st Cavalry
Fort D. A. Russell, Texas

TROOP B, 1st Cavalry, commanded by Captain Byron E. Shirley, having received the highest percentage rating of proficiency is announced as the winner of the Curtis Cup and Guidon for the training year 1930-1931.

2nd Cavalry
Fort Riley, Kansas

WITH a detail from the Machine Gun Troop, 2nd Cavalry, using the one-pounder gun for the prescribed salute, Troop B, 2nd Cavalry, escorted Vice President Curtis at the dedication of old Fort Hays, June 23, 1931, as a new state park at Hays, Kansas. The regimental field music as well as the troop and detachment were under the command of Captain Garnett H. Wilson.

Both the 1st platoon, Troop A, 9th Engineers and Troop B, 2nd Cavalry, had each won a "leg" on the post baseball championship prior to the trip to Hays. Upon their return Troop "B" won the final game of the series by a score of 12 to 3.

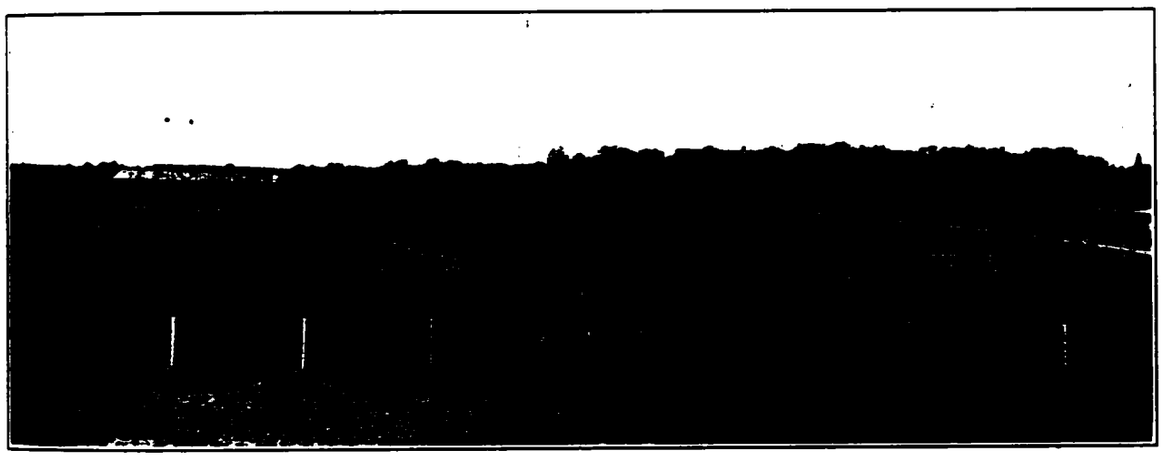
The regiment is carrying out its annual pistol and saber practice with excellent results. While the Kansas river is in its lower stages, this regiment is devoting considerable attention to training men and horses in swimming the river.

A post polo team composed of Major Lawrence, 2nd Cavalry, Major Thayer of the Cavalry School faculty, First Lieutenant George Read and First Lieutenant Henry C. Hine, both of the 2nd Cavalry, on July 9th won a 13 to 11 victory over the Fairfield Club of Wichita in the Fort Leavenworth invitation polo tournament, according to the Kansas City Star.

3rd Cavalry (less 1st Squadron)
Fort Myer, Virginia

THE regiment is engaged at present with the summer training camps. 275 CMTC students, 35 ROTC students from V.M.I. and the 305th, 306th, 307th and 308th regiments, Cavalry Reserves, have been ordered to the post.

The Fort Myer Polo Team, consisting of Major A. D. Surles, Major J. W. Cunningham, Captain F. W. Ligon, 1st Lieutenant C. H. Noble and 1st Lieutenant W. A. Holbrook, Jr. played in the recent War Department Invitation Tournament and in the Argentine Cup Tournament. In the first match the team played to the finals, being eliminated by the War Department Whites. Two shipments of polo prospects have been received from Fort Reno and Front Royal. 1st Lieut. F. W. Makinney, Jr. is at Mitchell Field trying out for the Army team.



Fort Myer Olympic Course.

Many additions have been made to the post by Colonel Harry N. Cootes, regimental commander. Among these is a new entrance gate and the planting of numerous shrubs and bushes. Most interesting to horsemen is the new jumping pen modelled after the international course at the National Horse Show, Olympia, London. The course is sodded and is enclosed by a pipe fence, beneath which hedge is planted. Uprights are laid in concrete, brush obstacles are made of the growing plant, and brick walls and stone walls are solidly constructed of the real materials. A pipe line has been laid to the field for watering and for filling the concrete water jumps.

1st Squadron, 3rd Cavalry
Fort Ethan Allen, Vermont

DURING the month of June the 1st Squadron, 3rd Cavalry, went into camp for two weeks at the Fort Ethan Allen Artillery Range at Underhill, Vermont. Fifty-five Cavalry Reserve Officers were attached to the Squadron for training during this period.

Demonstrations of all forms of cavalry activities were given for the benefit of the Reserve Officers, who had an opportunity to command platoons and troops.

In addition to training of Reserve Officers, the Squadron engaged in squadron and platoon combat firing and musketry exercises. The varied terrain of the Artillery Range permitted a variety of problems to be fired and ranges over one thousand yards were available, exceptionally good facilities for this type of training.

During the month of July the Squadron will be engaged in training over three hundred CMTC students and in August will train one hundred and fifty-five Reserve Officers.

4th Cavalry
Fort Meade, South Dakota

DURING the past month, the Regiment has welcomed its new commanding officer, Col. O. W. Bethurst; the new Post Quartermaster, Capt. M. M. Goodwyn; and 1st Lt. R. L. Land, who has just completed the troop officers' course at the Cavalry School.

Col. Alexander M. Miller, GSC, Chief of Staff, accompanied by Lieut. Col. Alfred Brandt, GSC, Assistant Chief of Staff, G-3, and Capt. Earl C. Ewert, Field Artillery, Assistant G-3, all of Hqrs. 7th Corps Area, Omaha, Neb., arrived at Fort Meade on Saturday, June 20th, by government car, for the purpose of observing normal training activities of the regiment.

Major-General Johnson Hagood, Commanding the 7th Corps Area, arrived at Fort Meade on June 23, accompanied by his son, Lieut. Johnson Hagood, Jr. The purpose of General Hagood's visit to the Black Hills was to inspect the South Dakota National Guard encampment at Rapid City.

A party of six officers from this post were the guests of Fort Robinson, Neb. during their recent Polo Tournament and Horse Show. The Fort Meade Polo team tied with the Fort Robinson team in games won, but the Fort Robinson team having earned one more goal during the tournament, was declared the winner. Members of the team, together with Sgt. Edward Hayes and Sgt. John Doherty of Troop "B," 4th Cav., succeeded in winning a total of four blue ribbons, five red ribbons and four third places in the horse show.

Troop F, 4th Cavalry, accompanied by the Band, made its annual trip to Belle Fourche, S. D., to participate in the Black Hills Roundup Celebration, held on July 2, 3, and 4.

5th Cavalry
Fort Clark, Texas

ON May 5th the entire Regiment (less Band) left Fort Clark, Texas, by marching, enroute for Camp Bullis, Texas, for the purpose of participating in maneuvers with the Second Division. The Regiment returned to Fort Clark on May 26, 1931.

Colonel S. Field Dallam who has commanded the Regiment since September 22, 1928, has recently received orders relieving him from his assignment and duty with the Fifth Cavalry and ordering him to duty with Headquarters Fourth Corps Area, with station at Fort McPherson, Georgia.

The high degree of efficiency maintained by the Regiment while under Colonel Dallam's command is evident from a review of some of the more prominent duties performed during that period. In 1928 Troop F received enthusiastic commendation from Field Marshal Allenby for its appearance and musical drill. In 1929 Troop A took second place in the Goodrich Trophy Contest; first place being awarded on a score of 100 per cent. During this year the Regiment received the commendation of the Corps Area Commander and civil authorities for its work in connection with the border troubles of that year. In 1930, Major General Lassiter, following his inspection, commended the Regiment for its "Soldierly appearance, excellent morale and fine regimental spirit." After the 1930 maneuvers against the Second Division, the Corps Area Commander expressed his "Very high appreciation of the excellent spirit shown, ingenuity they showed in overcoming difficulties and of the very successful way in which they performed the mission assigned them." In the fall of that year General Summerall in a letter of commendation after his inspection said, "The Fifth Cavalry, under the Command of Colonel Samuel F. Dallam, has maintained the high standard heretofore noted in that Regiment. The escort troop was handsomely mounted and the uniform, equipment and bearing of the men were worthy of the Regiment." The 1930 Draper Trophy was awarded to Troop E.

6th Cavalry
Fort Oglethorpe, Georgia

THE entire period has been devoted to the ROTC and CMT Camps.

Brigadier General Edward L. King, visited the post on June 22d and Major General Guy V. Henry on July 7.

Major Walter E. Buehly joined the regiment on July 6th.

1st Lt. C. B. Hutchinson, joined the regiment on July 7th.

The following officers have left the regiment:

Captain S. R. Goodwin.—Fort Leavenworth, Kansas.
Captain G. L. Caldwell.—Fort Riley, Kansas.
Lieutenant W. H. Hunter.—Fort Riley, Kansas.
Lieutenant R. C. Lowe.—Fort Riley, Kansas.

7th Cavalry
Fort Bliss, Texas

LAST May, the regiment participated in the Cavalry Division Maneuvers in the Sacramento Mountain region. The situations and terrain were such as to test men, animals and equipment to the utmost, and the Seventh came through in fine shape with very few casualties.

The month of June was devoted to preliminary target practice, and reconstruction of officers' quarters, and the month of July to these activities and to the training of reserve officers from the 311th and 312th Cavalry.

In August the Seventh will replace the Eighth on the target range.

Little has been done in the way of polo or jumping since the middle of May. In the polo tournament, the Senior Garry Owen team came out first, defeating the 82nd Field Artillery team in the final and deciding game with the score 10-7. The junior team took second place in its division, losing to the Division Headquarters four.

In the April Horse Matinee, the Seventh again took first place, having won every other matinee of the season. The team excelled particularly in schooling phases.

The regiment regrets the loss of Lieut.-Col. Frank Keller, Major J. J. Bohn, Captain C. L. Stafford, Captain F. T. Bonsteel, Captain J. V. Gagne, Lieut. L. L. Judge and Lieut. J. T. Riepe, all of whom have left or will leave this summer, and it extends a cordial welcome to Lieut.-Col. H. E. Mann, Captain O. S. Peabody and Lieut. F. O. Dewey who have recently joined.

8th Cavalry
Fort Bliss, Texas

THE regiment left Fort Bliss for the Dona Ana Target Range July 6th. The target season will last until August 1st when the regiment will return to the post.

During the month of June the regiment acted in the capacity of parent organization for the CMT and ROTC Camps held on this post.

Recent losses to the regiment are Captain Stanton Higgins, Captain B. H. Graban, Lieutenant C. P. Bixel and Lieutenant H. A. Luebbermann, all of whom have been ordered to the Cavalry School at Fort Riley; Captain A. J. Wynne who has been ordered to Tank School; Lieutenant E. L. Rhodes who has been ordered to Air Corps Primary Flying School at Brooks Field, Texas.

9th Cavalry
Fort Riley, Kansas

MAJOR Edward C. McGuire, is relieved from assignment to the 9th Cavalry, effective September 3, 1931, and is detailed as a student in the Tank School, 1931-1932.

First Lieutenant Gilman C. Mudgett is detailed to pursue a course of instruction at the Cavalry School, Saumur, France, and sailed from New York City, July 1, 1931.

The following officers of the regiment attended the Mission Valley Hunt Race Meet at Kansas City, Mo., May 2 to 4, 1931: Captains Marion Carson, Rufus S. Ramey, Edwin M. Burnett, First Lieuts., Francis P. Tompkins, Gilman C. Mudgett and Hayden A. Sears.

11th Cavalry
Presidio of Monterey, Cal.

THE Presidio-Monterey Peninsula Horse Show was held at the Del Monte Polo Field June 19th to 21st, inclusive. This Horse Show was managed by Presidio personnel and, being very successful, a considerable sum was available for local charities. Lt. E. L. Harrison was individual high point winner.

The usual marches during April and May were varied by the First and Second Squadrons and the Machine Gun Troop making pack trips over the Santa Lucia Mountains in the Santa Barbara National Forest. The Machine Gun Troop encountered a good sized forest fire and, being the first to arrive, had a large part in the checking of the blaze. Letters of commendation for the work done by the troop were received from both the state and federal forest service.

12th Cavalry
Fort Brown, Texas

JUNE 30th brought to a close the annual small arms practice of the troops of the 12th Cavalry stationed at Fort Brown, Texas. The results obtained were highly gratifying to the Regimental Commander, Colonel Francis W. Glover.

A review of the Regiment (less 2d Squadron), was tendered Technical Sergeant Ralph Oggitio, Headquarters Troop, 12th Cavalry, on the occasion of his retirement from active service on April 24th.

A gesture of international amity typical of the relation of American and Mexican military officials along the Border was enacted at Fort Brown on June 10th when Colonel Francis W. Glover, commanding the 12th Cavalry, presented General of Division Eulogio Ortiz, with Headquarters at Monterey, Mexico, with a saber which Colonel Glover carried in the Spanish-American War. The presentation took place at Colonel Glover's quarters where General Ortiz was making a formal call, attended by General Serrano, Commander of the military garrison at Matamoros, by Mayor Roberto Garcia of Matamoros, Chief of Customs Leopoldo Verdugo, of Matamoros and members of the garrison at Fort Brown. Last fall at Reynosa, Mexico, a similar event took place with Colonel Glover as the recipient of a handsome hand embroidered *charro* uniform and ornately inlaid saddle from General Ortiz.

2nd Squadron, 12th Cavalry
Fort Ringgold, Texas

SEVERAL changes are being made in the officer personnel. Major Robert C. Rodgers relieved Major Geoffrey Keyes as Squadron and Post Commander. Major Keyes having been ordered to the Ecole de Guerre. Captain Forrester H. Garity is on leave upon the completion of which he will report to the Cavalry School. Lieutenant George C. Clemens will depart on leave about July 15th upon completion of which he will sail for the Philippines. Captain Benjamin A. Thomas has reported for duty and Captain George A. Gunderson and Lieutenant Elgin R. Thomas will join the command upon completion of leaves.

12th Cavalry
Fort Riley, Kansas

A number of changes in the commissioned personnel have recently taken place.

stage, and has profited greatly from the earnest efforts of Capt. Stockton and Lt. Buckland, detached from the regular army as instructors for the troop.

The Troop officers are: Captain Chauncey McCormick, 1st. Lt. Paul Butler, 2nd. Lt. Roy D. Keehn, Jr., and 2nd. Lt. Willard Meyers.

As first sergeant of the troop stands a name familiar to nearly the whole regular army—Dan Doyle. An example of the versatility developed in the cavalry is shown by his ability, after a quarter century of regular army training, to so ably fill his present position. Not only is he a first sergeant and caretaker second to none, but he has become a friend and adviser to every officer and man in the troop. His fund of army lore, collected in nearly every branch of the service, has been of constant assistance to his outfit here. He has become to the Black Horse Troop what he was to the regulars on reservation on a most able subaltern.

Troop B, 12th Cavalry

3rd Sq. and M. G. Tr., 307th Cavalry
Norfolk, Virginia

A VERY impressive parade was held in the city of Norfolk on Memorial Day with contingents from the United States Navy, Virginia National Guard, Veterans' Organizations and the city of Norfolk participating. The unit Instructor, Major David H. Bisbrick Cavalry (DOL), acted as Grand Marshal of the parade. Major James R. Mullen, commanding the Squadron and Lieutenants W. L. Rena, Jr. and R. B. Butts Cavalry Reserve, acted as aids.

The officers of the Squadron have combined with other Reserve Officers in the city for the establishment of a Branch Club at Cape Henry, Va. A barracks building has been secured at Fort Story for the club which has ample accommodations for the officers and their ladies and many enjoyable parties are anticipated for the summer months.

307th Cavalry

862nd Field Artillery (Horse)
62nd Cavalry Division

LIEUTENANT Colonel Albert Gilmor, CAC, who has been Unit Instructor of the regiment since the time of its organization about two years ago, was relieved effective from June 30th, and ordered to Fort Monroe for duty. The new Unit Instructor will be Lieutenant Colonel Walter H. Smith, F. A.

A review of the work accomplished during the inactive training season that has closed, indicates very substantial progress having been made by the regiment during the past year. Beginning with the month of February the practice having been inaugurated of holding two regimental conferences monthly instead of one as regularly prescribed and it has been very

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DURING the past month, the Regiment has welcomed its new commanding officer, Col. O. W. Rethorst; the new Post Quartermaster, Capt. M. M. Goodwyn; and 1st Lt. R. L. Land, who has just completed the troop officers' course at the Cavalry School.

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12th Cavalry
Fort Brown, Texas

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A review of the Regiment (less 2d Squadron) was tendered Technical Sergeant Ralph Oggitio, Headquarters Troop, 12th Cavalry, on the occasion of his retirement from active service on April 24th.

A gesture of international amity typical of the relation of American and Mexican military officials along the Border was enacted at Fort Brown on June 10th when Colonel Francis W. Glover, commanding the 12th Cavalry, presented General of Division Eulogio Ortiz, with Headquarters at Monterey, Mexico, with a saber which Colonel Glover carried in the Spanish-American War. The presentation took place at Colonel Glover's quarters where General Ortiz was making a formal call, attended by General Serrano, Commander of the military garrison at Matamoros, by Mayor Roberto Garcia of Matamoros, Chief of Customs Leopoldo Verdugo, of Matamoros and members of the garrison at Fort Brown. Last fall at Reynosa, Mexico, a similar event took place with Colonel Glover as the recipient of a handsome hand embroidered *charro* uniform and ornately inlaid saddle from General Ortiz.

2nd Squadron, 12th Cavalry
Fort Ringgold, Texas

SEVERAL changes are being made in the officer personnel. Major Robert C. Rodgers relieved Major Geoffrey Keyes as Squadron and Post Commander. Major Keyes having been ordered to the Ecole de Guerre. Captain Rossiter H. Garity is on leave upon the completion of which he will report to the Cavalry School. Lieutenant George C. Claussen will depart on leave about July 15th upon completion of which he will sail for the Philippines. Captain Benjamin A. Thomas has reported for duty and Captain George A. Goodyear and Lieutenant Egon R. Tausch will join the command upon completion of leaves.

13th Cavalry
Fort Riley, Kansas

A NUMBER of changes in the commissioned personnel have recently taken place.

On May 20, Colonel Alexander B. Coxe relieved Colonel Walter S. Grant as regimental commander.

Major Arthur D. Truxes, Captain Edwin M. Burnett, First Lieutenants Paul G. Kendall and Eugene L. Harrison (on duty with Olympic Equitation Team) have joined the regiment.

Major Harold Thompson will join the regiment in September to replace Major Edwin N. Hardy who has been detailed to the General Staff Corps. Major Nelson M. Imboden leaves the regiment in September for Leavenworth.

Captain Charles E. Dissinger has left the regiment to be assigned to the staff and faculty.

Master Sergeant Owen H. O'Rourke and Staff Sergeant Anthony Hungler, both of the Headquarters Troop, recently retired after completing 30 years service. The former saw service in China, the Philippines, and in France during the World War, and the latter in Cuba and the Philippines.

14th Cavalry (less 1st Squadron)
Fort Des Moines, Iowa

LT. COLONEL G. H. BAIRD relinquished command of the regiment and left for duty with Organized Reserves, Louisville, Ky., on July 1, 1931. Lt. Colonel Talbot Smith taking over the regiment. A farewell party in honor of Lt. Col. Baird was given by the officers of the regiment.

Hq. Troop, 106th Cavalry
(Chicago Black Horse Troop) Illinois N.G.

ORGANIZED early in 1929 as headquarters troop of the 106th regiment, the Chicago Black Horse Troop now has two years and two summer camps to its credit and feels qualified to lift its voice in these pages. The troop has been particularly fortunate in its officers and instructors during this development stage, and has profited greatly from the earnest efforts of Capt. Stockton and Lt. Buckland, detached from the regular army as instructors for the troop.

The Troop officers are: Captain Chauncey McCormick, 1st. Lt. Paul Butler, 2nd. Lt. Roy D. Keehn, Jr., and 2nd. Lt. Willard Meyers.

As first sergeant of the troop stands a name familiar to nearly the whole regular army—Dan Doyle. An example of the versatility developed in the cavalry is shown by his ability, after a quarter century of regular army training, to so ably fill his present position. Not only is he a first sergeant and caretaker second to none, but he has become a friend and advisor to every officer and man in the troop. His fund of army lore, collected in nearly every branch of the service, has been of constant assistance in his work here. He has become to the Black Horse Troop what he was to the regulars—an inspiration as a man and a soldier.

Troop B, 109th Cavalry
Tennessee N. G.

THIS organization on May 2-3 conducted a mobilization test and a practice march. The march was from Chattanooga, Tenn. to Catoosa, Ga. and return and covered a distance of 42 9 10 miles. We believe that this is a very good record for distance and a little bit out of the ordinary for National Guard cavalry during armory training period.

305th Cavalry
Philadelphia, Pa.

A REVIEW of the work accomplished during the inactive training season, 1930-31, indicates very substantial progress having been made by the regiment during the past year.

This regiment having been designated for active duty training at Fort Myer, Va., July 5-18, 1931, in connection with the training of the CMTC, has for the past several months given much time to preparation of the work to be done while in camp.

Seventeen officers reported at Fort Myer, Va., on July 5th for 14 days active duty training.

306th Cavalry
Baltimore, Md.

THE inactive duty training of the 306th Cavalry for the year 1930-1931 was brought to a close by a dinner at the New Maryland Country Club on June 24, 1931.

Colonel John Philip Hill acted as toastmaster. The Honorable Howard W. Jackson, Mayor of Baltimore, was the principal guest of the evening and addressed the officers of the regiment. The following officers of the regular army were present and spoke to the regiment: Colonel John D. Long, Cavalry (DOL), Colonel J. T. Conrad, AGD, Colonel F. R. Brown, AGD, Colonel C. A. Sevane, S. C., Major E. W. Taulbee, Cavalry, DOL.

3rd Sq. and M. G. Tr., 307th Cavalry
Norfolk, Virginia

A VERY impressive parade was held in the city of Norfolk on Memorial Day with contingents from the United States Navy, Virginia National Guard, Veterans' Organizations and the city of Norfolk participating. The unit Instructor, Major David H. Blakelock, Cavalry (DOL), acted as Grand Marshal of the parade. Major James R. Mullen, commanding the Squadron and Lieutenants W. L. Renn, Jr. and R. B. Batte, Cavalry Reserve, acted as aids.

The officers of the Squadron have combined with other Reserve Officers in the city for the establishment of a Beach Club at Cape Henry, Va. A barracks building has been secured at Fort Story for the club, which has ample accommodations for the officers and their ladies, and many enjoyable parties are anticipated for the summer months.

307th Cavalry
Richmond, Virginia

ONE of the most successful inactive training periods in the history of the regiment was brought to a close on June 30, 1931.

Twenty-four officers of the regiment have been ordered to active duty at Fort Myer, Va., August 2-15, 1931.

308th Cavalry
Pittsburgh, Pa.

ACTIVE duty training now holds the center of the stage with many officers actively preparing themselves for their duties with the CMTC this summer at Fort Myer.

The most interesting event since the last issue of the JOURNAL was the practice march in which 16 officers took part on May 30 and 31, 1931.

Lieutenants Goldsworthy and Thomas with Sergeant Cence are spending their vacation this year on horseback. They are now out in the mountains on a two weeks ride during which they will carry their own shelter and rations, and camp wherever and whenever they see a place that strikes their fancy.

The outdoor polo season is well under way in Pittsburgh. The regimental team has as usual been playing a very fine brand of polo with games at Monongahela City and at the Pittsburgh Polo Club.

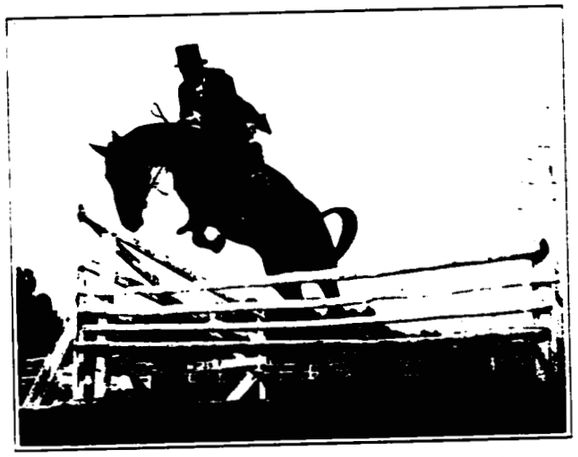
The last unit meeting before camp will be held at the Cavalry Club at Aspinwall, Saturday, July 11, where there will be rifle, pistol and saber practice in the afternoon and dinner at the Aero Club, after which we will return to the Cavalry Club and gather around an outdoor fire for the evening.

The June meeting was well attended and among those present were a number whom we have not seen for some time.

862nd Field Artillery (Horse)
62nd Cavalry Division

LIEUTENANT Colonel Albert Gilmor, CAC, who has been Unit Instructor of the regiment since the time of its organization about two years ago, was relieved effective from June 8th, and ordered to Fort Monroe for duty. The new Unit Instructor will be Lieutenant Colonel Walter H. Smith, F. A.

A review of the work accomplished during the inactive training season that has closed, indicates very substantial progress having been made by the regiment during the past year,—beginning with the month of February, the practice having been inaugurated of holding two regimental conferences monthly instead of one as regularly prescribed, and it has been very



Lt. Col. F. K. Chapin, Unit Instructor, 307th Cavalry on His Hunter, Princess Pat.

gratifying to note that the additional conferences were well attended and the interest well sustained—so much so, that it is planned to continue the practice next year.

During May and June, two officers of the regiment accepted commissions in the National Guard—Captain Edward L. Rich, Jr., F. A. Res., becoming a Captain, and First Lieutenant J. Rieman McIntosh, F. A. Res., becoming a First Lieutenant in the 110th Field Artillery of the Maryland National Guard. The transfer of our Reserve officers to the National Guard is encouraged whenever suitable vacancies become available, and should serve to promote a mutuality of interest that it is believed will prove increasingly helpful to both the National Guard and the Reserve as time goes on.

The regiment will go to Fort Hoyle on August 2nd for two weeks of active duty under the guidance of the Sixth Field Artillery, with which regiment it has had the privilege of serving for the past two years. Approximately 60 per cent of the available officers of the regiment will receive active duty training this year.

BOOK REVIEWS

New Wars: New Weapons, by Lieutenant Commander The Honorable J. M. Kenworthy, R.N., M.P., formerly The Admiralty Staff, London. Elkin Mathews & Marrot, London; 160 pages, with frontispiece; 3s 6d net; 1930.

The author invites attention to the fact that we are spending more money for weapons and defense each year than before the World War, and he tries to show the way for efficient spending on modern, instead of obsolete weapons.

After a brief recital of the history of the development of weapons, the evolution of naval warfare, the passing of the great battleship, a wastage of the taxpayers' money, a discussion of airplanes versus battleships, the real peril, campaign in three dimensions, the aerial offensive, and the changes the times have brought about, Commander Kenworthy sums up his case in rationalizing, as he sees it, the national defense. His thesis is well taken. There is much to be said for his conclusions, even if one disagrees with some of his arguments. His attitude in the parliamentary debates is indicative of a position, well taken, and seriously interesting to the law-makers of Great Britain.

The author holds that a unified Ministry of Defence, a concentration upon aerial, gas, chemical and mechanical developments, are dictated. Again, there is much to be said for his conclusions.

H. G. Wells, after reading his book, says that the narrative "is altogether admirable. * * * Vivid imagination with real knowledge and experience. * * * Extraordinarily convincing."

Rationalization of armaments, policies, mutual international agreements, disarmament treaties and actual demonstrations of performance for peace are necessary on all side for complete cooperation toward peace. Preparedness for war, must, therefore, come economically with the newest and most efficient weapons for the next or newest wars.

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The American Black Chamber, by Herbert O. Yardley. Bobbs-Merrill Co., Indianapolis, 1931. 370 pages, illustrated. $3.50.

A book you will enjoy. The achievements of the Cryptographic Section of the Military Intelligence Division of the War Department General Staff during the World War are told in a most interesting and absorbing way in Major Yardley's book.

It will come as a distinct shock to Americans to learn that the most secret and confidential code cablegrams and messages of the United States were easily decoded and probably read by our Allies as well as by enemy and neutral countries. False security is the dangerous state in which we lived. Thousands of lives were needlessly sacrificed through the breakdown of our combat codes; and, conversely, thousands of lives were saved through the ability of our cryptographers to break down speedily the constantly changing codes of our enemies.

We can't all be cryptographers, but we can and should know enough of the subject to realize the power of a skilled cryptographer to understand our most secret radio, cable, and wire communications.

In diplomacy as well as in warfare the cryptographer plays a major rôle—defensively as well as offensively. The nation that can maintain secrecy for its communications and read the cablegrams and radiograms of other nations is often in a position to gain its legitimate ends without being forced to go to war. The ethics of the case may be debatable, but Stephen Decatur's memorable words persist in recurring to this reviewer.

Aside from the purely military lessons to be learned from *The American Black Chamber*, the book is heartily recommended to the average reader for its illuminating discussions of secret inks, analytical solution of codes and cyphers, the workings of MI-8, the operations of foreign powers in cryptography, the intrigue and espionage incident to the war, and the vital part played by the cryptanalysis during the Peace Conference and the Washington Disarmament Conference as well as during the World War.

The book is more interesting and intriguing than a first class detective story, for it possesses not only the dramatic suspense of such stories, but it bears the unquestionable stamp of absolute authenticity. It is recommended to our readers as an outstanding work of military and national interest. If you love mystery, intrigue, dramatic suspense; if you enjoy a peek—many peeks—behind the scenes, *The American Black Chamber* will more than satisfy you.

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Loyalties—Mesopotamia, 1914-1917, by Lieut. Col. Sir Arnold T. Wilson: 340 pages. *Oxford University Press, London, 1930.* Price $10.00.

The author, who held the position of Acting Civil Commissioner in Mesopotamia, recounts his experiences in the legendary Garden of Eden from the outbreak of the World War to the death of General Maude. The interesting narrative covers both the military and non-military phases of the Mesopotamia campaign. The author depicts the difficulties of terrain, vagaries of the weather, and extremes of climate that tested the endurance of all ranks. He details the serious problems of supply complicated by long and imperfect lines of communications. Colonel Wilson has much to say that is complimentary and otherwise about the conduct of the Mesopotamian campaign.

The story is admirably told, with an exceptional breadth of view and deep human sympathy and understanding. A large number of portraits add to the general interest. The appendix contains a number of interesting documents including two that should prove very interesting to philatelists. A very elaborate bibliography and an excellent map complete the volume.

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With Meade at Gettysburg by George Gordon Meade. Published by the John C. Winston Co., Philadelphia. 201 pages..

Whether justly or not, Major General Meade has been severely criticized for not instituting a more vigorous pursuit of General Lee and the defeated Confederate forces, after their repulse at the Battle of Gettysburg. As long as men will continue to argue and defend their own ideas such controversies always arise—and no one yet ever heard of any one ever changing his opinion.

Published under the auspices of the War Library and Museum of the Military Order of the Loyal Legion of the United States, Philadelphia, Pa., this book was compiled by General Meade's son and edited by his grandson. It is plainly for the purpose of putting General Meade's side of the argument before the public. Copious extracts are made from the General's personal correspondence to his wife, from his orders issued in the field, and from his testimony before Congress nine months after the battle. Also there are extracts from General Halleck's letters to General Meade. Twenty-four maps help the reader form a picture of events, which would almost be impossible from just reading the written details.

The author opens the narrative with a very sketchy outline of the Civil War in the east up to the assignment of General Meade to the command of the Army of the Potomac. With the aid of good maps the reader is then given a clear picture of the distribution of the federal forces in the Maryland-Pennsylvania area, and their concentration on Gettysburg. Following this is a detailed description of the movements and actions of almost every Union brigade, insofar as it was directly concerned with the fighting, on the first, second, third, and fourth days of the battle. This is supplemented by enough information of the Confederate forces to give the complete story. Then the Confederate retreat and the Union hesitation, and finally the Confederate offer of battle at Williamsport and the refusal of Meade to accept.

If the reader is willing to accept the limited mission of the Army of the Potomac as given by the author, namely "the mission of the Army of Northern Virginia was to establish for the Confederacy an offensive military supremacy on Northern soil and the mission of the Army of the Potomac was to defeat the Army of Northern Virginia in accomplishing its mission," then the book has accomplished its mission. But there will probably be quite a few readers who will be unwilling to accept such a limitation to General Meade's mission, especially after the crushing repulse administered to the Confederates on the third day. The magnificent conduct of the troops during the three days fighting, their worn out condition, the shortage of supplies, and the like, are all brought forth to show why it was not considered wise to attack a foe who time and again had demonstrated his fighting ability, and who at this particular time was occupying a strongly entrenched position. General Meade states that for him to have attacked Lee on the fourth day would have resulted in the same disaster for the Union forces that the Confederates suffered on the third day. The reader can judge for himself who was right—General Meade, or his critics. There is one positive outstanding fact, and that is that we cannot help but be thrilled at the splendid tactical handling of his forces by General Meade during battle. To offset that, though, is the habit of calling his corps commanders together "for consultation," which, however one may try to disguise it, was nothing more nor less than a council of war. Fatal to aggressive action since time began.

It is an interesting book. For those who wish to have a splendid reference in their library on the Battle of Gettysburg this will be a welcome addition.

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The Martial Spirit, by Walter Millis. Published by Houghton Mifflin Company, 1931. 410 pages. $4.00.

This book concerns our war with Spain. The author states "the foregoing book was undertaken rather as an essay in history than as history itself" and "it may seem that I have stressed the satiric aspects of war." It is certainly written in a sort of jazzy, serio-comic style, and at the same time is strongly satirical. Just what the real object of the book is, is hard to determine.

The reviewer has heard from childhood that our war with Spain was probably unnecessary, and brought on by a powerful group of "yellow journals." Mr. Millis stresses this factor. He describes very graphically the immense power of the press, and clearly shows the influence it had in working the public up to the war pitch. In his comments and criticism of the part polities played in using the press, both to bring on the war, and then later to handicap the operations of both the Army and Navy, he points out a grave danger to be avoided in the future.

In his dealings with personalities the author seems to cheapen the book. He is an excellent "second guesser." With sarcasm and innuendo he savagely criticizes the older Theodore Roosevelt, Henry Cabot Lodge, and William Randolph Hearst, together with a host of their contemporaries, the great majority of whom are now dead and of course unable to defend themselves. The author seems to forget that in preparing his essay he had the advantage of studying thirty years of debate on this particular subject, both oral and written, and access to the records of both Governments. It is not apparent in his criticisms that he has taken that fact into account, and that the leaders of the country, political, civilian and military, made their decisions and acted solely on the information that they had at the time. It hardly seems fair to abuse and ridicule men now dead for their thoughts and actions in

the eighteen-nineties in the light of developed information in the nineteen-thirties. It is only just to state, however, that the book seems to "knock" practically everybody and everything.

The evils of a non-censored press and unlicensed political meddling in military affairs in time of war are interestingly set forth.

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IN THE ENEMY'S COUNTRY, by Joseph Crozier. A. A. Knopf & Co., New York, 1931. 235 pages.

Joseph Crozier, a French business man and aviation enthusiast, became the head of a secret service group in Holland during the World War. He tells the story of the work there simply and entertainingly. There are no heroics. The translation leaves the Gallic flavor undisturbed. Though the book contains little of value to the military man, it makes interesting reading.

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MEMORIES OF THE WORLD WAR, by Robert Alexander, Major General, U. S. Army, Retired. Published by the MacMillan Company. New York, 1931. $4.00.

In a foreword the author states that he has two objects in view in presenting these "Memories" to the public; one, to tell the unvarnished truth, and secondly, to record his appreciation of the devoted service and the determined valor of the troops with whom he was associated. He accomplishes his purpose well, and the reader will find in the pages of General Alexander's book a clear and interesting description of the work of a combat division.

The author starts his book with a rebuke to President Wilson for not fully preparing the military forces of the United States to enter the war, and consequently causing the deaths of so many soldiers due to untrained leadership. Then follows the author's story of crossing the Atlantic, his arrival in France, training trips to the French and British forces, his duties as commander of a replacement division, and finally his assignment to the command of a brigade in the 32nd Division, and some combat experiences.

In August, 1918, he was promoted to Major General and assigned to command the 77th Division. The 77th made a fine record, and the General gives full credit to both individuals and organizations who helped make that record. He is most positive in all his statements and does not mince his words in discussing either the success or failure of various officers. He gives authentic facts on some disputed questions, and in particular explains the so-called "lost battalion," which in the opinion of the 77th Division was neither lost, nor had to be rescued.

In the opinion of the author far too much time was "wasted" in the instruction of the tactics of "trench warfare," which could have been better and more profitably used in the instruction of minor tactics for open warfare. He is also a great believer in the value of the Command and General Staff School at Fort Leavenworth, and the efficiency of its graduates.

The book is of interest to the general military reader and worth while adding to that ever-growing library of "War books." It is of special interest to veterans of the 77th Division.

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BEDFORD FORREST AND HIS CRITTER COMPANY, by Andrew Nelson Lytle. Published by Minton Balch and Company. New York. 1931. Price $5.00.
Reviewed by Lieutenant-Colonel William Waller Edwards, Cavalry.

Why the author has used the term "Critter Company" does not appear, but Bedford Forrest doubtless used it many times—he probably even said "hoss critters"—for he was of the uneducated yeomanry of the South.

This latest biography of General Forrest (there have been five previous ones) is an attempt to depict his development into the most typical strong man of the Agrarian South.

The narrative presents his remarkable career in vivid style. Each chapter is packed full of unusual and thrilling adventures, for this amazingly powerful earnest man had many to draw from.

Forrest's role in the Civil War was of course the most important and dramatic part of his strange eventful life.

The resourceful author has gained sympathy with his brilliant subject by talking to all the old surviving members of his command, and having spent two years beside in going over the "hard turnpikes which once echoed the beat of his horses' hoofs and the wild yells of his riders" he has handled Forrest's military operations with a distinct understanding of each of them.

After his famous raid into west Tennessee in which he cut off Grant's Vicksburg supplies, Forrest was classed by the Confederate Generals in the Southwest merely as a highly successful cavalry raider.

Yet, after reading Lytle's account of the Battle of Brice's Crossroads it is difficult indeed to understand such utter lack of comprehension, for this battle was certainly neither a cavalry raid nor an accident.

When it was too late, they found out at Richmond that Sherman and Grant knew more of Forrest's genius for war than they knew themselves.

The book before us deals him the justice which history owes him but which, alas! he never got at the hands of his superiors.

It is a splendid portrait upon a broad colorful canvas of an American of pioneer stock of tremendous endurance and wonderful courage, who in four years of cavalry leadership, against odds, never knew defeat.

Notes from the Cavalry Board

(Continued from page 72)

ELECTRIC HORSE CLIPPING MACHINES

The Andis Clipper Company, Racine, Wisconsin, has furnished the Cavalry Board a number of electric clippers for test. Four of these machines went into test on November 20, 1930, and others at a more recent date. The Chicago Flexible Shaft Company have also furnished their newest product known as the "Clipmaster" for test. Both these machines are excellent products and appear to be all that is claimed for them.

The Andis clipper is powered with a well known universal motor, the whole machine being held by a handle in the hand when in operation, thus eliminating the enclosed chain which so frequently breaks. It is equipped with a twenty foot, three conductor rubber covered cord and ground clamp. The switch is mounted on the motor just above the handle, and can be easily operated with the thumb. The tension adjustment is mounted directly over the cutting blades which run on roller bearings. All the working parts are enclosed in an aluminum and metal housing. The weight of the entire machine is three pounds. With this machine one horse was clipped in twenty-one minutes.

The Clipmaster is also powered with a universal type motor, and instead of being held by a handle in operating it, as is the case with the Andis machine, the whole motor is held in the grasp. It has a snug, easy hold, the machine being well balanced in all positions. It is equipped with a rubber covered conductor and ground wire, the ground eliminating the likelihood of either operator or animal receiving a shock through shorting of the motor. The tension is easily adjusted, the machine working on a very light adjustment. The Clipmaster is also a chainless machine. The weight is approximately the same as the Andis.

Blades for both machines have proved very satisfactory and have outlasted the issue blades. The price of these machines is less than that of the issue hand clipper.

RADIO TELEGRAPH EQUIPMENT, TYPE BC-GM-152

On May 4, 1931, four radio receivers, type BC-GM-152 were placed in service test. These receivers are for use by an individual mounted man, and are carried on an improvised hanger made from the ordinary issued McClellan saddle bags, in the same manner in which the saddle bags are carried. The receiver is mounted on an improvised leather hanger which replaces the near saddle bag, the batteries being placed in the off bag, the electrical connections being made by means of a four-conductor lightly armored cable which goes over the horse's back. The antenna is a telescopic Bristol steel fishing rod, mounted in a guidon stirrup, the set being grounded to the metal case in which it is mounted. The wave length band of the BC-GM-152 is 200-1200 meters. 1500-250 kilocycles. This permits inter-communication between the SCR 109, 127-130, the Air Corps SCR 134, and these sets.

These sets were tested during the spring maneuvers of The Cavalry School to assist in determining whether or not they satisfy a definite tactical requirement, for use on a mounted man as a "contact" or "control" set between advance reconnaissance detachments or patrols and main bodies. They were satisfactory to a distance of approximately thirty miles, which is the greatest distance at which they have thus far been tested by the Cavalry Board.

Logic

(Continued from Page 13)

III.

Dusk the same evening found the War Correspondent sitting on the banks of a river, feeling more tired than he ever remembered in his life. He had come fast and far since he had watched the attack of the cavalry division at dawn that morning.

It was a typical Eastern river. The bed was formed by a depression about half a mile wide and thirty feet below the level of the surrounding plain. At this time of year the river flowed in three or four main streams, and many smaller channels, some quite shallow, some just fordable by a man on a horse.

Immediately below the spot where the War Correspondent was sitting was a long column of cavalry with machine guns in pack fording the stream. The shallowest places were marked with flags, and the column twisted and turned like a long brown snake. But even so he could see that in places the water was half way up the saddles, and that the horses had some difficulty in keeping their feet. On the bank to his left were six-wheelers unloading ammunition, reserve machine guns and wireless sets, which were being loaded on to rafts and poled across the streams to the usual accompaniment of cat calls and witticisms of the British soldier, delighting in a job outside his usual routine.

In rear of the last squadron came Bonzo's battery: the little howitzers almost disappearing completely under the water in the deeper channel, but the teams seeming to find less difficulty than the cavalry horses, possibly because they were held together by the harness.

Bonzo drew out to watch his teams across.

"Hard day on the skins; still they don't look too bad do you think? We are going across now with the mounted regiments to form the bridgehead. It will be at least twenty-four hours before this river is bridged for any of the mechanized stuff. Now you see why we are not mechanized. We are the close support weapon, and it is our boast that we can go anywhere where a man on a horse can get. It is after all only logic."

Foreign Views on Mechanization

(Continued from page 40)

the road net into account; fortified works will have a relation to it.

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The *Voie Sacrée* (Bar-le-Duc to Verdun) showed that automobile transport could replace the railroad over short distances.

The French had an important strategic reserve of portée artillery.

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As to the technique of employment, two methods:

First Method: The new engine may be incorporated into the existing organizations, that is into the large units, Infantry divisions or Cavalry divisions, whose elementary cell is the foot-soldier or the horse. The latter impose their specific possibilities of speed and of muscular fatigue on these large units.

* * * * * * * * * *

The Cavalry division has rightly maintained, in spite of new additions of power, its old type of organization, as long as the horse alone was capable of carrying the scout and the combatant of high speed in all types of country.

However, lately, a new engine has *appeared*: the rapid reconnaissance car for all terrains, which constitute, a formidable competitor for the mounted scout and combatant.

Second Method: The authorities will free themselves from servitude to existing organization and will seek a technique of employment using fully the properties of the new engine, considered as a supplementary element of force for the army.

With reference to a new engine susceptible of being utilized in war, this method consists in discarding the idea of incorporating it into the existing organizations and in seeking a technique of employment permitting the exploitation of all its specific qualities of power, speed, radius of action, etc. This research may result, as has been the case with aviation, in the *organization* of *new* units or services superimposed on the existing combatant arms.

Considering the poor results obtained by the first experimental method in the large cavalry unit, one wonders if the research procedure applied to aviation should not be used for the motorized vehicles adapted to *all terrains* which have just made their appearance in France and England and certain of which are in service or on trial in our army.

* * * * * * * * * *

Far from being the condemnation of the Cavalry, the motorized engines constitute for it the opportunity for a resurrection, in which, with formidable means at its disposal, the Cavalry spirit will be able to amplify infinitely its innate qualities of boldness, skill and heroism.

The second method of research should, therefore, be used to determine the technique of employment of a motorized group resuming the mission of the old homogeneous Cavalry division; the procedure to be followed has been traced by the steps taken in military aviation.

* * * * * * * * * *

The problems of security which arise from an adversary's possession of such a force will be met by motorized forces, which will act like *divisional cavalry.*

* * * * * * * * * *

The application of the second method will lead to the possible and necessary resurrection of the independent cavalry of the heroic epochs of that arm, as well as to the resumption, under a form astonishingly amplified, of cavalry security missions. Such research seems to be quite urgent.

The United States Cavalry Association

Organized November 9, 1885

DESIGN

1. The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—*Article III of the Constitution.*

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MEMBERSHIP

Membership shall be of three classes, which, together with the conditions of eligibility therefor, are as follows:

(1) Active, for which all general officers of the Army of the United States and all commissioned officers of the Cavalry of the Army of the United States shall be eligible.

(2) Associate, for which all present and former commissioned, warrant, and non-commissioned officers of honorable record of the military or naval services of the United States not included in class I shall be eligible.

(3) Honorary.

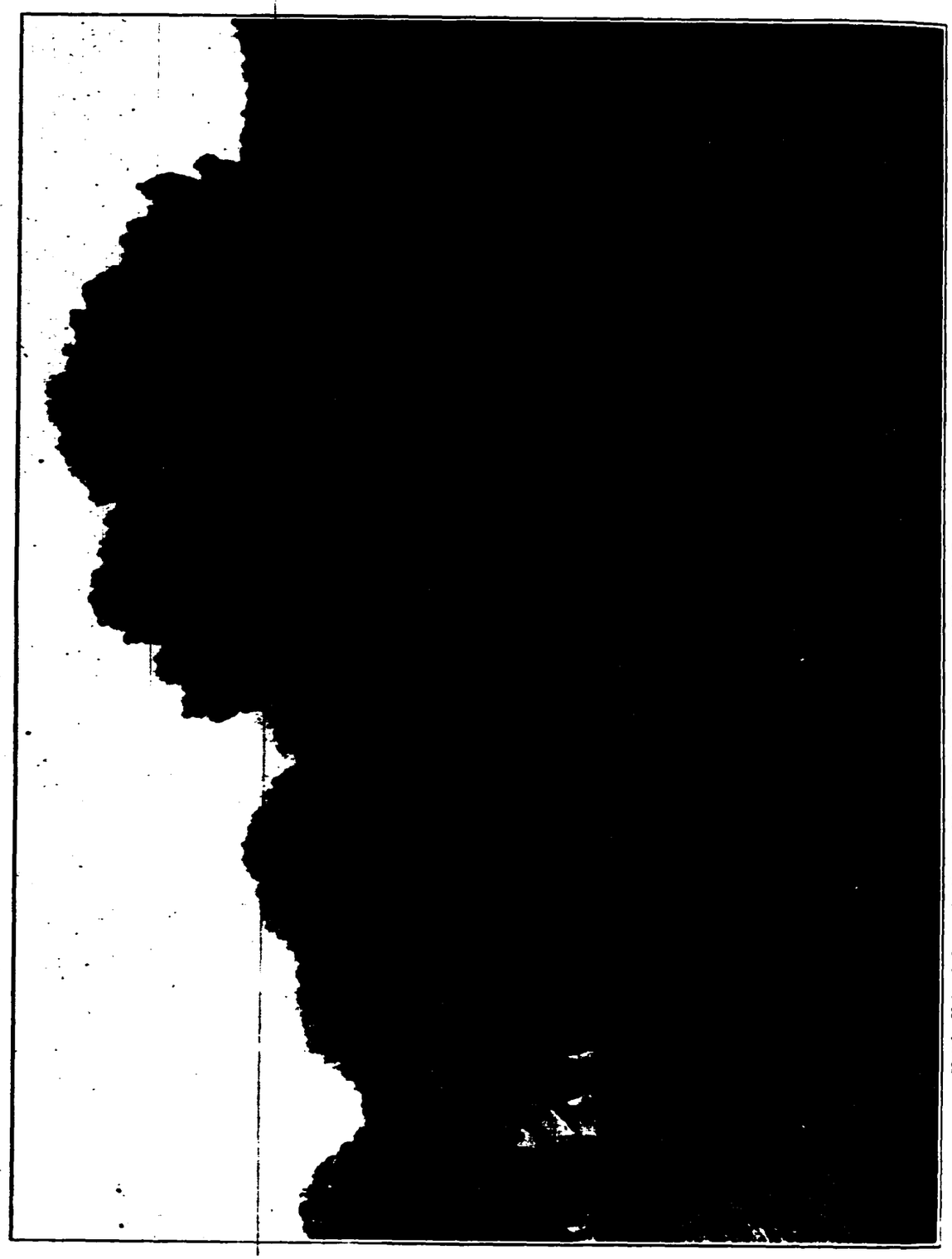
Application for membership, showing present or former military status, should be addressed to the Secretary, U. S. Cavalry Association, 1624 H Street, N. W., Washington, D. C., and be accompanied by remittance of dues for one year.

DUES AND SUBSCRIPTION TO THE CAVALRY JOURNAL

There is no initiation fee. Annual dues, payable in advance, $2.50, which includes subscription to the Cavalry Journal, 60% thereof being so designated.

Any person or organization not eligible for membership may subscribe for the JOURNAL at the regular subscription rates of $2.50 per year. Canadian and foreign postage, 50 cents additional.

Members and subscribers are requested to give prompt notice in advance of change of address. Changes in address are made only on notification.



Hourly Halt of Troops in the 1st Cavalry Division Maneuvers Near Lee's Ranch in the Sacramento Mountains of New Mexico.

THE CAVALRY JOURNAL

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R.O.T.C., the Key to National Defense

By Major General Johnson Hagood, U. S. Army

I

WAR has been described as a migration of creatures who force their way into territory occupied by other creatures and are met by resistance. In some forms of life, as with germs, all the invaders become engaged with all the defenders. In other forms—ants, for example—some of the creatures are developed as soldiers, some as workers, etc. Among savages all men fight until they get too old. Among civilized peoples wars were formerly conducted by standing armies, the civilian population not participating nor caring very much as to the outcome. Now the entire resources of nations are pitted against each other—moral, physical and industrial.

And war will continue as long as creatures have different ideas as to their rights and are willing to fight for them.

II

Necessity knows no law—and Military Necessity is supreme. In appraising an R. O. T. C. graduate as a prospective officer, we should not ask "Is he qualified?" We should ask, "Is he the best material available?" and "How can he be improved?"

The first question is answered in the affirmative. Young college graduates with two years' military training under federal supervision are far and away the best material that America could ever have for the quantity production of company officers in time of war.

The second question is answered by saying that we cannot improve the mental, moral and physical character of these young men by any means at our disposal, but we can improve their military knowledge three hundred per cent by changing the R. O. T. C. courses. This can be done without any increase in present appropriations and without taking any more of their precious time from other studies.

III

The best military law ever written upon the statutes of the United States was the old Militia Act of 1792. Those were the days when legislators were statesmen. They thought clearly and had the faculty of reducing their thoughts to writing. This act provided that every able-bodied male citizen between eighteen and forty-five should be enrolled in the militia. It provided for organizing these men into regiments, brigades and divisions. It required them to turn out, without pay, for training and inspections, and, under pain of punishment, to furnish their own uniforms, equipment, arms and ammunition. It gave us a national army of citizen soldiers. There was a fatal defect, however, and after languishing on the books for over a hundred years, the law was repealed. The fatal defect was that the execution of the law rested with the governors of the several states instead of with the President.

IV

The present National Defense Act is a good law. Some give it Character "Excellent." I can only hand it "Good." The C. M. T. C. is fine. The National Guard is wonderful. The Regular Army and the Reserve Officers Corps are far from perfect. The fatal defect in the Reserve Officers Corps is that it is organized around the veterans of the World War and there is no provision for replacement. As long as the veterans last all is well and good. When they are gone we shall have a millstone around our neck—a corps of one hundred thousand officers, in grades from second lieutenant to major general, whose only knowledge of the military profession will be what they learned as boys at school, supplemented by subsequent correspondence courses and fourteen meager days in contact with troops once every five years. (This figure is based upon present congressional appropriations.)

V

It goes without saying that exclusive of World War veterans the only men in America, or the best men in America, to exercise high command in time of war are the professional soldiers. In this I am willing to include the National Guard and the Marines, though their employment is not germane to this discussion.

At the outbreak of the Civil War two hundred eighty-one officers resigned from the Regular Army and joined the South. Jefferson Davis, a graduate of West Point and ex-Secretary of War, had the good sense to appoint these officers at once to high command. Samuel Cooper, Adjutant General of the Army (with rank of colonel); Joseph E. Johnston, Quartermaster General; Robert E. Lee, colonel of cavalry; P. T. Beauregard, captain of engineers; and others, were made full four-star generals in the Confederate forces. Regular Army lieutenants became lieutenant generals. Grant in his memoirs regrets the same thing was not done in the

northern army and recommended that at the outbreak of another war the Regular Army be disbanded and its personnel distributed among the emergency forces.

General Pershing asked that no brigadier generals be sent to him over forty years of age, and no major generals over forty-five. What shall we do in the next war with paper battalions, regiments, brigades and divisions commanded by men over fifty years of age whose professional knowledge has been acquired by lectures and correspondence and who, in the average case, have not had more than ninety days' actual contact with soldiers during the preceding thirty years?

VI

Congress has provided twelve thousand Regular Army officers, in time of peace, at a cost of over thirty-eight million dollars per year. Six thousand of these are extra. That is, they are not required for the tactical or administrative organization of the Regular Army. They are used, in time of peace, to train the civilian components. What are they going to do in time of war? Are they going to lead these men in battle or are they going to stand and coach them from the side lines?

VII

At the date of the Armistice General Pershing was asking for an army of one hundred divisions in France. This together with the overhead at home would have required half a million officers, three hundred thousand in the combatant branches of the line and two hundred thousand in the services of supply. By properly distributing our professional soldiers, by reorganizing the R. O. T. C., and by a more intelligent organization of our S. O. S. personnel, we could provide an Emergency Officers Corps four hundred thousand strong, without increasing present appropriations for National Defense. This corps would be much more efficient than the present Reserve Officers Corps (excluding World War veterans) and could stand the analysis of cold logic upon its merits.

The general outline of this scheme for an Emergency Officers Corps is as follows:

a. From certain R. O. T. C. institutions (hereafter indicated) commission all graduates, Basic as well as Advance Students, as lieutenants and captains in the Emergency Officers Corps. These young officers should be required to take no training and have no obligation except in case of war. At the end of five years their commissions should expire, unless they voluntarily choose to take training and compete for promotion. This would give us an annual crop of forty thousand fine young men, with a total of two hundred thousand at an average age of twenty-five years. Selected C. M. T. C. graduates should be treated in the same way.*

b. From the above classes and from the National Guard, promotions should be made, after five years' service, to the grade of major, all such officers being required to take, in the grade of major, a regular course of training involving annual encampments and to be discharged from the service upon reaching the age of thirty-five. This would give us about thirty thousand majors of the line.

c. From the Regular Army, Marines and National Guard, and from World War veterans as long as they last, we should fill the grades from general officer down to lieutenant colonel. We would need about twenty thousand.

d. From professional men in civil life and without regard to age (up to sixty-four years), we should appoint S. O. S. men. Men whose ordinary vocations fit in with their army duties, who are already seventy-five per cent trained, would require no peace-time expenditure of public funds for that training. It would not be necessary for them to know the Army red tape, and the essentials of their duties could readily be acquired from simple manuals. We could use about one hundred fifty thousand of these.**

e. The present organization of the Reserve Officers Corps into units higher than the regiment, and even into regiments away from the large cities, is just a paper proposition and has no advantage except for administration. So-called unit training has a sentimental value, but little else. Under the proposed Emergency Officers Corps we would have a paper army for purposes of mobilization—the important thing—and the training would be adapted to the requirements of the individual. When the time is limited this is the best way to utilize it.

More details of this plan will be indicated later.

VIII

The United States Military Academy at West Point may be considered as the number one R. O. T. C. institution in this country. It is the best military school in the world. It has furnished officers for the Regular Army and, in addition, has exceeded many other colleges in the United States in the percentage of graduates to attain success in civil life. Other military schools, the Virginia Military Institute and The Citadel, for instance, were created in imitation of West Point to furnish officers for the state forces at a time when the burden of national defense rested upon them.

It has already been indicated that Jefferson Davis, unhampered by promotion lists, precedents and politics, used his Regular Army personnel to better advantage in the organization of the Confederate Army than was possible in the case of those who stood by the Stars and Stripes. Davis received two hundred ninety-six West Point graduates, one hundred ninety-three from the Army and one hundred three from civil life. From these graduates he appointed eight full generals; fifteen lieutenant generals; forty major generals; and eighty-eight brigadier generals. Of the Corps commanders in the Confederate Army only two were non-West Point graduates; of the Army commanders, none. He used the graduates of the state military schools in the same way.

But the North did not go far in the plan of putting their professional soldiers in charge of their volunteer forces. Regular Army "combat teams" were retained intact, and Grant was refused the services of a Regular Army second lieutenant, whom he wanted for colonel of a volunteer regiment, because "he was the only officer on duty with his company."*

*About ten thousand captains and lieutenants could be had from the warrant officers and soldiers of the Regular Army.

**In France the S.O.S. included everything except the actual fighting at the front—doctors, lawyers, all forms of transportation, construction and forestry, telephone, telegraph, and every thing connected with the supply of food, clothing and ammunition.

IX

The plan of going outside of West Point and accepting the state military schools and other similar institutions as an integral factor in our system of national defense was not a Regular Army idea. It did not originate with the General Staff. Neither the Regular Army nor the General Staff has ever fully understood these schools or appreciated their tremendous importance. The big idea was first conceived during the Civil War by a member of Congress—Justin S. Morrill—who introduced compulsory military training in the Land Grant Colleges. For fifty years it languished and had no more to do with national defense than did algebra or football; and today the R. O. T. C. stands to the Army as the horseless carriage stood to the automobile. The horse was taken away, the shafts were removed, and something inside made the thing go. The R. O. T. C. boy is just a Regular Army soldier with something left out. He wears the Regular Army uniform, draws the Regular Army ration, studies the Regular Army regulations, and receives a little something of Regular Army training. At the end of the first year, future bankers and big business men are qualified to serve as privates in the ranks of an emergency army. At the end the second year they are qualified to serve as corporals and sergeants. Having then completed the compulsory military training under the Morrill Act, they are free to take two more years of advanced work—voluntary—and qualify as lieutenants in the Officers Reserve Corps.

An average young American with a fourteen-year-old mind and an eighth grade education can qualify as an expert with any weapon issued to the American Army within fifteen days after his induction into the military service. During the same time he can be hardened to march with his command, whether afoot, ahorse, or in the back seat of an automobile. He can be taught to obey his officers and to perform the essential duties of a private soldier in the field. Time spent in teaching college men to become private soldiers is time wasted. They learn to tie knots in ropes and to name the parts of obsolete ordnance; to take down and reassemble machine guns blindfolded; to operate motor transportation—when we already have thirteen million licensed chauffeurs at large in the country; and in the case of dentists, they learn to execute the manual of arms. If the clerk at a soda fountain were discovered taking the cash register apart blindfolded, it might cause comment, but we take pride in a class of blindfolded sophomores who can put together the intricate parts of a magazine rifle.

*Grant, himself, and Sherman were examples in the northern army of R.O.T.C (West Point) graduates called back from civil life to take high command. But the War Department was not responsible for this.

X

General Pershing, in his book on the World War—the greatest book upon any military subject ever written by an American—says:

> "In each succeeding war there is a tendency to proclaim as something new the principles under which it is conducted. Not only those who have never studied or experienced the realities of war, but also professional soldiers frequently fall into the error. But the principles of warfare as I learned them at West Point remain unchanged. They were verified by my experience in our Indian Wars, and also during the campaign against the Spaniards in Cuba. I applied them in the Philippines and observed their application in Manchuria during the Russo-Japanese War."

These immutable principles of the military art were learned by General Pershing at West Point with Upton's Tactics, an old-fashioned breech block rifle, a muzzle-loading artillery. How much of our time with the R. O. T. C. is devoted to teaching immutable principles and how much of it is devoted to teaching the technique of military weapons that will be obsolete before the next war?

R. O. T. C. institutions may be assembled into the following groups:

Group I: Essentially military schools originally modeled after West Point and graduating boys of college age. Entirely independent of the federal government for the support of military instruction. Examples: Norwich University, Pennsylvania Military College, Virginia Military Institute, The Citadel.

Group II: Same as Group I, but for younger boys. Examples: Shattuck, Manlius, Culver.

Group III: Essentially military schools, but with agricultural or mechanical arts as a primary objective. Dependent upon federal aid for the support of military training. Examples: Virginia, Texas and Clemson Agricultural and Mechanical colleges.

Group IV: Semi-military colleges which give a course of military training compulsory for all freshmen and sophomores, but optional for juniors and seniors. Some of these are Land Grant Colleges, such as Kansas State Agricultural College; and some are not, such as Coe College, at Cedar Rapids, Iowa.

Group V: Essentially civilian colleges at which a small number of students elect to take military training: Examples: Yale, Harvard.

Group VI: Medical colleges, high schools and other miscellaneous institutions not included in the first five groups are not considered in this discussion.

Group I Institutions.

Norwich University, Pennsylvania Military College, Virginia Military Institute, The Citadel, as indicated above. These institutions came into existence long before the National Defense Act. They were created by the states to provide officers for their own defense—just as Congress at the suggestion of Washington created West Point to provide officers for the defense of the nation. They were developed without federal aid.

They were modeled after West Point—had their own courses of instruction, their own traditions, their own methods—and have been impeded rather than advanced by the superimposition of R. O. T. C. units. The Citadel (the one with which I am most familiar) was created in 1843. The state law provided that the Battalion of Cadets should be organized as infantry, but that since it was to be a school of instruction the functions of the other arms should be taught also. Its graduates were eligible for appointment to any office in the state forces below the grade of colonel.

This is the way the Corps of Cadets was organized at West Point, and still is. But not satisfied with this, in the case of the Citadel the federal government has superimposed upon this four-company infantry battalion a three-company coast artillery formation and has changed the course of instruction from one suitable for cadets (young officers) to one suitable for enlisted men. Thus the institution now looks like the print from a kodak film that has had two exposures. Formerly the textbooks on artillery were the same as at West Point. Now Citadel cadets study the manual for second-class gunners—a wholly unnecessary grade in the Regular Army, created for the sole purpose of giving men two dollars a month extra pay, which is more than it is worth.

These R. O. T. C. units should be withdrawn from these purely military schools Instead of having so-called unit instructors they should have the West Point organization, with Regular Army officers detailed as Commandant of Cadets, tactical officers, etc. Whatever federal assistance they receive—and they should get a plenty—should be in a lump sum and, within reasonable limitations, expendable as the institutions think best. They should be allowed to develop and to manage their own curriculum. We should judge them by results and not hamper them with infinite details that impede their progress. Stonewall Jackson and George C. Marshall will vouch for the V. M. I. Other great soldiers will vouch for the efficiency of the other institutions as they were operated before the days of federal aid contingent upon interference. Graduates should be commissioned as captains in the Emergency Officer's Corps.

Group II Institutions.

Shattuck, Manlius, Culver, etc. The same remarks apply to this group except that the graduates are younger and do not have the mental equipment of college graduates. They should be commissioned upon graduation as second lieutenants in the Emergency Officers Corps and advanced to first lieutenants when they become twenty-one years of age. If they subsequently graduate at college, they should then be commissioned as captains. In the Group II institutions the brightest of the boys will be considerably under twenty-one years of age upon graduation. But that should not prevent their being made lieutenants. Napoleon was a lieutenant at sixteen. Generals Drum and DeWitt were commissioned in the Regular Army before they were nineteen, and a number of officers in the Confederate Army were generals at twenty-one.

Group III Institutions.

Virginia, Texas and Clemson Agricultural and Mechanical colleges. Their military courses approximate very closely to those of Group I, but since these are Land Grant Colleges and have an objective other than military they should be given more federal supervision than those of Groups I and II. But even the Group III schools should be allowed great latitude. The graduates should be commissioned as captains the same as for Group I.

Group IV Institutions.

Under the Morrill Act, passed in 1862, Land Grant Colleges such as the Kansas State Agricultural College are required to give military instruction; and a number of others, like Coe College, have adopted the same system, in consideration of which they receive federal aid. It is to this group and to the following group that the principal discussion of this paper is directed, because most of the energy and funds expended by the government is directed towards these colleges.

The course of instruction in the Group IV colleges is divided into Basic and Advanced. The Basic is compulsory and the Advanced is optional. Instruction is provided for by the establishment of so-called R. O. T. C. units peculiar to the several arms: such as an infantry unit, a coast artillery unit, etc. The freshmen and sophomores are taught the duties of private soldiers in these several arms and receive certificates of qualification as noncommissioned officers. The juniors and seniors are trained as officers and upon graduation are commissioned in the Reserve Corps. But only twenty per cent of the Basic students pass up to the Advanced Course, so that eighty per cent of all this effort is wasted. And thirty thousand young college graduates, with two years' military instruction under federal supervision and at government expense, pass out of these schools every year with no obligation to serve the country in case of emergency. The two hundred hours of military instruction received by them is equivalent to a two-year enlistment in the National Guard. What folly to waste such opportunity and such material!

The time available is not devoted to teaching the simple fundamental principles of the military profession. It is padded out with the National Defense Act. Customs of the Service, and the little non-essential details that make up the routine of a soldier's three-year enlistment. We should recognize these young college men as cadets and should go directly to the point of qualifying them as officers of an emergency army. So-called R. O. T. C. units should be abolished and there should be one fundamental basic course for all Group IV institutions. This course should comprise the fundamental principles common to all arms. It should be contained in a textbook prepared by a competent author under the auspices of the War Department. The present course of instruction is indicated by eleven hundred forty-six separate references to various official publications—a sentence here, a paragraph there, and a page somewhere else. Out of this tangled mass of

Army red tape civilian publishers, ahead of the Army in recognizing the necessities of the case, have collected these scraps of paper, and pasted them together in the form of R. O. T. C. manuals which they sell to students.

In selecting a course of instruction for the R. O. T. C. we must use the time to the best advantage and from the many subjects of military value should take those that are interesting, dignified and of definite value to the student in his civil vocation. We must remember that these students are preparing themselves for the keen competition of civil life. That is their main objective. The Army is a side line. They have got to make a living, support a family and reap the joy of success. The best men have no time to waste and will demand value received for every hour they spend at college. You can hear a successful business man or a lawyer or a doctor say that the military bearing, the orderly habits and the respect for authority that he learned at military school had served him well in after life. But you cannot hear him say the same thing about the nomenclature of the Mortar Deflection Board.*

We must also bear in mind that we are dealing with college boys and not with enlisted men. Youth attaches great importance to matters of little import to maturer minds. The Honorary Colonel, the Company Sponsors, express the spirit of the R.O.T.C. They extend a wholesome influence and those in authority should take the greatest possible advantage of the inspiration behind this idea. R. O. T. C. students are young officers in the making—the War Department notwithstanding. They are cadets. They should be treated like cadets, and dressed like cadets. Their organizations should be called Cadet Corps. The names of the institutions should be attached—thus: "The Kansas State Cadet Corps." Their officers should be called Cadet Captain, Cadet Colonel, etc.

The criticism of this paper is directed principally toward the Basic Courses, designed to qualify the students to serve as enlisted men. The Advanced Courses might be retained somewhat along present lines, with such modifications as naturally follow from the changes made in the Basic and substituting Essentials, of course, for Non-essentials.

Upon graduation from a college of the Group IV class, each student should be commissioned as an officer in the Emergency Officers Corps, the Basics as second lieutenants and those who have completed the Advanced Course as first lieutenants or captains, according to their aptitude and accomplishments.

Group V Institutions.

These should be handled along the same lines as those of Group IV, with such modifications as obviously follow on the fact that all students do not take the course of military training.

Distribution of Graduates.

Commissions should be prepared in advance and handed out with diplomas on graduation day. As indicated above they should run for five years, without any obligation for training or service except in case of war. This would give us a stock of two hundred thousand company officers with a twenty per cent turnover each year—new blood—and distributed as follows:

Captains:		
Graduates, military colleges	6,500	
Selected graduates from military schools and from Advanced Course Land Grant Colleges*	8,500	15,000
First Lieutenants:		
Selected graduates, military schools	3,000	
Graduates, Basic Course, Land Grant Colleges	25,000	28,000
Second Lieutenants:		
Graduates, military schools	5,000	
Graduates, Basic Course, Land Grant Colleges	152,000	157,000
GRAND TOTAL		200,000

*In this tabulation the term Land Grant Colleges includes Group V institutions.

XII

Thirty years ago the Adjutant General—afterwards Premier—of Australia visited America in a world-wide search for a military system adapted to the genius of his people. It was he who first suggested to me that America had the best military school in the world and more military schools than all the rest of the world together, but that outside of West Point none of the American military schools were incorporated in our military system.

I think we can say that this great R. O. T. C. system, peculiarly American, peculiarly adapted to the genius of our people and to the youth of our land, is not fully developed—not half developed—and that we Regular Army soldiers, on the whole, do not understand these boys nor sympathize with their problems.

*The inventor takes occasion to apologize to the R.O.T.C for the twenty-eight technical names attached to the various parts of this device, none of which he knows himself.—J. H.

Maneuvers of 1st Cavalry Division

By Major Cuyler L. Clark, 82d Field Artillery

THE field maneuvers of the 1st Cavalry Division in May, 1931, were planned to afford training of all participating units in operations in mountainous terrain and in country lacking in an adequate road net and limited in water supply.

The day preceding the first movement of troops, all visiting officers and officers and noncommissioned officers of the garrison were assembled by the Division Commander, and the objects of the maneuvers were explained.

The fact that the maneuvers were to be held to teach sound military lessons rather than to prove the superiority of one force over another was stressed. In those cases when local encounters might occur with no umpire present, both sides were enjoined to decide, by a conference of commanders, the probable outcome; in case of disagreement, to call an umpire from another locality.

Attention was called to the importance of the experiment to be conducted with the radio-telephone in order that all might observe and derive the greatest benefits from this innovation.

The following troops participated:

Brown.

Headquarters, 1st Cavalry Division
Division Special Troops
2d Cavalry Brigade, consisting of:
Headquarters and Headquarters Troop, 2d Cavalry Brigade.
1st Cavalry
8th Cavalry
1st Battalion, 82d Field Artillery (less Battery A)
Troop A, 1st Armored Car Squadron (less 2d Platoon)
Troop B, 8th Engineers (Squadron) (less 2d Platoon)
1st Medical Squadron (less detachments)
1st Cavalry Division Quartermaster Train (less 1st Pack Train and detachments)
Two airplanes with necessary personnel.

White.

7th Cavalry
Battery A, 82d Field Artillery
2d Platoon, Troop B, 8th Engineers (Squadron) (less one section)
2d Platoon, Troop A, 1st Armored Car Squadron
1st Pack Train and detachments, 1st Cavalry Division Quartermaster Train
Detachment, 1st Medical Squadron
Two airplanes with necessary personnel.

As the Cavalry Service probably will be more interested in the tactical and logistical lessons to be drawn from maneuvers than in a detailed account of the movements which took place day by day, only a brief outline will be given of the situations which brought the troops into contact.

The general situation represented war as being imminent between Texas (Brown) and New Mexico (White) with the Brown main forces concentrating at Sierra Blanca, Texas, covered by the Brown Cavalry force at Fort Bliss, and the White main forces concentrating at Alamogordo, New Mexico, covered by the White cavalry force at Alvarado (Map No. 1.).

The Brown message that announced the declaration of war reported the White force at 2:00 P.M., May 22d, 1931, to be guarding the border from the vicinity of Alvarado, N. M., and to be composed of a Cavalry regiment reinforced by Artillery, Armored Cars and Airplanes. The Brown force was given the mission of defeating the hostile Cavalry force in its front, of securing Orogrande and of preparing to delay the advance of the main White force from Alamogordo until the arrival of the Brown corps from Sierra Blanca.

The White message which announced the declaration of war reported that the Brown force at Fort Bliss was composed of a Cavalry division, less one brigade, and that it was planning to invade White territory at once. The White force was given the mission of delaying any advance of the enemy on Orogrande and of holding him south of Jarilla Mountains until the arrival of Infantry reinforcements due at 4:00 P.M. the following afternoon.

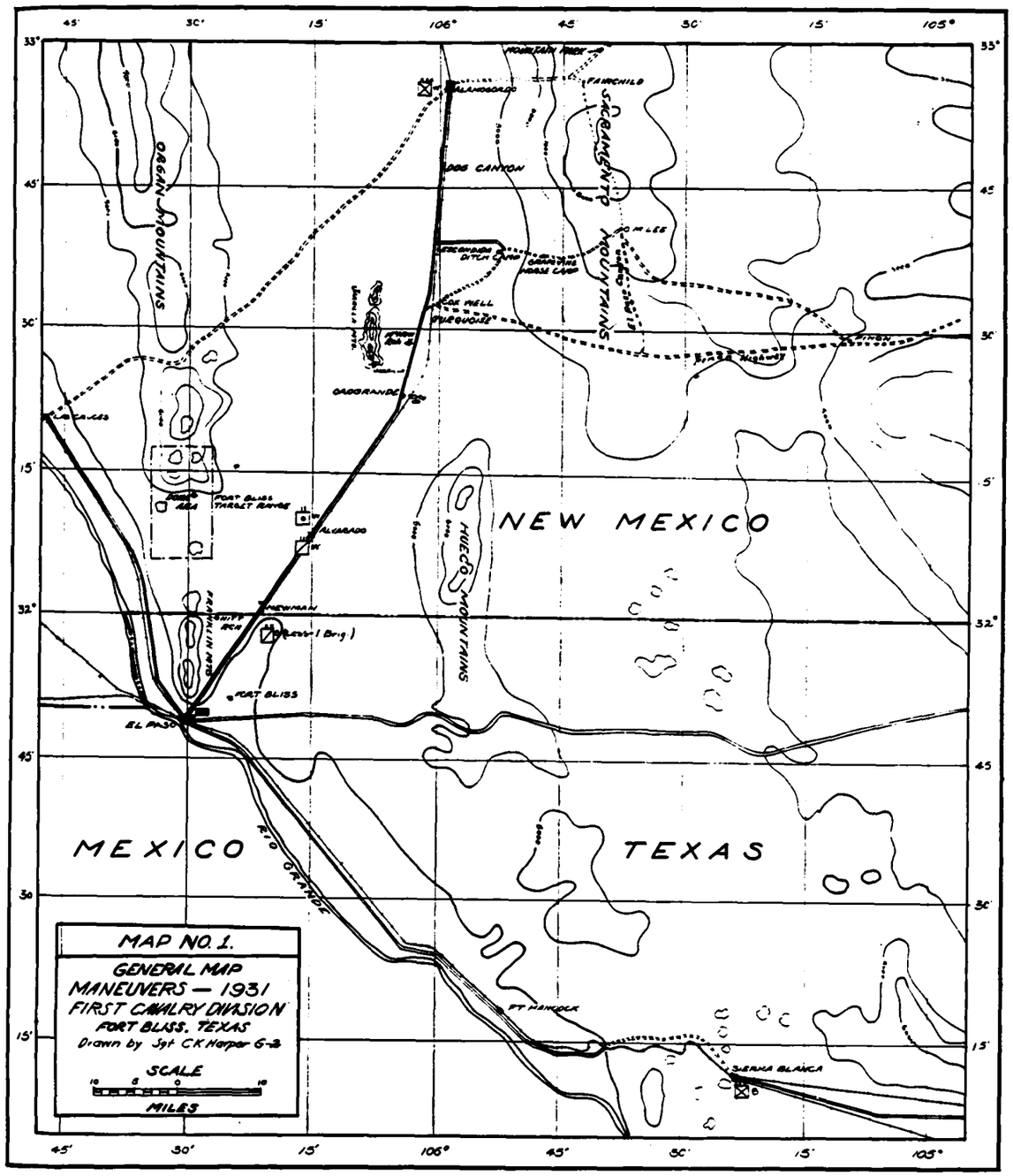
The first missions called for the rapid advance to seize Orogrande by the Browns and delaying action by the Whites to hold that point until relieved by other troops. The depth of advance was influenced by the necessity of reaching Orogrande, which was the first point north of Fort Bliss that was provided with natural water supply. Water as far north as the border was obtainable from tank cars but not after passing that point until time had elapsed for the repair of that part of the railroad in hostile territory.

The terrain between Newman and Orogrande was very open, and the only outstanding defensive or delaying position was that at Orogrande. The terrain was suitable, however, for delaying action by a small force, as sand dunes and patches of mesquite afforded enough cover for this purpose.

Upon the declaration of war the Brown commander ordered aerial reconnaissance and directed a squadron which was already on outpost south of Newman to seize that town at dark and hold it until the arrival of the main force.

The main Brown force marched in two columns at dark on Newman, where it was halted to feed and water the animals and to give the troops a hot meal.

It began its advance from Newman at about 4:00 A.M., using a formation designed to overrun quickly hostile resistance. The formation employed one squadron as the advance guard, one squadron paralleling the main body on the right of the axis of movement, one squadron on the left, and the remainder of the force following the advance guard. About 5:30 A.M. the Brown air service reported that the enemy had evacuated Alvarado and that the main White force was going into position just south of Orogrande. Subsequent reconnaissance revealed the fact that the White commander had detached one troop, reinforced by



machine guns, to delay the advance of the Browns. This troop during the day occupied only one position which was strong enough to require the Brown force commander to employ his artillery, but by the constant use of machine guns in successive delaying positions it caused almost continuous delay in the advance of the Brown force. The distance from Newman to the objective for the day, Orogrande, being 34 miles, it was necessary for the Brown force to maintain an average rate of march of three miles per hour in order to reach the final position south of Orogrande in time to capture it before nightfall.

During the march to the border the armored cars were moved to Hitt's Ranch to cover the Brown left flank and to be prepared to advance promptly around the west flank of the Whites as soon as the border was crossed. The mission given the armored cars when the attack order was issued was as follows:

> "To go to Orogrande via Dona Ana and thence south from Orogrande by the Orogrande-Newman road until contact was gained with the main White forces and to report enemy movements, the size of a troop or larger, seen along or from your route of march."

In accordance with these instructions the Brown armored cars proceeded by the route designated and reached the rear of the White position at Orogrande at about 10:30 A.M. It reported the White dispositions by detaching one car to carry the message back to the Brown commander.

While in rear of the White position, the armored car platoon discovered the radio station and limbers of the White artillery which was in position southeast

Individual Mount Radio Receiving Sets.

of Orogrande. It attacked and would have caused great damage in these installations. The personnel of the platoon, however, were so intent upon their attack that they failed to note the guns of the battery which were concealed in the mesquite near by. As a result, the platoon became engaged at close range in a fire fight with the battery and, by umpire's decision, was ruled out of action for four hours.

The Brown force commander began reconnoitering for the attack on the White position at Orogrande at 1:10 P.M.; the attack order was issued at 2:00 P.M.; and the marching columns were assembled preparatory to attack by 3:00 P.M. At this time the White force withdrew to Cox Well, and the Brown force went into camp for the night.

One of the interesting features of the advance was the control of the flanking squadrons by radio telephone, while moving. The installations which enabled this communication to be maintained consisted of a truck transmitting set which followed the commander's car and telephone receiving sets attached to the saddle pockets of mounted signal men who accompanied the squadron commanders. The Brigade commander's car was equipped with a radio telephone set which enabled him also to maintain constant communicatiton with the Brown airplanes. This use of radio telephone and the moving motorized command post aroused widespread interest among the observers.

Upon the termination of the troop movements Saturday, all military operations were suspended to allow all troops to rest over Sunday. During this time the Brown force remained in camp at Orogrande and the White force at Cox Well.

At midnight Sunday the progress of the maneuvers was resumed in accordance with missions received at that time. The Brown and White messages represented the White Infantry brigade, in bivouac at Dog's Canyon Station ten miles south of Alamogordo, as taking over the mission previously assigned to the White Cavalry force; and a Brown regiment of Corps Cavalry as taking over the mission previously assigned to the Brown Cavalry. The maneuver troops were thus released to operate in the Sacramento Mountains, which are located about thirty miles northeast of Orogrande.

The new mission given the Browns required them to defeat the enemy now at Cox Well without delay and then to proceed via O. M. Lee-Fairchild-Mountain Park to harass the enemy concentration at Alamogordo; the new White mission required the Whites to move to the Sacramento Mountains and cover the left flank of the Corps by delaying any attempt to turn the White left flank via O. M. Lee-Fairchild-Mountain Park.

The terrain over which the troops now fought can best be visualized by referring to Map 2 and the attached photograph, Plate A. The elevation of the flats at the base of the mountains is about 4600 feet. The bluffs seen in the photograph rise abruptly about 2000 feet to the mesa. The mesa is in general bare or covered with small scrubs until an elevation of about 7000 feet is attained. At this point the tree line is reached, and the character of the country changes completely. The tree line marks the boundary of the Lincoln National Forest and the Oliver Lee Game Preserve, which are heavily wooded and well watered areas between 7000 and 10,000 feet in elevation.

The photograph shows a general view of the Sacramento Mountains as they appear from the vicinity of Cox Well, the location of the White force at the beginning of the phase. The only practicable routes through the mountains for the withdrawal of the White

Plate A. A Distant Airplane View of the Sacramento Mountains.

force run northwest up the valley of the Sacramento River from Lee's Ranch. To reach Lee's Ranch from Cox Well, there are two roads which are suitable for wheeled transportation. The first goes northeast through the flats to Ditch Camp and thence up Grapevine Canyon; the second by a longer but less difficult route via the Pinon Road and El Paso Canyon. This route goes east through the gap south of the Sacramento Mountains and then turns north into the mountains.

Based on the mission assigned, the White force began withdrawal from Cox Well at 12:00 midnight and moved on the Sacramento Mountains. The Brown force immediately sent out its armored car platoon to gain and maintain contact with the White force and to report the direction of withdrawal. As this platoon was prevented from moving around the south flank of the White force by the presence of armored cars west of Cox Well, it withdrew and proceeded via Escondida around the north flank. It encountered a squadron of the White force entering Grapevine Canyon just before daylight. Unfortunately for the Brown commander, the platoon was discovered and driven off by one-pounder fire before accurate information as to the composition of the White force could be obtained.

About 5:00 A.M. the main Brown force marched in one column with one squadron in advance guard to regain contact with the Whites. By 8:15 A.M., the following dispositions were reported by the Brown Air Service. (Map No. 2).

One troop with machine guns covering the mouth of Grapevine Canyon.
One troop in Culp's Canyon.
One troop with machine guns at western edge of the mesa on the Pinon Road.
One troop moving north from Rutherford Tap Tank towards O. M. Lee.

The actual dispositions of the White force at this time were:

One squadron covering Grapevine Canyon.
One troop in Culp's Canyon.
One squadron (less one troop) at western edge of mesa on Pinon Road.
Headquarters Troop and one battery of artillery in the vicinity of Rutherford Tap Tank.

The White artillery battery had not been located, although especial efforts were made by the Brown air service to find it. It remained concealed during the day by the simple device of placing guns irregularly in position and by scattering the horses in small groups so as to appear the same as the dispersed cavalry troops in the vicinity.

Two plans of advance were considered by the Brown force commander:

1. Advancing immediately on the western exit of Grapevine Canyon with a view to seizing the commanding ground in that vicinity, preliminary to further operations.

2. Occupying a centrally located assembly position until nightfall and then moving under cover of darkness to the attack. The location of water was one of the determining factors in the consideration of these plans. Water was found in this situation only at the following widely separated points that could be reached in one march:

Cox Well
Water Point No. 1
Ditch Camp
Grapevine Horse Camp
Culp's Tank

The last two positions were in the hands of the Whites.

The Brown commander decided to employ the plan which called for the capture of the western exit of Grapevine Canyon. The command was watered at Water Point No. 1, and, about 1:00 P.M., while at this point, orders for the further advance were issued. One regiment was ordered to make a feint against the mouth of the canyon while the other moved across country in deployed formation by the most direct route so as to strike a point about two miles above the mouth of the canyon. The regiment which was to make the assault encountered rough country in its advance, but it was in position to attack the ridge protecting the canyon by about 5:00 P.M. It was opposed at this point by one troop, reinforced by machine guns. At this time an umpires' decision was rendered giving the probable outcome of the attack. The decision permitted the Brown force to occupy the western exit of the canyon. The White force withdrew to a position about two miles east of Grapevine Horse Camp.

The mountain fighting which occupied the next two days was the most interesting part of the maneuvers. The rough country over which the troops were engaged slowed down their speed and made them think more about the importance of terrain features. The real thrills, of course, came to the members of numerous small detachments of the command who for the first time were required to act on their own initiative in strange country.

To explain the Brown plan of attack, it is necessary to describe first the routes of advance into the mountains:

Grapevine Canyon: From Ditch Camp to Lee's Ranch via Grapevine Canyon is a distance of about 12 miles. This, the most direct route, was thought to be too strong to be forced by direct operations.

The Cow Trail: The airplane photograph marked Plate B shows, in the upper left hand corner, this trail ascending the long hogback. The Grapevine Canyon road may be seen in the center and foreground of the photograph. After reaching the mesa, the Cow Trail continues with increasing elevation to Shelton's Lower Ranch and Shelton's Home Ranch. From these two points trails are found which cross over the ridge into the valley of the Sacramento.

Culp's Canyon: This route proceeds through a comparatively open ravine as far east as the Point 20, where the wall of the mesa rises abruptly. Lee's Ranch may be reached from this point by a trail going eastward into El Paso Canyon and then turning north. The distance from Ditch Camp to Lee's Ranch over the last route mentioned is about 25 miles.

The plan for the attack was as follows: One regiment, with one pack train attached, to march early May 26th via Culp's Canyon and Rim Tank and by noon May 27th to attack towards the north and drive the enemy force now at O. M. Lee towards Bishop.

One squadron with one pack train attached to move early May 26th via the Cow Trail just north of Grapevine Canyon, Shelton's Lower Ranch and Bishop to take up position astride the Bishop—Lee's Ranch Road at Bishop by 11:00 A.M., May 27th, and attack towards O. M. Lee; on the morning of the 27th, this squadron to detach a rifle platoon and a light machine gun platoon to march to the junction of the Shelton and Grapevine Road (Point 24) to assist the remainder of its regiment by attacking down Grapevine Canyon. One regiment less one squadron to make a demonstration up Grapevine Canyon and to continue to press up Grapevine Canyon until the canyon was cleared. The artillery battalion, less one battery, to cover the advance of the squadron moving up Grapevine Canyon from position in the vicinity of Ditch Camp and to be prepared for prompt forward displacement.

A special sketch covering the operations was prepared to facilitate communication and to assist in keeping all personnel oriented as to the progress of the advance. All important tactical points in the vicinity of the routes of advance were given code numbers and each unit down to include the troop was given a new code designation. It was planned to maintain communication with the columns entirely by radio and wireless telephone. The airplanes acting as observers for the commander were ordered to keep him informed of the progress of the advance, using the radio-telephone as a means of communication.

During the afternoon and night of the 26th the Whites shifted their forces to meet the attack of the Browns as follows:

One troop of the north squadron was sent up the trail running north from Point 24 to cover the north flank of this squadron. This troop established an outpost line with one platoon at Shelton's lower ranch and one platoon on the trail east of McFadden's Ranch.

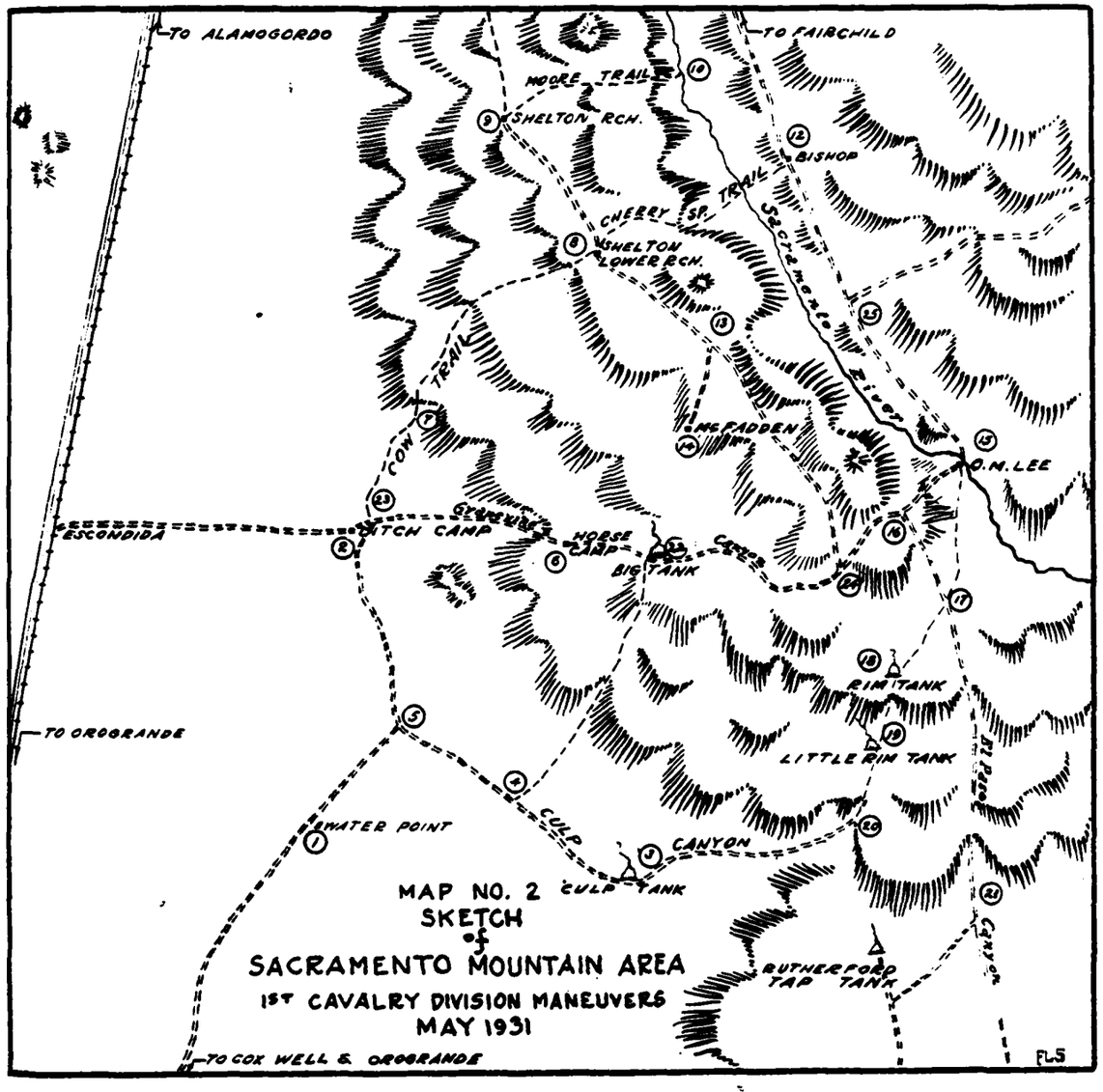
One platoon of the machine gun troop was attached to the north squadron, and the troop less one platoon was placed in El Paso Canyon to protect the south flank.

One troop remained in Culp's Canyon, and a squadron, less one troop, in Grapevine Canyon with the mission of delaying the advance of the Browns.

The remainder of the White force, consisting of Headquarters troop and one troop of cavalry and the battery of artillery, was placed in reserve at O. M. Lee.

The advance of the south column was opposed by the White troop near Culp's Tank. This troop occupied successive delaying positions. By night fall the column succeeded in advancing to the vicinity of Point 20. During the latter part of the advance, the White troop was driven to a flank, and its radio set which had remained in position was captured. The center column succeeded in advancing about three miles up Grapevine Canyon during the course of the day. During the night one platoon of artillery was displaced forward to support the advance of this column. It was previously considered inexpedient by the Brown brigade commander to attempt to use the 75-mm. guns in the mountains, but when given an opportunity this weapon soon demonstrated its usefulness. By 7:30 A.M. the platoon had succeeded in neutralizing a White machine gun position in Grapevine Canyon that the squadron had been unable, up to that time, to capture.

The north column encountered the White platoon on outpost at Shelton's Lower Ranch at about 3:00 P.M. This platoon was not expecting the Browns to approach from the direction they came and as a result was surprised, and a large part of the platoon was captured. The action terminated about 5:00 P.M. The



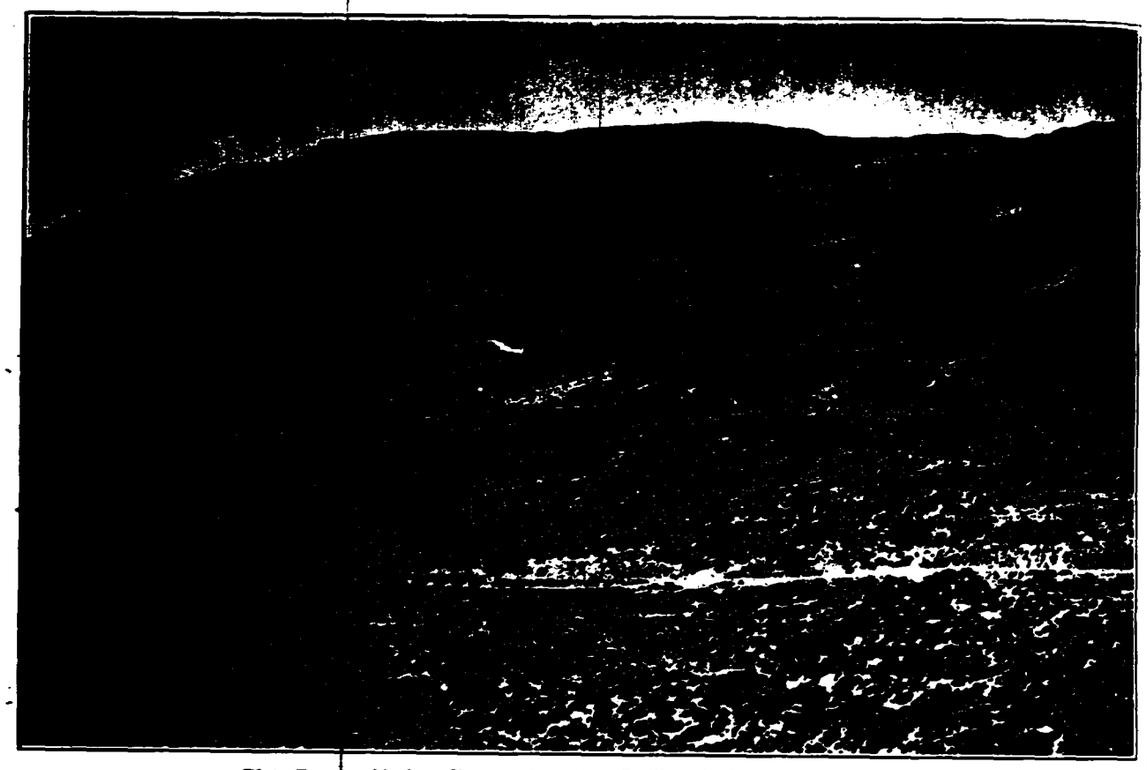


Plate B. An Airplane View of the "Cow Trail" and of Grapevine Canyon.

Brown squadron then marched north to Shelton's Home Ranch to obtain water for the animals.

During the night the White force prepared to retire northward and sent the troop which had been in regimental reserve northward beyond R. J. 25 to cover the withdrawal. The White plan contemplated turning eastward at R. J. 25 to avoid contact with the Brown squadron at Shelton's Home Ranch. The troop placed one squad with machine guns on the trail which runs east from Shelton's Lower Ranch and one squad with machine guns on the trail running northeast from Shelton's Home Ranch.

The trails referred to were so limited by the mountainous character of the terrain that flanking movements from them were considered impossible. This fact accounts for the small forces assigned to the mission of blocking the trails. The remainder of the troop occupied a position astride the Sacramento Road north of R. J. 25. The rest of the White forces were ordered to fall back on Lee's Ranch preparatory to withdrawal. It was not feasible to order withdrawal until the scattered detachments of the force could be assembled. During the night, May 26th-27th, the Brown forces closed in on Lee's Ranch and prepared for the final attack.

At 8:00 A.M. the White order for the withdrawal was issued, but before the withdrawal could be executed the Brown assault fell on the White positions from the west and south. This was followed about 10:00 A.M. by a wide envelopment by a squadron of the south column which crossed over the ridge into the Sacramento Valley and attacked Lee's Ranch from the east.

In the meantime the north column had succeeded in crossing over into the Sacramento Valley near Bishop. Upon reaching this point it occupied a position astride the road and sent out patrols to locate the main White force. Before contact was gained with the White troop which was covering the route of withdrawal selected by the White commander, a change of mission caused the withdrawal of both forces. As a result of the enveloping attack of the Browns on Lee's Ranch, the White commander had been forced to modify his plan for the withdrawal of the entire command and to retire at once with such troops as were not directly engaged. This retirement was being carried out when the next change in the Brown mission was received.

Throughout the maneuvers particular attention was given to the procedure to assure control at all times. It is believed that some improvement over the regulations governing past maneuvers resulted. Umpires were instructed to act between the opposing forces rather than with one side or the other. Taking a position at the limit of effective fire from the defenders' position, the umpire kept each side informed as to the probable effects of the fire of the opposing side. His position enabled him to prevent promptly the attacking force from disregarding the effects of the fire of the defender.

One of the most important lessons of the maneuvers is believed to relate to signal communications. As previously explained, the Brown force had a special radio-telephone net superimposed over the usual radio net, which continued to operate handling principally administrative messages. As a result of this special organization and experimental equipment, the Brown brigade commander was able to direct from his command post the movement of his command into the mountains, in three columns over a broad front. In the operations which ensued the command penetrated the mountains for a depth of twenty-five miles, established two overnight camps, reassembled, and withdrew over one road to the Ditch Camp. All of these movements were executed without confusion, as directed from the command post at Ditch Camp. The White force, on the other hand, was equipped with only the three radio sets ordinarily assigned a cavalry regiment plus one additional truck set assigned for umpire control. None of the special radio-telephone equipment supplied the Brown force to enable them to carry out experimental work, was available. No special coded map was used, and no special training outside that ordinarily given in the regiment was pursued in preparation for the maneuvers. Communication within the regiment was normal. The need for communication facilities, however, was exceptional,—as great, or greater, than that required by the attacking force, whose plans were less dependent upon information of the enemy than were those of the defender. Even with the advantage of the possession of high ground on its side, the defenders in such a situation face a very difficult problem. The signal communication of such a force should be based not upon its tactical designation but upon the mission to be performed. Its communication facilities should be specially organized with its mission in view.

During that part of the maneuvers occurring in the mountains, frequent discussions were heard among the observers present as to the action that would have resulted from an attack on the position by an infantry force of equal strength to the cavalry force employed. Such discussions are by nature problematical, but the course the maneuvers took seemed to bring out one point clearly; that is, that a cavalry plan which makes use of its superior mobility to seek the rear of the defenders' position is apt, in mountainous country, to be very decisive in its effect. An infantry attack, due to its inability to seize the routes of withdrawal in rear, is less likely to bring about a complete evacuation of the hostile position.

The afternoon of the 27th and morning of the 28th were used to assemble the White and Brown forces, which were now combined to constitute the Brown force. By noon on the 28th, all units were located in the vicinity of Ditch Camp.

On May 28, 1931, messages were received which changed the mission of the Brown force. The White Infantry Brigade at Dog's Canyon Station reinforced by one squadron of cavalry was represented as advancing southward as an advance guard of the White Corps. Confronting this force was one regiment of cavalry which was soon attached to the Division, thus giving it a cavalry strength of three regiments, actual, and one regiment, assumed. The Brown force was then ordered by Corps to move to a position north of Orogrande and to occupy and defend a line extending east and west through McNew's Ranch until relieved by the 1st Infantry Division marching north from Newman.

The objects sought in this situation were the instruction of the supply and administrative services in their specialties and the added experience which those elements of the command which had been engaged entirely in offensive missions would receive in defensive tactics.

About 4:00 P.M. the unit commanders, who had been furnished automobile transportation at Ditch Camp, were assembled on the defensive position north of Orogrande for reconnaissance, and the orders for occupation of the position were issued. The troop movement, which began at dark, brought all units to their positions by 2:00 A.M.

The infantry flag attack began at 5:00 A.M. In order to insure this part of the maneuvers being conducted according to approved infantry tactics, two infantry officers who were with the division as observers were put in charge, and sufficient officers detailed as their assistants to assure control.

The flag attack was continued until all elements of the command were required to withdraw to a second position. This took until about noon, when the maneuvers ended.

An account of the maneuvers would not be complete without some reference to the problems of supply. During the first three days the line of communication was the hard surfaced road leading north from Fort Bliss to Orogrande. The railroad which paralleled the road was not used on account of shortage of funds to cover freight shipments. After reaching Orogrande the line of advance followed unimproved dirt roads through the flats to the mountains. As far north as Orogrande the Motor Transport Company was used in lieu of the railroad. The Company was composed of 23 3-ton Class "B" Trucks and 7 new 2-ton F. W. D. Trucks on pneumatic tires. Due to the small peace time strength of units and the fact that one regiment of the division was not present, it was possible for the Motor Transport Company to move in one load two days' supplies, including long forage.

Beyond Orogrande the use of motor transportation was restricted on account of the nature of the roads. Some use of the F. W. D. and light trucks, however, was made to carry perishable supplies and combat equipment in the initial movement to Ditch Camp. During the three days the troops were in the mountain area, all use of motor transportation was prohibited both in the mountains and in the flats adjacent to the mountains where the poor roads existing had already been cut up by troop movements. This restriction was

necessary to prevent damage to motor vehicles beyond the existing facilities for repair. During the time that the use of motor transportation was possible, supplies were moved to points within easy marching distance of the regimental field trains; in some cases, directly to the kitchens. When the use of motors was restricted, the loads were transferred to wagon and pack transportation.

The White force was given one of the four pack trains with which the division is equipped and sufficient motor and wagon transportation to handle its supplies

Left to right: Brigadier General Walter C. Short, Commanding 2nd Cavalry Brigade; Hon. Patrick J. Hurley, Secretary of War; Major General Ewing E. Booth, Commanding 1st Cavalry Division.

from bases established prior to maneuvers. All the remaining divisional transportation was assigned to the Brown force. The Brown Brigade administrative plan for the advance beyond Orogrande was in part as follows:—

a. Spring wagons loaded with 1/3 day's rations, grain and wood to follow the main body without distance.

b. Escort wagon elements of combat trains to march with the field trains.

c. Field trains loaded with 1 day's rations, grain and wood to follow the spring wagon column without delay.

d. Motor elements of field trains to follow the spring wagon columns. This plan was in effect until the orders for the attack in the mountains were issued. During the period of the attack the actual supply from the distributing points to troops was accomplished by pack transportation. Sufficient pack animals were attached to each regiment to carry its supplies for the duration of two days' action. No long forage was supplied in the mountains.

The supply of troops entirely by pack and horse-drawn transportation was found to call for much more careful planning than is necessary when motor transportation is used. In some cases, due to oversight by regimental supply personnel, troops found themselves lacking in one or another element of the ration, on account of loads having been improperly made up. In general, however, conditions which made necessary the use of animal transportation slowed up the rate of advance of the troops themselves, and this fact enabled the supplies to keep up.

The supply of ammunition was simulated by specifying 25 rounds of blank rifle ammunition as a day's fire and by making similar assumption regarding the ammunition of other weapons. The ammunition stocks were carried in the firing elements, combat trains and divisional trains. The real problem of ammunition supply was, of course, not represented because the actual use of the tonnage of ammunition that would be required was not feasible.

The most difficult G-4 problem in the maneuvers is believed to have been the supply of water. Along the entire line of advance, water was obtainable only from widely separated points. This condition brought out the fact that, in cavalry actions, commanders often must base their movements on the important consideration of water supply at the termination of the day's movements. Incidentally, the Engineer water filtration and purification unit which was attached to the Brown force proved to be of great practical value when water had to be obtained from open sources.

Cavalry and Mechanized Force

By Brigadier General Hamilton S. Hawkins, U. S. A.

RECENT announcements from the War Department concerning Mechanized Force and Cavalry have, it is believed, been misunderstood and misinterpreted by the press, and sensational headlines and statements have appeared informing the public that the horse is doomed in the military service and that it is the intention of the War Department to mechanize the entire Cavalry as soon as the necessary funds can be provided.

But Mechanized Force can never replace Cavalry on any terrain. It is undoubtedly a coming arm and must be developed. Not as a replacement but as an additional force.

Since the rôle and mobility of a Mechanized Force more nearly resembles that of Cavalry than that of any other arm, Cavalry officers are selected to command and lead it. It must be understood, however, that this is also because of the fact that Mechanized Force will accompany Cavalry frequently as a reenforcement, just as battalions of light Infantry have done under certain circumstances in the past, especially in Europe.

There is an idea prevailing among some officers that Mechanized Force is to be assigned Cavalry missions in what is termed ordinary country, and Cavalry kept for work in difficult country. This idea is very false and dangerous. The most important of the Cavalry missions must be performed by the Cavalry in any military compaign. Mechanized Force will be able in suitable terrain to take over a few of the smaller or less important missions; but, in any country whatever, whether suitable for Mechanized Force or not, the more important Cavalry rôles must be undertaken by Cavalry. That this Cavalry can be strengthened and assisted materially by a Mechanized Force in suitable terrain is undoubted. The combination and cooperation of the two is the true idea, and any departure from this principle will bring disappointing results.

Now, just what is meant by *ordinary* country or by *difficult* country is a little obscure. Cavalry has repeatedly shown its superior mobility in rough mountainous terrain or in swampy flats. Presumably this is difficult terrain for Mechanized Force. Cavalry has operated successfully in the Rocky Mountains of America and in the swamps of Virginia and the Philippines. The famous Candaba swamps of Luzon were successfully traversed by Cavalry during the Philippine Insurrection. But Cavalry is still more useful in country that is not so difficult. What is ordinary or suitable terrain? If we take the three states New York, New Jersey, and Pennsylvania, we find a rolling terrain interspersed with farms, meadows, patches of woods, creeks with steep banks and muddy bottoms, and some very rough hills. An excellent country for Cavalry operations. Many roads exist for the use of motor vehicles. A Mechanized Force could accompany Cavalry but could not alone take over any very large operation in support of the Infantry in battle, as the Cavalry can. There are too many thick woods and other obstacles to rapid movement of machines.

We have seen demonstrations of tanks knocking down trees and stone walls and proceeding at speed over level meadows. But it is absurd to think of tanks and passenger trucks, carrying machine gunners, romping through woods and swamps, creeks and villages at the speed that Cavalry can attain. It is one thing to knock down a tree. It is quite another thing to proceed at speed through or over the piling up logs and timbers.

The most important job of Cavalry is to fight in conjunction with and in support of Infantry. Not to precede the Infantry by a hundred miles. The superior mobility of Mechanized Force on roads is comparable to the superior mobility of Infantry over Cavalry when the Infantry is moved by railroad trains or by trucks and the Cavalry is moved by marching. This has been true for many years. When the Infantry arrives within contact distance of the enemy, it must detrain or detruck at a safe distance. In the field of maneuver it becomes, not motorized nor entrained Infantry, but good and real Infantry, depending upon its legs and its stamina for its maneuver or its advances across country. When a Mechanized Unit arrives it is simply a Mechanized Unit, very capable in some but not all situations, and not able to maneuver very far from its gas and oil supplies, which are brought up on roads. When the Cavalry arrives it is Cavalry, capable of rapid maneuver on any terrain, even though separated from its supplies of forage for several days at a time.

Railroad trains can be used to carry the Cavalry to the theater of maneuver. Why always consider that it must march? In a country without railroads we shall find few roads of any kind, and a Mechanized Force will move towards the theater of maneuver no faster than the Cavalry. A Mechanized Force that has succeeded in getting a very long distance ahead of the Infantry or Cavalry may find itself alone in very serious difficulty, especially if hostile Cavalry is active and cuts off its supply of gas and oil. A horse can go several days without food and can usually find some vegetation and water to support him for a week or two. But show us the motor vehicle that can move a foot without gas or a mile without oil. Tanks and tractors require an enormous amount of these supplies.

As armies approach each other the rate of their advance must slow down, however rapidly they have moved up to a certain distance from the enemy, and it will be found that Cavalry can, as of old, keep ahead

of the army during this period for such missions as are usually assigned Cavalry preliminary to the general engagement.

Whenever anyone is considering the replacement or substitution by Mechanized Force for Cavalry, he should examine very carefully into how our modern Cavalry is equipped and armed, how it moves and what is really meant by its mobility. The average person who has had but little experience with Cavalry—and this applies to some cavalrymen—pictures a Cavalry column marching on a road at five or six miles per hour, automobiles and trucks whizzing by and leaving the column as though standing still. Not very mobile as compared to machines! He might as well compare the speed of these machines or railroad trains to that of a column of marching Infantry, which is much slower than even the Cavalry. Yet every one, or almost every one, knows that we must have Infantry and that it cannot be replaced by Mechanized Force.

Neither the Infantry nor the Cavalry will march a hundred miles from Point "A" to Point "B" if it can be transported by rail or by truck. But when they arrive at Point "B," or within a few miles from there, if the enemy is there, they will detrain and detruck and their own special characteristics will be brought into play. A Mechanized Unit, however rapidly it has travelled, must halt at the same place and alter its formations to suit its own qualities.

Keeping in mind that it is not intended to disparage or discourage the development of Machanized Force but to deny it as a substitution for either Cavalry or Infantry, we should examine the qualities of these various forces.

As long as Infantry and Artillery exist, there must be Cavalry. In fact longer, because it is more mobile than either of these arms. But there must always be Infantry. Even if Mechanized Force could maneuver anywhere and everywhere that Infantry can, which of course is not so, we could never maintain in time of peace enough of these costly machines for time of war. We would have as many of them as our government would permit but, when war is declared, we are going to mobilize as many men as we can and try to have more of them than the enemy has. Those that do not go into the Mechanized Force and other special forces are going to be organized as Infantry, Cavalry and Artillery, and other branches. Therefore, there must always be Infantry. Of course, there are other reasons why Infantry cannot be replaced. Some of the fighting it does cannot be done as well by any other force.

Now, if the enemy has Infantry we must have not only Infantry but Cavalry as well. If there is Infantry in an opposing army our Cavalry follows as a corollary thereto. Otherwise we shall be at a disadvantage, especially if the enemy has a numerous Cavalry. Every thoughtful Infantry officer who has participated in a large maneuver without the support of Cavalry will confirm this statement.

What are these qualities of Cavalry that make it indispensable?

After it has arrived, by rail or steamship or truck, as referred to before, at a point a few miles from the enemy or a few miles in front of our own army, its qualities come into play. It now gets off the main roads and can move rapidly in any terrain.

The mobility that is claimed for Cavalry is mobility on the battlefield or in the nearby field of maneuver. In this zone the horse is the fastest means of maneuver and advance upon the enemy. On certain very suitable terrain, tanks may exceed this speed, but not in general. When supported by its own means of powerful fire and sometimes by the assisting fire of other troops, the mounted attacks by Cavalry in successive thin lines of mounted skirmishers have been proven in the last wars to be very formidable and less costly, when well timed, than prolonged fire fights on foot. In visualizing a mounted attack, most persons think of the Cavalry attacking in inferior numbers against a superior foe. Whereas, when thinking of an Infantry or dismounted Cavalry attack, they realize that superior numbers are necessary. Give this same superiority in numbers to the mounted attack, and we have a different picture.

It has been stated that, because of improvements in modern weapons, the horse can no longer be considered as a weapon. But the American Cavalry is many jumps ahead on that idea. For many years the horse as a weapon has had no part in the calculations of those who formulated the present Cavalry tactics. Although the weight and speed of the horse has still some shock effect, this has not been counted upon by those who formulated the present doctrine in the Cavalry concerning the mounted attack. The words SHOCK and CHARGE were carefully avoided in all instruction given at the Cavalry School and in all regulations prepared there during the four years following the World War. However, some thoughtless persons have reinserted these words in the regulations. The reasons for omitting these words were that, to most persons with superficial knowledge of Cavalry, they convey an impression similar to that conveyed by the famous picture of "The Charge of the Scots Greys at Waterloo" and other paintings of Cavalry charges. Solid ranks of men and horses massed together, and rank following rank with scarcely a few yards distance between them. This is the idea of Cavalry in action still prevalent among many persons.

But this idea was given up by our leaders in Cavalry thought many years before the War.

The term *Mounted Attack* was substituted so as to convey an entirely different picture. The true picture is a similar formation to that of the Infantry in modern attack. Irregular lines or waves of mounted skirmishers deployed with intervals of five or more yards between troopers. Wave succeeding wave, so as to produce the necessary numerical superiority when the enemy is reached. This is the same principle used by the Infantry, and it enables the attackers to hurl a sufficient number of men upon the enemy without subjecting them to losses that would be certain if large numbers were crowded into the front rank.

In this mounted attack the shock of the horses is not relied upon, although it will be present to an appreciable degree. Reliance is placed upon the weapons carried by the troopers, the principal one being the very effective automatic pistol, which can be fired to the front or right or left front with astonishing accuracy from the back of a horse. Reliance is also placed on a powerful supporting fire which the Cavalry has within its own means and which is increased if the Cavalry is supported by Artillery and by Infantry in that beautiful cooperation or team work that should exist between the branches of the service.

Here, also, the cooperation of a Mechanized Force with the Cavalry would come into play. This force might not only lend the support of its fire elements from a stationary position but, in addition, its mobile fire elements, such as the light tanks, might accompany the mounted attack in some form yet to be devised.

The term, *Mounted Attack*, further implies that it is not a ponderous mass relying upon the shock of its horses like a great avalanche or the charge of a herd of buffalo, but a swiftly moving, sinuous and evasive succession of individual warriors who possess automatic firearms and know how to use them at close quarters. It conveys the idea of an attack that may sweep through the enemy's lines or may terminate by the troopers leaping from their horses and engaging the enemy hand to hand. Losses are reduced by its loose formation like that of Infantry and by its speed in closing with the enemy. They are further reduced by whatever supporting fire can be given by Artillery or by other troops from a stationary position. This is not a purely visionary picture. It has been given the acid test and has come out a sound principle.

So, it is upon the Mounted Attack, not the Charge, or the Shock of horses, that we rely.

But the Cavalry has still another powerful alternative upon which to rely. It can attack or defend dismounted. The Cavalry has now more fire power per man than any other branch. Especially in the important task of delaying enemy forces, this powerful fire action and capacity for dismounted fighting will be most useful. Successive positions for such delaying actions at the head and on the flanks of an enemy column can be taken and abandoned with great rapidity because of the facility for moving across any country. And this facility will be more general than in the case of a Mechanized Unit acting alone.

Undoubtedly a Mechanized Unit could assist greatly in such tasks, sometimes acting even alone. But its radius of action across country will often be very limited.

Before anyone, be he soldier or civilian, is competent even to venture an opinion as to the substitution of armed machines for Cavalry, he should have a considerable experience with small units of Cavalry in training and in maneuver and, if not actual experience in war with these units, at least a thorough knowledge of the history of Cavalry. It is the small units that compose any larger force which determine the practical value of any arm of the service.

Such an experience and such a study will convince the most skeptical, if he keeps an open mind and is really in search of the truth, that Cavalry is more useful now than ever before in its history; provided, of course, that it is armed and organized and trained in accordance with our most recent ideas.

The tremendous fire power that has been developed through the agencies of Artillery, machine guns, light cannon, and bombs, both on the ground and from airplanes in the air, makes it possible to smother temporarily and for a very brief period the greater part of the fire of enemy forces in a fixed position. Supported by such a fire, the attackers, if moving very rapidly, can get across the intervening ground and close with their opponents before they have had time to recover fully from its effects. It is partly because of this that Cavalry can attack successfully over open ground that would be impossible to foot troops. In all theaters of the recent war this was proven whenever the mounted attack was properly organized and timed. There are literally dozens of such actions recorded and available to the student in historical research.

Thus, instead of ruling the Cavalry off the battlefield, the modern fire arms have helped to make it more useful than ever before. Attacks by foot troops, whether Infantry or dismounted Cavalry, must be confined to ground where it is possible to advance upon the enemy by skillful use of cover; because, when the supporting fire can no longer smother the enemy, the foot troops *if exposed* are subject to the same kind of powerful fire and are too slow to bridge over this period without destructive losses. They must, therefore, be able to arrive at the assaulting position without too much exposure. On flat, open ground this is impossible. It was for this precise reason that tanks came into play during the last war. They were able to go through barbed wire entanglements and other artificial obstructions and thus, when backed up by Infantry, became very useful for trench warfare attacks with very limited objectives. As soon, however, as the objectives become distant, the tanks must wait for supporting troops. On such a mission Cavalry does not have to wait for supporting troops. It can hold the ground it has won for several hours until Infantry can arrive; or, if it is delaying action that is required, it can hold till the delay is effected and it is able to make the necessary arrangements to get away. The more it becomes necessary to move across country rapidly to avoid losses, the more useful the horse becomes. If the Cavalry finds good cover for its advances, so much the better. But, if there be no cover, it is the only arm that has a chance to advance without destructive losses. Repeated experience has shown that the horse on the battlefield is not only possible and practicable but indispensable, not only in the ranks of the Cavalry but also as mounted messengers (often the best means of communication), in Horse Artillery, in machine gun units, and to mount commanders and staff officers when their automobiles can go no farther. The horse can still remain on the battlefield and will remain as long as men engage in open warfare.

The Air Forces may complete the distant reconnaissance. Only the close-in reconnaissance remains to be done by the Cavalry. It operates by day and by night. It trickles through woods and across creeks that would long delay a Mechanized Force, especially by night. It is the least vulnerable force to the attacks of hostile airplanes, because it can scatter quickly and continue to move while so scattered. A Mechanized Unit is one of the most vulnerable to air attacks. Machine-gunners or riflemen transported in trucks are especially good targets for the airmen. Tanks of gas and oil, so necessary to move a Mechanized Force, are easily riddled by machine gun bullets or hit by bombs dropped from the air. Antiaircraft defense will of course be present, but any success of the airman will be far more effective than as against the Cavalry which may lose a man or a horse or two but goes on. The Cavalry can get into places for observation impossible to machines.

After the reconnaissance and during the ensuing battle the Cavalry may be assigned to one of a number of rôles or missions. The most important of these are attacks on the enemy's flanks and rear at the right time to coordinate with the Infantry action, but not just at will; striking at the sensitive spot in the enemy's line at the critical moment, usually about the time reserves are put in to complete the victory; delaying actions against enemy reserves, so as to keep them out of action at the critical moment, usually to gain time to find and use our own reserves; pursuit of a routed enemy.

The enemy's Cavalry, perhaps reënforced by a Mechanized Force, will attempt to prevent our Cavalry from performing these missions and may have to be beaten first.

Probably the most important of all Cavalry missions is the delaying action against enemy reserves. By keeping the enemy reserves out of action for a period of time our own reserves may take advantage of the opportunity to clinch the victory. Now, in order to accomplish this mission our Cavalry must be able to move rapidly across country of any kind, to continue the movement in spite of attacks by the enemy air forces, to make mounted attacks on outlying security detachments so as to avoid delay, to protect itself from ambuscades or surprises by the enemy or from surprises as to the nature of the ground, and to do this while moving rapidly towards its objective. This protection is attained by using covering detachments moving ahead by rapid bounds. Finally, it must be able to make both mounted and dismounted attacks upon the enemy reserves. All this is possible in any kind of country. And when the country is suitable, Mechanized Force will be of great assistance.

But could Mechanized Force be depended upon to do this alone? It is very doubtful, very improbable. As pointed out above, Mechanized Force can be delayed by hostile Air Force, it can meet insurmountable obstacles in the nature of woods, creeks, rainy weather, rough mountains, etc. If not one, then perhaps another of these things. Reconnaissance in front of Mechanized Force is impossible by its own means, except by armored cars which can operate on roads or near them and which are easily ambuscaded and captured by the enemy if too bold.

Finally, when the Mechanized Force reaches its objective, the enemy reserves, it can make one attack and it is through. It may succeed for the moment but not for long without the support of Infantry or Cavalry.

One of the situations wherein Cavalry may be sent to delay enemy reserves, is when our Infantry has made a break-through and a wide gap is created. Cavalry may be sent through the gap for a considerable distance to meet the hostile reënforcements. On such missions the enemy, unless already routed, will attempt to surround and destroy the Cavalry. Vivid descriptions of such situations are found in the annals of war. To escape, after having performed its mission, is sometimes very difficult for such a Cavalry force. Bold cross country riding, both by day and by night, and sudden and surprising attacks to cut its way through become necessary. A Mechanized Force in such a situation will probably become helpless.

The trouble with persons who think too optimistically about Mechanized Force is that they fail to realize that it can be stopped at all. Whereas, it can be stopped by Artillery, or light cannon or heavy machine guns of large caliber. It may be neutralized by hostile Mechanized Force. It must have Cavalry or Infantry support. While the tanks, or combat cars as they are to be called, are not vulnerable to ordinary 30-caliber bullets, they are very vulnerable to the fire of light cannons and heavy machine guns. The soldiers who are organized as machine gunners or riflemen to support the light tanks and who are carried in trucks moving by wheel and track are very vulnerable to air attack until they detruck and deploy. The physical exhaustion incident to moving across country in either tanks or these adaptable trucks is very great and cannot be prolonged. When we see these machines in an open field going through evolutions at great speed and spurting forth red streams of fire from their machine guns, they look very formidable. But their fire is very inaccurate and after even a successful attack they must be supported by Cavalry and Infantry. The soldiers mentioned above, who as machine gunners or riflemen are travelling in adaptable trucks, are not sufficient. Besides, they cannot go in that way with the tanks across country on distant missions because of their vulnerability, because of the exhaustion.

Important missions of delay are best carried out by forcing the enemy to deploy the head of his column and then by harassing attacks on his flanks. But a Mechanized Force cannot execute these harassing attacks by bouncing against the enemy sides and bouncing back again like a rubber ball. Cavalry can. The machines are too vulnerable while standing still to fire at a halt, and when moving their fire is inaccurate. A Mechanized Unit is not flexible enough to execute such delaying actions. Perhaps a little delay at first and then they are finished.

Why is this? Because, when tanks make an attack, they move forward firing rapidly and moving rapidly. As they begin to reach the enemy position, they must be supported by Infantry or Cavalry, because if they halt they are too vulnerable to the fire of Artillery and light cannon and heavy caliber machine guns. They must keep moving. Now this supporting force, organized into the Mechanized Unit and carried in passenger trucks, must detruck to fight or to advance under fire. Their movement then becomes as slow as that of Infantry. They cannot keep up with the fast moving tanks, so the tanks must wait for them. But foot troops are unsuited to harassing attacks, because, once they become engaged, they have difficulty in getting away and must either defeat the enemy in their front or be repulsed with heavy loss while withdrawing. Cavalry is the arm suited for the harassing attacks which form a part of delaying actions as explained heretofore.

Cavalry acting with and supporting fast moving tanks can keep up with them in the attack and can retire with them if the enemy is too strong. Or, if the enemy's position is captured, Cavalry can hold the position dismounted while the tanks and led horses are removed to shelter from Artillery and other fire to which they are vulnerable. The dismounted Cavalry can hold the position as long as may be necessary to bring up Infantry, if that mission is the one assigned them in the general scheme. When this combination of Cavalry and tanks is out alone on delaying action, it is of course not expected to hold any gained position for long.

Of course both Infantry and Cavalry must be armed with light cannon and 50-caliber machine guns to oppose a hostile Mechanized Unit. And this can be and is being done.

Therefore, although it is true that a Mechanized Force, containing within its organization its own troops for the support needed by its tanks, can move on roads for, say, 50 miles or more, faster than Cavalry can march, it is also true that this force needs Cavalry with it after it arrives on the scene of action and when it commences its cross country work. That is to say, when it is assigned the usual Cavalry missions. One can conceive, however, of a number of missions that could be performed by the Mechanized Force alone. These should be studied and practically tabulated. It will be found that, when the most important Cavalry missions are necessary, the Mechanized Unit must wait for the Cavalry to arrive.

The true rôle of Mechanized Force is to support Cavalry. Here it may become very powerful.

As stated before in this article, Mechanized Force needs Cavalry or Infantry to support it. In the contemplated organization of a Mechanized Force, attempt will be made to provide its own support by some unit of machine gunners and perhaps a few riflemen being part of the organization. They will be carried along with the light tanks in trucks that will use wheels on roads and let down caterpillar tracks for cross country work. This will not be successful, except in specially suitable country, because such an organization, referred to elsewhere as soldiers carried in trucks, cannot keep up with the tanks across country for long distances. This is one reason why such an organization cannot operate very far from roads and why Cavalry must be brought up and made ready to cooperate with a Mechanized Unit when the mission is one heretofore assigned to Cavalry.

If we are going to experiment with Mechanized Force in maneuvers against older arms, then it is only logical to give to the Cavalry which may oppose such a force the organization and armament that it needs. It would hardly be conclusive to deny the Cavalry a chance to experiment with some new arms and equipment while giving all to the Mechanized Unit that is requisite. Let the Cavalry have all the light cannon and heavy machine guns of large caliber that it can handle without loss of its essential mobility; and the packs to carry them. And, when it meets a Mechanized Force of equal numbers of men, it will certainly take care of itself. Take any country or terrain, thought to be ordinary terrain and extensive enough for an illustration of the performance of the more important Cavalry missions, outlined above, and assign a Mechanized Force alone to these missions. The limitations of such a force will become very apparent.

The Cavalry should always be considered as a corps of special troops to be used by the commander-in-chief for special missions requiring troops possessing its characteristics. Like the Artillery it serves to support the Infantry, to relieve the Infantry and to save the Infantry in various situations. The Infantry is the great fighting arm and is subject to greater strain, greater exhaustion and greater losses than any other arm. Every means must be used to save it, and the Cavalry is one of those means. Mechanized Force is simply another of these means; but, if it proves useful as such, this does not indicate that it can replace Cavalry.

A very numerous Cavalry is especially necessary for the American Army for reasons that would take too much space to discuss in an article of this nature. A numerous Cavalry, well organized and equipped with the most modern arms and appliances and with motorized transport, can undertake operations at the beginning of any war that would start us off with great advantages. Even though war could be fought with the sole employment of tanks on the ground and airplanes in the air, as sensational writers would have us believe, it would take four or five years after the opening of hostilities to produce the number of these war engines which would be sufficient to enable us to use them exclusively. But we should wish to gain early successes and to finish the war quickly. This could not be done without a numerous Cavalry, armed, equipped and trained to fight either mounted or dismounted under the most modern conditions. The rôle of any Mechanized Force we should have should be to support this Cavalry.

Minor campaigns or small military operations that our country has engaged in could have been completed probably in one quarter of the time and with about

the same number of men, had a sufficient force of Cavalry been sent at once to the scene of action.

And yet our Cavalry, so necessary at the outset, is so reduced as to be almost ridiculous. At present we could not foregoe more than eight or ten squadrons at war strength and ready to move at once. Considering even the present reduced size of the army, we should have not less than 10,000 Cavalry, not including the overhead for schools, civilian components and other drains on effective units. This number should be multiplied in any mobilization plan.

Whatever may be the desirability of experimentation with Mechanized Force, our first need is more Cavalry, not less.

Those persons who are given to superficial observation and investigation and to superficial thought are always sliding off on tangents to a true course. With the development of fast moving machines have come attacks against the Cavalry arm by those who can see nothing but the machines. Such persons are led astray because of the absence of any intimate knowledge of Cavalry employment and its preparation for such employment.

First, some thirty years ago, it was to be men on bicycles who were to replace the Cavalry. The absurdity of this soon became apparent. But the controlling idea of those who propose to substitute machines for Cavalry horses has ever been to increase the speed of marching troops on roads, forgetting that the outstanding characteristic of Cavalry is not its speed in marching on roads but its speed and flexibility in cross country work in the field of maneuver and on the field of battle.

Then, the Air Force was to replace the Cavalry. The idea being that since the horse soldiers had been "the eyes and ears of an army" and since the airplane could take over this rôle, there was no more use for mounted troops. Again we see the failure to understand that reconnaissance, important as it is, has never been the most important rôle of the Cavalry. To strike at the sensitive spot in the enemy's forces at the critical moment and to keep his reserves out of action are and have been, since the time of Napoleon, the great rôles of this arm. Reconnaissance has been imposed always upon it, and now that the distant reconnaissance is largely taken over by the Air Force, the Cavalry is relieved of a great part, though not all, of this exhausting duty and can be better saved for its great rôles. These facts have become apparent gradually to all, after many foolish suggestions that Air Force should replace mounted troops.

And now we slide off on another tangent, and this time it is Mechanized Force which is to replace the Cavalry.

Always, these tendencies are manifest among professional writers, journalists, inventors, and others who publish their views to a public eager for sensational news. Unfortunately, even those officers of the Army who have only a superficial knowledge of Cavalry are led away from historical facts and straight thinking.

After all is said, there is more ignorance and less expert knowledge concerning Cavalry than in the case of any other arm of the service.

Some officers see in the Cavalry only a mounted Infantry using horses merely to increase its mobility to something like two or three times that of Infantry in route marches. Others see only an arm trained and held in readiness for an opportunity to charge in solid ranks and, perhaps, performing some reconnaissance in the meantime.

Neither of these conceptions is correct. But the Cavalry itself, especially European Cavalry, is somewhat responsible for these misconceptions. For a good many years before the great war, the true rôle of Cavalry had been forgotten. Therefore, little thought had been given as to how the Cavalry should be organized, armed and trained to perform this true rôle in the face of modern developments in other arms. The European Cavalry was trained to execute reconnaissance without taking into consideration that to do so successfully it had become necessary to fight Infantry as well as Cavalry, and that changes in both mounted and dismounted attacks were necessary. When the great war came, the Cavalry found itself poorly equipped to meet unforeseen conditions. Although it performed invaluable services, it did so under great and unnecessary disadvantages. And its true and great rôle was forgotten by almost all high commanders as well as in the Cavalry itself. Its dismounted fighting was performed with great gallantry, although poorly equipped and trained for such work. After a few costly attempts to charge in close order, mounted attacks were discarded. Of course, the war in trenches that was resorted to by both armies on the Western front was responsible for the failure to develop a correct mounted attack, until the latter part of the war when some progress along this line was made.

The British Cavalry in Palestine and also in Mesopotamia found itself at last and opened the eyes of its observers to the possibilities of Cavalry action under modern conditions. And General Allenby, in conducting a campaign which, had there been no war in France, would have attracted the most intense interest of the world, gave demonstration of the proper use of Cavalry and of the importance of having always available a relatively large force of this arm. During those campaigns the British Army in Palestine had four Cavalry divisions and from five to seven Infantry divisions.

Had the Germans possessed the true conception of the use of Cavalry, the German Army might have entered Paris in the early weeks of the war in 1914. Again, in 1918, when the Germans had nearly broken through between the British and the French Armies, a Cavalry corps, trained properly and used rightly in attacking the French and British reserves, might have prevented the stopping of the gap until German reserves of Infantry had been found and moved into the gap to exploit their victory and to bring about the great decision of the war in their favor.

Similar opportunities occurred on every front. But no, the paramount role of Cavalry had been overlooked in the military world for many years, and no genius

arose to the supreme command on either side to break away from the existing attitude towards it. And even had the high command on either side possessed the true conception, it would have found no Cavalry in Europe equipped and trained properly for its great tasks.

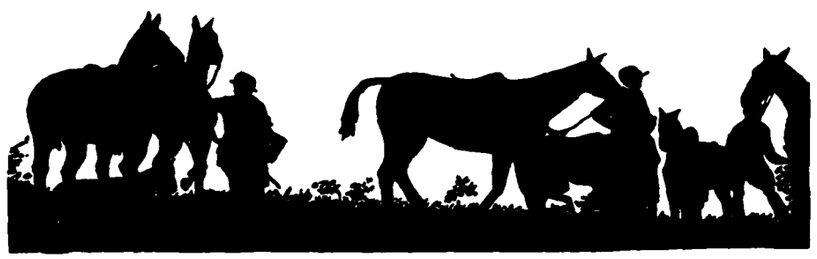
It is not surprising, therefore, that at the present time we find so many suggestions among both military men and civilians that Cavalry might be replaced by men carried in armed machines. Those who differ with such views are liable to be classed as ultra-conservatives and "old fogies." But if these same men had possessed the correct ideas and been in position to insist upon them before the great war, they would have been classed as radicals.

It is believed that the doctrine taught now in the American Cavalry is essentially correct. It includes both mounted and dismounted action. It insists upon deployment, laterally and in depth, for both types of action. It demands great fire power within all Cavalry units, not only for defense but, also, to support the advance of both mounted and dismounted riflemen. It requires that all riflemen be trained to advance dismounted to the attack without undue exposure; that is, by stealthy approach and skillful utilization of cover afforded by accidents of the ground, no firing positions established or any exposure permitted for this purpose until within two or three hundred yards of the enemy's position; no halting on open or exposed ground; fire support by machine guns, and artillery if available, to be constant and powerful until the riflemen take up the firing themselves at very close ranges. It requires leadership of a very high order by platoon and squad leaders in both mounted and dismounted action. It requires an armament and training for protection against observation or attack by hostile aircraft or hostile mechanized force. It specifies that the various rôles of Cavalry are much the same as heretofore but that the paramount rôle is to support the Infantry by attacking at the critical moment at the sensitive spot in the enemy's organization or against his reserves. It indicates the automatic pistol supplemented by the sword if, for lack of ammunition or other reasons, the pistol cannot be used as the principal weapon of the mounted trooper. It requires that a skillful and uniform method of marching shall prevail as one of the great essentials in Cavalry training and operation. And, lastly, it requires bold and skillful riding across all kinds of country.

Many items might be listed as necessarily included in such doctrines, such as reconnaissance and the necessary training in patrolling to perform it. But this would serve merely to list all the innumerable little items of training that are necessary.

It is difficult to state what is doctrine and what is something else. But it might be pertinent to state, in addition to the above, that our Cavalry believes that mounted action, properly supported by fire, against an isolated force of the enemy, is more decisive and less costly than dismounted action if the Cavalry force is large enough to attack at all. Superiority in numbers is usually necessary to attack dismounted against an enemy in position. With that superiority, a combined dismounted and mounted attack is considered as the best method unless the ground and certain accessory defenses should forbid. Small forces of Cavalry should beware of dismounting, but should try either the one or the other without attempting to combine mounted and dismounted action.

With these doctrines and the necessary numbers, equipment and training, our Cavalry would be prepared to give services of inestimable value. Air Force and Mechanized Force working in cooperation with Cavalry, and motor transport bringing up supplies so difficult in the past to obtain for Cavalry, would combine to bring about the most brilliant successes.



The Tactics of Bush Warfare

By Major Roger W. Peard, U. S. Marine Corps

PROBABLY the greatest shock received by any officer on his first tour of expeditionary duty in the West Indies, Central America, or other similar duty in any part of the world, where in time of peace he encounters actual guerilla warfare, is his apparent inability to apply directly to each situation those principles of war which have been so diligently instilled into him by the instructors of our various service schools and by study of historical precedents.

The very nature of the enemy's tactics drives us to somewhat similar methods. The enemy forces are usually guerilla or bandit groups, these groups consist of from twenty to seventy irregulars, and at best are indifferently armed. The enemy has no regular lines of communication and supply. The enemy has no permanent strongholds or other prepared bases of operations. As a result we can not hope to attack any fixed objective or use any carefully prepared plan of maneuver. Hence, for the offensive, we must adopt methods that are somewhat similar. When we take the offensive and put on the trail combat patrols of any size whatever, no one can foresee the moment when our avowed offensive may switch in an instant into the grimmest sort of a life and death defensive.

We have regular garrisoned towns, outposts, routes of supply and communication, etc., to protect and maintain, while the roving nature of the enemy forces, living off the country as they regularly do, permits them to concentrate their entire force, when and where they will, to attack or harass our garrisons, supply trains and patrols, as they may deem advisable; to start the action at the time and place most favorable for them and to break off contact whenever the fire fight becomes too heavy and they have inflicted the maximum of damage on our forces, and with little or no danger from any pursuit we may be able to launch, due to the almost impenetrable tropical forests, rough terrain and total lack of roads, other than foot paths.

The bandits' superior knowledge of the terrain, operating as they do in unmapped, outlying parts, sparsely populated, and with the sympathy and information system well perfected among friendly noncombatants, makes it indeed fortunate that we are able to compensate somewhat for our lack of numbers by our superior armament, training, morale, and education.

The trails and so-called roads in these outlying parts are indescribable; unless once seen and traversed, they are difficult to visualize, even if an adequate description were possible. They are impassable except for foot troops, mounted infantry, pack animals, and bull-carts, and the latter can only negotiate those roads shown on the unreliable native maps as "improved." Practically all troop movements must be made in single file.

It is very evident to interested observers over a period of years, that these formerly ignorant and untrained bandit forces are steadily improving, both as to armament and training. Their morale is an ever varying item to be carefully estimated from each special situation as it arises.

All troops operating in the rainy season, as well as troop convoys for supply trains etc., are mounted on native animals whenever mounts are available. Dry season operations include more foot troops, but even then, the men's blanket rolls are carried on pack animals, the soldier carrying only his arms and fighting equipment.

In our most recent operations in Nicaragua from 1927 to date, we find ourselves often encountering leaders of considerable military training and experience, whose troops are well armed with up-to-date rifles and ammunition, machine guns, Thompson submachine guns, and bombs and whose campaign is not restricted by any rules of civilized warfare, while our actions are always subject to the closest scrutiny of ambitious publicity seekers and over-zealous pacificists in the United States, which requires our campaign to follow strictly the recognized rules of land warfare, to the protection of which these unscrupulous guerillas have no shadow of a legal right.

As the last Nicaraguan campaign has furnished the most extensive operations of bush warfare in recent years and has been conducted under the most adverse conditions of climate and terrain, a more detailed account of these operations may be of interest.

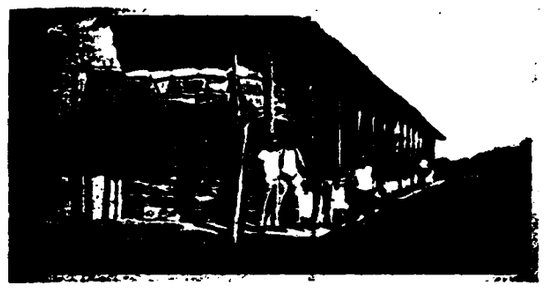
Occupation and Defense of Towns with the Primary Mission of Denying Such Towns to the Bandits

This form of occupation became necessary in Nicaragua in the summer and fall of 1927, for the reason that our available troops were insufficient to completely occupy the entire country, but the protection of the citizens of Nicaragua, foreigners and established business, in the various cities and towns, was essential. Furthermore, our forces had not yet been committed to a definite offensive, and the newly formed constabulary had not yet reached a sufficient size to take over operations of any magnitude. Our delay in taking up a definite offensive was largely based on the continuing effort of all concerned to induce all possible bandits to accept immunity and lay down their arms. This effort was pursued diligently for some time after the expiration of the time limit for disarmament as set by the Stimson-Moncada Agreement.

As the bandit operations in 1927 were confined almost entirely to the Northern Area, it was unavoidable that some sort of protection be given the law-abiding

[1]These minor warfare tactics are the author's opinions and are based on expeditionary duty during the last fifteen years. The author is an instructor in these tactics at the Marine Corps Schools.

citizens of this area and their commercial interests. Thus the original occupation of Ocotal, Jicaro, Somoto, Pueblo Nuevo, San Fernando, and Telpaneca, was accomplished by small detachments of marines and native troops, which were insufficient to control the surrounding country or rid it of bandits. Prior to Sandino's concentrated attack on Ocotal in July of 1927, and as late as November of 1927, this policy remained in effect. Every effort was made to rid the country of armed irregulars without bloodshed, for humanitarian reasons as well as military necessity, since our forces were insufficient in number for a complete occupation of the area. We were greatly overextended and without adequate lines of communication.



Machine gun emplacement, with protected sniper's post above. Norvil Barracks, Somoto, Nicaragua.

At this time all supplies not obtainable locally, had to be hauled from Managua to Esteli by bull-carts, a distance of about eighty-five miles, and thence north to all other posts by pack animals. In some cases the pack animal route was over one hundred miles from Esteli.

At this time the Marine Air Force consisted of only five old wartime DH two-passenger planes. When they had completed their regular hazardous missions of communication, combat and photography, they had little time or ability to help out in the supply situation.

In all towns occupied in the Northern Area of Nicaragua, bullet proof adobe buildings had to be procured as barracks. Tents were unsatisfactory in the rainy season; their procurement by bull-carts would have taken up valuable cargo space, which was already inadequate for supply purposes, and quartering troops in tents would have invited sniping and night attacks. In some instances, inactive Catholic churches had to be utilized as barracks.

Every member of these garrisons was assigned a definite battle station and a sector of fire; men were thus trained until battle stations could be occupied in utter darkness in a very few seconds. Their training along these lines was largely responsible, in my opinion, for the successful defense of Telpaneca, to be discussed in detail later.

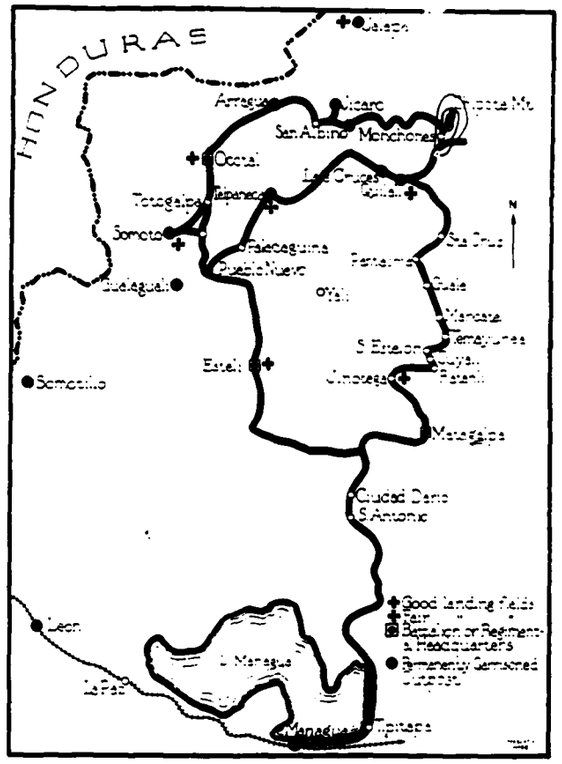
This period ended about November 1, 1927, at which time a definite offensive mission was assigned to all troops in the Northern Area.

Surprise Attacks by Bandits on Garrisoned Towns

There were two outstanding examples of this class of warfare in Nicaragua that deserve detailed accounts.

Attack on Ocotal: At 1:00 A.M., on July 17, 1927, the bandit forces combined under Sandino and attacked Ocotal with a force of about six hundred men. Sandino issued a written attack order definitely assigning the duties of each group. These groups consisted roughly of about seventy-five men each and had separate leaders. An original copy of this order later fell into the hands of the marines.

The defending troops at Ocotal consisted of thirty-five enlisted marines with two commissioned officers, and forty native soldiers of the Guardia Nacional with two American officers. The marines had one Browning machine gun and two Browning automatic rifles, but no Thompson machine gun, no rifle grenades, no hand grenades of any kind, and no trench mortars or 37-mm. guns. The guardia garrison had one Lewis machine gun and nothing else but their Krag rifles. The ammunition supply of all troops was inadequate for a prolonged siege.



Sketch No. 2.

Garrisoned towns (1927-1928) of the Northern bandit area of Nicaragua, showing trails connecting these garrisons, and route of supply overland from Managua.

Both garrisons, marine and guardia, kept up an intense defensive fire until daylight but were unable to sally forth in the dark and close with the attackers, as their numbers were only sufficient to protect their

barracks buildings, the attacking force so greatly outnumbered them.

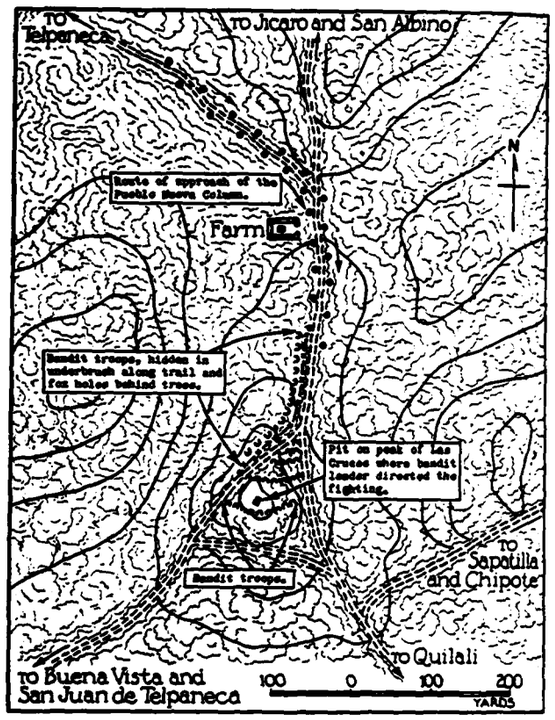
At daylight, the attackers occupied protected sniping posts completely surrounding both barracks buildings and had one machine gun in the belfry of the Catholic church about seventy-five yards from the marine barracks. Their plan was to hold the garrisons in their quarters until night and then renew the attack, as the attackers had a healthy respect for our marksmanship and made no pretense of an open daylight attack. Their well-chosen and protected sniping posts and their superior numbers made it suicide for the garrisons to attempt a daylight counterattack.

Either by chance or careful planning, the bandit attack occurred on Sunday, the only day of the week that regular airplane trips from Managua to Ocotal were not scheduled. Purely by chance, two planes on a photographic mission were sent to Ocotal on the morning of July 17th and immediately returned to Managua with news of the siege. About 3.30 P.M., five combat planes reached Ocotal with a capacity load of bombs and machine guns. Their targets were like a moving picture scenario; most of the bandits had withdrawn to the edge of town to hold a consultation concerning the operations for the coming night and were bunched, several hundred of them, in a deep high-walled river bed. The planes were able to drop all their bombs before the attackers could leave this ravine; then the planes chased them over the country trails, ground strafing the bandits until all machine gun ammunition had been expended. The airplane casualties were estimated at two hundred bandits and completely broke up the siege.

Shortage of ammunition, lack of auxiliary weapons, and the overwhelming numbers of the attackers would have placed the defending troops in a very bad situation the second night, had these planes not arrived as they did.

However, contrary to the general belief and to published articles on this subject, the battle of Ocotal was the only action in Nicaragua in which airplanes were the deciding factor or even essential from a purely combat standpoint. The bandits had learned their lesson, and future attacks on towns and the ambushing of patrols on the trail, etc., were always commenced and broken off before the planes could reach the fighting.

Attack on Telpaneca: It is interesting to note the facts leading up to this attack. After the battle of Ocotal, Salgado, one of Sandino's leading sub-chiefs, split with Sandino and withdrew to Somoto with about seventy-five men. This was before Somoto had been occupied by our troops. Salgado was disgruntled because Sandino had called him by the title of "Colonel" in his attack order for the Ocotal battle, instead of "General"; however, upon leaving Sandino, Salgado stated he would not fight for a general who could not win battles. After the marines occupied Somoto, that area became too hot for Salgado; he had lost several men killed and wounded, and there had been considerable desertion from his ranks until his force did not number more than about thirty. Salgado was a typical negroid-indian type, untrained in modern warfare but cunning and experienced in bush warfare. Those who knew him personally said he could be recognized anywhere, as he was an exact counterpart of the Indian head on our American five-cent piece.



Sketch No. 3.

NOTE: The top of Las Cruces Mountain was sparsely weeded. Large pine trees had fox holes dug behind them that afforded an excellent field of fire along the trail from the north.

Bandit positions on west of trail behind barbed wire fence, were in a drainage ditch about three feet deep and ditch was not visible from the trail on account of heavy brush.

Bandits were finally driven off by well directed machine gun and trench mortar fire from farm yard surrounded by a low rock wall, about three hundred yards north of the peak of Las Cruces.

We later learned from native sources that, when Salgado rejoined Sandino, he asked Sandino for a chance to show him how a successful attack on a town should be made.

At 1:00 A.M., on October 19, 1927, a bandit force of three hundred men under Salgado, attacked the marine and guardia garrison at Telpaneca, which consisted of twenty enlisted marines and twenty-five enlisted guardias, with only one marine officer present, commanding both detachments. It will be noted that 1:00 A.M. was also the exact hour the attack on Ocotal commenced. The hour chosen for these attacks was sufficiently late in the night to permit the garrison to get well settled for the night and early enough to permit the attackers to have several hours of darkness in which to carry on the attack before daylight. Whereas the Ocotal attack was launched in bright moonlight, Salgado chose a very dark and foggy night for the Telpaneca attack. Partly on account of this darkness and fog, the attackers were at the doors and windows of the barracks buildings and the officers' quarters, pouring in an automatic fire, when first discovered. On the night of this attack, the officer in charge had taken special precautions and had posted two sentries on each post, but the bandits completely eluded these double sentry posts and launched the attack as a complete surprise. Had the bandits withheld all fire, entered the buildings and attacked with machetes only, I believe their chances of success would have been much better. In this connection, the advisability of double sentry posts is well worth considering. While the assignment of two men to each post under conditions of severe nervous strain does alleviate this strain on the sentries, I believe that it also decreases their alertness; they are too prone to be careless and while away in conversation the time that should be employed in strict observation; it would appear preferable to double the number of posts and decrease their size accordingly, thus assuring increased alertness over a smaller post for which each sentry is entirely responsible.

Within an incredibly short time and in utter darkness, all men of the garrison were at their battle stations; the one machine gun, from a well-protected emplacement, was delivering a steady traversing fire over a prearranged and maximum field of fire. The garrison was well supplied with hand grenades and automatic weapons, and, after the bandits' failure to capitalize to the utmost their surprise attack, their efforts became steadily less effective and more costly, until daylight forced them to withdraw about 4:30 A.M. Except in carefully prepared ambushes along the trails where ample cover was available and practically no clear targets were presented to the ambushed, the bandits never showed an inclination to fight in daylight against the superior marksmanship of the marines and the well-trained native troops.

During this Telpaneca attack, the bandits made a concerted and well planned effort to induce the native troops to mutiny, by offering immunity, money for their arms, good positions in the bandit army, and by using a continuous stream of well thought out propaganda against the Americans. Their efforts along this line proved a complete failure. It is believed that the loyalty of native troops generally is directly dependent on their liking for and confidence in their officers. In this case, the one officer present was a first lieutenant in the Marine Corps who held a commission as a captain in the guardia and was extremely popular and efficient.

The attack on Telpaneca was the second and last attempt by Sandino's forces to attack garrisoned towns. His second failure with severe losses taught him a lesson, and thereafter his entire campaign concentrated on ambushing patrols on roads and trails.

An amusing incident of this Telpaneca attack occurred about a half hour before daylight; the guardia soldier in charge of the corral and pasture slipped out in fatigue clothing without informing anyone as to his intentions, his interest in his mules entirely obscuring or overcoming the personal danger involved. He secured nine of his best mules from a nearby pasture; drove them nine miles on foot to a friendly farmer; hid the mules and continued on foot the balance of the forty-five miles to the nearest post, to bring in the first information of this attack, six hours before this information was received from any other source. His exploit permitted a relief column to be formed and well on the way before the airplanes or telegraph brought word of this attack. Telpaneca had no radio, telegraph, or telephone communication, and was entirely dependent on mounted patrols and airplanes for its communications.

After the attack on Ocotal and Telpaneca both, rumors were received from apparently reliable native sources that a second attack would be forthcoming, but such never materialized.

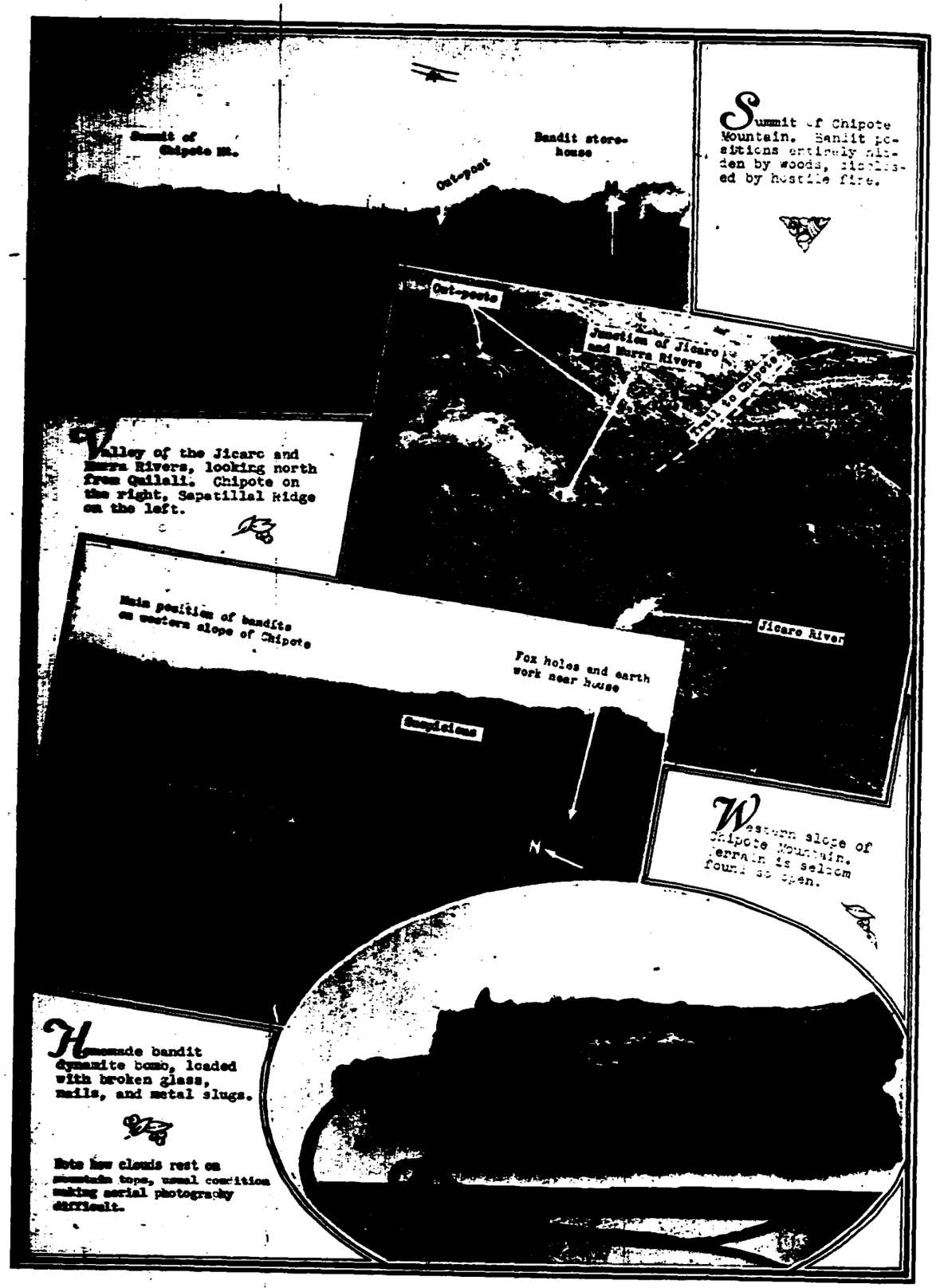
Surprise Attacks on Bandit Camps

Our first successful attack of this nature in Nicaragua occurred in the first part of October, 1927, when a patrol of twenty-five marines from Somoto, after traveling all night in a rainstorm, attacked a bandit group under Santos Lobo, at Mal Paso killing seven bandits and capturing a large number of rifles, animals, stores, etc.

For this kind of attack, reliable native information is essential. Due to the large number of bandit sympathizers among the non-combatant civilian population and fear of reprisals among the few friendly natives, reliable information was extremely difficult to obtain. As the number of our troops increased and the bandit operations grew less successful, this avenue of information improved, until several posts had on their payrolls from two to four native intelligence agents, who were able regularly to penetrate the bandit camps and return with definite information as to the location of the bandits. The difficulty of attacking bandit camps was increased because they were constantly being moved; the bandits scarcely ever camped for more than two nights in the same place, and such information has to be fresh to be of any use.

It was found necessary for our troops to always travel at night and only for such distances as could be traversed before daylight, if a surprise attack was contemplated. Any daylight travel was immediately known to the bandits; their spies were numerous, and even our preparations for the night travel had to be delayed until the native inhabitants of the garrison town had retired for the night. The garrisons at Pataste and Telpaneca were particularly successful in such operations, their native intelligence service being excellent and their officers energetic.

This warfare was particularly effective on the morale of the bandits, as these bandit groups after an attack lost more men by desertion than they had by casualties in the attack itself. In these surprise attacks, we never had a casualty; even when their force was far superior, the bandits' one thought was to get away safely, when taken by surprise. They seldom waited to ascertain the size of the attacking force.



The morale of the enlisted men in the posts, where these successful operations were numerous, mounted with each success until the men complained to their officers if many nights passed without a patrol to make, and this in spite of the inclement weather and strenuous marches involved.

In the fall of 1927, Sandino divided into districts all territory not occupied by marines and guardia. He gave definite boundaries for these districts and placed a certain sub-chief with a group of men in charge of each district, with orders not to leave their districts without his permission. These district chiefs, in addition to their combat missions, forwarded supplies to the larger bandit groups. A district chief named Polanco had the district immediately east of Telpaneca, around Pericon. His district was only about twenty miles square. Patrols from Telpaneca, with an excellent native intelligence service, hit his camps at daybreak three times in ten days, killing several of his men each time and capturing most of his equipment and supplies. He was afraid to leave his district, as this would have incurred the displeasure of Sandino, and he felt certain his movements were being accurately reported to the marines. When his force of thirty-five had finally been reduced to twelve, he gave up and left.

One post had a cur dog that went out with all patrols. He preceded the patrol; never barked or made a sound, but if he spotted a man, horse, or anything unusual, he made a perfect point like a well trained bird dog and held the point until the leading element arrived. One morning just before dawn as a patrol was approaching a bandit camp for a surprise attack, this dog pointed a sleeping bandit sentry who was concealed in the brush beside the road and would undoubtedly have awakened and given the alarm when the patrol passed, if the dog had not spotted him and prepared the way for his quiet capture. At night when no patrols were out, this dog walked post with the various sentries. Anyone trying to take this dog with him when transferred to another post would have started a riot or mutiny.

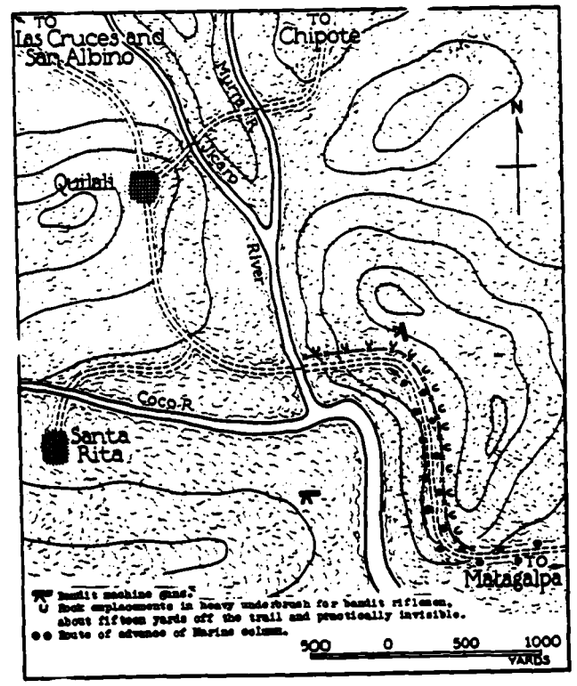
This district plan of Sandino's remained in effect until about January, 1928, when the arrival of an additional regiment of marines in the northern area made it impracticable. He then withdrew most of his troops to the unoccupied eastern part of Nueva Segovia and operated them in larger groups, with headquarters on Chipote Mountain and Sapotillal Ridge.

Offensive Operations Against Known Bandit Strongholds

Our occupation of Chipote Mountain and the destruction of all bandit works thereon in February of 1928 is the best illustration of this class of warfare encountered in Nicaragua.

A column of about one hundred and eighty marines and guardia cleared Matagalpa on December 19, 1927, with three hundred loaded pack animals, and was to make a junction at Quilali with another column of forty marines and twenty guardia from Pueblo Nuevo. Quilali was an unoccupied village within about fifteen miles of Chipote and was to be used as a base of operations against Chipote. This combined force of 240 men and officers was considered sufficient to garrison the village of Quilali, keep themselves supplied by pack train from Telpaneca, and form an offensive force to capture Chipote, with airplane support from Managua via Ocotal. The bandits ambushed the Pueblo Nuevo column at Las Cruces, when, after three days of travel, they were within two hours' march of Quilali. One officer was killed and one severely wounded, leaving a sergeant in command.

In such operations, where the trails traversed force the entire patrol to proceed in single file, through heavily wooded, mountainous and winding trails, the importance of protective fire (reconnaissance by fire) by automatic weapons ahead and to the flanks of the advance guard cannot be stressed too strongly, whenever a possible ambush locality is reached. The results never vary; if the ambush actually exists, the



Sketch No. 4.

bandits always think their position has been disclosed and return our fire. If this reconnaissance fire has been properly managed, the ensuing fire fight is always at ranges entirely to our advantage. On long patrols or any kind of a daylight move where a bandit ambush is possible in Nicaragua, the bandits knew our every move and thus the laying down of this reconnaissance fire did not force us to forego the element of surprise, as such did not exist. The main drawback of this plan is the expenditure of ammunition involved. Reserve ammunition must be taken on pack animals and its expenditure closely supervised by an efficient advance guard commander. On such operations you

have only one decision to make: will you expend ammunition or men?

Another unusual factor of operations conducted in single file is that the best results can be obtained by marching the elements of your command without distance. On these winding, hilly, wooded trails, only a

Ocotal.

few of your men can come under enemy fire at any one time and place, and, if your elements are marched with normal distances, one part of your command can very easily and unknowingly reach a position out of supporting distance of the other elements.

A great deal of the terrain in Nicaragua would not permit the sending out of security groups on the flanks, etc. In many cases where this manner of flank protection was possible, it was impracticable on account of the delay involved, as it was usually imperative to reach a certain camp site where water and forage were obtainable before dark.

It is difficult to get away from the large war idea. In these "small time" peace wars, the successful operations are those in which the enemy suffers severe casualties but our side has none. Even one severely wounded man becomes an inconceivable burden to an operating patrol; he has to be taken along on a hand carried litter for the balance of the operation, or the entire patrol must abandon its present duty and convey him to the nearest post. Few patrols can spare sufficient men to safely conduct the wounded into camp and still carry on their mission without delay. The patrol has probably been cut to the minimum for the mission assigned at the outset, as the garrison left behind where the patrol was formed must always remain sufficiently large to successfully defend itself against a concentrated attack of the entire bandit force.

This ambush of the Pueblo Nuevo column occurred about 3:00 P.M. on December 30, 1927. Due to the number of wounded and the size of the attacking bandit force, the column was forced to take up a defensive position on Las Cruces until a relief column could reach them. No troops could reach them in less than two days, except the Matagalpa column which was due to arrive in Quilali late on December 31st.

After struggling through the mud and mountain trails for twelve days, this large Matagalpa column arrived across the Jicaro river about one and one-half miles from Quilali without having seen a single bandit. Their objective was clearly visible on a small plateau almost within shouting distance. Quilali appeared to be deserted.

At this psychological moment, as the head of the advance guard made a sharp turn in the ridge trail bordering the Jicaro River, an alert marine saw a hat protruding from behind a tree to his left front and within twenty feet of the trail. He gave the alarm, and the bandits opened fire on the advance guard with one machine gun firing point blank down the marine column and another machine gun swept their flank from across the river. After a twenty minute fire fight the bandits were routed, but the marines and guardia had five dead and fourteen wounded. They proceeded to Quilali with their dead and wounded and made camp. The next morning an airplane dropped them a message as to the plight of the Pueblo Nuevo column and a relief patrol from Quilali was sent to their assistance. Late the same night all troops of these two columns were back in Quilali.

Two guardia officers had been killed; the commanding officer of each column severely wounded and several other officers slightly wounded; three enlisted marines and one guardia enlisted man killed; fourteen wounded enlisted men; seventy-five loaded pack animals were missing from the Matagalpa column and a few from the Pueblo Nuevo column.

Brigade Headquarters in Managua now altered the plan for this Chipote operation. Quilali was evacuated and all officers, men, and animals moved to the San Albino Mines. San Albino was now designated as the base for operations of a special combat battalion of marines plus one guardia company. Fresh troops arrived in San Albino from Ocotal to fill up this battalion, and a new commanding officer arrived. Then, operations against Chipote began in earnest.

The guardia company was used for special independent missions, reconnaissance, and scouts. Two marine rifle companies were assigned offensive missions only and were to operate in two columns. One company was assigned the task of keeping up the route of supply, communication, etc., between the operating forces and San Albino. The machine gun and howitzer company was split up and attached to the offensive operations as the situation demanded.

From San Albino to Chipote was only about ten miles, but two large mountains had to be crossed; the trails were the worst sort of foot-paths, muddy, winding, bordered by woods, and through an area that no marines had yet traveled and for which there were no accurate maps. A few native guides were available but their reliability was unknown, and they performed their duties with great reluctance due to the danger involved.

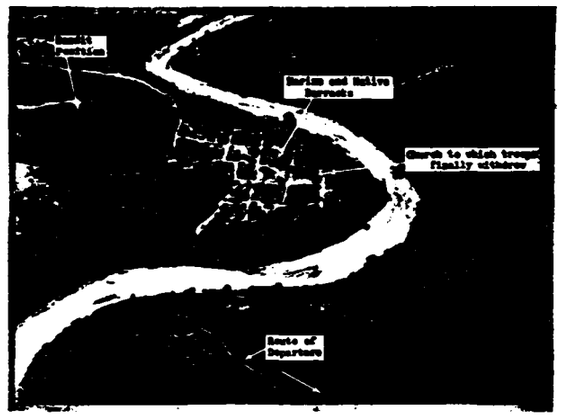
Troops operating towards Chipote moved slowly with all rations, spare ammunition, guns, etc., on pack animals. Outposts over half way to Chipote had been established and stocked with reserve rations before the final drive into Chipote proper was launched.

Prior to our reaching Chipote, the air forces had laid down a half hour bombardment with all the bombs and machine gun ammunition they could carry at one trip. This plane bombardment either drove the bandits off Chipote entirely, or they had voluntarily withdrawn before our arrival, as the occupation of Chipote by our troops was almost without incident, only a few old men and boys having been left behind by Sandino to slightly harass our advance and make us believe Chipote was still occupied. The capture of Chipote was only important in that it existed in the public mind as an impregnable stronghold, this belief having been engendered by Sandino's many boasts in Central American periodicals that no force of American Marines could ever capture or drive him out of Chipote. If made seriously, Sandino's only possible hope of justification therefor lay in the fact that the difficulties to be surmounted in reaching Chipote would make an operation against it impracticable. We later learned that this vain boast lost him many followers after Chipote fell. Nothing of any importance was found on Chipote and after rendering it impracticable for further bandit occupancy by carrying away or destroying everything of value left behind by the bandits, we abandoned it.

Defensive and Offensive Battles on Roads and Trails

From January, 1928, to the present date, all contacts of any importance between the government forces of Nicaragua and the bandits, or between marines and bandits, fall under this heading.

While the general principle that no commander of troops in the field should ever be taken by surprise is our present day doctrine, the difficulties encountered



Telpaneca.

in Nicaraguan trails, the nature of the terrain, climatic conditions, the bandits' superior knowledge of the country, tropical wear and tear on the physical condition of the operating personnel by insects, climate and illness, caused many patrol commanders to look upon this maxim as an ideal never quite attainable. It was seldom that the normal security measures of recognized tactics were possible; even columns operating with a perpetual airplane reconnaissance were never free of the ambush danger, as well concealed ambushes were often equally invisible from the air and from the trail.

The doctrine of maintaining contact with the enemy once such contact has been gained amounts only to a play on words and has no practical application in bush warfare. In bandit fighting in the hills or outlying parts, when contact with the enemy has once been gained, our only procedure was to concentrate the maximum fire on the bandit position and inflict the greatest possible loss in the short time at our disposal before they retired through the gullies and underbrush.

Pursuit as we understand the term was unknown. In most cases a really well managed pursuit would have produced little or no results, as after a contact the bandits scattered in all directions to re-assemble at a prearranged place hours later. To attempt a pursuit often would have required the pack train to be left with an insufficient guard and our pack train loads were most precious to the bandits, as well as containing our entire means of subsistence in the field. To send part of our forces through unknown hills and woods in an attempted pursuit would have courted disaster in many ways: men lost; a possible shooting up of our own troops in the confusion, and a costly and profitless delay in reaching a safe camp site for the night.

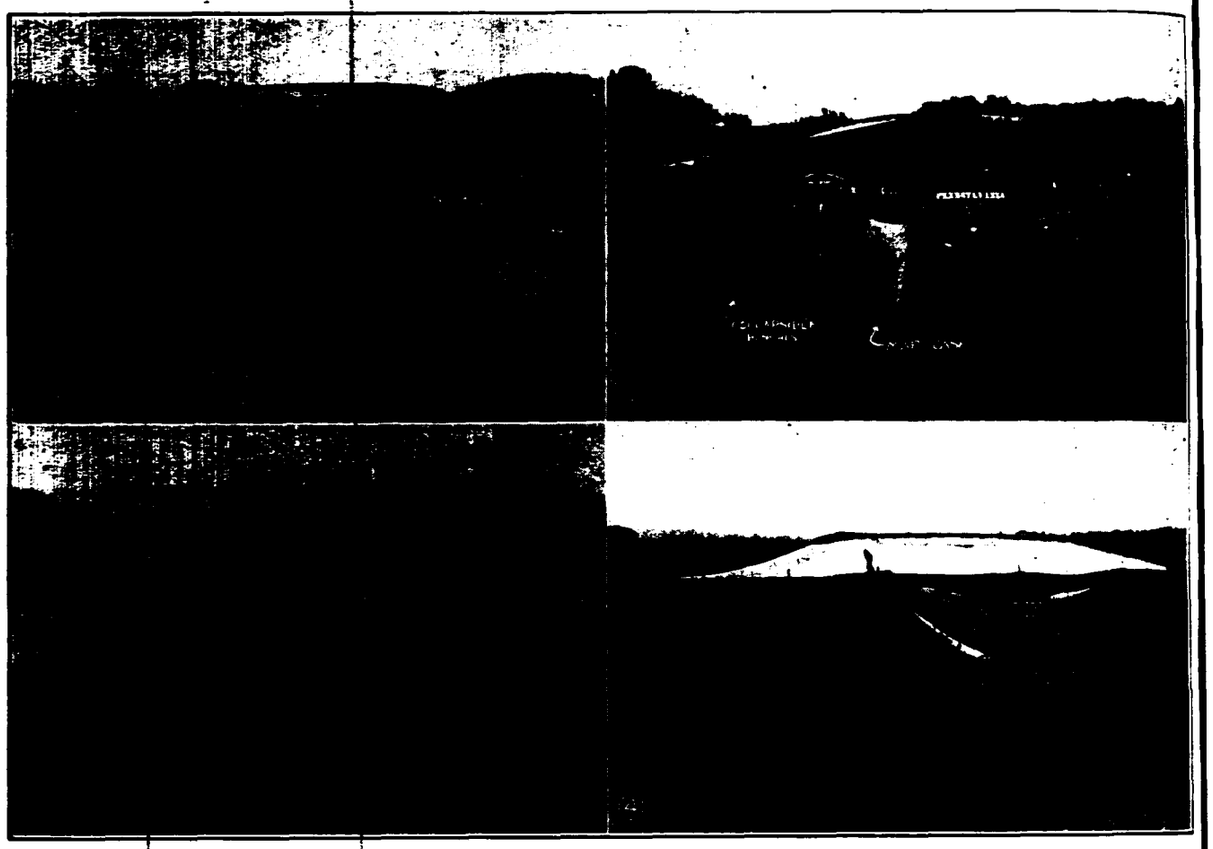
In Nicaragua our patrols marched through knee deep mud, rocky mountain trails, sweltering in the valleys, almost freezing on the mountain tops, beset by every class of insect placed on earth to torture man, and, when camp was reached, dead tired, the men could not sleep on account of the insect bites received during the day, which with very little encouragement became tropical ulcers. It was truly, "Marching all day and scratching all night." We often heard war time marines yearning for the trenches of France.

Camp Security for the Night

The orthodox camp security methods were adequate generally as to principle but varied slightly as to application. Sentries on the outskirts of a camp are useless if they walk their post in a military manner as they have been taught to do on regular guard duty. They should remain concealed at places giving them the best view of their sectors. The uneven wooded terrain permits a stealthy enemy to close with a sentry before he can give the alarm, if he walks his post openly. I am a strong believer in camp fires. They should be kept burning brightly all night when the command has bullet proof shelters in which to sleep. In Nicaragua patrols usually reached villages or ranches for the night camp. The camp fires increase the morale and cheer of the men immeasurably and, if properly located, furnish lighted avenues of approach through which an attacking enemy must penetrate and become excellent targets, before they can hope to close with the encamped force. The normal confusion resulting from a night attack, of which the attackers expect to take full advantage, is thus avoided.

The Command Post Truck

By Captain George A. Wiggam, 103d Cavalry, P. N. G. (S-3, 52nd Cavalry Brigade)



TRUCKS of the type shown above were used by the 52d Cavalry Brigade for its C. P. during the III Corps C. P. X. at Camp Meade, Md., in the summer of 1930, and by both the 103d and 104th Cavalry for the regimental C. P.'s during their field training at Mt. Gretna, including use on road marches and maneuvers of several days' duration. It not only solved the problem of transportation of the equipment but it provided a means of setting up a command post promptly at a new location without loss of time and without confusion. It centralized the headquarters and was easy for messengers to find.

When marching on the road the truck is located near the head of the column, generally immediately in rear of the Commander's group, and provides a mobile, readily accessible message center which can be kept open at all times if so desired. The truck is identified by command post signs on the sides, front and rear. The top affords a place for display of identification panels to airplanes without halting the march or having personnel fall out.

The truck used is a light cargo G.M.C. with a stationary top and open sides. Folding tables are attached with hinges along both sides of the truck, extending from the rear of the front seat to the tail gate. Hinged legs fold down against the tables when they are raised. A single large hand-screw (indicated by the arrow in Plate 1 above) holds each table in position against the side of the truck when they are raised for traveling.

A large flat map box or case slightly smaller than the roof of the car fits into brackets suspended from the roof, and in this the staff maps or other perishable papers are carried. Folding benches fit in along the sides of the truck and against the back of the driver's seat. Lighting at night is provided by lifting the head-lights from their brackets and moving them to the sides. A third light with a cord attached is plugged into a receptacle on the dashboard to furnish light at the rear of the truck.

With the Command Post set up, it is customary to place the S-1 and S-4 sections together on one side and the S-2 and S-3 sections on the other side. The Commander and the Executive have their places at the rear.

Orientation of R.O.T.C. Freshmen

By Colonel P. L. Miles, Infantry

AUTHOR'S NOTE: *The following orientation with such modifications as have been necessary to bring it up to date has been given to freshmen at the University of California for four semesters and has been well received. I believe it has helped to raise the morale of the unit to a high plane and I submit it because I believe it may furnish others on this duty an opportunity to obtain information of methods used at this institution which may have some value.*

It is obvious that at the beginning of the basic course it is desirable to assemble the newly enrolled freshmen to tell them something of the course and the purpose of the training. In the absence of this introduction it is possible that a student might complete the entire basic course without a clear understanding of what it is all about. The following introductory talk is given as if addressed to the assembled students.

IN the first place, I want to say that I do not feel called upon to justify military training in colleges and universities generally nor in this institution particularly. That matter has been settled for us; but I know that if you realized that the matter had been settled logically and sensibly, instruction would be easier and your work more pleasant, intelligent and profitable to you.

The Federal Government goes to considerable expense to maintain this training. It surely expects a return for this expenditure in added security to the nation. The State evidently believes that this training has another value in addition to the one just mentioned. The State, of course, cooperates wtih the Federal Government in the matter of aid to public safety; but, in order to do this, it is not necessary for it to go to the length of requiring all of you to take military instruction. No, the State and university authorities have an independent view of the value of this training quite apart from its value to the country in making you potential officers and noncommissioned officers in time of national emergency. I shall speak of this value to you later.

Let us first take up the Federal Government's point of view.

The R. O. T. C. is part of the nation's plan of preparedness for the possibilities of war. The question immediately comes to the minds of some of you: Why prepare for war? Have we not heard that preparation in itself may lead to war? Some of you may believe that the Kellogg peace pacts and other sincere efforts of a similar nature, designed to aid the maintenance of peace in the world, will serve not only to outlaw war but to eliminate it altogether. If you believe war can be abolished altogether you believe something different from the realization of most of the statesmen of the world and you must remember that the decision for or against war in any particular case is nearly always in the hands of the statesmen. It is only when diplomacy fails that the soldier must step in.

The hope in these peace efforts is to resolve some of the difficulties, to reduce some of the international frictions, to arbitrate whenever we can, to conciliate and therefore to reduce the probabilities of war. You must understand, though, that the undertaking in the Kellogg peace pacts was only to influence the signatory powers to refrain from being the aggressors in war. No nation has agreed nor ever will agree to prostrate itself voluntarily and give up its right to defend itself. And right there is the reason why the practical value of the pacts is so greatly restricted. Opposing nations will never admit being the aggressor in any case. The allies and associated powers believed that the central powers were the aggressors in the World War. The Germans, though forced by the Treaty of Versailles to accept war guilt, have never voluntarily admitted that they were aggressors. On the contrary, many prominent Germans have filled columns of newspapers and periodicals, which some of you may have seen, specifically and emphatically denying any such aggression.

Last year the Manchurian Chinese and Soviet Russia were engaged in open hostilities. They were both sent notes by our Secretary of State calling their attention to the fact that they were signatories of the Kellogg Pacts. They both replied denying responsibility as aggressors. You may remember how curtly Soviet Russia replied to that note telling us in substance to mind our own business, that she was fully aware of her responsibilities under the pact and that in that pact she had surrendered no right to defend herself.

We must not assume that these peoples are sinister or insincere. On the contrary, they nearly always are convinced of the justness of their positions. They have such different backgrounds of belief, such different standards of living and of morals, are likely to have such divergent views of what is right, and are so unconsciously influenced by interest that they can not see any international problem as a disinterested person sees an abstract question. Due to the different point of view the problem is always presented in a different aspect. It has been wisely said that war is not a conflict between right and wrong but between right and right: between right as one people see it against right as their opponent sees it.

For many centuries, men have been seeking ways to eliminate war as a human institution. The most we can hope for is progress. Complete elimination of war can not be expected until human nature undergoes a complete change and human nature has changed but little under the veneer of all the centuries of civiliza-

tion. We have about the same emotions that the caveman had. Of course, we have better control of these emotions than he had, but we are still strongly influenced by love, hate, selfishness, anger, greed, envy, desire, conceit and the whole gamut of emotions.

When we love all men of whatever race or creed as we love ourselves, when we are willing to share everything we have with any pauper without question as to his worthiness, when we are willing to lower our own standards of living to a common level with the rest of the world, when we no longer resent having some one take from us what we believe belongs to us

Interior of Armory, University of Illinois.

and when we are smitten on one cheek and truly turn the other—then the abolition of war will be possible.

War is nearly always caused by the conflict of the economic interests of peoples. The pressure of excessive populations, the emigration from barren or stricken lands, the constant struggle to improve living conditions, the seeking for food and the things necessary for the industrial life of a nation—all of these things have caused many wars in the past.

It is difficult to convince a man who can procure no work in his own country, or who receives there a mere pittance for his toil, of the justice of denying him the chance to work in a more fortunate country where the opportunities for profits from his labor are greater by many fold. On the other hand, while the man in the more fortunate land can well afford to be generous and is usually willing to be so, he is seldom willing to be generous to the extent of sharing his job and his profits with the less fortunate stranger from foreign lands. These fundamental causes still exist and may still lead to war sometimes in spite of every means invented to prevent it.

In this our own beloved country, we have more God-given resources, more wealth, more prosperity, more comforts and luxuries than any people ever had since the world began. We are told by the economists that our prosperity is associated with the questions of high wages that increase the capacity of consumption and elevate the general standard of living, of the consequent increased productivity of the country responding to this power of consumption, and of the power to market our surplus products abroad. The majority of our people seem to believe that these questions are related to certain political policies, immigration restriction and the alertness of our Government to further the opportunities to market our surplus abroad. These are the things that affect our standards of living but unfortunately they are the very things that cause friction with other peoples.

We should ask ourselves, are we willing to give up any of the things which our fortunate citizenship in this country has given us, are we willing to lower our standard of living? If not, then we must be willing some time or other to fight to maintain it. I believe that our people as a whole are disposed to go to the limit required to maintain it. I hope that day will not come in your life times, but one can not predict when that dire necessity may arise. It is therefore only a matter of common prudence to make suitable preparations against that possibility.

The argument is frequently advanced that measures of preparedness in themselves bring on wars. It is true that a feverish preparation at a time of inflamed public feeling might do so. It is also probably true that competitive arming directed against a particular nation may produce such friction amidst the tinder of international sensibilities that the spark of war is ignited and a devastating conflagration is begun. But a moderate and reasonable preparedness never has done so. Arms and ships and airplanes in themselves do not cause war. Men fought with stones and clubs long before arms were invented.

The R. O. T. C. is a cog in the system of moderate and reasonable preparedness which the representatives of the people of this country in Congress have instituted. So much for the Federal Government's point of view.

Now, what do the R. O. T. C. courses offer you personally? What good do you get from them as an individual? What do you get from the R. O. T. C. training that will benefit you in the profession or civil pursuit you expect to follow after graduating from the University?

First, let me mention the most obvious thing you will gain—discipline. The American people and especially American youth are prone to resent that word. It has been said that the American people are the most undisciplined people on earth. If that be so, it is because they think it inconsistent with the fullest measure of liberty. It is because the real meaning of and need for discipline have not been understood.

A very broad definition that will give you an understanding of what we mean by discipline is this: Discipline is that quality that assures the orderly and dependable accomplishment of a deed according to plan. Modern society is congested and complex. Without discipline, it would be in a state of utter confusion and without personal security. No business can run successfully without discipline and the larger the business, the more important relatively becomes the subject of discipline in the organization.

Military discipline is discipline of the highest type, because it must be so ingrained that it will cause the habit of obedience in the soldier with such promptness and with such automatic force that the deed desired by the commander will be executed as a matter of course. The aim is to have such a habit of automatic obedience that in cases where the soldier is subjected to great personal danger, he will execute the will of his commander before the natural instincts for safety assert themselves in overpowering fashion.

You young gentlemen come here with high aspirations to leadership in some walk of life or other. Dean Rieber, whose philosophy you will come to respect and whose personality you will come to esteem, has said that no man has a right to aspire to leadership who has not first learned obedience. How does any leader know what he demands of his followers if he has never subjected himself to the discipline inherent in the following of a leader? Discipline is sometimes like a disagreeable but effective medicine: perhaps unpleasant in the taking but certainly beneficial in its effects.

I have dealt at some length on the subject of discipline because a great deal of our training here is disciplinary. Close order drill is almost wholly so. It would take but a short time to get sufficient coherence in ranks to permit the placing of men on the battle field. The purpose in the repetition and the strivings for exactness is disciplinary—to get those automatic reactions, those easy relations between mind and body that cause assembled individuals to act as a team.

Some of you gentlemen will find that you are lacking in good coordination between mind and body. You may not think quickly enough; you may be careless in thought and neglect to fix your attention at the right time on the part of the command that tells you what you are to do; or you may be unable to make your body do at the right time what your brain tells it to do. Close order drill will help you to overcome these deficiencies and will bolster up the mind's control of the actions of the body. Good close order drill has also the purpose of developing pride in one's self and in one's organization. There is a satisfaction in knowing that you are an actor in a good exhibition. A student of this university once told me that he felt submerged and of little consequence in ranks until the thought came to him how unfavorably conspicuous he would become and how unfavorably his action would reflect on his organization if some time at parade before critical spectators he should execute order arms when all the rest of his company had executed right shoulder arms. This thought served to impress upon this student his importance in the machine.

We shall pass over by merely mentioning them, the benefits to be derived from physical training and training in punctuality, cleanliness, neatness, exactness and respect of authority. You probably are not fully aware of the physical benefits you get here in this and the Physical Education Departments in one year.

One instance may serve to emphasize the physical advantages of this training. At the beginning of one semester we had a very hot drill day. In spite of all our precautions we had twelve or fourteen cases of minor heat prostrations. It should be of interest to you to know that every one of these cases was a freshman. No man who had a year's training was affected.

We believe that the Military Department offers a training in effective organization and in leadership, including the giving of orders and directions, the necessity of follow-up or supervision and the management of men that will be of value to any of you who become leaders in any walk of life. Moreover, we do not believe that the same or similar opportunities for this training are offered by any other department of the University.

It has been found that for military needs, one leader can not effectively deal with more than eight or ten men. When the number available is greater than eight or ten, there must be a subdivision into two or more parts with two or more subleaders in addition to the leader. This increases the overhead and the apparent number of ineffectives. Nevertheless, the added control and supervision by those who are apparently ineffective more than offsets the loss of men in ranks. The same principle should be applied in business organization. Whether it is always applied with intelligence and economy your training here should help you to determine.

You will learn here that orders are delivered through the chain of command. If you are a superior commander, you should not deal directly with a junior commander's unit, ignoring that commander. That is a principle to apply in business. So is the proper relation of the staff to the command something that should be applied in business but is not always understood or done by it.

Some of the students here have observed that what was apparently thought to be a discovery in the economic organization of labor by an author on that subject has been in use a long time in the Army as a principle of organization. I refer to the requirement that specialists learn other jobs besides their own in order that men may be interchanged and the organization not to be disrupted by casualties. This is an age of specialists in professions, business and industry. In many cases, the pendulum has swung to overspecialization. Industry can learn something from the Army in this respect. Think about this if you take the course in labor economics.

A great many men seem to think that leadership is inherent and God-given, that a leader naturally asserts himself and springs into position without effort or preparation like a child born to the purple. It is true that some men have natural ability as leaders, but it is just as true that leadership can be acquired by an understanding and application of its principles and intelligent training in them.

If you expect to have a thing done as you desire it done, you will learn here how carefully and exactly you must give your directions. You will learn how much explanation of a new matter you can give at one time with a reasonable expectation that it will be absorbed. You will learn that, other things being equal, the length of such explanations must be shorter

for a group than for an individual and shorter for a large group than for a small one. You will learn the method of being forceful without being offensive. You will learn the necessity of follow-up or supervision—that it is not sufficient merely to give an order or direction but that you must follow it up yourself or have an organization to follow it up for you to see that your direction is properly understood and executed as you intended.

Supervision of execution develops your power of observation. You learn to observe a whole group and pick out errors of execution. You learn something about the handling of men and you begin that as soon as you are made a corporal or a lance corporal and get a group to be responsible for.

Your actions as commanders of even the smallest groups must be such as to command respect. The best way to do that is to impress on your group at the outset that you know your "stuff" accurately and fully. There is a way of requiring attention to business without being offensive. There is a way of getting your command to do a thing not only willingly but enthusiastically. There is an excellent opportunity here to learn through practice how to lead other men—to make them do the thing you want them to do, cheerfully, with everything in them. If you acquire that ability here and take it away with you when you leave the University on graduation you will be leaders.

This is by no means a full discussion of the offerings of the Military Department, but it will serve to orient you and perhaps clear up some misconceptions.

Du Pont Smokeless Powder Experimental Laboratory

THE experimental laboratory of the Smokeless Powder Department of the du Pont Company, which has heretofore been known as the Brandywine Laboratory and which was located at Henry Clay, near Wilmington, Delaware, has been moved to Carney's Point, New Jersey, the location of the du Pont smokeless powder plant.

New buildings have been erected for the Smokeless Powder Laboratory at Carney's Point, including a new ballistic building, a chemical laboratory and the necessary units for the semi-works plant. The new laboratory will be known as "Burnside Laboratory" in honor of Mr. Charles F. Burnside, deceased, who was one of the pioneer smokeless powder makers of America.

Although only experimental samples of powder have actually been made in the Brandywine mills for a number of years, the testing of powders has been continued on the site where E. I. du Pont de Nemours established the original du Pont mills in 1802. It is explained that the change has been made in the interest of convenience and efficiency, as all du Pont smokeless powders are produced in the Carney's Point plant which is said to be the largest manufactory of the smokeless type of powders for sporting uses and for military purposes in the western hemisphere.

In striking contrast to the simple single piece of equipment used for testing black gunpowder more than a century ago are the highly scientific instruments with which the new du Pont laboratories are equipped. For many years after the making of explosives in the little water mills on the Brandywine began, the sole means of testing the "strength" of gunpowder was the *éprouvette*, a small mortar, into which a measured charge was loaded together with a solid iron cannon ball. Firing was done by means of a red hot rod placed on the touch hole. The index to the strength of the powder was the distance the ball was shot by the charge.

Some measure of the advance in the manufacture of smokeless powder can be had when this old method of testing is compared with the precise measurements made today on apparatus such as is installed in the present du Pont laboratories. There are super accurate chronographs for measuring velocities, pressure gauges which measure the pressure with utmost exactness, the gun for measuring recoils, the oscillograph for making time-pressure curves and many other instruments used as gauges of the various qualities which a good powder must possess.

The production of propellent powders is an exact science which calls for the most minute care because of the qualities which must be developed in the product. The du Pont laboratory has developed a system of accurate chemical control, the result of the many years' experience of the Company, which aims to make a product whose stability, propellent and keeping qualities will meet the demands. Modern smokeless powder is an entirely different product from the old black powder which was a physical mixture. Smokeless powders of today are cellulose products and are made to meet exacting specifications. The system of chemical control and checking which has been developed in the du Pont laboratories aims to insure the greatest uniformity in meeting the various sporting and military requirements.

In addition and all important is the fact that after the powder has been manufactured and tested ballistically, samples are stored in specially constructed, high temperature surveillance magazines where the keeping qualities of the product can be reliably predicted in a comparatively short space of time.

Chasing the "Transvaal Wolf"

By Lieut. Col. William W. Edwards, Cavalry(DOL), Asst. Chief of Staff, 103rd Division

(Continued from July-August Issue)

The British horse artillery which unlimbered instantly upon the ridges lost no time in finding a target. The Boer transport halted dead in its tracks. The wagons were outspanned where they stood and the teams hurried into the protecting river bed.

General French, meantime, had pushed forward two squadrons of the 12th Lancers, with a battery of horse artillery to cover his left flank in front of Cronje and seize a crossing east of the convoy and west of the main drift so as to effectually block the Boers under any circumstances from crossing the river. Evidently Cronje clearly recognized the peril of his position for he lost no time in making vigorous efforts to ascertain the strength of the mysterious force which dared attempt to stop him. Four Boer guns were brought up to directly oppose those of the British to which they made vigorous reply, but after twenty minutes firing, were outmatched and either silenced or withdrawn. On the right rear of the British guns, a strong body of Boers attempted to seize a lower spur of high ground. A squadron of the 19th Hussars, later reinforced by a squadron of Household Cavalry and a battery of horse artillery, raced the Boers in the open and reached the position first, holding this important post throughout the day. As the afternoon waned the Boer fire having slackened, the squadron of Hussars was pushed forward to ascertain if the Boers were holding the river bank in force. When the squadron moved forward, well opened out, their right flank extending close to the river, they were met by a heavy unmistakable rifle fire from a low embankment, paralleling the river at about six hundred yards and the fire compelled them to fall back. Though with considerable loss in men and horses, their mission was very definitely accomplished. The river bank was held. Of this there could be no doubt. And in addition, it was probably being intrenched!

Simultaneously with this movement on the part of the Hussars, an independent Boer force, coming up from the south, presumably a reinforcement from Stormberg or Colesberg, was seen heading along the ridge, extending northwest of Koodoosrand Drift. This force opened fire from Koodoosrand itself and shells began to fall uncomfortably near the high ground around the Kameelfontein Farm which General French had selected as his headquarters. It was the obvious intention of the Boers to work about the semicircle of hills and surround that portion of the British forces on the west which was holding Cronje's front. Again the Boers showed themselves better defensive soldiers than offensive. In this particular instance, their efforts as usual were not pushed with the vigor which the occasion demanded. A well handled squadron of the 12th Lancers, which had been holding a position throughout the day at Kameelfontein Farm, reinforced by a section of guns, proved sufficient to keep them effectually in check and frustrate their efforts.

In the evening the fire slackened on both sides and in the welcome dusk, a cloud of dust to the west of Paardeberg brought quick hopes at French's Headquarters that the mounted British infantry was approaching, but a heliograph signal failed to establish communication and after dark General French ordered a salvo of guns as a means of indicating to Kitchener and Lord Roberts, if they were within sound, that he had headed off Cronje. That night intense anxiety prevailed in the British cavalry camps.

All fully realized that the insignificant strength of the cavalry advance force must by this time be pretty well known to the Boers, by whom a bold attack would in all probability result in sweeping it away. It seemed indeed a foregone conclusion that if the British infantry did not come up by the following morning, the resolute Cronje, aided by the Boer forces from Bloemfontein, would easily fight his way through.

The British squadrons made a cheerless bivouac in the positions they had taken and held. In view of the uncertainties of the immediate future, their regular rations had been carefully saved against a probable emergency and the men and horses were supplied from neighboring farms which for the last few days had fortunately appeared frequently enough along the way to supply their needs.

Before daybreak the next morning General French, with his staff rode from Kameelfontein Farm to the extreme right of his command. When the sun rose, it disclosed no Boers upon the western hills toward Paardeberg. This was found to be the only change in their position of the day before. Just where it had first precipitately halted, the Boer wagon train lay in the broadening early light still sullen and lifeless. Along the bed of the Modder, some slight movements could be seen. According to the combined story of Boer deserters who came from time to time like rats from a hole, everything within the Boer laagers was in great confusion. As soon as there was sufficient light, efforts were continued to get into heliographic communication with Kitchener's infantry advancing from the west. After repeated attempts, the cavalry signals were acknowledged and French's thrilling story cheered and hastened the lagging steps of Kitchener's infantry.

If Cronje was to get across the Modder now he must crawl out of his trench and fight under the conditions imposed by Lord Roberts, otherwise he would have to remain where he was until the forces of "Little Bobs" closed about him. There was now little doubt as to who was master of the situation.

Cronje had made his way down to the river and occupied a long stretch of it between the Drifts of Paardeberg and Wolveskraal. "Little Bobs" himself had arrived that day at Paardeberg having come from Jacobsdaal and the "outside Boers" displaying greater activity below the south bank of the Modder to the east of Koodoosrand Drift, General French, after a consultation with his Chief, obtained permission for his cavalry division to be transferred from Kameelfontein to Koodoosrand Drift, their present position to be taken by the infantry who, on account of their numerical superiority, could extend their lines. A flash light message was also sent to Kimberley for the remaining portion of the cavalry division to join with the utmost rapidity.

Accordingly, General French commenced a series of operations on what might be termed the outer circle of the net which had been drawn around Cronje, the object of the cavalry being from this time forward to nip in the bud all enemy plans for reinforcements coming from the south and west and so leave the main body of infantry free to devote itself to what had now become the main issue of pressing Cronje to surrender.

This was the situation at the end of an intense breath-taking week, whose beginning saw the taking of Kimberley. The old Wolf was now fairly surrounded. On the west the Highland Brigade of Kitchener's army, which had met the brunt of the repulse at Magersfontein, was south of the river with another infantry brigade on the north. On the east General Kelly-Kenny's division was on the south bank while French with his cavalry and the mounted infantry which had meantime come up, were to the north of it. Yet the Boer position was a very formidable one. Not only were the banks of the river fringed with Boer riflemen under the best cover imaginable, but from these banks, as if nature herself were in league with the Boer cause, extended on each side a number of "dongas" or deep ravines which made formidable natural trenches. The only possible attack, from either side, must be made across a level plain, fifteen hundred yards wide.

Such an assault was actually made—by a grave error of judgment—the following Sunday, February 18, 1900. It developed inevitably a resistless sheet of bullets from the desperate and invisible Boers, whose lines of unerring marksmen were sheltered by these dark, mysterious dongas as well as the river bank itself.

With the deadly experience of Magersfontein in retrospect, it was a foregone conclusion that it would be unsuccessful. Although several impossible British attacks were made, the Boer line was proved unshakable. Even the British artillery which shelled the river bed made practically no impression upon the scattered and hidden Boer riflemen. The only outward effect which these attacks showed was in the contraction of the Boer position from about three miles to two. Death still lurked among the willows which hid the brown, steep banks of the Modder.

Meantime far distant Boer laagers were hurrying to Cronje's rescue. The Boer relieving force took up a position south of the river stretching from Paardeberg, in a southwesterly direction; a strong defensive position it was, with the evident intention of covering Cronje's retreat. General French was first concerned to firmly secure the two drifts—Koodoosrand and Makauw,—the latter five miles further up stream. In order to do this, it was necessary to occupy the line of kopjes one mile south, which ran parallel to the river. General Gordon with a battery of artillery, the 16th Lancers, and one hundred and fifty men of Roberts' Horse, was selected for this mission. The Lancers were detailed to seize Makauws Drift and Roberts' Horse, Koodoosrand. Both were successfully accomplished.

The possession of Makauws Drift by the British turned the enemy's flank under cover of the British artillery which laid a heavy bombardment on the hills to the south. Roberts' Horse was enabled to move out from Koodoosrand Drift and step into the positions the Boers had left along the coveted kopjes, which thenceforth formed the British outpost line, the remainder of Roberts' brigade bivouacking on the right bank of the river itself.

By these operations General French placed himself in a position to cooperate in an attack which was planned on an important isolated eminence held by the Boers and known as Kitchener's Hill, for the reason that it was the position first occupied by Kitchener's Horse when his main army reached Paardeberg. The hill rose some distance from the Modder, southeast of Paardeberg Drift, and was an important strategical point in that it commanded not only the river bank but a wide expanse of open veldt. Its importance had been gauged by Cronje as well as those who had so loyally flocked to his rescue. The "outside" Boers now held this vantage point in considerable numbers.

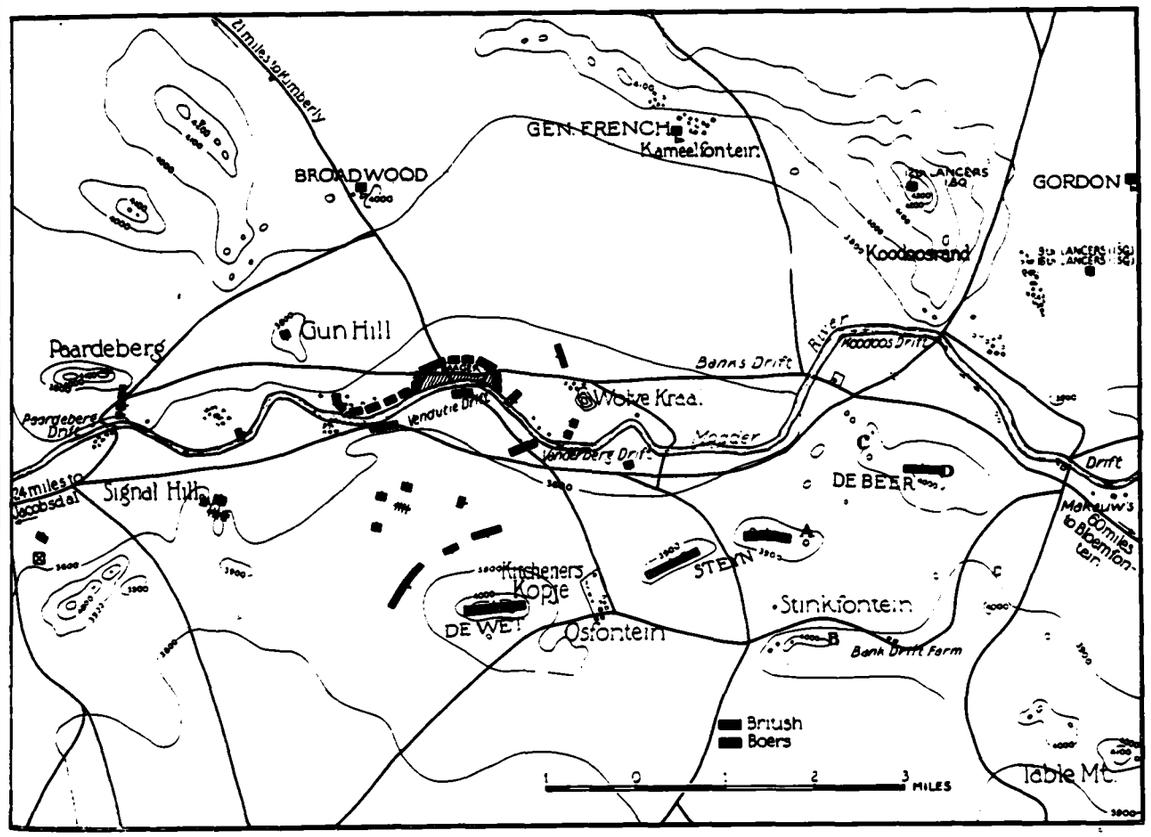
Should Cronje break through the British lines, as his comrades in arms had every confidence that he would, his retreat southward would be covered and practically assured so long as the Boers held Kitchener's Hill. The keen military eye of Lord Roberts, seeing that the enemy must be dislodged, sent two battalions of infantry, reinforced by artillery, to operate from the direction of Paardeberg to the south of the hill, while Broadwood's brigade of French's cavalry was ordered at the same time to turn the hill from the west and south, joining hands with a cavalry force under General French himself, which cooperating from Koodoosrand Drift, was to clear the intervening kopjes on its way. A battery, with the Lancers, one squadron of Kitchener's Horse and a detachment of Roberts Horse, was adjudged sufficient to leave behind as a protection to the Drifts. It may be well to mention in this place the skill and courage displayed by cavalry patrol leaders in the matter of reconnaissance which

was a particular feature of the work of French's cavalry in the Boer War. Over and over again the only means of finding out if a kopje was occupied by the enemy was for the British scouts to ride on until a burst of flame from the crest was incontrovertible evidence of the fact. It was a daily occurrence for a subaltern to go and draw Boer fire, knowing very well that this would not be until he got within the deadly range of four hundred or five hundred yards of an enemy, lying so well concealed that field glasses could not detect even so much as the muzzles of their rifles.

The terrain conditions generally made it inevitable that British scouts were forced to advance over an open plain where for miles they were visible to the keen eyes of the Boers. A grave deterrent to the confidence of the British cavalry scouts was the condition of the horses, which rendered cavalry patrols very liable to be overtaken if discovered. The method which was found to answer better than any other was that of dividing into small groups of four men each, supports of from eight to ten men riding about three hundred yards in rear, the groups riding at intervals of three hundred yards, a reserve of forty to fifty men being in rear of the center.

Setting out at daybreak on February 21st, so efficient was the work of the scouts that French's guns, when within 2500 yards of the most easterly Boer hill, were enabled to open fire upon it with confidence and effect, whereupon the Boers fell back in haste to their next position, a ridge lying westward where they were protected by a natural fortification of boulders, against which the British guns were unable to make any impression whatsoever. General French accordingly moved off to the flank and joined Broadwood's Brigade, which having marched from Paardeberg, was with General Kelly-Kenny's infantry actually engaged at the time in bombarding Kitchener's Hill itself.

As General French was resting his tired horses, about eight hundred Boers came galloping from Kitchener's Hill into the open. Evidently thinking that the reduced numbers of the British squadrons in plain view would be easy victims, they dismounted at eight hundred yards from General French and opened fire. But they had not seen and therefore had not counted upon the British guns, which lay concealed in the long grass behind and which soon unlimbered and opened fire. The dismounted British troopers meantime added to the discomfiture of their surprised foe by firing hot volleys. The Boers, suddenly checked in their confident advance, wheeled off and retired in the direction of an easterly hill they had abandoned earlier in the day.



PAARDEBERG.
Situation Early Part of the Night of 18th-19th February, 1900.

Finding even this position untenable they turned and fled across the plain towards Makauws Drift, under the bullets of the outpost held by Roberts' Horse. Their final disorganization was accomplished by the opportune fire of two British guns holding Makauws Drift from the north side. The British plan of Boer dislodgement by flanking movements of strong columns of cavalry with heavy guns, while an attack was delivered in the center by a strong force of infantry, resulted in gaining one Boer position after another for none had the wish to share the unenviable position of their favorite but unfortunate commander whom they had come to relieve.

By the next morning (February 22nd) the Boers had evacuated all their positions south of the river from Kitchener's Hill to Poplar Grove, their General Botha barely being able to save himself by racing off on a pony. The line of cavalry now extended from the river to the mounted infantry pickets at Kameelfontein. Two squadrons with guns formed a reserve at the neck, north of Koodoosrand Ridge and two squadrons of the Sixteenth Lancers reinforced the cordon round Cronje's laager from Lincoln's Post to Kitchener's Hill.

At this time, another one of French's Brigades General Porter's—arrived from Kimberley at Koodoosrand Drift, somewhat later than expected, owing to the miscarriage of orders and delay of supplies. For a week there was no sign of their transport train. The effect of short rations was intensified by exposure during many nights of exceptional inclemency during which the men were devoid of shelter and had no protection other than the clothes they wore. Yet fighting almost continuously during this period, they were rewarded for their efforts by at last seeing the "outside Boers" in their front in full retreat from the neighboring kopjes. Their success was however tinctured with regret inasmuch as it was out of the question with their jaded, worn, underfed and overburdened troop horses to pursue the Boers mounted upon their seasoned, hardy and lightly equipped ponies.

The place of cavalry in the pursuit had to be taken by artillery which never failed to shell the Boer horsemen, even though with indifferent results against such a fleeting target.

The total strength of General French's cavalry division at this time, reduced by the ardors of the South African veldt, was 4530 of all ranks, 4221 horses, 42 guns and six Maxims. Cronje's predicament in the meantime did not grow better. A careful inspection by the field glasses of the "outside Boers" showed Cronje's laager to be completely surrounded by the enemy. Hemmed in on all sides, his ease and that of his loyal burghers, a mere handful compared with the encircling multitude, had grown rapidly into a desperate one. For such a soldier as "Little Bobs" was not slow in pressing his advantage. He soon brought up a whole infantry division while the British artillery was reinforced by three Naval 4.7 guns and two Naval twelve pounders. In other words, thirty-five thousand men and sixty guns were scattered around Cronje's little Boer army on the Modder.

The frightful roar of big guns, the indescribable thunder of bombardment was always in their ears. It was only the supreme resolution of the Boer farmers and the indomitable example of their leader that enabled them to hold out through those interminable days. There was, of course, the strong hopes of relief which, welling continually, seemed not altogether in vain. The popularity of Cronje accounted for the many and determined efforts which had been made in his direction. They were based also upon the expectancy that ultimately he would fight his way out. Thwarted by the British cavalry, which stood around like terriers at a rat hole, the efforts of these "outside Boers" were destined to be of no avail.

Finally *their* hopes likewise perished. A Boer dispatch rider from the "outside" wormed his way miraculously through the British lines to Cronje, with the urgent appeal that he push through the British lines to an appointed rendezvous, where he would fall under the protection of the relieving forces. At the place of rendezvous—well outside the lines held by the British cavalry—the relieving forces waited for the helpless Cronje in vain. Through the silence of night, when his attempt was to have been made, the daring Boer messenger returned with an echo from the beleaguered Boer trenches to the effect that, as his horses were all killed, Cronje considered the attempt at escape foolhardy and declined to make it. Henceforward his days were numbered,—days in which the hours were continually punctuated by the pitiless guns which crashed shell and shrapnel into the river bed where the miserable Boers were huddled amidst their dead horses.

Lord Roberts' dispositions for envelopment were simple and efficacious. One brigade of infantry was placed astride the river to the west, with orders to push gradually up as occasion served, using trenches as their means of approach. Another infantry brigade occupied the same relative position on the east. Two other divisions remained in readiness. The two infantry brigades at either end of the Boer lines at length got within striking distance. The front trenches of the nearest brigade were only seven hundred yards distant from those of the Boers.

Before moonrise, in the darkness of the early morning, the Canadians, being in the lead, advanced, the front rank holding their rifles in their left hands and each extended right hand grasping the sleeve of the man next to it. The rear rank had their rifles slung and carried spades. The two infantry companies nearest the river were followed by a company of Royal Engineers, carrying bags of earth. The whole line stole through the pitchy darkness with the realization that any minute a blaze of fire such as flamed before the Highlanders at Magersfontein, might blow them to eternity. One hundred! two, three, four, five hundred paces! They could sense the Boer trenches. Still onward they stole, step by step. Their quarry must be within a stone's throw of them. Involuntarily, their hopes began to rise. Then as suddenly, they were cut short by an ominous resonant, rattling sound. Without

(Continued on Page 61)

Community Interest in National Guard

By Colonel William H. Waldron, Infantry

"I DO not seem to be able to get the people of this community interested in my company," complained Captain B. Company B was on the skids and sliding. The last field training inspection report rendered on the company was not good and the recent annual armory inspection report did not nearly come up to the Colonel's expectations. The Captain and the Colonel of his regiment were discussing ways and means for the improvement of the outfit which was stationed in a thriving little city of about 12,000 souls.

"Just what do you estimate to be the trouble?" inquired the colonel. "Let's lay all the cards on the table and play them face up—open and above board," he continued.

"No cooperation; no civic pride in this community. People of this town don't care anything about the National Guard," replied Captain B. "We can't get the right kind of young men in the company. Employers don't want National Guardsmen in their organization," he explained.

"All right," replied the colonel. "Now let's analyze the situation and try to arrive at some conclusions that may be of some value to us. You have a good armory here, and I must say it's kept in pretty good shape"—

"One of the best in the State," broke in Captain B. "We do keep it in good shape. You know, I'm a stickler for limiting the use of the armory to the purpose for which it is intended—military training. I don't believe it should be loaned out or rented for all kinds of affairs—dances, carnivals, automobile shows and such things. I turn them down all the time. I figure this armory was built for the training of Company B and is not to be used for a lot of outside things."

Figuratively speaking, the Colonel took a blue chip from the Captain's stack and deposited it on his own. He labeled it "non-cooperator." He continued his questioning.

"Do many of the townspeople turn out for your armory drills, and other company activities?"

"They do not. I have to keep them out of the armory on drill nights. I found that having a lot of people hanging around here on drill nights interfered with my training and I had to put a stop to it."

Another blue chip was added to the Colonel's stack. He earmarked it "exclusiveness."

"I happen to know, Captain, that you are in the insurance business," said the Colonel. "Do you hold a membership in the Chamber of Commerce?" he inquired.

"Chamber of Commerce in this town is a frost, it is absolutely no good," asserted Captain B. "They do not do anything worth while. Besides, sir, I do not see what that has to do with Company B." It was a touchy subject with the Captain. He had had a row in the Chamber of Commerce over the use of the Armory for a big civic affair and was in bad odor in that body. A third blue chip from the Captain's pile graced the Colonel's growing stack. It was named "civic interest." He went on leading trumps.

"You have a Rotary Club in town!" asked the Colonel affirmatively.

"Yes, sir, and they claim it is a pretty progressive outfit," admitted the Captain.

"Have you ever been to any of their noonday luncheons?"

"No, sir. As I understand it, the luncheons are confined to members of the club."

"Did you ever consider the idea of trying to get a membership in the Rotary Club?"

"No, sir. Another insurance firm fills the insurance classification there," was the alibi.

"Did it ever occur to you that there is a military classification provided for in the Rotary Club? I think it comes under the heading of National Defense, Land."

"Never heard of that before," declared the Captain.

"Well, that is a fact. As Captain of Company B, you are the head of the element of National Defense in this town, and as such you would be perfectly eligible for membership under the National Defense classification. Better look into it," enjoined the Colonel.

"I will," agreed the Captain reluctantly. "But that is a pretty close corporation and hard to break into. However, I'll do what I can about it."

"You know, your annual dues would be a perfectly legitimate expenditure from your company fund," vouched the Colonel. "It would certainly be classed as for the benefit of the company."

This statement seemed to ease the mind of Captain B. somewhat. But the attitude of the Captain gave the Colonel another chip—a red one this time and he dubbed it "tight-wad" in his own mind. He may have well added the same to his Chamber of Commerce chip.

"You say employers do not want National Guardsmen in their organization. Do you know this to be a fact, or do you just surmise it?" asked the Colonel.

"All I know is that some of my best noncommissioned officers have declined to reenlist when their enlistment expired, and they gave me that as their reason," contended Captain B.

"How do employers get around the law if they discharge a man because of his absence on account of attending a field training period with the National Guard?"

"Perfectly easy to do it," replied the Captain. "No employer will say to a man, 'Jones, if you go to the the training camp I cannot hold your place open for you'. That would be a poor way to put it up to Jones.

What actually happens is this. Several weeks after Jones comes back from camp and returns to work, Mr. Employer tells him that work is slack and they have to reduce the force, and that he is compelled to lay him off. He will let him know when to return to work. Jones is let out. The call to return never comes to him. Some other fellow eventually gets the job. But there has been no violation of the law."

"Have you ever gone to one of these employers and put the proposition squarely up to him?" inquired the Colonel.

"I would get nowhere with such stuff. He would laugh me out of his office. These people have no interest in the National Guard or in the National Defense. As far as Company B is concerned, the outfit does not fit into their scheme of things at all—at all. No use for me to waste my time on that line, Colonel. All I could do wouldn't amount to a hill of beans."

The Colonel increased his stack with another blue chip from the Captain's pile. He labeled it "employers," for the want of a better word.

"How many times has your company turned out in the past year? Have you all been in any parades or other community affairs?" questioned the Colonel, in quick succession.

The Captain thought it over for a moment. "As far as I can remember, not once," he answered. "There hasn't been a parade in town, that I know of, for more than a year. Last Armistice Day the Legion had charge of the ceremonies and they did not call on Company B to participate. I did not feel like butting in, because I got out of the Legion two years ago on account of the things they were doing in the Legion Post. I did not like the way they were running things."

Another blue chip to the Colonel's stack. It was dubbed "Legion." It raised the total to six. Here the Colonel stopped his questions. He lighted his pipe before proceeding.

"Captain, we have played the cards. I have lead trumps all the way through. I have acquired six of your chips and added them to my stack. Each one of them represents a thing that is the matter with Company B. I want you to listen to what I have to say about them.

"First, let's consider the matter of the use of the armory. This is a public building—bought and paid for by the people, the tax-payers of the state. I agree with you that it is primarily intended to be used for the military training of Company B and should not ordinarily be diverted from that purpose. But it is a fact that it is not used for military training every night in the week and in my opinion it should be made available to the community when it is available. Let me illustrate.

"Some civic organization needs the armory for a community affair. A committee of citizens come to you and ask you to let them have it on a specified date, which they have so arranged that it does not in the least interfere with your armory drill. In reply to their perfectly reasonable request you say No; maybe in no uncertain terms; maybe you try to give your reasons. They do not get by with the committee. These fellows are influential citizens, else they would not be on such a committee. By your action you have created a group of knockers against Company B. Had you granted their request you would have rendered a service to the community and at the same time made a group of boosters for the outfit. I am sure you see the point I am trying to get over to you." said the Colonel.

"Yes, sir. I see the point. Do you mean to say that I should let these people have the use of the armory without their paying for it?" inquired Captain B.

"That all depends upon what it is to be used for. If it is for a charitable purpose or something of that kind, I would say there should be no rental consideration. If it were a business proposition where some civic organization anticipates deriving a money profit from the use of the building, it would be perfectly all right to make a charge for it. Such organizations are usually ready and willing to pay a reasonable rental. Each case must be considered and decided on its merits.

"Some units have well organized activities in which extensive use is made of their armory and from which they derive money for their organization fund. In those states where boxing is legalized, armories are capable of being made handsome revenue producers under proper management. I have known of instances where one-company armories have made goood profits by conducting roller skating rinks in them. There are individuals who will take over an armory on certain specified nights each week and run it as a skating rink, giving the company a percentage of the gross receipts. They supply the skates and all equipment for the conduct of the business."

"Well, I must admit that I have never looked upon the matter in exactly the way you have put it up to me. Your arguments are convincing. Company B surely needs some boosters and maybe that's one of the ways to get them. It also needs some funds with which to carry on."

"From now on I will depend upon you to consider the use of the armory in the light of what I have said," enjoined the Colonel.

"Very well, sir," said the Captain.

"Now, let's consider the second chip. You say that you do not encourage the townspeople to come to the armory on drill nights. In my opinion you are making a grave error. How do you expect people to take an interest in something of which they know nothing? It's not human nature that they should do so.

"I would turn my policy around in this respect, just 180 degrees. I would encourage people to come to the armory on drill nights and let them see what the men are doing. When practicable I would put on a demonstration of the company activities, have open house, and invite the people to attend. On such an occasion I would have something worth while to show them. Arrange for guides to show them around and explain things to them. By doing these things you will raise the morale of Company B and you will make a lot of friends for the outfit. This open house proposition is no fanciful dream. It is a reality and those organizations which have tried it out have found it all to the good. Besides creating community interest it is

capable of being developed into a big publicity feature for the company which only adds to community interest.

"Again I say, I will depend upon you to proceed along the lines I have been talking about. I am sure you will find it to your advantage to do so."

"Yes, sir," was all that the Captain could say.

"We will now consider the third chip. I noted with interest what you said regarding your position in the Chamber of Commerce and their attitude towards Company B. I am familiar with all of this and the problem is capable of solution. In fact I have started the solution already. I have paved the way for you through my friends in the Chamber and they are ready to let bygones be bygones.

"In your Chamber of Commerce you will find the leaders of business and civic affairs of your city. They are men of influence and prestige in the community. As an organization they can put over anything they set out to do.

"I also happen to know that there is no military committee in the organization of the Chamber of Commerce. The consequence is that there is no organized body whose business it is to consider things military in this city. There should be such a committee, and you being the senior officer of the National Guard, should be chairman of it. I have also talked this matter over with the president of the Chamber and when you have demonstrated to them that you are ready to play the game, they are ready to meet you more than half way. In this connection I may say that your membership dues in the Chamber would be a legitimate charge against your company fund."

"But, Colonel, you are piling up more charges against the company fund than it can stand," said the Captain.

"I was waiting for just that statement. My answer is this. When you get to doing the things I am telling you about, the community will support your company. They will see to it that you have all the money in your company fund that you require.

"All that I have said about the Chamber of Commerce and its relations with you and your company, I now repeat and emphasize, with respect to the Rotary Club. Again I have paved the way for your application to fill the vacancy now existing in the Rotary classification "National Defense. Land," and you will be elected to it in due course. You will have to submit your application and have it acted on by the membership committee of the Club.

"You will find that your membership in these bodies will give you a higher standing and increase your prestige in the community. Incidentally, you will find that it will do no harm to your business in civil life.

"Now, take these third and fourth chips and add them to your stack. Check and double-check them."

The Captain saw the points the Colonel was making. His morale was going up every minute. In his heart he was clamoring for the solution to his other problems.

"Now, for the fifth chip. I want you to win that back, too. These employers of men are hard headed business men, intent upon making profits for themselves, paying their stock holders regular dividends and keeping their establishments out of the red. They have to do these things to get away with their game. Unless they can see some advantage in having their men in Company B, they cannot be expected to give a whole-souled endorsement to the idea of their going off to a training camp every summer. The best you can hope for is absence of antagonism. But you show these fellows where Company B fits into their own scheme of things and how the company may render them a service, and the way is paved for their support to the limit.

"You say some of your noncommissioned officers failed to reenlist because their employers do not want National Guardsmen in their organization. Where were these men employed?" asked the Colonel.

"One of them is with the street railway company, and another is with a manufacturing concern," replied the Captain.

"All right, suppose you go to the corporations with a proposition of rendering them a service in case of fire, flood, storm, or other disaster, show them that Company B is the only organized and equipped body of men in town that is capable of being called into service in an emergency and that can be depended upon to step in and take charge of affairs when the local authorities have exhausted their resources and have their backs against the wall. Tell them that Company B stands ready and willing to do this community service in case of emergency and show them your plans for the mobilization of the company on short notice. In connection with all of this, you propose that you make a military survey of their plants and work out these relief plans to meet any emergency that may arise. Such a survey will include the location of sensitive and vital points in the establishments and your plans for the protecting them with guards and relief parties. You will find these people interested because you are proposing to render them a service.

"At this time you do not have to bring up the employee question at all. They will eventually bring it up themselves and coming from them is better than coming from you. The chances are that they will be encouraging their men to take on in Company B."

"That's all fair enough for the fellow who has nothing to do but command a company in the National Guard. You know I have a living to make, too," argued the Captain.

"Again I was anticipating that remark. You are in the insurance business?" affirmed the Colonel.

"Yes, sir," answered Captain B.

"Can't you see, man, that the contacts you make in connection with the service of Company B will stand you in good stead in the insurance business? Can you get any better approach to a man than the offer of a service to him? Your business depends absolutely upon favorable contacts. I'm pointing out to you the best way in the world to get them. In the game I'm talking about you never know when you may be rustling up a high commission policy. There are dozens of industrial concerns here any one of which may re-

quire the services of Company B any minute. I do not think it is necessary for me to say more on this subject, is it?"

"No, sir," replied the Captain. "I get your points."

"Now, for the sixth chip. A National Guard company needs opportunity to display its goods. If these opportunities do not exist they must be created. An up and going Legion post has occasion to turn out several times each year. They are the logical organization to have charge of the local patriotic affairs. In order for Company B to get in on these, the company must have a standing with the Legion. This all means that you as the Captain of Company B must take a leading part in the conduct of Legion affairs. You can render indispensable service to the Legion, and by working it in the proper way you can be one of the leaders of their activities.

"My advice to you is to brush aside any personal feeelings you may have against the Legion. Get into the organization with both feet and play the Legion game big. You need them for Company B, and they need Company B at every turn of the road. I am sure you see my contentions and how you can work out the solution of the problem to the benefit of the National Guard."

"Yes, sir," was about all the Captain could say.

"I expect to see your activities along the lines I have indicated reflected in the future reports on your company. I realize it is going to take you a while to get these things operating but when you do I am sure you will find them all to the good." said the Colonel.

Captain B thanked the Colonel for his visit. He expressed his sincere appreciation for what he had done for him. He assured him that the day marked a new jump off line for the company and for himself as well. So it proved.

International Horse Show at Pardubice, Checo-Slovakia

THE Checo-Slovakian Equestrian Federation is organizing this year a great international horse show, to take place at Pardubice from the 27th of September to the 3rd of October, as a part of the Physical Training and Sports Exposition. President Masaryk has agreed to be the sponsor: M. Udrzal, President of the Council, has accepted the honorary presidency. Both are fervent horsemen and great admirers of equestrian sport.

Pardubice is a great horse center universally known for its fox hunts and obstacle races. On the 4th of October will take place the great steeple-chase, a richly endowed test, with one of the most difficult courses in Europe. All horse show competitors are invited to take part in it.

The show events will be put on in the new Exposition stadium built for the occasion. The instructors of the Checo-Slovakian Cavalry School, which is at Pardubice, will organize the show in such a way as to give complete satisfaction to the contestants and to the public.

The show includes, among other events, 10 international jumping events, the principal of which will be "The President of the Republic's Prize," for teams of four riders from each nation, and two international schooling events, one of which corresponds to the "dressage" of the 1932 Olympiad.

Lucerne International Horse Show, 1931

THE Société Hippique of Lucerne has decided to organize again in 1932 an International Horse Show at Lucerne, which will take place from the 3rd to the 11th of July.

Events Overseas

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

A LEAGUE "with teeth in it" is proposed once more. France has placed itself squarely behind the project offered September 1 by M. Paul-Boncour, chairman of the Foreign Affairs Committee of its Chamber of Deputies, that the land, air, and naval forces of all League members be pooled to execute the mandates of that body whenever needed. The idea of such an international police force is not new. Brought forward by Leon Bourgeois in 1919 for incorporation in the Treaty of Versailles, it found no support outside his own country.

Judging from the immediate repercussions in Continental capitals, the thesis has small chance of acceptance. Too large the French military establishment, too solid and substantial the bloc of votes in the Council under French control for the mental comfort of rival Powers under such an arrangement. The press of London, Berlin, and Rome see behind the proposal a French hegemony permanently clamped on the Continent. Paul-Boncour has provided an active talking point in the diplomatic parleys preceding February's International Disarmament Conference.

After all, is it safe to hold the Conference? Or would it be wiser to postpone such a major surgical operation until an ailing world has recovered something of its normal health and temper? The prime movers behind the effort scheduled for February 2, 1932, are wondering whether they have not pushed matters so rapidly and at a time so unpropitious as to retard, or possibly to scuttle, every hope of success in this movement for world peace. If the declarations of Paris, London, and Rome over the past two months are to be taken at face value, deadlock already exists, five months before the gavel is raised. The French memorandum of July 21 to Geneva announces briefly that that country has already reduced her armaments to a minimum. Typically Gallic is the added remark that disarmament is a political not a technical question. Ramsay MacDonald likewise finds his country's defense preparations at the lowest point consistent with safety. Mussolini insists on quid pro quo. He will scale down only when and if his rivals do so, and only if he may retain an armament as strong as the strongest. Parity with France in brief. The intransigent tenor of such pronouncements is understandable when we note the fear on the part of Europe's political leaders that for many months at least the Continent will continue to be a boiling kettle of political and economic feuds. In such an atmosphere disarmament would strangle.

In spite of these obstacles, steady progress is made on the draft treaty which will constitute the working text of the Conference. Already it is obvious that limitation of aircraft, will constitute a major difficulty. London and Paris, remembering the Zeppelin raids, wish to limit dirigibles as to number, volume, and horsepower. Military airplanes, under that proposal, are limited as to number and horsepower, and a further check is placed on strength of personnel. Whether there will be any attempt to interfere with that highly variable strength factor, the commercial plane convertible to military use, is doubtful.

The British Empire

United Kingdom. Labor is out. The MacDonald Cabinet which came into power on a tidal wave of votes June 5, 1929, resigned office August 24. Asked by King George to resume his duties as premier and to organize a new government of all parties, MacDonald assented. Within twenty-four hours he had secured the King's approval of a Coalition Ministry, in which Labor and the Conservatives both held four appointments, and the Liberals, two. Philip Snowden remains as Chancellor of the Exchequer. Stanley Baldwin, Conservative leader, and twice a premier becomes Lord President of the Council.

Parliamentary acceptance of the Ministry, when that body convenes September 8, seems a foregone conclusion. MacDonald can count on the solid support of the Conservatives, and probably of all the Liberals. How much more than a handful of the Laborites will follow him out of the Socialist fold is a question. For, note his words in his radio appeal to all classes of Britons: "I have not the Labor Party credentials for what I am doing . . . Be that as it may, I have the credentials of an even higher authority, those of national duty as I conceive it, and I obey them irrespective of consequences." Rank apostasy that, in the eyes of the Trades Union Council, executive committee of Labor. And promptly the four Labor apostates who hold portfolios in the Coalition Cabinet are read out of the party. In short, Labor has so far gone the road to Moscow as to declare that the interests of the proletariat supersede those of the nation. They refuse to see that wide open pit which has opened before British credit, the patent fact that its further depreciation will so strike British commerce and industry as to make intolerable the hard lot of the worker. Whatever Labor's view, England has decided to retain the services of MacDonald and Snowden, who, it seems, will be "kicked upstairs"—into the House of Lords.

MacDonald's economy program awaits detailed announcement, but higher taxes and a slash in expenditures are certain. The dole is apparently due for a ten per cent scale down, not enough by a good margin to bring it in line with the reduced cost of living. A political truce is guaranteed by the tripartite group

in support during its passage, and with that goal achieved, the bludgeons will be taken up again in preparation for a new general election.

An incident of note in this drama appears in the emergence of the Crown from the status of figurehead, to which British politics had relegated it in the past century. It was by the King's "command" that the opposition parties joined MacDonald in the fight for the nation's credit. Not since the emergency of 1915 has the world witnessed such an assertion of the royal prerogative in England.

The reaction in favor of British credit was almost instantaneous. Private banking interests in the United States and France raised $400,000,000 within 36 hours to support the pound. Meanwhile, the Prudential Assurance Association of Great Britain mobilized a half billion in foreign securities for a similar purpose.

The Dominions. Canada alone holds her head safely above water, and even she shows signs of distress. The drought has given her a devastated area over a six hundred mile belt in the prairie region, covering an average depth of 150 miles just north of the international boundary. No merchantable wheat will be harvested there this fall. Relief legislation of all kinds will entail the highest national expenditures in history,—at a time when income is dangerously low.

Australia, having bravely chosen the hard road of honor, is considering the recommendations brought forward by an Economy Committee. If carried through, the Commonwealth will achieve savings for the fiscal year estimated at about a half billion dollars. And Premier Lang, New South Wales' apostle of repudiation and dishonor, ate crow when, hat in hand, he came to his Council for the funds to pay his Civil Service. New Zealand, like Australia, is paring defense appropriations in a drastic manner. The cut involved a complete reorganization of her military forces. Compulsory training is abolished. How difficult her situation has become may be realized from the fact that, requiring an export trade of £10,000,000 annually to cover the Dominion indebtedness, her exports today are virtually wiped out.

Western Europe

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Help for Germany? Of course. But French short term credits to her rival are negligible. The risk is too great. Moreover, Premier Laval announces there "can be no credits without confidence", or to translate, France wants political guarantees as to *Anschluss* and the *Treaty of Versailles*. Austria's action in renouncing *Anschluss* September 1 helps clear the way for future credits to Germany.

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Spain. Spain zigzags confusedly. Radicalism and regionalism provide pitfalls and barriers to every constructive effort of Zamora's provisional government until the press, in early September, finds Madrid in the "totter" stage. Just what do the Spanish people want? The forced removal of a king and the curbing of the power of the Church had the support of the vast majority of the populace. From that point forward it has been a bitter tug of war between violently opposed elements, all determined to cut the cloth of the new government to their own pattern. Apparently, a liberal republic will be the offering of the Constitutional Assembly which began its labors in the closing days of July. But how liberal? Syndicalists, Marxian Socialists, Communists, and Republicans contest for the upper hand, showing no mood for compromise. The Socialists boast the strongest single party in the Cortes, but it falls sufficiently short of a majority to necessitate an alliance with the Republicans. And the militant minorities, Communist and Syndicalist, live up to their code of bad manners with strikes, riots, bombs, and what-not.

Disorder has become chronic, in spite of the repressive measures used by the police and army. Barcelona is, as always, the heart and center of extreme radicalism. Under virtual martial law for weeks, it nevertheless became on September 3 the scene of the most serious efforts to date toward violent overthrow of established government. Sindicato Unico, violently radical labor organization, succeeded in paralyzing all commercial and industrial activity by means of a general strike. After two days of hard fighting in which artillery was used on the Syndicalists' headquarters and arsenal, the strike appears to be broken, although the Anarchists now order its continuance. An earlier and similar effort at Seville was nipped when the troops struck hard, arriving just in time to rescue the bakers who were being browned in their own ovens by their Moscow-minded employees.

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In each case remedies were found. Germany bravely chose the method of self-help.—reduced expenditures, more taxes. The financial representatives of the United States, Great Britain, France, Italy, and Belgium, backed by the Bank of International Settlements, provided means to further extend the short-term credits previously granted Germany. And the Fascists fell short by more than 3,500,000 votes of the number needed to topple the Prussian Diet. On that occasion the Communists, even more ugly than usual, were clubbed and shot into quiescence after two days rioting.

The immediate danger was over by the end of July. The mark again approached parity, German bonds rose in all foreign exchanges and the Reichsbank rediscount rate, raised to 15% at the height of the crisis, was dropped to 10%. Late in August a 7% rate became general throughout the country. Not till September 3, the day of reopening of exchanges, which had been closed for seven weeks, was German faith in the nation's stability put to a full test. Stocks were dumped at a sacrifice as high as forty per cent of their previous values, with few takers to be found. Foreign buying the following day ended the calamitous drop for the time being, but the future appears dubious.

Germany and Austria saved face, and little else, when on September 3, they publicly renounced their customs union. The announcement anticipated an unfavorable decision by the World Court, which has had the legalistic aspect of the matter under consideration. No bar to German action in that direction was found by the Court, but Austria was found estopped by her commitments under the contract entered into by Vienna, when in 1922, she secured a loan from a group of Powers, members of the League. Schober, Austrian Minister of Foreign Affairs announced bravely that this is but a temporary setback, not ultimate defeat. Of greater importance than the Court decision was the fact that France, strongest opponent of the proposed union, today holds the whiphand over European finance, a fact which the impoverished Teutonic would-be partners cannot hurdle.

Italy. Bluster is no new element of Italian pronouncements. Senator Scialoja, Italy's representative at the Permanent Court of International Justice at the Hague, making his plea for Italy in the Austro-German Customs matter, stated bluntly that the decision might mean peace or war. Mussolini, speaking to his Blackshirts at Ravenna, declared in part, "We are ready to overthrow and destroy everything which may impede the march of the Fascist revolution." Repeatedly and from the outset he has denounced the international conferences at Geneva and elsewhere which are seeking a way out of Europe's economic morass. And he has so far abandoned hope of any desirable outcome of the approaching General Disarmament Conference, if we are to accept his statements at their face value, that he suggests a one year international truce on all armaments as a palliative. Finally, he proposes to give the League one more chance to solve the problem of Europe's economic rehabilitation. Failing in that he demands a free hand for Italy's quest of "harmonious relations" to avert the split of Europe into two hostile camps.

The mobilization of the Fascist Army is scheduled this year to take place in an area north of Venice, between the Piave and Tagliamento Rivers, not far from the Austrian and Yugoslav borders. No significance is attached by the Italian press to the site selected, even though the recent French maneuvers on the Franco-Italian border are taken into consideration. However, the ability of the Fascist auxiliaries to mobilize promptly and effectively for any emergency is to be made clear to the world. The annual air maneuvers, beginning August 26, in the vicinity of Spesia, involved the assemblage of about 1,000 planes, the largest air fleet ever brought together in Europe.

At this writing, the Fascist-Vatican controversy, Mussolini's most difficult domestic problem since May, seems to be over. Under the agreement forecast, the Vatican will be assured of full control over the religious education of Italian youth. In all other spheres the Fascist government will have direction.

Eastern Europe

Russia. Opportunist Stalin again startles the world with one of his lightning changes of policy. Briefly, the "class war" is over, and the Russian people are a united whole, if we are to believe his announcement. In particular, Stalin is making overtures to his skilled engineers responsible for the management of the gi-

in support during its passage, and with that goal achieved, the hindgeons will be taken up again in preparation for a new general election.

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Aug. 9—Fascists and Communists seek in referendum to dissolve the Prussian Diet, and secure new elections.

In each case remedies were found. Germany bravely chose the method of self-help,—reduced expenditures, more taxes. The financial representatives of the United States, Great Britain, France, Italy, and Belgium, backed by the Bank of International Settlements, provided means to further extend the short-term credits previously granted Germany. And the Fascists fell short by more than 3,500,000 votes of the number needed to topple the Prussian Diet. On that occasion the Communists, even more ugly than usual, were clubbed and shot into quiescence after two days rioting.

The immediate danger was over by the end of July. The mark again approached parity, German bonds rose in all foreign exchanges and the Reichsbank rediscount rate, raised to 15% at the height of the crisis, was dropped to 10%. Late in August a 7% rate became general throughout the country. Not till September 3, the day of reopening of exchanges, which had been closed for seven weeks, was German faith in the nation's stability put to a full test. Stocks were dumped at a sacrifice as high as forty per cent of their previous values, with few takers to be found. Foreign buying the following day ended the calamitous drop for the time being, but the future appears dubious.

Germany and Austria saved face, and little else, when on September 3, they publicly renounced their customs union. The announcement anticipated an unfavorable decision by the World Court, which has had the legalistic aspect of the matter under consideration. No bar to German action in that direction was found by the Court, but Austria was found estopped by her commitments under the contract entered into by Vienna, when in 1922, she secured a loan from a group of Powers, members of the League. Schober, Austrian Minister of Foreign Affairs announced bravely that this is but a temporary setback, not ultimate defeat. Of greater importance than the Court decision was the fact that France, strongest opponent of the proposed union, today holds the whiphand over European finance, a fact which the impoverished Teutonic would-be partners cannot hurdle.

Italy. Bluster is no new element of Italian pronouncements. Senator Scialoja, Italy's representative at the Permanent Court of International Justice at the Hague, making his plea for Italy in the Austro-German Customs matter, stated bluntly that the decision might mean peace or war. Mussolini, speaking to his Blackshirts at Ravenna, declared in part, "We are ready to overthrow and destroy everything which may impede the march of the Fascist revolution." Repeatedly and from the outset he has denounced the international conferences at Geneva and elsewhere which are seeking a way out of Europe's economic morass. And he has so far abandoned hope of any desirable outcome of the approaching General Disarmament Conference, if we are to accept his statements at their face value, that he suggests a one year international truce on all armaments as a palliative. Finally, he proposes to give the League one more chance to solve the problem of Europe's economic rehabilitation. Failing in that he demands a free hand for Italy's quest of "harmonious relations" to avert the split of Europe into two hostile camps.

The mobilization of the Fascist Army is scheduled this year to take place in an area north of Venice, between the Piave and Tagliamento Rivers, not far from the Austrian and Yugoslav borders. No significance is attached by the Italian press to the site selected, even though the recent French maneuvers on the Franco-Italian border are taken into consideration. However, the ability of the Fascist auxiliaries to mobilize promptly and effectively for any emergency is to be made clear to the world. The annual air maneuvers, beginning August 26, in the vicinity of Spesia, involved the assemblage of about 1,000 planes, the largest air fleet ever brought together in Europe.

At this writing, the Fascist-Vatican controversy, Mussolini's most difficult domestic problem since May, seems to be over. Under the agreement forecast, the Vatican will be assured of full control over the religious education of Italian youth. In all other spheres the Fascist government will have direction.

Eastern Europe

Russia. Opportunist Stalin again startles the world with one of his lightning changes of policy. Briefly, the "class war" is over, and the Russian people are a united whole, if we are to believe his announcement. In particular, Stalin is making overtures to his skilled engineers responsible for the management of the gi-

gantic industrial establishments which are being set up under the Five-year plan. Invidious distinctions between the highly skilled personnel inherited from Czarist days and the younger dyed-in-the-wool Communists are swept aside. The reason for it all lies on the surface. Communist efforts to build a gigantic industrial plant have thus far been a history of one calamitous failure after another, except in those cases where foreign engineers (usually American) have had complete control. And the successive trials of the Czarist engineers for sabotage of these efforts have failed even to provide the necessary goat for the appeasement of national wrath. Hence the olive branch and cooperation—for a spell. At the same time, the foreigners are to be given a free hand, while the ignorant Commissars who can boast no merit beyond high-powered Communism, are pulled into the background in the administration of industry.

The coming winter worries Moscow. At no time since 1927 has the populace shown more severely than now the unremitting strain of close rationing, war psychology and ever-increasing "tempo." There are promises of a greater food supply for internal distribution, but on the other hand average prices have mounted a full fifty per cent under decrees whose object is to bring more ready cash to the Treasury. Looking beyond the winter, Stalin has recognized the need of a permanent increase in the supply of basic commodities,—in short, a higher standard of living. A new Five-year Plan accordingly takes shape, with the agronomists in charge. Production of live stock is to be increased by from 20 to 60% within the first year. Canning and dehydrating plants are to be erected. A distinct fillip is given by prospects of another record-breaking harvest this fall, increase in acreage having more than counterbalanced the damage incurred from severe drought.

Threats and blandishment alternate in Russo-Polish diplomacy. Large scale Russian maneuvers during mid-July in the vicinity of Minsk, near the Polish frontier are counterbalanced in a measure by Moscow's invitation to Poland for an exchange of information on armaments, as a preliminary to the approaching conference at Geneva. A rapprochement would greatly ease the road for the Franco-Russian treaty of non-aggression. But there are embarrassments. The discovery that Major Piotr Dembowski, brilliant Polish General Staff officer, was a Communist in Russia's service and was keeping Moscow informed of Poland's war plans is a case in point. His summary execution was ordered, and one Bogoboj, Russia's acting military attaché, hastily left for home.

Russian efforts toward armament production are pushed at a feverish pace, though with many a hitch. The new model guns turned out under German management were pronounced very pretty, but the steel refused to stand up under firing conditions. Inferior steel likewise puts a blight on tank production. Better success is reported in the output of aircraft, as signalized by the flight over Moscow August 15, of the ANT-14, the first Soviet-built five-motored plane. Only the DO-X and the Italian bomber KA-90 surpass it in size. It has a speed of 135 miles an hour.

The Balkans and the Near East

Rumania. Bank crashes which speak for themselves alternate with reports of dictatorship, of military alliances (affirmed and denied). The blossoming of the defensive alliance with Poland into a joint bulwark against Russia, under French direction, awaits full confirmation. Sizable orders for armament have been placed by Bucharest with Polish arms factories. Of equal interest are "Pravda's" reports that Rumania is establishing a naval base on Pascel Island, north of Constanza. Russia sees a threat from Great Britain and France, who are charged with inspiring this development to secure a base for future joint naval operations against Russia. Nor is Russian suspicion allayed by the material increase in strength of the Rumanian navy as a result of recent French and Italian deliveries.

Growing communistic infestation of the Rumanian populace is being dealt with drastically. Mere membership in the Communist Party is punishable by imprisonment from six months to three years. Active participation in propaganda is resulting in five to ten year sentences for the culprits. Military authorities have concurrent power with the police in arrest of offenders, and trial is by court-martial.

Bulgaria-Greece. The eleven-year old controversy over the repatriation of the nationals of both countries is coming to a head. Bulgaria has arbitrarily ordered all Greeks to leave the country within thirty days, reprisal according to Sofia for the earlier Greek action in expediting the departure of reluctant Bulgars from Greek territory. The special committee appointed by the League some years back to settle the quarrel has thrown it up as a bad job. Another problem for the World Court.

Turkey. The appearance of 25 Italian hydroplanes in the Black Sea for maneuvers in July has brought a prompt protest from Angora to the Straits Commission. A violation of the Treaty of Lausanne is charged, in that it prohibits passages of the Straits by a force greater than that of the most powerful fleet of the littoral powers of the Black Sea. Rome blandly protests that fourteen of the planes came overland.

Hungary. The retirement of Count Bethlen, "because of ill health" according to his own statement, coming hard on the heels of the loan of $25,000,000 granted the Hungarian government by Paris, occasioned a flurry in the Continental press. Briefly, the premier's head was a part of the price charged by Paris, according to the German version. And with no end of glee these observers discover that Count Julius Karolyi, the new premier, sees "eye to eye with his predecessor," and that his Cabinet is at least a "shadowgraph" of the Bethlen Ministry. Whether the change will put an end to the growing influence of Italy and Germany in the affairs of Hungary is a question for the future.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson

CANADA—*Canadian Defence Quarterly*—July 1931.

This issue contains an editorial on the Caribbean policy of the United States. Although the author regards that policy as essentially defensive in character, with security of the trans-isthmian canal route or routes as its sole basis, he, nevertheless, holds that in its practical application it is a contradiction of the Pan-American policy, albeit the two regulate the relations between the United States and Latin America. The methods employed in giving effect to the Caribbean policy, particularly in its economic and political aspects, have aroused serious apprehensions and misgivings, and so reacted against Pan-Americanism. That the underlying motives have been misunderstood is beside the point. The fact remains that the actions of the United States have had the most unfavorable repercussions throughout Latin America.

The Clark Memorandum on the Monroe Doctrine, and more recently, the course of action adopted in Nicaragua and Honduras suggest a definite change, not in the Caribbean policy, but rather in that phase of its application which was productive of much recrimination and misunderstanding. It is still too early, the author believes, to gauge the Latin American reaction to this change and, by way of conclusion, he whimsically observes, "We can not help wondering whether the application of this new 'policy of restraint' was not hastened by the recent British Empire trade drive in South America."

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

"The Infantry Regiment in Defense," by Lt. Col. Lesaffre and Capt. Fraeys.

A very interesting and instructive illustrative problem in troop leading, in which the authors cover progressively reconnaissance, preparation and occupation of a defensive position by a regiment of infantry. Appropriate field orders for each phase of the problem form part of the text. The dispositions provide two successive defensive lines in fairly close proximity; the second line is garrisoned by the regimental reserve. The study affords an excellent insight into Belgian defensive combat tactics and principles.

COLOMBIA—*Revista Militar del Ejercito*—Sept. 1930.

"The Work of the Chilean Military Mission in Colombia," By Colonel Jorge Mercado.

The last civil war in his country, writes Colonel Mercado, accredited Military Attaché of Colombia in Washington, had reduced the Colombian Army to the state of a barbarous horde. Organization, as far as there was such, depended upon the whim of revolutionary leaders rather than upon military reason or necessity. Recruiting became more or less of an organized manhunt. Corporal punishment was the basis and means of maintaining and enforcing discipline. The Chilean Military Mission, invited to Colombia by General Rafael Reyes while President of the Republic, changed all that completely. Some of the ablest officers of the Chilean Army were assigned to that interesting and important duty of rehabilitating, reorganizing and training Colombia's army, which, thanks to the unselfish and devoted services of these instructors, has become an effective and efficient military organization as well as an institution for the propagation of practical patriotism and good citizenship. The Chilean officers who participated in this work, the author writes, have earned for their country the everlasting gratitude and loyal friendship of every citizen of Colombia.

FRANCE—*La Revue d'Infanterie*—April, 1931.

"Tactics and Armament," by General Challéat.

The author, an experienced artilleryman, analyses the military properties and firepower of modern weapons in their relation to offensive and defensive combat tactics. Applying his deductions specifically to the weapons of the French army and their proper tactical use, he develops existing deficiencies in materiel as well as in tactics and technique, and points out the needs of the future.

The machine gun, light and heavy, is an effective weapon for defensive warfare. In offensive action, however, it is of little value against personnel under cover or against materiel. Because of its great mobility the machine gun is an effective weapon against assemblies of reserves and for harassing hostile troop movements behind the front. The author recommends the development of a special 30-mm. antiaircraft machine gun which should be subject to the regimental commander and for that reason located near his P. C.

General Challéat believes that the infantry's greatest need is an effective antitank gun. He regards the 75-mm. field piece as poorly adapted for that rôle. Unlike the machine gun it cannot lay down a continuous band of defensive fire to stop an advancing tank. Hence, it must continue systematic fire until it scores a disabling hit. That, the general believes, is largely a matter of luck.

Present infantry weapons, the author believes, are inadequate against an enemy in an intrenched position. The difficulty of keeping up the ammunition supply during an attack which has reached close proximity to the enemy, further complicates the problem. There are also serious difficulties in the way of close and effective cooperation between infantry and supporting artillery. This suggests to him the growing need for an "accompanying gun." Again, he regards the 75 as ill-suited for that purpose because of its weight. The author recommends the development of a 37- or 47-mm. cannon

capable of serving the need of the infantry against tanks and against intrenched personnel both in offensive and defensive combat.

Artillery armament, the author believes, leaves little to be desired. Such deficiencies as do exist he discussed in an article published in the April, 1930, number of the "Revue d'Artillerie". He advocates a more extensive use of shrapnel in lieu of H. E. shells for certain classes of interdiction and harassing fires and a more extensive employment of 75's for counterbattery work. He also believes in the desirability of adapting the 75-mm. ammunition for the use of reducible charges to permit a more effective adjustment of trajectories at short and mid-ranges.

Since the antitank gun is the tank's most formidable enemy, General Challéat suggests the necessity of developing a new, specialized artillery for tank support. This proposed organization he labels "armored regiment", because of the protective armor he believes each gun should carry against frontal and enfilade fire. General Challéat offers a simple plan for the tactical handling of this artillery. A gun accompanies each tank to the cover from which the tank is to debouch for the attack. The gun is emplaced in a suitable position previously selected and the gunners follow alertly the progress of the tank, and are prepared for immediate action against any hostile antitank gun which may open fire. He visualizes the tank and supporting gun as an inseparable team, with the tank advancing from cover to cover, awaiting at each halt the forward displacement of the supporting gun.

HUNGARY—*Magyar Katonai Szemle* (Hungarian Military Review).

By direction of the Minister of Defense, the various Hungarian military publications were consolidated, and have appeared, since January 1, 1931, as a united service monthly. The text, averaging 300 pages, is arranged under nine headings, each forming a separate section with its own editor. These sections are: 1. General Military Information; 2. Publications of the Infantry and Cavalry School of Musketry; 3. Technical Section: Engineers and Aviation; 4. Supplies and Administration; 5. Medical Section; 6. Publications of the Military Historical Archives; 7. Veterinary Section; 8. Sport Items; 9. Miscellaneous: Items of General Interest—Reviews of the Professional Press—Book Reviews. The table of contents is printed in Hungarian, German, Italian and French.

This excellently edited magazine is a publication of the Royal Hungarian Military Historical Archives, Budapest, and is under the general editorship of Colonel vités Stephen Berkó. Annual subscription 12 pengös (about $4.00). All officers of the active list and militarized officials of correlated services are required to subscribe to this publication, and provision is made for deduction of the fee from the officers' pay in monthly instalments.

GERMANY—*Militär-Wochenblatt*—July 18, 1931.

"Mounted Pistol Practice".

Mounted pistol practice has not received the serious attention in European cavalry organizations that is the case in the American service. It is, therefore, interesting to note that our system of training in the mounted use of the pistol is beginning to command attention abroad. The *Wochenblatt* acquaints its readers with the details of the course of instruction for mounted pistol practice prescribed by Training Regulations in force in the U. S. Army. Sketches showing the mounted pistol course illustrate the text of this article. By adopting the well-tried and successful American method of training, the author believes, the German army will be able to place its mounted pistol practice upon a broader and better basis.

INDIA—*Journal of the United Service Institution of India*—April, 1931.

"Aircraft and Internal Security in India," by "Constabeel."

The employment of armed forces for internal security must be governed by the following principles:

1. Object: To restore normal conditions with the least exercise of force.
2. Forces of law should take and maintain the offensive.
3. Prevention is better than cure: hence arrest leaders, break up hostile organizations and quell disturbances in their initial stages.
4. Use force only against disorderly elements.
5. Action taken should leave neither bitterness nor resentment.

Aircraft may be used in case of civil disorders for reconnaissance, communication, moral effect, offensive action, and transportation. Conditions in India are such that the author is inclined to believe that aircraft will render most effective services in the field of transportation, effecting both economy of force and a saving in ultimate cost.

Revista de Equitación

The CAVALRY JOURNAL salutes the Mexican *Revista de Equitación*, founded by Major General Joaquin Amaro, Secretary of War, and edited by General Brigadier Rodolfo Casillas, a graduate of Saumur and Fort Riley. In addition to other interesting matter the magazine gives much space to the new Equitation Regulations, to prepare which General Casillas has been commissioned by General Amaro, himself an enthusiastic and finished horseman.

CURRENT TOPICS

1931 Cavalry Rifle and Pistol Teams

COMPETITION at Camp Perry was especially keen this year as is shown by the large number of competitors, some 2000 representing 113 teams from all over the United States.

Cavalry individuals were conspicuous on the rifle bulletins of every match. The Farr Rifle Trophy was won by Corporal Kellerman of the 12th Cavalry, who, with a service rifle, made the phenomenal score of 99 out of a possible 100 at 1000 yards.

The Cavalry Rifle Team placed second in the Herrick Trophy Match and in the Infantry Team Combat Match was fourth. In the Roumanian Team Match of 81 teams, the Cavalry placed second.

The Cavalry Team was outstanding in the Pistol and Revolver Matches. Sergeant Jensen, 7th Cavalry, won the Rapid Fire Pistol Match, and Sergeant Wilzewski took first place in the Army Pistol Match.

The National Rifle Team Match was fired on September 11th and 12th with 113 teams of ten men each. The Cavalry Team placed fifth.

Following is the composition of the Team:
1st Lieut. Geo. A. Rehm, 3rd Cav., *Team Captain.*
1st Lt. Clyde A. Burcham, 7th Cav., *Team Coach.*
1st. Lieut. Paul McK. Martin, 6th Cavalry.
1st Lieut. Claude A. Thorp, 5th Cavalry.
Corporal Alex F. Kellerman, 12th Cavalry.
St. Sgt. Leslie H. Hedglin, 1st Cavalry.
Sgt. Roscoe R. Grider, 14th Cavalry.
Sgt. Richard V. Wilzewski, 8th Cavalry.
Sgt. Stanley Blazejovski, 3d Cavalry.
Corporal William G. Hamel, 4th Cavalry.
Sgt. Edward Yeszerski, 8th Cavalry.
Pfc. Haldur Hermanson, 14th Cavalry.
Alternates:
Pfc. Holger H. Christenson, 1st A. C. Sq. Cavalry.
Sgt. Gaines G. Wicker, 2d Cavalry.

The National Pistol Team Match was fired on September 8th with ideal weather conditions. The Cavalry won this match for the first time since its inauguration in 1920.

Following are the scores made by the Cavalry Pistol Team and the totals of the next five teams:

	50 yds. SF	*25 yds. TF*	*25 yds. RF*	*T. S.*	*G. T.*
1st Lieut. George A. Rehm, 3d Cav. (Captain)					
1st Lieut. Clyde A. Burcham, 7th Cav. (Coach)					
1st Sgt. Floyd Barrett, 11th Cav. (Alternate)					
Sgt. Jens B. Jensen, 7th Cav.	85	95	89	269	
Cpl. Alex F. Kellerman, 12th Cav.	64	86	82	232	
Sgt. Richard V. Wilzewski, 8th Cav.	81	97	90	268	
1st Lt. Paul McK. Martin, 6th Cav.	74	85	75	234	
1st Lt. George A. Rehm, 3d Cav.	81	93	84	258	1,261
U. S. Marine Corps					1,256
Infantry Pistol Team					1,253
U. S. Coast Guard Team					1,223
U. S. Navy Rifle Team					1,221
Field Artillery Team					1,200

Following is a congratulatory letter addressed to Major General Guy V. Henry, Chief of Cavalry:

My dear General Henry:

I desire to extend to you and the Cavalry the congratulations of the Infantry on the Cavalry's fine performance in winning the N. R. A. Pistol Team Match.

The Cavalry has had a long, hard fight, and this, I think, makes the victory all the more deserving.

With all good wishes for continued success, I am

Sincerely,

STEPHEN O. FUQUA,
Major General,
Chief of Infantry

As the representatives of the Cavalry service, the Cavalry Teams are much in the public eye, and I trust that, in the future, our unit commanders will send us their best men, as they did this year.

GEORGE A. REHM,
Team Captain.

Gold cup presented by the Minister of War, Chinese Republic, as first prize, Interallied Pistol Competition, Le Mans, France, June 28, 1919. Won by American Expeditionary Force Pistol Team and presented by them for annual competition as the National Pistol Team Match Trophy.

A Treasure Hunt

By a Stotsenburgian

TO EVERYONE who has served at Stotsenburg, the place holds many pleasant memories—polo games, golf, riding over the mountain trails, hunts for deer and wild boar, swimming, picnics on the Bum-bum,—capable, barefooted servants, noiseless as shadows, rather foreseeing your wishes than merely fulfilling them. One recalls the scurry of noisy, laughing children along the officers' line, followed and watched over by complacent, gossiping "amahs;" the pleasure of ever-fresh linen and "whites" immaculately laundered in the back of the house by the "lavandera" an expert chewer of betel nut, who only upon the most rare occasions allowed a telltale red drop to mar her otherwise perfect work.

Then, there was the delightful informality and intimacy of the five to seven calling hour, which has been the medium of many lasting friendships. One recalls informal dinners, the aroma of curry, the delicious mangoes, bamboo sprouts and banana buds; the trips to Chinese Charlie's in Angeles.

In 1926 Stotsenburg was an equestrian community of the first order. A large ladies' riding class was continually maintained; there was a continuous round of controlled rides, cross country hunts, paper chases, gymkhanas, horseshows, and polo tournaments. For all of these, suitable prizes were provided and boundless enthusiasm was shown.

A "treasure hunt," which proved a pleasure to the participants, was organized by the club entertainment committee over a course of approximately four miles and was so arranged that the few who did not enter mounted events might negotiate it by automobile. Necessary detours to obtain suitable automobile routes from station to station would entail delay enough so that the time required for a motor vehicle would be about the same as for a horse.

The riders were to proceed from station to station of the Treasure Hunt course in accordance with instructions received at the various stations. Some of these were of a more or less cryptic nature, while others presented relatively little difficulty. In this way, a card with the inscription "Equus infirmus. equus debilitatus" was intended to lead the field to the Veterinary Hospital.

Dignity was lent to the proceedings by the early visit to the domicile of the great Negrito King, Lucas the First, on the hog back, western slope of Target Hill. Lucas whiled away his regal time listening to the drone of the 30-30's, burrowed in the hillside for the lead at the conclusion of the day's firing; peddled air plants and bows and arrows to the officers; and, we suspect, visited the receptacles in rear of the officers' line, for we sometimes heard him referred to (we regret to say) by the derisive epithet of "Ash Can Johnnie." Lucas preferred the title of General to that of King, and had a miniature uniform bedecked with stars which he donned when entering the post. Upon what he considered official visits he wore his sword.

At one of the stations the riders received the following:

"The ancient city of Troy
Which the Grecians tried to destroy.
Long stoutly withstood
Till a horse made of wood
Was used by the Greeks to decoy.

The Trojans fell for it strong
As told in old Homer's song.
Till a very great sage
Had it put in a cage,
And there it's remained all along."

—*Nepolop.*

Simple enough. It was a horse race from there to the polo pen, newly erected in the center of the main parade. Right beside the old baseball grandstand, it should be stated for the benefit of old timers.

In the polo pen sat a small barefooted, befreckled, blond youngster, who wore a soiled rag about one great toe, ragged overalls, a straw hat with a torn brim and carried an old-fashioned bent pin fish line with a fish dangling from the end. From him they secured the final clue:

"What place in the post does the name Tom Sawyer at once suggest?

"For the benefit of those not acquainted with Mister Sawyer, I might state that he was a contract painter—specialty, white fences.

"'Mark Twain' is a term used in sounding and indicates a depth of two fathoms.

"I hope you can fathom this."

Up the parade ground, next to headquarters, in plain view from where they were, the hunters could see the ten foot, whitewashed fence, which surrounds the swimming pool. The maximum depth of this pool, by the way, is twelve feet, or two fathoms.

Ye gods! Some of them sought the school way over on the north edge of the post. Imagine Tom Sawyer in school—deliberately, knowingly and intentionally in SCHOOL!!!

The pool was the final station, and here was anchored the treasure, a small replica of Noah's Ark. Appropriate, too, for did not Noah land on Mount Arayat which rises above the surrounding plain 4000 feet in a mighty cone, twelve miles to the eastward? At any rate, that is how the mountain got its name, and this is justified to the satisfaction of the natives by the large depression in the summit of Mount Arayat.

Professional Notes and Discussion

The Mechanized "Cavalry"

TO THE EDITOR OF THE CAVALRY JOURNAL:

Speaking of the "Mechanization of Cavalry," Lieut. Colonel Scott, director of cavalry instruction at Fort Riley, informs the world in the "Rider and Driver" of June 18, that: "the great majority of Cavalrymen welcome the opportunity to develop it and to show what Cavalry can do with it."

Can this be so?—when they well know that the strength of the Cavalry arm has already been reduced far below what it should be. Why should not they, as well as the War Department, make proper representation to our legislative bodies and request that sufficient men be authorized for mechanization purposes, rather than having mechanization at the expense of present existing arms, especially the Cavalry arm —all of which are now reduced to the irreducible minimum for proper national defense?"

We are, in our army, very much impressed by new things. We are also much inclined to follow our English "cousins." Led largely by them we have adopted a new uniform, a new sword, a new saddle, (since abandoned), new formations for our cavalry regiment, etc. We have forgotten that in 1918 we believed we had the best cavalry in the world, made so by constant service in the field. Now we hear that the English, led by a few enthusiasts, have spent over a hundred million of dollars inventing and trying out a system of motorization of cavalry. It is a new fashion, a radical change. Should we follow it?

Lt. Col. Scott thinks that armored cars, moving as a body, may free cavalry from the exhausting work of reconnaissance. As an example he says "Armored cars may precede Cavalry by fifty miles or more, cover all roads" etc., working with aviation.

Let us form a picture of this fifty mile excursion to the front, in a section probably occupied by the enemy. The motor force must move slowly, or move fast. It is accompanied, of course, by scouting vehicles, auto cyclists, etc. If it moves fast no scouting can be done. Every wood, hedge, building along the road is a menace, possibly occupied by machine guns, anti-tank artillery or detachments of the enemy. Every bridge or culvert may have been prepared for demolition. The motor force having arrived in sight of the enemy, bang! A bridge in rear is blown up. The enemy's artillery arrive. The motor force is perhaps captured. It is confined to the road. It can't get away.

Suppose the motor force moves slowly. In that case the motor cyclists, etc., will be able to reconnoiter the woods, hedges, villages, etc., but only partially. They cannot enter woods or rough ground. The same result is liable to occur.

No, a motor force will not be able to make such a reconnaissance without the aid of cavalry. The cavalry scouting to the right and left will cause the motor force to move slowly. The advantages of speedy vehicles will be lost. The enemy will have time to prepare an attack. The vehicles cannot scatter in retreat, like cavalry.

I think it can be stated as an uncontrovertible fact that a motor force when on a reconnaissance must be protected by cavalry. I found that out in 1916 near Brownsville when an infantry force, carried by lorries, with an escort of a company of motorcycles, was disastrously ambushed three times in one mile by cavalry. It is difficult for motorcycles to reconnoiter off the road.

A mechanized force, like light artillery and machine gun units, will be able to accompany large bodies of cavalry in the advance guards and rear guards of armies; in important raids; in missions to seize and hold important positions; and in great cavalry battles. Whether motor forces will be, on such occasions, more useful than artillery or machine gun units is a question. On account of the tendency of machines to break down it is not improbable they will often interfere materially with the mobility of the cavalry. Only light tanks and armored cars should be used.

Speaking of tanks, we must remember that, in the world war, tanks were completely successful only when they were an entire novelty to the German soldier. This was no longer the case at the Battle of Amiens August 8-10, 1918, when the British went into action with 415 tanks and came out with only 67. All the rest were disabled by gunfire or otherwise.

Finally, as a nation whose vaunted policy is defense, we should employ our wits not so much in the invention of proper use of mechanized warfare devices as on the best way of destroying these engines of war. That should be easy, because that line of thought has not hitherto been much followed. The Germans made a start at it using anti-tank artillery, thermite and other bombs, attacks on the caterpillar treads, gas, traps, caltrops, etc. Let us use a little American inventiveness, and machines will be as useless in war as the German submarines and Zeppelins had become in 1918!

JAMES PARKER,
Major General, U. S. A., retired.

The Pumphrey Feed Box

THE EDITOR, THE CAVALRY JOURNAL:

On pages 51-52 of your issue of July-August, 1931, we find some interesting advice on "Conservation of Forage," and setting forth the ill effects due to an occasional greedy horse bolting and wasting his oats.

As the writer of that article does not mention them, I assume he is not aware of the fact that feed boxes have been devised to correct this evil.

This box has a separate compartment (which the horse cannot open) in which the feed is placed. From this compartment the oats are fed by gravity little at a time through a ½" opening at the bottom of the reservoir compartment into the main box accessible to the horse.

I had seven of these boxes in my troop some thirty years ago, and found them entirely satisfactory.

The accompanying illustration explains the working of the box. The same firm also sold an Oat Cleaner

The Pumphrey Feed Box.

designed to automatically remove dirt and trash from oats before being fed.

As to wastage of hay, it is even more important in the field than in the garrison to prevent this.

Just before the Cavalry Drill Regulations of 1916 went to press, the undersigned prevailed on Col. W. D. Beach, President of the Board, to insert near the end of paragraph 978 the following instructions:—

In each troop a man is detailed to walk the picket line while grain is being fed to look out for the horses generally and to take off the feed or nose bag of a horse as soon as he has finished feeding.

W. C. Brown,
Brig. Gen., U. S. A., Retired.

Notes from the Cavalry Board

Adaptation of the 37 mm. gun to pack.—For more than three years the Board has studied the vexatious problem of transportation for the 37 mm. gun. Various expedients have been tried and eliminated, such as wheeled transport and several attempts at packing. The latter contemplated using a hinged trail and placing the barrel on one side of the pack and the recoil mechanism on the other. Altering the trail by reducing its length, by the addition of hinges in its center, and by making certain changes in the position of the front leg, have all failed to produce the desired results, in that they did not combine gun stability (when gun is in action) with packing facility.

The problem of pack, however, has been successfully solved, the gun and ammunition having recently been transported in pack on a three hundred and fifty mile march and more recently on a forced march of one hundred miles in twenty-three hours with satisfactory results.

Captain Thomas J. Heavey, Jr., of the Cavalry School faculty has been collaborating with the Board in its efforts, and it is believed that he has produced a solution to the problem. Captain Heavey's original modification consisted of three major changes in the issued equipment. First, the trails were shortened so that the overall length of the issued tripod in pack was approximately the same as that of the .30 caliber water-cooled Browning machine gun. Second, the traversing mechanism was modified so that a hand wheel mounted on the outside of the left trail rotated the traversing screw, permitting continuous traverse. This traversing screw was also hinged to the inner side of the right trail and when assembled to the traversing hand wheel axle functioned as a spacer for the trails. Third, the front leg assembly was dispensed with, and substituted therefor was a front spade, thus lowering the pintle approximately five inches.

This mount was used by the 13th Cavalry during the school maneuvers of 1930-31 and by the Department of Cavalry Weapons, The Cavalry School, in actual firing of service ammunition during the school year 1930-31.

During one of these maneuvers the gun in pack was moved nine miles in about forty minutes, the gun squad taking six jumps in Forsyth Canyon without any maladjustments of the pack load or undue distress to the pack horses.

Actual firing tests of the gun indicated that due to the short trail the mount was not stable, the whole gun and tripod jumping up at each shot. However, this "jump" did not appear to affect the accuracy of the gun.

Firing on moving targets indicated that the gun, mounted on the short trail tripod, was effective at ranges of 1000 yards and under. Approximately 30% hits were obtained by the 13th Cavalry squad. At greater ranges effectiveness rapidly decreased.

Additional modifications of the original design were completed in October, 1930, consisting of the substitution of duralumin alloy metal for the spades and traversing hand wheel and the assembling of telescopic segments to the short trail. The saving of weight in the use of duralumin permits the incorporation of the extension trails with the actual saving in weight of six ounces. The telescopic trails increase the length of the trails 11¾ inches and when in the closed position do not increase the total overall length of the tripod in pack.

Firing tests of the telescopic trail mount indicated that the instability of the original short trail mount is nearly completely neutralized. This results in much more effective fire on moving targets, as the gunner

can, with no undue discomfort, keep his eye to the sight, thus increasing the rate of fire. This is a distinct advantage in all types of fire.

Hangers of different design from the standard cavalry pack hangers are used on both gun and ammunition loads, in that main supporting members are of light ribbed metal, cross braced by circular steel rods, all joints being welded. This results in approximately 50% saving in weight. The average weight of the hangers is under eight pounds.

The total weight in pack of the gun and tripod is approximately 209 pounds. Total weight of ammunition in pack (64 rounds) is 199 pounds.

The gun may be mounted from pack, loaded, laid, and fired in 31 seconds, and put in pack from action in approximately the same time. Rate of fire on a stationary target is the same as with the issued mount. Thirteen rounds have been fired on a moving target in one minute. The present low explosive shell has obtained complete penetration of ⅝" steel boiler plate prior to explosion at 550 yards in test firing.

The detachable shoulder guard, appearing to be unessential, has been dispensed with.

Semi-automatic arms.—Test firing with the Pederson and Garand semi-automatics was started on June 15th and has just been completed. The test of these arms involves the firing of Course A, both preliminary and record, combat firing, sustained fire test, functioning test, anti-aircraft firing, stripping and assembling test, and test to determine the effect of carrying in a rifle scabbard. Firing with these arms has been so conducted as to admit comparison between scores and performances with these rifles and those under similar conditions with the .30 caliber rifle, M1903.

During the firing various malfunctions have been encountered; in general, due to failure to feed cartridges into the chamber, failure of cartridge to rise to loading position, and failure to eject properly. These malfunctions were later traced as due almost entirely to dirt in the cartridge clips. The rifles function very well when clean and properly oiled. When hot and dusty, especially when dust and grit get into the clips, trouble is encountered. Some difficulty is being encountered with the accuracy of these weapons at the longer ranges; however, they are a great step forward, even at this state of incomplete development.

German Cavalry[1]

The Performance of Our Cavalry Horses in the 1930 Maneuvers

By General of Cavalry von Posek.

Digest from "Sankt Georg."

THE 3rd Cavalry division, composed of the 13th, 14th, 15th, 16th, 17th, and 18th cavalry regiments, with the 10th cavalry and two mounted detachments attached, formed the maneuvering force. The 3rd Cavalry division being one of the few full strength divisions, it was possible to make valuable observations as to the performance of the troops. It may appear at times that, with the great technical improvements of the mechanized force, the horse has outlived its usefulness as a means of transportation. That, however, is still in the distant future.

It is of interest to know how the horse got along and what he accomplished during the last maneuver.

This problem began on the 15th of September with a march over the mountains of the Thuringian Forest. Three regiments of the division had already taken part in Brigade maneuvers. The march began in the area of Gotha, advancing by brigades on three roads as far as Unter-Massfeld south of Meiningen. The main column marched about 60 km., the reconnaissance detachment about 90 km., and the patrols about 110 km. It rained in torrents and the troops had to march over smooth, hard surfaced roads with no soft shoulders on the side to give the horses a soft footing. In addition the grades were very steep. The horses had to be led up hill for long periods. Going down the gait was at a walk. Machine gun and communication carts had to have a draft of six horses to keep up.

The division continued the march further south the next day advancing in two columns. By its rapid advance it surprised the West wing of the enemy; a wide turning movement threw him to the East and forced him into an unfavorable position. The main column, in executing this movement, marched about 50 km.; the total distance for the first two days being 110 km. While the distances travelled during the last two days of the maneuver were less, the difficulties encountered were greater. It rained continually, the dirt roads were bottomless, and the terrain was very hilly. This steep and hilly terrain made unusual demands upon the regiments that had been stationed in the low country and were unaccustomed to hills. Combat and reconnaissance patrols received the brunt of all these obstacles as they had to move over the worst roads, across plowed fields and meadows.

The horses maintained their freshness, very few going lame. The review held at the end of the maneuver disclosed no fatigue on the part of the animals. The gait was rather too fast, a sign that the horses were full of energy and spirit in spite of the past hard work. The cavalry has again shown in this maneuver that, correctly handled, cavalry with its present increased fighting power is still an important and decisive factor in war. For the cavalry to be able to fulfill its mission, it is necessary that it have its horses properly trained in every respect. The doctrines of the training regulations must be followed.

The records show that our troopers' mounts, developed according to our principles of training and equitation, gave longer service in the war than the mounts of any other participating nation.

The cavalry horse in war must serve in ranks, on patrol duty, and on messenger service, with a rider comparatively unskilled according to "Modern Equitation" standards. He must do hard work in a creditable fashion. The last maneuver proved again that in every respect he is well able to do it.

[1] Translated by Major Otto Wagner, Cavalry.

Organization Activities

1st Cavalry
Fort D. A. Russell, Texas

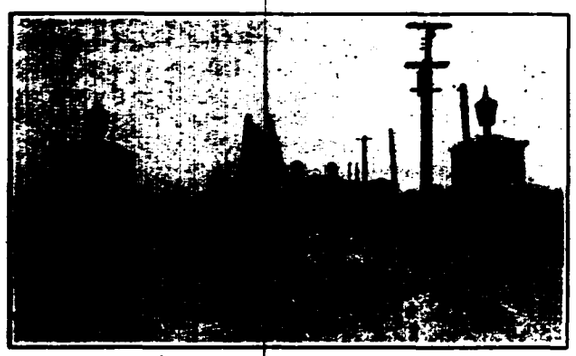
CAPTAIN Donald Dunkle, commanding Troop E, distinguished himself as high score rifleman for the regiment with a score of 331.

On July 11th, an excellent Gymkhana, followed in the afternoon by races and polo, was held. Major A. T. Lacey, Lts. Logan C. Berry, John G. Minniece, Jr. and Milton A. Acklen wore the colors for the First, in the game against the Marfa polo team. Horse show matinees were held August 16th and 30th in the parade ground horse show ring. Under the direction of Lt. Col. R. M. Cheney our show material is rapidly taking shape.

For the encouragement of athletics and to better finance such activities, the First Cavalry has recently organized a Regimental Athletic Association with Lt. R. T. Willson in charge.

A weekly bulletin, known as the Black Hawk Bulletin, has been started this summer and contains news of interest to the entire garrison.

Recently assigned to the First Cavalry are: Capt. John C. McDonald, Capt. William Kenahan, Lt. George V. Ehrhardt, and Lt. Basil L. Riggs.



3rd Cavalry (Less 1st Squadron)
Fort Myer, Virginia

THE Fort Myer Horse Show Team competed in the Warrenton, Rochester, and Bryn Mawr horse shows. Results at the Rochester show, attended by Colonel Harry N. Cootes, Major A. D. Surles, and 1st Lieutenants C. H. Noble, W. A. Bugher, and C. W. Bennett, were the most outstanding of the three. The Myer string was highest winner in the jumping events and broke the record for competition of military teams at Rochester shows. The five day Touch and Out class and the $1000 Jumping Stake were among the classes won.

Troop F, commanded by Captain H. J. Fitzgerald, performed its excellent rough ride and tandem drill at each performance of the show.

Machine Gun Troop, commanded by Captain C. H. Palmer, took part in the West Virginia State Fair at Wheeling, West Virginia, from September 7th to 12th.

The Winchester Fair, at Winchester, Virginia, featured exhibition drills by Troop E, Lieutenant D. W. Sawtelle, commanding.

From September 21st to 30th, the regiment made a practice march through Virginia. Included in the field exercises was a cooperative mission with the Air Corps, which took place at Marshall, Virginia. Here also, an exhibition ride was given for the residents of the vicinity.

Officers recently transferred from the regiment are Major J. W. Cunningham, Captain L. G. Gibney, and 1st Lieutenant R. A. Gardner. New arrivals are Captain G. I. Smith, Captain L. K. Truscott, 1st Lieutenant L. M. Grener, and 2nd Lieutenants J. H. Waters and L. F. Cole.

4th Cavalry
Fort Meade, South Dakota

THE 4th Cavalry returned to the post Sunday, August 30th, from its regular annual practice march. The itinerary of the march was as follows:

Deadwood, Cheyenne Crossing, Spearfish, Belle Fourche, Orman Dam, Vale, Bacand's Ranch, and back to Fort Meade. The troops engaged in maneuvers each day while in camp at Orman Dam.

Warrant Officer Tito Lipartiti, arrived at this station Saturday, August 29th, and has been assigned as Band Leader of the 4th Cavalry Band.

Master Sergeant Fred Conway, Headquarters Troop, 4th Cavalry, was placed on the retired list on August 31st. He departed the same day for El Paso, Texas where he intends to reside for the present.

10th Cavalry
Fort Huachuca, Arizona

THE 10th Cavalry Band under the leadership of Warrant Officer Wade H. Hammond, 10th Cavalry, has just completed a remarkable tour through the States of Arizona, New Mexico and Texas. It covered a distance of 2261 miles by motor transport and appeared in concert in twenty cities, including El Paso, San Antonio, Waco, Austin and Dallas.

The Commanding Officer, Colonel Sherburne, has given historic significance and atmosphere to the post by naming the principal streets and roads after former distinguished members of the regiment. This action is appropriate in view of the fact that Fort Huachuca has been for so many years the home of the Buffalo Regiment. The officer's line bears the name Grierson Avenue.

The regiment celebrated its 65th anniversary on Organization Day. The 10th Cavalry was organized at Fort Leavenworth, Kansas, on July 28, 1866. It was particularly fortunate in the selection of Colonel Benjamin H. Grierson as its first commanding officer, and who continued to command it for twenty-two years. Colonel Grierson was one of the famous cavalry leaders developed during the Civil War. He had the distinction of having once met and defeated the redoubtable Forrest. His famous raid from La Grange, Tenn., through Mississippi to Baton Rouge, La., so diverted the Confederate forces operating to relieve Vicksburg that Grant was able to transfer his army to the south of Vicksburg and so hasten its fall.

A feature of the Organization Day program this year was the presentation of the annual Shipp Memorial Cup to Technical Sergeant William F. Scott, Headquarters Troops, as the most distinguished soldier in the regiment. This cup is donated annually by Mrs. Margaret B. Shipp, mother of the late Captain Fabius B. Shipp, 10th Cavalry.

The Horse Show Trophy presented by the Bisbee Chamber of Commerce went to Lieut. Harold N. Forde, 10th Cavalry, winning the highest number of points in officers' competition. The trophy presented by the Tucson Chamber of Commerce went to Private Oscar Boone, Troop F, 10th Cavalry, enlisted men's competition.

Troop F and Troop A tied in the highest number of points won by organizations.

A tragic aftermath of Organization Day, celebrating the proud history of the regiment, came in the form of an order from the War Department placing it on an inactive status. The regiment on October 10th and 11th moves to stations as follows:

Vale! The 10th Cavalry "Key Men" Returning Saber for the Last Time.

Left to right: Master Sergeant H. C. Scott, Headquarters Troop; First Sergeant R. T. Brown, Machine Gun Troop; First Sergeant L. M. Carter, Headquarters Troop; First Sergeant John Allen, Troop B; First Sergeant John Sanders, Troop F; First Sergeant McCalister Weeden, Troop E.

Headquarters and 1st Squadron—Fort Leavenworth, Kansas.

2nd Squadron—West Point, N. Y.

Machine Gun Troop—Fort Myer, Virginia.

The passing of the 10th Cavalry as a combat regiment is an event of note and will come as a shock to the many distinguished officers and soldiers who have served with it. The 10th Cavalry *returns saber* with a proud consciousness of duty well done. The past will preserve for it a record second to none.

For the future we can confidently predict that it will carry on in its new rôle with the same loyalty and high spirit that has given its motto a living meaning. "Ready and Forward."

108th Cavalry
Atlanta, Georgia

THE Machine Gun Troop of the 108th Cavalry, Georgia National Guard, (known in the South as The Governor's Horse Guard), more than lived up to its reputation during the summer encampment period at Fort Oglethorpe, Ga. It was declared the Blue Ribbon Troop of the regiment with a proficiency average of 96.01 per cent and, by virtue of this award, will act as color escort at ceremonies during the coming year.

Captain Theodore Goulsby, commanding officer of the Machine Gun Troop, was presented by the men of his troop with a beautiful piece of silver service in recognition of his twenty years of untiring national guard service. Captain Goulsby went to the Mexican Border with Troop L, 1st Squadron, Georgia Cavalry and later saw service overseas. Appropriate speeches of presentation were made by Colonel J. E. Edmonds, commanding the 108th Regiment and by Major J. B. Fraser, commanding the 1st Squadron.

Among the individual awards in the troop was the presentation to Sergeant William A. Smith of the Colonel J. B. Osborne trophy as the outstanding trooper for the past year. Annual perfect attendance medals were awarded to Sergeants W. A. Smith, Perry Hoey, P. P. Stone; Corporals Albert Arnau, J. B. Nunes, G. J. Graham, Camp, and Private Henry Stokes.

A most successful dance was given at the Officer's Hop Hall at Fort Oglethorpe as a part of the activities of the week-end of August 8-9.

Later in the week, with the assistance of a three goal handicap the Horse Guard team won a fast and exciting victory over the strong Sixth Cavalry team of Fort Oglethorpe. The Horse Guard has aspired to this victory for a number of years, but this is the first time the Atlanta team has been able to turn the trick. The game was won in the last fifteen seconds of play with a 75-yard goal by Christian. Lieutenant Moran and his players hope that this game has broken the Sixth Cavalry jinx.

305th Cavalry
Philadelphia, Pa.

THE regiment has returned from its tour of active training at Fort Myer, Virginia, and vacation days are over. The regiment is preparing for the inactive training season 1931-32.

Notices have been mailed out for a meeting at which

time plans will be made for the winter training. The Unit Instructor has a problem made up which the regiment will work out on the actual terrain at Major Livingston's farm. This problem will be worked out the same way as the one held last Spring, using automobiles in place of horses.

306th Cavalry
Baltimore, Md.

THE active duty training for the 306th Cavalry was held at Fort Myer, Va., from August 2nd to August 15th, 1931. A schedule was carried out which filled every minute of the day with good hard work. The following officers attended:

Colonel John Philip Hill, Lt. Col. Matthew F. James, Major William H. Skinner, Major Geary F. Eppley, 1st Lt. Lester H. Kyle, 1st Lt. Linden L. Sanders, 1st Lt. Thomas H. Mundy, 1st Lt. Paul A. Chalupsky, 2nd Lt. Lathrop E. Smith, 2nd Lt. John W. Mann, 2nd Lt. Kenneth S. White, 2nd Lt. George W. Ellison, 2nd Lt. Claude N. Ballenger, 2nd Lt. Robert W. Brown, 2nd Lt. George B. Campbell, 2nd Lt. Lawrence S. Carson, Jr., 2nd Lt. George E. Monk, 2nd Lt. John S. Burgess, 2nd Lt. Raymond B. Carlton, 2nd Lt. Emil W. Kerttu, 2nd Lt. Samuel Letvin, 2nd Lt. John B. Naughton, 2nd Lt. Jesse T. Nicholas, 2nd Lt. Earnest J. St. Jacques, 2nd Lt. Joseph W. Clautice, and 2nd Lt. Alexander Gow, Jr.

Two enlisted men of the regiment attended the camp at their own expense. The officers of the 307th Cavalry were in camp at the same time, and many pleasant friendships were renewed.

2nd Squadron and Machine Gun Troop, 306th Cavalry, Washington, D.C.

MAJOR H. C. Dagley reported for duty on August 27, 1931, succeeding Lieut. Colonel A. G. Hixon, as Unit Instructor. Major Dagley is a graduate of the Advance Class, Cavalry School, and of the Command and General Staff School, and comes to us from five years of duty with R.O.T.C., Ninth Corps Area.

307th Cavalry
Richmond, Va.

THE 307th Cavalry attended camp at Fort Myer, Virginia, August 2nd to 15th, on an active status. Nineteen officers of the 307th Cavalry and one of the 154th Cavalry Brigade attended.

The following officers qualified with the Pistol:

Expert

1st Lt. Watson P. Gooch.

Sharpshooter

Major Edward N. Hay, 1st Lt. Walter L. Renn, 2nd Lt. William W. Morrell, and 2nd Lt. Reverly E. Winfree.

Marksmen

Major James R. Mullen, Captain Hal P. Costolo, 1st Lt. Gorham B. Walker, Jr., 2nd Lt. Charles E. Gifford, 2nd Lt. Frederick Sale, 2nd Lt. Asher R. Payne, and 2nd Lt. William L. Threlkeld.

3rd Squadron and Machine Gun Troop, 307th Cavalry, Norfolk, Va.

FOUR officers of the Third Squadron and Machine Gun Troop, 307th Cavalry, enjoyed a most delightful and instructive tour of active duty training at Fort Myer, Va., August 2-15, 1931. The officers who attended camp being:

Major James R. Mullen, 1st Lieut. Walter L. Renn, Jr., 2nd Lieut. Charles E. Gifford, and 2nd Lieut. Harry P. White.

The Unit Instructor, Major David H. Blakelock, is preparing training schedules for the inactive training of officers of the squadron and machine gun troop for the period October 1 to June 30.

308th Cavalry
Pittsburgh, Pa.

FROM July 19 to August 1, 1931, the 308th Cavalry officers who attended camp at Fort Myer, Virginia, conducted C. M. T. C. training and thoroughly enjoyed the experience.

Riding classes at the Hunt Armory will be resumed October 4th and will thereafter follow the usual schedule. Many officers have been riding outdoors throughout the summer.

Lieutenants Goldsworthy and Thomas and Sergeant Cence who during July made a two weeks horseback trip through the mountains reported many adventures.

The 308th Cavalry Club house at which the meeting on July 11th was held will be the scene of many of our activities this year.

Plans are on foot for the first unit meeting early in October.

862nd Field Artillery (Horse)
Baltimore, Maryland

DURING August the Regiment under Lieutenant Colonel Roger S. B. Hartz received its fifteen days of active duty training at Fort Hoyle, Maryland, under the tutelage of Battery F, 6th Field Artillery. Nearly fifty percent of the officers turned out. Business and pleasure were well balanced to the end that while the hours of training were well filled there was no dearth of swimming, tennis, golf and social activities. One important departure from the usual course of instruction was the qualification of almost all of the officers of battery grades as First Class Gunner.

309th Cavalry
Asheville, N. C.

THE 309th Cavalry participated in active duty training at Fort Oglethorpe, Ga., during the period July 26-August 8, 1931.

BOOK REVIEWS

ORDER OF BATTLE OF THE UNITED STATES LAND FORCES IN THE WORLD WAR—A. E. F. DIVISIONS. Prepared in the Historical Section, Army War College. U. S. Government Printing Office. 450 pages. $1.50 (buckram).

This publication was compiled in the Historical Section, Army War College, from original sources in the War Department archives. The necessary research, pursued from 1926 to 1929 by Lieutenant Colonel Henry Hossfield, was carried to completion in 1931 by Lieutenant Colonel Robert T. Phinney, Major John C. Bartholf, and Warrant Officer Charles H. Collins. For the first time, it makes available a comprehensive official digest of the principal events in the histories of the 43 American divisions that served in France, together with an accurate day by day record of their front lines and combat sectors.

The text is limited to a statement of facts, without comment. It covers organization, transportation to France, movements to training areas and combat sectors, battle participations, and post-armistice activities, to include return to United States and demobilization. In addition to these narratives, the book contains tables which give the names of divisions and brigade commanders and the divisional chiefs of staff with appropriate dates; the units that constituted or were attached to each division; assignments to corps and armies; and the location of division headquarters from the date of organization to demobilization.

This book is one of a series now being prepared by the Historical Section, Army War College. Subsequent volumes will present similar data for G.H.Q., A.E.F.; First, Second, and Third American Armies; I to IX American Army Corps; the Siberian Expeditionary Forces; Service of Supply; and the Zone of the Interior.

THE BATTLE OF DORA, by H. E. Graham. William Clowes and Sons, Limited, London, 1931. 75 pages and 6 maps.

This is a clever and interesting tale of the employment of a brigade of fast tanks around the exposed flanks of opposing armies. History being inadequate, the author has created his own international and military situations which, rather naturally, are exactly suited to his purposes. While Anglia is obviously Britain, Jugurthia and Martia have been divested of resemblance to existing nations.

Six infantry divisions of Anglia, within the boundaries of the friendly Jugurthia, are opposed to six infantry divisions of Martia. Martia also has six reserve infantry divisions that are to become available for combat in the immediate future, but, offsetting that, Anglia has an armored brigade which includes two light tank battalions (100 tanks), one medium tank battalion (55 tanks), and two close support tank batteries (12 tanks with 12-pdr. armament). The author has also injected into the armored brigade some highly mobile artillery consisting of 18-pdr. guns and 4.5 howitzers. A prime purpose of this artillery is said to be the slaughter of the hostile foot troops that crowd into "anti-tank localities" when threatened by tanks.

The author gives his armored force a rather heavy load of tasks, requiring it first to check the approach of the most advanced hostile reserve division, then to engage, in conjunction with the main attack, the hostile division in tactical reserve nearest the point of the Anglian main effort.

One might properly criticize the actions of Brigadier General John Carburetter for dispersing his command so much in his first task. The author, however, realizes that point of vulnerability and acknowledges in his preface that he expects such criticism.

As Americans, we are struck by the informal manner exhibited in the giving of important tactical orders. Such informality might be indicative of a masterly competency, but certainly an American officer would attempt to be more seriously methodical. Like his brothers in civil life, he would desire to be more "businesslike."

The author makes his officers efficient; his situation is appropriate, simple, and satisfactory; his solution is, for the most part, sound and acceptable (though perhaps a bit optimistic in spots); and the story is told with a commendable degree of thoroughness, clarity, and conciseness. Anyone at all progressive minded in the tactical field will read this book with much pleasure and appreciation.

THE CHALLENGE OF RUSSIA, by Sherwood Eddy. Farrar and Rinehart, New York, 1931. 8¼" x 5¾"; 278 pp.; $2.50.

"This book is written in the conviction that Russia constitutes a challenge to America and to the world," and Mr. Eddy then proceeds to show the nature of that challenge.

Though well known as a man of liberal beliefs, associated with many pacifist and radical organizations, the author can hardly be called a great admirer of Soviet Russia. He has made four visits to that country since the Revolution (two during Czarist days) and is unhesitating in his condemnation of the dictatorship that exists there; of the policy of world

revolution by violence and "of the intolerance, bigotry and persecution which spring from the Marxian dogma of communism," citing many instances to illustrate these failings in the Russian system.

At the same time he praises what has been accomplished in the education and culture of the masses and in the industrial and agricultural progress which has taken place during the past decade. Mr. Eddy claims that the five-year programme, now half completed in point of time, is considerably ahead of that in achievement and that Russia will have an enormous effect on world economics in the very near future. In 1921 industrial production had fallen to 17% of pre-war figures, while in June of last year Stalin reported that it had then been raised "to 180% of the pre-war maximum," five per cent. more than the estimate of the five-year plan. The production of agricultural machinery is "five times the pre-war amount and it will likely soon surpass even the United States." This machinery is being used in the state and collective farms all over Russia. Individual holdings are discouraged, to put it mildly, and are gradually passing out, while the "collectives" are increasing rapidly, as shown by the fact that they planted 90,000,000 acres in the second year of the plan as against 51,000,000 called for during the closing year of the five-year programme.

Mr. Eddy gives a graphic example of this collective farming by citing the case of fifty Russians who returned to their own country from the United States in 1921. "They started with nothing but their bare hands and these empty buildings (formerly the property of a Russian general and race-horse breeder). The first year they were so poor that they were reduced to eating crops and at times even weeds. Today their assets, apart from the land, are $60,000 and the membership of the commune has increased to 238 persons operating fourteen hundred acres." A clear picture is presented of the aims and actual working of the five-year programme.

The author combats the prevalent idea that morals are loose in Soviet Russia. "For a short time after the Revolution there was a period of license when all restraint was considered 'bourgeois,' but today promiscuity or sensuous indulgence or dissipation is 'counter-revolutionary.'

There is an ascetic vein in Soviet Russia. Moscow looks like a bleak Puritan city in comparison with the brilliantly lighted gaiety and night life of New York or Chicago. There is practically no public round dancing. The one gambling house recently closed its doors." One wonders whether this is due to morality or to lack of the necessary funds. "The gist of the new moral code and practice is personal freedom based on social welfare. The weight of revolutionary public opinion is for social welfare not individual license.... Divorce is slightly more prevalent in Russia than in the United States" although it can be obtained by mutual consent without alleging any grounds.

Mr. Eddy is unsparing in his criticism of the intolerance which exists in Russia, particularly in the religious field. While nominally all religions are permitted the only one really tolerated is the religion of communism as taught by Marx and Lenin.

True to his reforming principles the author makes a plea for the adoption of certain ideas in this country not all of which are Russian in origin. Among these are the government protection of workers against accident, illness, old age and unemployment and the public ownership of "strategic industries as are now being grossly mismanaged or which are gouging the public," citing coal and electric power as examples. The removal of high tariffs on manufactured goods in order to lower prices to the farmer is recommended also the reorganization of the judicial system "to the end that the courts may work more speedily, more justly and with less autocracy than in the past." The suggestion of most interest to the army is directed against the so-called imperialistic policies in Latin America, together with reduction of the military and naval forces, recognition of Russia, entry into the League of Nations, independence of the Philippines, etc.

This book is worth reading as it presents the viewpoint of an American liberal on the experiment in government now being conducted in Russia, together with an able exposition of what is actually happening in that country. No one will agree with him entirely; conservatives will consider him too radical while communists will condemn his moderation, but the thinking reader can profit by a careful perusal, whether or not he agrees with the authbr's conclusions.

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HORSE TRAINING; OUTDOOR AND HIGH SCHOOL, by *E. Beudant*, Ex-Captain, French Cavalry. Introduction by Lt. Col. John A. Barry, U. S. Cavalry, the translator. Charles Scribner's Sons, New York, $3.50.

(To be reviewed in a later issue)

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MODERNE KAVALLERIE. (Modern Cavalry. Reflections on its Employment, Leadership, Organization and Training.) By G. Brandt, Lieutenant General, retired, late Inspector of German Cavalry. E. S. Mittler & Son, Berlin, 1931.

Reviewed by Colonel G. M. Blech, Medical Reserve Corps.

General Brandt has published a number of valuable contributions on cavalry tactics which have placed his name among the internationally recognized authorities. He now presents a small but weighty book which is devoted to the principal cavalry problems of the future. In commenting on this book no less a personage than Field Marshal v. Mackensen accords Brandt the recognition of being the most authoritative person to treat the problems which are just now agitating many minds both here and abroad.

The first 20 pages are devoted to a historical review. Of the World War he says that during the first year the utilization of cavalry by all participants was not impressive. Errors in the first concentration are hard to correct, and blunders by the leaders cannot be made good by rapidity of movement. In the attempt to have cavalry everywhere, one had not enough at the decisive place. When Lt. Col. Hentsch gave the First German Army the order to retreat, there was at the Ourcq only one weak cavalry division. Had the German high command had 3 to 4 cavalry corps with the right wing, the German cavalry, properly commanded and led, could have produced great results. But, as it was, German G. H. Q. even declined the offer of the German crown prince to give up his cavalry, which he clearly foresaw would be of little use to him at Verdun.

The author dismisses the objection that such a mass of cavalry could not have been adequately supplied. Food for the men and animals should have been provided for the first few days by adequate preparation during peace, but once the cavalry force had invaded hostile country at a considerable distance, it could have lived off the country, as was demonstrated by the cavalry corps Garnier in the battle of Vilna and by the cavalry corps Schmettow in Roumania. The instances in which German and British cavalry (Palestine) attained the few successes are mentioned briefly. The author concludes this section with a statement which, though trite, illustrates the need for commanders-in-chief to understand the proper function of cavalry. History teaches that cavalry can attain a maximum of efficiency only if it is employed by the supreme command at the proper place at the right time. That is basic, but its realization is extremely difficult and presupposes a leader endowed with the divine gift to recognize early where the proper place for the use of cavalry will be and when the right moment for its employment has arrived. Such great leaders are rare.

The next section (28 pages) deals with the mission of army cavalry. In the main the teachings are those of our own service. He considers army cavalry systematically under the following subheads: Protection of Frontiers, Reconnaissance, Screening, Occupation of Territory, Employment in Battle, Cover of a Wing, Pursuit, Retreat, Army Reserve, Independent Activities against Hostile Communications (Raids). He sees the main mission of cavalry in active participation in the decisive battle. This arm is at present better equipped, trained and organized for it than it was during the World War. He favors the single envelopment, as there seldom is available sufficient cavalry for an attack against both flanks.

The problem of leadership is covered in nine pages. He rejects all missions which are given cavalry solely to keep it busy and demands that all missions be not only clear and purposive but adapted to the nature of cavalry. This section is not only a strategical and tactical study but a carefully prepared review of the need for the conservation of animals.

The next section is headed Tactics (17 pages) and opens with the terse statement that the nature of cavalry combat consists of alternately riding and shooting. Cavalry must ride in order to be able to shoot at the right place at the proper time, and it must shoot in order to be able to ride again—that is, be available for mobile employment.

A section on the organization of army cavalry (24 pages) is particularly interesting in that the author admits that the war-time organization of the different armies is no longer adequate. The failure of most nations to bring their cavalry up to an organization absolutely indicated for future war is due to tradition and to the general disinclination of military leaders to institute innovations. He stresses among other things the fact that the importance of mounted engineers—pioneers, as he calls them—is underestimated in many armies, since army cavalry working early and alone may often be delayed and hampered by a simple ditch. He praises our cavalry division organization because it has an engineer squadron of three troops.

While army cavalry is an independent arm, divisional cavalry is an auxiliary of infantry, which dictates its mission and function. There is a great difference between reconnaissance by army cavalry and that of divisional cavalry, so much so that he favors a separate nomenclature for the reconnoitering parties with each type. This section is replete with valuable suggestions.

The last section is devoted to training. What the author has to say about the necessity for and the nature of peace training will find a warm response from American cavalry officers. Unfortunately, we, like the Germans, must content ourselves with homeopathic doses.

Taken as a whole, General Brandt's study brings out the following salient points. Modern war demands cavalry in large bodies. We may as well think and prepare in terms of corps rather than of divisions. The cavalry regiment must have a mimimum of six troops and a strong machine gun troop. Armored cars have great advantages for reconnaissance as well as for combat. Divisional cavalry must be reduced to the minimum to provide sufficient corps and army cavalry. Training of cavalry must be carried on throughut the year, and a large cavalry terrain exercise (corps) should be held at least every other year. The cavalry divisions must have auxiliary arms, in the right proportion, the same as infantry divisions. Motorization will help cavalry, but the horse remains the most important medium for battle.

In the reviewer's opinion, this book should be translated and published in English so as to render it available not only to cavalry but to all officers.

Chasing the "Transvaal Wolf"

(Continued from Page 42)

seeing it in the dark, they had stumbled into a line of Boer meat cans, slung upon a wire and placed there to give the alarm. At the instant a single rifle which cracked fifty yards distant, caused the Canadians to hurl themselves on the ground. Hardly had their bodies touched earth before there glared a full six hundred yards of rifle fire from the entire Boers' line.

How the front line escaped destruction is one of the marvelous events of war. To rush the trench was impossible. To remain where they were, when the moon came up, which would occur shortly, would mean that they would be picked off to a man. They chose the only course. Breaking up in loose order and with surprisingly little loss, they made their way back. The two companies which had been followed by the Engineers, had met a better fate. Their expedient of carrying sackfuls of earth was most successful. On the outbreak of the fire the sacks were cast down, the men crouched behind them and time was given for further trenching against what proved to be Cronje's last reveille.

In the morning the British advanced troops found themselves secure and in such a position that they could enfilade the Boer trenches. It was to the heroism and ingenuity of those two companies of Canadians that the credit is immediately due for the white flag which fluttered at daybreak over Cronje's trenches at Paardeberg. At six o'clock that fateful morning, a British infantry general rode into Lord Roberts' headquarters. Following closely behind him, mounted upon a white horse, came a dark bearded man with grizzled hair flowing from under a tall brown felt hat. He was of middle size, strongly built, with the quick restless eye of a hunter. The black broadcloth suit which he wore and the green summer overcoat, together with the small riding whip he carried in his hand, gave him the appearance of a London vestryman. The generals shook hands and it was briefly intimated to Cronje—for he was this Boer soldier in the seeming disguise,—that his surrender must be unconditional, to which after a short silence he agreed.

His men, a pallid, ragged crew, emerged from their holes and delivered up their rifles. They were a singular pack indeed, ragged, patched, grotesque, some with goloshes, some with umbrellas and coffee pots. Bibles were their favorite article of baggage. The deep trenches and caves of the laagers from which they emanated along the river were speaking examples of the advantages of the defense over the attack. Crude as they were, they had enabled Cronje and his crew to hold out tenaciously against the fiercest shell fire Lord Roberts could bring against them.

The way to Bloemfontein was open. Lord Roberts' policy of the strategic use of cavalry independent of the main army was amply proved. French had sprung the trap by which the Old Transvaal Wolf was caught. Hereafter, they took no more chances with him but shipped him summarily from Capetown to Saint Helena for the duration of the war.

The United States Cavalry Association

Organized November 9, 1885

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Army Equestrian Teams in Past Olympic Games*

By Major William M. Grimes, Cavalry

General

THE equestrian events of the X Olympiad, Los Angeles, California, will be held during the period August 12th to 14th. There are three Equestrian events on the 1932 Olympic programme. In preparation therefor, the Army nucleus of the 1932 Olympic Equestrian team, is now training at Fort Riley, Kansas. The squad consists of representative riders and horses from the Infantry, Field Artillery and Cavalry.

The Los Angeles games mark the American Army's fifth appearance in Olympic Equestrian competition: 1912, Stockholm; 1920, Antwerp; 1924, Paris; 1928, Amsterdam; and now Los Angeles, 1932.

It may be of interest to trace the Army's Olympic efforts from 1912 to the present.

1912

Our initial Olympic appearance was at Stockholm, in July 1912. In January of that year the War Department designated a team consisting of: **Captain Guy V. Henry, Cavalry, Team Captain, 1st Lt. Ben Lear, Jr., 15th Cavalry; 1st Lt. John C. Montgomery, 7th Cavalry, 1st Lt. E. F. Graham, 15th Cavalry; 1st Lt. A. L. P. Sands, 6th F. A. and 2d Lt. John G. Quekemeyer, 5th Cavalry, to represent the Army.

The team started training at Fort Riley, Kansas, during the winter of 1912. Approximately nineteen horses were in training.

Among the horses selected for a tryout were: *Bill Stone, Chiswell, Connie, Deceive, Fencing Girl, Mabel Anderson, Norma S., Nymph, Poppy, Prim, Quandry, Roustabout, Scroptic, Sin Glen, Stratta,* and *Timber Lost*; as well as the following private horses: Captain Henry's *Bazan*, Lieutenant Montgomery's *Lady Forhall*, and Lieutenant Watson's *Chesapeake*.

This list contains the names of several horses that are watchwords in army horse circles. What memories *Chiswell, Connie, Deceive* and *Sin Glen* awaken! *Chiswell, Deceive* and *Sin Glen* were to participate eight years later in a second Olympic. Old *Joe Deceive*, until the time of his death, last year, lived a life of great ease—a pensioned old timer, roaming over the rim rock fields of the Riley reservation. If there is a heaven for our four-legged friends, certainly these horses are grazing there.

The policy of the War Department in training for recent Olympic equestrian events has been to relieve the officers trying out for the team from all other duties. In 1912 there was no such liberal policy; systematic training was difficult to accomplish due to the fact that three of the riders of the 1912 Olympic team were instructors at the Mounted Service School and

Major General Guy V. Henry, Chief of Cavalry, U. S. Army. Captain 1912 Olympic Team. War Department representative for U. S. Army participation in 1932 Olympic Games; Chairman 1932 Olympic Games Equestrian Committee, American Olympic Association; President, Federation Equestre Internationale.

were required to perform all their regular instructional duties in addition to training Olympic prospects. A great deal of the training of this first Olympic team took place at four in the morning. Those readers who have spent a winter in Kansas will know what that means!

Completing their training at Riley in June, the 1912 team sailed from New York on the S. S. "Finland," landing in Stockholm on June 30th. The horses were stabled with one of the Swedish Artillery regiments. Thirteen days after arrival the games started.

In the gruelling Three Day Event Captain Henry

* The source of data contained in this article is from old copies of the "Rasp" and official records of the Office of the Chief of Cavalry.

** Now Major General and Chief of Cavalry.

rode *Chiswell*, Captain Lear *Poppy*, Lieutenant Montgomery *Deceive* and Lieutenant Graham *Connie*. The following account of the cross country and steeple chase phase of this event, written by Colonel Ben Lear (then Captain, 15th Cavalry) appears in the 1912 "Resp;"

• • • • •

"The cross-country course, which started after some twenty odd miles of the long distance ride had been ridden, was a reasonably hard test for a good military horse. There were about twenty obstacles in all, probably half of which were small ditches. The first obstacle was a three and one-half foot fence with about a five foot ditch on the near side; it was at the foot of a slight decline and approached rather suddenly. Many penalties were given at this jump. Another similar obstacle was near the finish of the course but the fence was not quite so high and the approach was very good. Among the other serious obstacles were three large ditches and an "in-and-out" over Swedish fences. These ditches were from twelve to fifteen feet in width and with poor approaches. The bottom of one of the ditches was filled with plank, which frightened many horses and caused quite a number of refusals.

"The next morning we found our horses pretty stiff and sore in both legs and feet. *Connie* was in the poorest condition of any of our horses, while *Deceive* was hardly affected. *Chiswell* and *Poppy* showed the hard work, but not so badly as *Connie*. Fortunately this was a day of rest. The horses were led at a walk for half an hour in the morning and afternoon, and there was a continuation of the massage, bandage and water treatment. The animals were also re-shod, as most of the shoes had been worn almost as thin as paper by the hard macadam roads.

"The horses of other nations also suffered from the heat and excessively hard roads. A French horse was nearly dead when it reached the stables at the end of the first day's work."

• • • • •

In the "schooling phase" of this event, the 1912 riders did exceptionally well, placing third; this is remarkable, considering the lack of quality of our animals as compared to those of Sweden and Germany.

The 1912 "Prize Jumping Competition" (Present day *Prix Des Nations)*, was for teams of four riders each. With the exception of our team all of the other nations had four riders. This required our team of three to compete against selected scores of three riders out of a team of four. The team consisted of Captain Henry, riding *Connie;* Captain Lear, riding *Poppy* and Lieutenant Montgomery, riding *Deceive*. None of these horses had ever jumped a course so difficult as the one encountered. Sweden won this event with 25 faults; France second with 32 faults, Germany third, with 40, and our team fourth with 43.

To quote again from Colonel Lear's article relative to the *Dressage* event:

• • • • •

"In the prize riding competition Captain Henry and Lieutenant Montgomery entered with *Chiswell* and *Deceive*. *Chiswell* put up a remarkable performance, and his rider was heartily complimented by many present upon the work done. However, the horse as an animal did not rank with the magnificent animals entered in this competition by Germany and Sweden, the result being the Swedes won the first three places, Germany the next, Sweden two more and America thirteenth out of twenty-one entering."

• • • • •

The showing made by the 1912 American Army Olympic team in our maiden Olympic effort was remarkable; it has never been equalled. The team set a high standard for subsequent games; it placed third in the Equestrian Championship, fourth in the *Prix Des Nations;* and out of twenty-one competitors was thirteenth in the *Dressage*. Truly a remarkable performance when one considers that it was our second effort at International competition. (Our first was the International Horseshow at the Olympia, London, 1911).

In 1912 we were handicapped in our efforts by a lack of time in which to prepare riders and horses—only five months were available; furthermore the conditions under which training was carried on were far from ideal and lastly our shortage of suitable horseflesh was very apparent. Of the 1912 horses *Chiswell* was used in the Three Day Event as well as the *Dressage; Connie* and *Poppy* appeared in two events; while *Deceive* performed the miracle of participating in all three of the events—truly a remarkable feat and brilliant tribute to the adaptability and reliability of the American thoroughbred, as well as a tribute to his skillful training, handling and condition.

Of the 1912 riders, Captain Henry and Lt. Montgomery rode and exhibited in all three events, the Three Day, Prize Jumping, and the *Dressage;* Captain Lear rode in two events, the Three Day and the *Prix Des Nations*, while Lieutenant Graham rode in the Three Day Event.

The above is in rather marked contrast to the present day tendency to specialize both horse and rider for an event.

1920

The year 1920 witnessed the celebration of the Seventh Olympiad at Antwerp, and our second appearance in the games.

No Olympic games were held in 1916 on account of the World War.

The 1920 team was in charge of Colonel W. C. Short,* Cavalry, and was captained by Major B. T. Merchant, Cavalry, with Captain D. H. Mallon, V. C., as team Veterinarian.

The team started training late in the winter of 1920 at the Cavalry School; training was carried on at Riley until June when training was suspended during the period of the overseas journey. The team sailed from Hoboken the latter part of June and arrived in Antwerp July 6th. The team completed its training at Coblenz, Germany.

While in Germany the team entered various horseshows, competing at Cologne, Bonn, Coblenz and Wiesbaden. Splendid arrangements for horses and training grounds were made available to the team at Coblenz, the headquarters at that time of the American Forces in Germany.

*Now Brigadier General, U. S. A.

Lt. Col. B. T. Merchant, Cavalry, Captain 1920 Olympic Team, on Jack Snipe, a Seasoned Olympic Campaigner

Antwerp was reached on September 1st, where the team continued training until the competition started.

At Antwerp there were four principal equestrian events; viz: the Equestrian championship; the *Prix Des Nations*, the *Dressage*, and an Individual Jumping contest open only to horses and riders who had not competed in the *Prix Des Nations*.

The Equestrian Championship team consisted of four officers. The score of the three highest riders to count; our team being represented by Major H. D. Chamberlin, riding *Nigra;* Major John Barry, riding *Raven:* Major W. W. West, Jr., on *Black Boy;* and Major Sloan Doak, riding *Deceive; Deceive's* second appearance in Olympic competition.

The following extracts are from an account of the 1920 games, written by Major B. T. Merchant:

• • • • •

"First phase—fifty kilometers in three and one-half hours, five of which were across country over natural obstacles at rate of fifteen miles per hour. Going very heavy due to rains, obstacles, twenty-four in number, some of them very difficult, particularly a brook with treacherous landing where Chamberlin fell.

"In this phase Barry fell at the first jump, broke two bones in his right hand, remounted and finished on time; Chamberlin fell at Brook, unhurt, remounted, finished on time; West made perfect score. Doak lost time on cross-country part of the ride.

At the end of first phase our team stood second to Sweden.

Second phase—twenty kilometers in one hour over roads and bridle paths, the latter extremely heavy going due to rains. The measuring of this twenty kilometers was doubtless done with a very long tape as it was at least three kilometers over the distance. Our men were travelling on a time table and got so far behind between the fourth and fifth control that all of them galloped as fast as possible for the last fifteen minutes trying to get in within the hour. None finished on time, and the penalty for overtime was heavy. *Deceive* pulled up lame at the conclusion of this ride. Pulled a ligament in the right hind pastern and the judges eliminated him. This was a blow to us. At the end of this phase Sweden was still in first place with our team in second place.

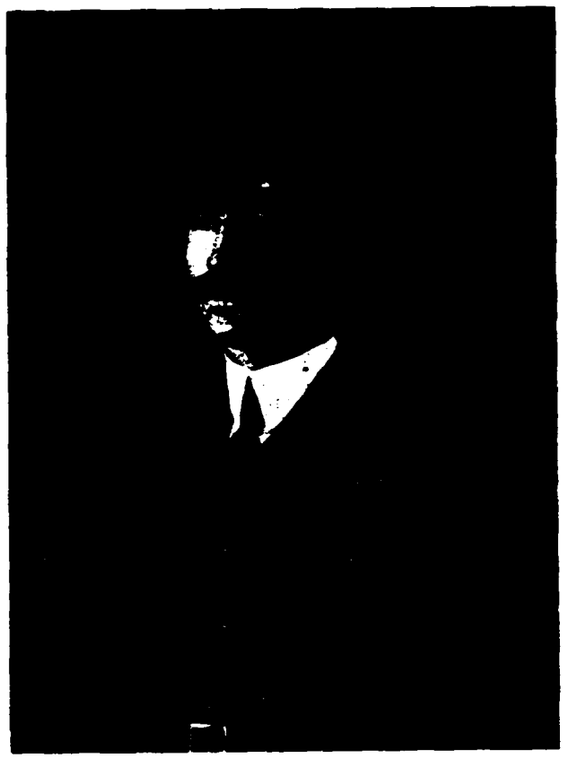
"Third Phase—Jumping over the course in the stadium. This was an entirely new course to us, and no one knew, at least we could not find out, just what the jumps were to be until the preceding day when we were allowed to 'look' at them.

"The course was not the Olympic course we had expected at all, in fact there were but few of the jumps that had any resemblance to the Olympic course that we had been training on. Notwithstanding this our three horses did fairly well, that is, fairly well considering the horses and Barry's broken hand. At one point in the course it was necessary to stop from a full gallop in a twenty foot sand square, turn about and go over a jump. Barry couldn't make this half quickly enough with only one good hand and we lost points there. All three of our horses, however, showed the lack of recuperative power possessed by better bred animals."

• • • • •

"Sweden placed first in the final standing of this Three Day Event, with Italy, Belgium, United States and France following in that order.

"The 1920 *Dressage* Team consisted of three riders and three horses. Major Chamberlin rode *Harebell;*



Brigadier General Walter C. Short
Manager of 1920 and 1928 Teams

Major John Barry rode *Sin Glen;* and Major Sloan Doak rode *Chiswell.*

Havebell was a thoroughbred mare, 16.1 hands; *Sin Glen* a candidate of the 1912 team, was a clean bred mare by *Scintillant II; Chiswell,* a veteran of the 1912 team was a three-quarter bred chestnut gelding.

The team did not place.

In the *Prix Des Nations,* Major Chamberlin rode *Nigra;* Major Doak rode *Rabbit Red;* Major V. P. Erwin rode *Joffre,* and Major K. C. Greenwald rode *Mecca.*

The team placed fifth.

For the Individual Jumping Contest, Major West rode *Prince;* Major J. W. Downer rode *Dick;* and Major H. T. Allen, Jr., rode *Don.* This event was won by Italy.

In glancing over the list of riders of the 1920 team there appear several names that figure very prominently in later Olympics—Majors Barry, Doak and Chamberlin. Major Barry rode on and captained the 1924 team; Major Doak rode on and captained the 1928 team and likewise was a member of the 1924 team. Major Chamberlin rode again on the 1928 team and is now one of the outstanding candidates for the 1932 team.

1924

Lt. Colonel John A. Barry, Cavalry, (then Major, 3d Cavalry) was designated to captain the 1924 team.

It was proposed to have the 1924 team exhibit at the Olympia, London, prior to the Olympic games. With the above in view Colonel Barry went to London in 1923 to observe the Olympia.

Many suggestions and offers of assistance, looking to the sending of an Army Horse Show team to the International Horse Show, Olympia, London and the Olympic Games in 1924 were received by the War Department and the American Remount Association.

A committee composed of R. H. Williams, Jr., New York, and Pierre Lorillard, Jr., Tuxedo Park, N. Y., was appointed by the Chairman of the Sports and Competition Committee of the American Remount Association as a committee of two with full power to organize a horse show committee and to secure the approval and cooperation of the War Department of a definite plan of action. Three officers were added to the committee; Major J. A. Barry, as Cavalry representative, Major C. P. George, as Field Artillery representative, and Major C. L. Scott, as representative of Remount Service. The plan of the committee was to collect suitable horses and sufficient funds both to mount and to pay the expenses of sending a team to Europe in 1924.

The nucleus of the riders of the 1924 team was assembled at Fort Myer, Va., where the show horses returned from the American Forces in Germany were stabled. With these horses the team nucleus showed at prominent Eastern horse shows in the fall of 1923.

The Olympic team sailed from New York on the S. S. Minnewaska on May 31st, 1924, the team going direct to London where they participated in the Olympia. Upon completion of the London Show the team sailed for France and completed their final training at Rocquencourt, 12 miles from Paris.

The team consisted of the following:

Major J. A. Barry, Cavalry
Major C. P. George, F. A.
Major Sloan Doak, Cavalry
Major E. W. Taulbee, Cavalry
Captain W. T. Bauskette, Jr., Cavalry
Captain V. T. Padgett, Cavalry
Captain J. R. Underwood, V. C.
1st Lt. F. L. Carr, Cavalry
1st Lt. F. H. Bontecou, Cavalry Reserve
1st Lt. P. N. Robinett, Cavalry

In addition fourteen (14) horses and grooms were taken.

The team entered the Equestrian Championship and the *Prix Des Nations.*

In the Equestrian Championship the following riders and horses were entered: Major Doak rode *Pathfinder;* Lieutenant Carr rode *Proctor;* Captain Padgett rode *Brown Boy:* and Major Barry rode *Miss America.*

The following is an extract of the report on this event:

* * * * *

"In schooling, we came out about the middle. For the second phase—endurance test—the ride started at Auteuil—four and three-eighth miles through the Bois returning to Auteuil where the steeple chase was ridden, then through Saint Cloud to Le Bois de Meudon where cross country began—the ride ending at the big aviation field near Paris. The footing, with the exception of the steeplechase, was very hard. There were many miles of metalled roads, a good deal of cobble stone and very steep hills. *Miss America* could not finish on account of sore feet, *Brown Boy* went lame before start of the cross country and was withdrawn. *Pathfinder* on that day finished first and *Proctor,* our only remaining entry, third. *Pathfinder* is a thoroughbred. *Proctor* is an English horse, said to be a thoroughbred, but has no papers. *Miss America* is about half bred, *Brown Boy* is a former troop horse of no breeding. The above facts show necessity of blood. Three horses had to finish for a team to be considered for a team prize. We were therefore eliminated as a team. In final classification Major Doak, on *Pathfinder,* won third individual prize and *Proctor* was eighth."

* * * * *

For the *Prix Des Nations* the following riders and horses were entered: Lieutenant Bontecou rode *Bally McShane;* Major Doak rode *Joffre:* Captain Padgett rode *Little Canada;* and Major Barry rode *Nigra.*

The course consisted of eighteen jumps, not over four feet eight inches nor more than fourteen feet broad. The track was of heavy sand 1076 meters long. Our team did not place.

In both the Equestrian Championship and the *Prix Des Nations* events of the 1924 games, the contests were for teams of four (4) competitors for each nation; insofar as a team's score was concerned only the scores made by the three high men on each team counted.

The following extracts are from an account of the 1924 Games, written by Colonel H. N. Cootes, Cavalry, who at the time was Military Attaché to Austria and Czecho-Slovakia:

* * * * *

"Between fifty and sixty of the World's greatest horses and horsemen competed, and it was the consensus of opinion among the World's most noted horsemen, both past and present, that it was the greatest exhibition of equestrian events shown in the history of the World. To those who were fortunate enough to be present, the memories of this great exhibition of the pick of the world's horses and the class of horsemanship shown will always remain vividly with them."

"Many lessons were learned by the American team, among them the fact that in future competitions it will be useless to show horses who are not perfectly schooled and clean bred, and also the fact that in preparing for those competitions not only must the first team be composed of thoroughbred horses, but also the substitutes, because as the training progresses there will occur accidents which will at the last moment require the substituting of horses; in the case of the American team, three of the best horses were disabled: *Submersible, Tango Dance, Blank Check,* and one after another were eliminated by lameness or accidents. This required the substitution of horses who by reason of lack of blood could not cover the courses in the endurance and steeplechase tests.

"The first phase of the equestrian championship was individual schooling of the horses. The contest was by teams of 4 competitors for each Nation, and prizes were awarded to the three best competitors of each Nation who had the highest score. This test was intended to show the suppleness of the horse and its docility. Each contestant was allowed 8 minutes in which to do his work, the track being 60 meters long and 20 meters wide. The work of the American officers in this phase of the test was very good. Major Doak, Major Barry, Lt. Carr and Lt. Padgett gave their horses an excellent ride.

"The second phase of the Equestrian championship was the endurance test. The start of the test was on the steeplechase course at Auteuil and it was one of the most gruelling tests ever seen, due to the fact that the itinerary was checked at the completion of each phase of the contest. Unless one could see the course, it would be hard to conceive the difficulties of this test, and many of the horses were unable to complete it, most of whom were of the cold blooded type. The test consisted of riding 36 kilometers (22½ miles) in two hours, two minutes, forty-two seconds, partly on roads, on cement pavement and on pathways through the country and on steeplechase grounds; certain portions of the course consisted of hills and steep descents, which necessitated the walking of the horse. In this test, American horses scored a big success, as Major Doak on *Pathfinder* finished first and Lt. Carr on *Proctor* finished third. In the final classification however, Major Doak was placed third and Lt. Carr eighth: the horses of both Major Barry and Lt. Padgett were not equal to it, and both were forced to withdraw, after making beautiful performances in the steeplechase part of it. The exact number of horses failing to complete this course was not given out, but it was known that at least two horses from every team, except the English, Holland and Swiss, failed to finish.

"The 3rd phase of this test was obstacle jumping, and Major Doak made a splendid performance in this event, but when the final score sheets were given in, it was found that he had been given one fault at the water jump, which took 80 points from his score, and instead of finishing first, as the majority of competitors thought, he was placed third in this event, much to the surprise of a number of officers who were witnessing the competition.

"In the Individual Training Competition, (*Dressage*) in which America had no horses engaged, occurred the finest exhibition of schooled horsemanship which I suppose has ever taken place in the world; it was won by General de Linder, a retired General of the Swedish Army, on *Piccolomini.* Despite this officer's years (50), he also won the Scandinavian jumping competition last year. His horse *Piccolomini* is a fine type of thoroughbred, and he has been schooling this horse for about three years. Captain Sandstrom, a Swede, on *Zobel,*

Lt. Colonel John A. Barry, Cav. Captain 1924 Olympic Team and Member of 1920 Team

who finished second has been working on his for six years, from one to five hours daily.

"The most thrilling part of the whole game was naturally the jumping contest for the *Prix des Nations* which took place in the Colombes stadium on Sunday afternoon, July 27th. The course was 1,070 meters long, fourteen jumps and was the most difficult course which most of the competitors stated that they had ever seen: only two minutes and thirty-nine seconds were allowed. The difficulties were increased greatly due to the fact that a thick layer of sand covered the entire course which was from fetlock to over ankle deep in most places. Therefore, the majority of the horses after they made a good performance over the first five or six jumps became so tired that they repeatedly fell or knocked down fences over the remaining jumps. Major Barry on *Nigra,* Major Doak on *Joffre,* Lt. Padgett on *Little Canada* and Captain Bontecou on *Bally Mac Shane.* All of these horses have a long list of winnings to their credit, but in this event only Major Barry and Major Doak were able to finish, both *Bally Mac Shane* and *Little Canada* refusing the bank jump, thereby being disqualified."

1928

The Ninth Olympiad was held in Amsterdam, Holland, August 9-12, 1928. The American Army entered a team in the following two events. The *Prix des Nations* and the Equestrian Championship.

With a background of three previous Olympics the 1928 team started training with a wealth of experience.

In addition to the horses available from the show string at the Cavalry School and the Field Artillery School, a call was made on all the cavalry regiments to canvass their horses with an idea of uncovering likely Olympic prospects. In addition to public animals a number of civilians were asked to donate or loan horses to the Army for 1928 tryouts.

The plan of training for the 1928 team contemplated two special training centers, one at the Cavalry School, the other at the Field Artillery School; the Cavalry element of the United States Army Horse Show Team was at Riley and the Artillery element at Sill. To these elements were to be added such other military and civilian riders and horses as might be suitable and available. From all these sources a team was to be selected and assembled about May 1, 1928, for further training.

In accordance with the above plan the following cavalry officers started training at Fort Riley; Major Sloan Doak, Major H. D. Chamberlin, Major O. I. Holman, Major A. W. Roffe, Captain F. H. Waters, Captain W. B. Bradford, Captain F. L. Carr, and Captain R. C. Winchester. The Field Artillery officers who trained were Major C. P. George (in charge), Captain N. J. McMahon, Captain W. H. Colburn, and Lieutenant E. Y. Argo.

The request for suitable horses brought forth from the service at large five animals. These were shipped to Riley for tryout. One of the five was retained, owned and loaned by Major J. R. Underwood, V. C. Six civilian owned horses were tried out at Riley but none were taken on the team.

The training of the Cavalry and Artillery elements of the team started in the fall of 1927. The combined training of the two elements was held at Riley from May 1, 1928, to June 2, 1928, at which date the team left Riley for Rye, N. Y., where the team trained until July 10, when the team proceeded to Hoboken and loaded on the SS "President Roosevelt" for the trip to Europe.

The following officers composed the 1928 Olympic Team:

Brigadier General W. C. Short, U.S.A., Manager.
Major Sloan Doak, Cavalry, Team Captain,
Major C. P. George, Field Artillery,
Major H. D. Chamberlin, Cavalry.
Major A. W. Roffe, Cavalry,
Captain W. B. Bradford, Cavalry,
Captain F. L. Carr, Cavalry,
Lieutenant E. Y. Argo, Field Artillery,
Captain P. T. Carpenter, V. C., Veterinarian.

The above list contains the names of several veterans of past Olympics—Major Doak was a seasoned campaigner with two previous Olympics to his credit; he rode on the 1920 and 1924 teams. Major George and Captain Carr were members of the 1924 team; Major Chamberlin had previously ridden on the 1920 team. The team had in Brigadier General W. C. Short a veteran with much experience in handling and managing army equestrian affairs. General Short was familiar with Olympic conditions, having managed the affairs of the 1920 team at Antwerp.

The team landed at Amsterdam July 20 and proceeded to Hilversum, twenty miles from Amsterdam, for final training. Eighteen days elapsed between landing and the opening of the equestrian events.

The following official account of the 1928 Olympic is taken from the official report of Major Doak:

* * * * *

"After close observation of the condition of the horses, the record of their daily performances and bearing in mind the experience of 1920 and 1924, the following team for the Equestrian Championship was selected and as required was submitted 48 hours before the competition:

1. *Misty Morn* Ridden by Major Doak
2. *Benny Grimes* Ridden by Major Chamberlin
3. *Verdun Belle* Ridden by Captain Carr

Reserve *Ozella* Ridden by Major George

The reserve horse or rider could replace any other horse or rider up to one hour before the beginning of the competition. Contestants were shown over the steeple chase and cross country course after the designation of the team and reserve. *Ozella*, who was considered the surest entry, was placed in reserve especially so that after our looking over the course she could replace what was thought to be the weakest horse of the other three.

"The requirements for the horse championship were as follows:

First day—Schooling of known prescribed movements, value 300 points.

Second day—Endurance, value 1400 points.

Third day—Jumping in stadium over an unknown course of 12 jumps at rate 14 miles per hour, value 300 points.

The second day in detail consisted of:

A.—Road march of 4⅜ miles at rate of 9 miles per hour.

B.—2½ mile steeplechase at rate of 22½ miles per hour over thirteen jumps.

C.—9 mile road march at the rate of 9 miles per hour.

D.—Cross country 5 miles at the rate of 16.7 miles per hour.

E.—1¼ mile gallop at 12½ miles per hour to finish.

"Horses carried 165 pounds and were penalized very heavily for any overtime. For example: The allotted time in the cross country was 17 minutes and 46 seconds; if he were one minute late his time penalty would be 210 points or over two-thirds of the maximum score for schooling of jumping.

"In "A" most of the distance was in soft going.

"In "B" the footing was good enough though quite uneven, and some of the jumps were stiff.

"In "C" about three miles was in very heavy sand over sand dunes and about one mile was on brick pavement.

"In "D" there were more than forty obstacles, which included wide and deep irrigation, ditches, most of which had seepy banks for about two feet on each side; solid natural rail fences 3 feet 10 inches high, in some places in front of wide ditches, sometimes as "in and out", sometimes in or beyond ditches, sometimes following a sharp change of direction, and many of them in the latter part of the "cross country" when the horse was most fatigued, (these latter caused several falls); five road crossings with ditches on each side of the road, these ditches had vertical banks and some of them with water four feet below surface of ground. The ground was comparatively level, but the course was full of sharp turns, which made it impossible to gallop at much speed for any considerable distance.

"E" was in sandy going.

"After being shown the above course, and from experience in 1920 and 1924 Olympic Games, weighing the relative value of the endurance phase with that of the schooling or stadium jumping there was no doubt but that the horses should be chosen for absolute soundness, galloping and staying ability, courage and broad jumping, so long as they could show creditably in the schooling and stadium jumping phases.

"Bearing the above in mind *Benny Grimes* was considered the weakest of the horses originally nominated, and *Ozella* ridden by Major George was substituted for him. This gave us a team of three horses, one of which was 15 16 thoroughbred, and the other two were registered thoroughbreds.

"In the schooling phase of the three day test our team was placed tenth out of fifteen nations; 256 points behind Holland, the leading nation. We had no expectation of standing high in the schooling phase because of the fact that our horses had been in training for such a short time. In contrast, one horse shown by the Holland team was known to have been in training for six years and competed in the 1924 Olympic Games.

"The other two horses had been in training for a long period and were thoroughly schooled.

"In the endurance phase our team finished first, placing us in second place for the first two days, until we were eliminated as a team by the judges' decision to eliminate *Ozella* because of failure to take one obstacle on the cross country course. Other than this failure to take one jump, none of our horses were penalized for any cause, and each horse received a bonus for under time on the "Steeple Chase" and "Cross Country", which were the only phases on which a bonus was allowed. The official veterinarian stationed at the finish of the ride stated that our horses were in better condition than those of any other nation.

"In the stadium jumping the two horses remaining completed the course, one with two faults and the other with six faults."

* * * * *

The Equestrian Championship was won by Holland, second and third place going to Norway and Poland respectively.

For the *Prix des Nations* our team was as follows: Major Chamberlin riding *Nigra:* Major Roffe riding *Fairfax:* and Captain Carr riding *Miss America.*

The following is quoted from Major Doak's report:

"The course consisted of sixteen obstacles from four feet four inches to four feet eight inches high with most of them spread between five and six feet and including two "in and outs", double over, triple bar, bank and fence, water, fence and bank and fence, gate, stonewall, double bars over water, etc. The course was very reasonable, though a thorough test, and I know any or all of our horses entered were capable of negotiating the course without fault. However, it was reasonable to assume that any good jumper over such a difficult course, making 15 miles an hour, with many turns might make an error at one or more obstacles. None of our horses jumped without fault, but each made a very creditable performance. Their scores were as follows:

1. *Nigra*, one front knock-down, 4 faults.
2. *Fairfax*, one front and one hind knock-down. One run-out totalling 8 faults and 4 faults for overtime.
3. *Miss America*, one hind knock-down and front foot in water totalling 6 faults.

Lt. Colonel Sloan Doak, Cav. Captain 1928 Olympic Team, Member of 1920-24 Team on Jack Snipe

"This gave the team 22 faults placing the team eighth out of sixteen entries. The winning team had one horse to go without fault, and each one of the other two horses had one hind knock down. Two teams were eliminated, and the others had faults ranging from 4 to 62."

The standing of the first three teams in this event were Spain, Poland and Sweden.

* * * * *

It is interesting to note that of the six horses representing the United States in the 1928 Games, four were privately owned officers' mounts, viz: *Misty Morn, Verdun Belle, Fairfax,* and *Ozella;* one, *Miss America,* was purchased privately and presented to the Government for use on the 1924 Olympic team. *Nigra* was purchased during the War under abnormal conditions. This grand old mare holds the unique and enviable record for American Army horses, having been ridden in the *Prix des Nations* event in three Olympics, 1920, 1924, and 1928. It is interesting to note that in the 1920 Olympics, *Nigra* not only was in the *Prix des Nations* but Major Chamberlin rode her in the Three Day event also!

Miss America was a veteran of the 1924 team.

The 1928 team was unquestionably one of the best

mounted teams insofar as relates to breeding type and condition of horses. Our riders were experienced and qualified horsemen. The training of riders and horses was all that could be desired in the time that was available.

1932

The plans for the training and development of the 1932 team are well under way.

The problem involved, training of riders and horses in three separate and distinct forms of mounted endeavor, viz; jumping, schooling and an endurance test.

Two plans presented themselves for the development of riders and horses for the 1932 equestrian games: First, a decentralized training plan contemplating the development of riders and horses at several locations, such as Fort Riley, Fort Bliss, Fort Sill, Front Royal, within regiments, etc., for preliminary training under selected officers; later, riders and horses being assembled at one location for elimination trials and final training; the second plan was a centralized training scheme contemplating the initial development of riders and horses at some location for preliminary training under a specially qualified officer.

The decentralized plan was adopted: briefly the plan contemplated:

(1) Preliminary training during the year 1930 and 1931 conducted at designated posts under the supervision of selected officers. During this period riders and horses were selected for additional training, given at Fort Riley.

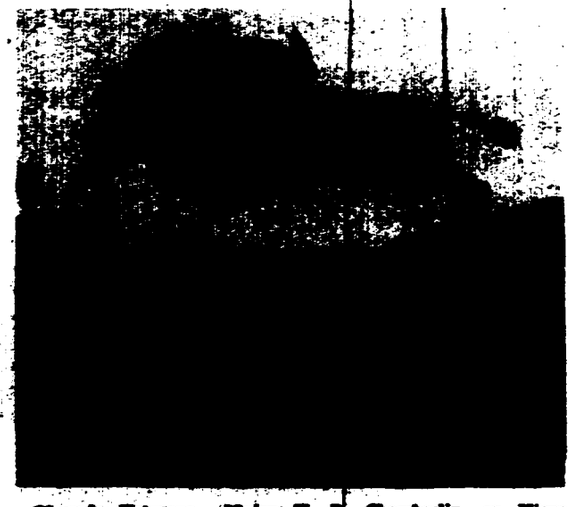
(2) Intermediate training at Fort Riley in 1931. Riders and horses to be those sent to Fort Riley as above outlined. In the fall of this year elimination of riders and horses to be made with a view to the selection of those to receive final training.

(3) Final training in 1932 to be conducted at Fort Rosecrans, California.

The army nucleus of the 1932 Olympic Games Equestrian Team has now completed its intermediate training at Fort Riley, and a group of these candidates have been selected for their final training, which will take place at Fort Rosecrans, California. The following group of officers and men, along with approximately forty horses, were to assemble in California on or about December 1st of this year:

Lieut. Col. C. L. Scott, Cavalry.
Major Harry D. Chamberlin, Cavalry.
Major Arthur P. Thayer, Cavalry.
Capt. William B. Bradford, Cavalry.
Capt. James E. Noonan, V. C.
Capt. Fred W. Koester, Cavalry.
Capt. Isaac L. Kitts, Field Artillery.
Capt. Edwin Y. Argo, Field Artillery.
Capt. Hiram E. Tuttle, Q. M. C.
Capt. John T. Cole, Cavalry.
1st Lieut. Peter C. Hains, III, Cavalry.
1st Lieut. Earl F. Thompson.
1st Lieut. LeRoy J. Stewart, Field Artillery.
1st Lieut. Carl W. A. Raguse, Cavalry.
1st Lieut. John W. Wofford, Cavalry.
2nd Lieut. Raymond W. Curtis, Cavalry.
Tech. Sergeant Alvin H. Moore, Engrs.

Lt. Col. C. L. Scott, Cavalry, Manager 1932 Olympic Games Equestrian Team, on Lord Russell, Three-Day Horse



Olympic Veterans. Major H. D. Chamberlin, on Nigra IX Olympiad, Amsterdam, 1928. Nigra was on the Olympic Teams of 1920-24-28. Major Chamberlin rode on the 1920-1924 Teams and is now a member of and in charge of training for the 1932 team.

CONCLUSION

The successful outcome of athletic competition depends on a sound progressive scheme of training. Olympic equestrian competition is no exception.

Olympic equestrian competition is the stiffest kind of competition. It demands experienced horsemen and experienced horses and involves the training and conditioning of both.

American Army horsemen have the lessons of four previous Olympics to guide them. They can, should and will profit from the experience gained in preparation for, and participation in, those games.

Some Random Observations

By Lieutenant Colonel C. Burnett, 3d Cavalry

On the State of the Army

TO officers who have been serving with troops in recent years, it is no news that the Army as a whole is not in as good a state of training as could be desired. But to one who returns after a long absence from troops the present condition of affairs comes as something of a shock. Conditions probably differ materially at different posts, but throughout the Army in general it seems that the exigencies of the times have relegated training to a subordinate position in the scheme of things. Building roads, the repair of barracks and quarters, shovelling snow in winter and cutting grass in summer, fatigue details of various descriptions, the formidable Class "A" special duty list—however necessary such work may be—all take men away from training. The summer training season, short at best in northern stations, is cut into deeply by C. M. T. C. and O. R. C. training camps. It is not at all unusual to find men of comparatively long service who have had little or no training in minor tactics, while a large percentage know nothing whatever of combat firing or musketry practice.

It would seem idle for us to pretend that the regular army is a thoroughly trained force, capable in all respects of acting as a model for our civilian components. Under present conditions training must be sacrified for maintenance. Is that condition understood outside of the Army?

The C. M. T. C.

It would be difficult to overestimate the benefit derived by the young men who attend the CMT Camps. It seems a pity that so few can be accomodated yearly—for in these days of flaming youth, too often are those old homely virtues of self-respect, self-reliance, obedience to authority, honesty, cleanliness and punctuality—to mention only a few—neglected in the home. The Army can, and does instill these virtues in those youngsters who are fortunate enough to come under its influence. At the same time, however, those who have not been intimately associated with these camps cannot realize how much of a burden they are to the regular army. For the line troops, not only is the time lost for their own training, but the labor involved is no small matter.

Erecting and taking down a camp, drawing, and later turning in a tremendous amount of equipment, cleaning horse equipment, etc. daily, the heavy special duty involved—all place a heavy burden on the enlisted man, whose morale, to say the least, is not improved thereby. Neither is it a small matter for the troopers to turn their horses over to the mercies of inexperienced boys. The Medical Corps, too, feels the strain, especially at the beginning and end of camp, in making the necessary physical examinations, often with insufficient personnel. A post headquarters handles hundreds of extra papers before, during, and after a camp. The Quartermaster is not through even when clothing and equipment have been issued, and taken in again, although that in itself is no small job. Clothing and equipment must be inspected, cleaned, repaired or condemned, operations which are only finished in time to start over again with a new camp. In short, it is not too much to say that the whole energies of a post are devoted to these camps for a period even longer than the camp itself.

Under existing conditions, it will be admitted, I think, that the regular army, itself, derives but little benefit from C. M. T. Camps. On the other hand, graduates of the Blue course have a long way to go before they can become competent reserve officers. Any scheme, therefore, that would insure some benefit to the regular army and at the same time improve the instruction now being given to C. M. T. C. students, would appear worthy of some consideration. The following plan is by no means new in principle, and it is believed can be made to work by anyone who will make the necessary effort.

The war strength of a troop of cavalry is 7 officers and 166 enlisted men. Under the assumption that M day is the day C. M. T. C. candidates are ordered to report, fill up the troop to war strength with reserve officers and C. M. T. C. candidates, just as the troop would be increased in an actual emergency. This would mean the addition of four or five reserve officers and some eighty to ninety C. M. T. C. candidates. The regular troop officers would then clothe, equip, and train the new men, *and at the same time train their own enlisted men.* The peace-time troop would become the training cadre, just as would be the case in an actual emergency and M day would take on a real meaning instead of the rather vague abstraction which it is now.

While conditions vary at different posts, at most places, probably, the C. M. T. Camp is quite near barracks. In such a case, one-half of the complete organization could be quartered in the barracks, while the other half is in camp, the two groups changing after the first two weeks. At some places, it might be preferable for everybody to be in camp, while at others there might be barrack accomodations for all. The important point is that platoons and squads should be made up of a mixture of enlisted men and C. M. T. C. students and the integrity of these organizations maintained throughout the month. It is believed safe to say that at the end of the month, all officers concerned would have acquired some invaluable experience in preparing for actual war conditions, the enlisted men of the troop would have received some badly needed

training, while the C. M. T. C. students would know much more about soldiering than is possible for them to learn under the present somewhat artificial system of instruction. If there is any remote idea that these young men are to become reserve officers some day, they should know a thousand and one things which they do not get now—much of which they would unconsciously absorb from the example of the enlisted men in their squads.

The only objection I have heard advanced against such a scheme of training is social, rather than military. The fear has been expressed that it might not be wise to mix C. M. T. C. students with enlisted men of the regular army. That objection carries little weight with officers who have been in close association with these camps. As a matter of fact, the training cadre of non-commissioned officers live in close association with these boys under the present scheme of training. The majority of these boys come from homes differing but little from those of our enlisted men, although their general average of education is somewhat higher than that of the enlisted man. A certain percentage, of course, come from well-to-do families; but it is believed that they are the ones who would welcome, and profit most from, this proposed method of training. Officers who have been on duty at these camps would be the first to assure any inquirer that the young men of the C. M. T. C. are in no danger of contamination through association with enlisted men.

The O. R. C.

Undoubtedly these camps are of considerable value to the organized reserves. They afford a pleasant outing during the hot months of summer, with camping and horseback riding provided under the best possible conditions, all without cost to the individual. Undoubtedly, such camps are a great asset in keeping up interest in the reserve corps and are probably worth while from that standpoint alone. The reserve officer fills a very important niche in our military scheme and is deserving of our best support.

From a purely military standpoint, however, the particular camps observed by the writer leave much to be desired. There is ancient—and excellent—authority for the statement that the blind cannot lead the blind. Often, the regular army officers on duty with these organizations appear to have very little to do with them during these camps and seem to be passive observers more than active instructors. The instruction then depends largely upon the regimental commander who may, or may not, get results commensurate with the expense involved. The value of the instruction will therefore vary with the regimental commander. As so many factors besides the purely military one enter into such a situation, a proper solution appears difficult—too difficult, at least, for the writer.

The R. O. T. C.

All officers owe their best efforts toward making this institution a success. It is our only hope for obtaining competent reserve officers for the future, and any opportunity to instruct them should be utilized to the fullest degree. The cavalry is very fortunate in being able to obtain material from several excellent military schools. To mention only one instance, in New England, Norwich University turns out most desirable material for reserve officers. Graduates of that institution are well grounded in the basic requirements of a cavalry officer, and only need some instruction in field training and troop administration to be an actual asset to the cavalry service. The ideal method of instruction for such newly-made second lieutenants is to take them into camp, away from a post, for their first two weeks of active service. Under such conditions, both administration and field service can be taught them, free from the many interruptions and distractions of post life.

The writer had an opportunity to train fifty-five such young men with his squadron during the past summer. They were incorporated into the troops and participated in the various problems in minor tactics, dismounted combat exercises, etc. Afternoons were devoted to tactical rides under regular officers. At the same time they were shown how a camp should be run, under conditions very similar to those they would encounter if suddenly called to active duty in an emergency. Such men can absorb a lot of useful things from the enlisted men of an organization, if given the opportunity. From this experience, the writer is convinced that a camp with a regular organization, free from outside interference, is the ideal method of training the young reserve officer.

For those few who are attached from time to time for their two weeks' tour of duty during the year, not a great deal can be done. Usually such a small number of enlisted men can be turned out for drill that not much useful instruction can be given along that line. As a matter of fact, in many institutions the students receive more close-order drill than do the enlisted men. However, much-needed instruction in troop administration, mess management, supply, etc., can be given, while first-hand contact with courts, boards, guard duty, etc., cannot help but be of value to the new officer.

It is up to us to make the service so interesting and attractive that the young ROTC graduate will be encouraged to continue along the path he has started.

The Yorktown Sesquicentennial Celebration

By Second Lieutenant John R. Lovell, Coast Artillery Corps

THE Sesquicentennial Celebration of the Siege of Yorktown and the Surrender of Cornwallis provided an unexpected opportunity for the United States Army to render a peace-time service where organized assistance was sorely needed. Few of us had any idea that we were to take such an important part in it until the War Department placed Brigadier General S. D. Embick, Commandant, Coast Artillery School, in general charge of the demonstration. The Yorktown Sesquicentennial Celebration was one of the greatest projects that the United States Army has undertaken since the World War.

For this celebration Congress appropriated $200.000 and created the United States Sesquicentennial Commission composed of five senators and five representatives. In addition the state of Virginia appropriated $12,500, and appointed its own commission of ten members. In order to supplement the two commissions, and to act where the federal and state organizations could not function, the Yorktown Sesquicentennial Association was formed. This association was composed of public spirited and patriotic citizens from the several states and territories of the Union.

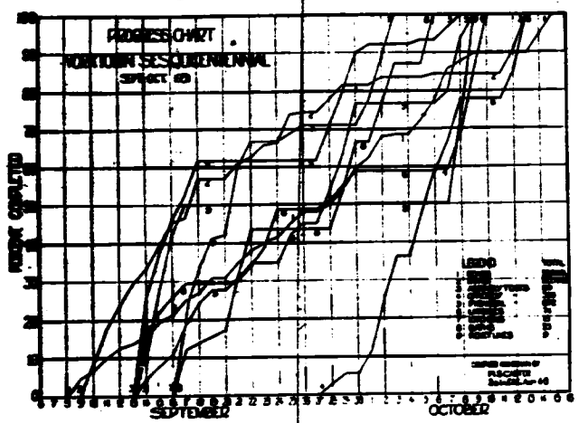
The Colonial National Monument, an organization operating under the National Park Service of the Department of Interior, was established and undertook much of the preparatory work. Mr. Oliver G. Taylor, Engineer in Charge of the park project at Yorktown, Mr. William M. Robinson, Jr., Superintendent of the Colonial National Monument organization, and Mr. J. R. Lassiter, Associate Engineer, and their assistants deserve great credit for their unlimited and willing cooperation with the Army personnel. The Colonial National Monument organization assisted in clearing the battlefield, prepared the specifications for and awarded the contracts. They performed a large part of the construction work under the supervision of their engineers.

Mr. Albert R. Rogers had been appointed as the Director of the Celebration prior to the time that the Army took charge of the project. Many of the details in connection with the Celebration had been worked out by Mr. Rogers months in advance.

The Commanding General organized a complete general and technical all-army staff as follows:

C. G.	Brig. Gen. S. D. Embick, U. S. A.
C. of S.	Major D. S. Lenzner, C. A. C.
A. C. of S.	Major C. W. Bundy, C. A. C.
A. de C.	Lieut. J. D. Moss, C. A. C.
G-1	Major T. C. Cook, C. A. C.
	Capt. J. P. Ratay, F. A.
	Lieut. M. L. Elliott, A. C.
G-2	Major Hayes A. Kroner, Inf.
	Lieut. C. W. Allen, A. C.
G-3	Capt. W. W. Irvine, C. A. C.
	Capt. H. B. Smith, Inf.
	Lieut. M. S. Carter, C. A. C.
G-4	Major L. L. Stuart, C. A. C.
Qm.	Capt. I. J. Wharton, Q. M. C.
Asst. Qm.	Lieut. C. J. Hauck, C. A. C.
Mess Officer	Capt. G. M. O'Connell, C. A. C.
Asst. Adjutant	Lieut. J. R. Lovell, C. A. C.
Provost Marshal	Capt. B. L. Milburn, C. A. C.
M. P. Officer	Lieut. F. T. Ostenberg, C. A. C.
In charge of buses, taxis	Lieut. W. R. Ellis, C. A. C.
In charge of parking lots	Lieut. R. F. Cuno, A. C.
Transportation Officer	Capt. C. F. Johnson, 34th Inf.
Asst. Trans. Officer	Lieut. T. V. Stayton, C. A. C.

Musical Director	Capt. K. J. Fielder, Inf.
Communications Officer	Capt. Creighton Kerr, C. A. C.
Chaplain	Capt. I. J. Bennett
Fire Marshal	Capt. P. R. Bermel, C. E.
Asst. Fire Marshal	Lieut. D. P. Norman, Inf.
Engineering Officers	Colonel J. C. Ohnstad, C. A. C.
	Lieut. H. E. Strickland, C. A. C.
Liaison Officer	Capt. W. C. Rathbone, Inf.
Surgeon	Colonel D. F. Duval, M. C.
C. O. Troops	Colonel C. H. Miller, Inf.



At first glance, the staff appears to be a top-heavy organization, but its size was fully justified during the actual period of the Celebration. The Commanding General and his assistants were officially designated as the Executive Staff, United States Sesquicentennial Commission. This staff actually commenced to function in its entirety at 9:00 a. m., October 5.

The work assigned to the regular army troops consisted of the construction and improvement of roads and paths, the erection of tents for the Celebration, preparation of camps required to shelter the regular army, national guard, and other units.

The first regular army contingent began work under the supervision of Captain W. W. Irvine, C. A. C., G-3. Two regiments, the 51st and 52nd Coast Artillery, were designated special duty organizations. The permanent guard, tractor and truck drivers, janitors, orderlies, and other special duty personnel were detailed from these organizations, so that the other outfits would have their full strength for pageant activities and drill rehearsals.

The celebration ground was a large alfalfa field with a small patch of cotton, tobacco, and peanuts, and numerous beds of flowers within it. The alfalfa was harvested. Colonel J. C. Ohnstad, C. A. C., was detailed engineer in charge of the Celebration grounds, and Lieut. H. E. Strickland was detailed engineer in charge of the army camp area. The task of staking out the fields was begun, accurate sketches were made, and the work progressed rapidly in its early stages.

Captain P. R. Bermel, C. E., assisted by Lieut. B. S. Shute, C. E., and Lieut. Frank Blue, C. E., and Company C, 13th Engineers had charge of the construction of the paths and roads. Marl, excavated in the vicinity, proved to be excellent road and path building material. It was hauled by Mack army dump trucks which were obtained from all over the Third Corps Area, and small, privately owned, dump trucks hired by the U. S. Commission.

As fast as they could be utilized efficiently, troops were sent to Yorktown to rush the preparation work to completion. These details were sent from the Mechanized Force and the 34th Infantry at Fort Eustis, and the Coast Artillery organizations at Fort Monroe. Materials were obtained from practically all of the posts in the Third Corps Area and from the Quartermaster Depots.

Company C, 13th Engineers, was designated as the fire company. In addition to other assignments, this organization was to be considered as a reserve for any emergency that might occur.

The Yorktown Sesquicentennial Celebration covered the period October 16-19. Friday, October 16, was designated Colonial Day; Saturday, October 17, Revolutionary Day; Sunday, October 18, Religious Day, and Monday, October 19, Anniversary Day.

There were many prominent speakers on the four day program including the President of the United States; Marshal Petain of France; our own General Pershing; the Acting Secretary of War, the Honorable Frederick H. Payne; the Secretary of the Navy, the Honorable Charles Francis Adams; the Secretary of the Interior, the Honorable Ray Lyman Wilbur; the Governor of Virginia, the Honorable Garland Pollard, the Governors of the Thirteen Original States, and many other notables.

The series of pageants which were held in connection with the Celebration was splendid. It was most

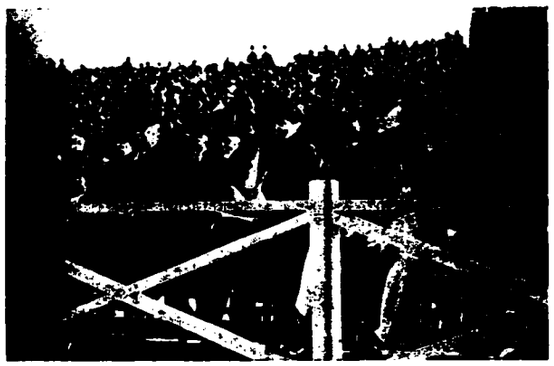
PLAN OF THE SIEGE OF YORKTOWN.

impressive, and the details were historically correct insofar as they are of record. The difficulties to be overcome in training and rehearsing several thousand persons can well be imagined.

Mr. Thomas Wood Stevens was the Pageant Director, and incidentally, the author of the pageants. He was ably assisted by Mr. Theodore Viehman, Associate Director. Mr. Alexander Wyckoff, Designer, Warrant Officer George Dahlquist, 12th C. A., Musical Director, and others. Major F. C. Phelps, 34th Infantry, assisted the Pageant Director and acted as a liaison officer between the Director and the Military units participating.

The U. S. Army troops arrived at their camp near Yorktown October 10, became settled in quarters over the week-end, and commenced rehearsals Monday, October 12. Rehearsals and exercises were held every morning for the military personnel while civilian groups took over the pageant field every afternoon.

The drill regulations that were in effect in the colonial and French armies during the revolutionary period were carefully rehearsed weeks in advance. It was difficult for our Infantry, Cavalry, and Coast Artillery units to enact even a sham battle where the troops advance toward one another in a single line,



Marshal Petain, President Hoover, Mrs. Hoover, General Pershing, Mr. Townsend.

shoulder to shoulder, with volley fire predominating. Revolutionary tactics were entirely different from those employed now, and it required several rehearsals before our soldiers were rated as good exponents of Baron Von Steuben's drill regulations.

The costumes used by the participants in the pageants were accurate and complete. Many of them were made by ladies living in the communities in and near Yorktown, under supervision of Evelyn Cohen, Costume Designer. The remainder were furnished commercially. Over 4000 costumes were used in the entire pageant.

The Pageant was divided into three separate parts —the Pageant of the Colonies, held on Friday, October 16, the Pageant of the Yorktown Campaign on Saturday, October 17, and the Anniversary Day Pageant on Monday, October 19.

The Pageant of the Colonies depicted scenes of the history and character of the Original Thirteen Colonies, in the form of drama and pantomime with events leading from the landing at Jamestown in 1607 to the signing of the Declaration of Independence. The actors in this pageant were drawn from Fort Monroe and Langley Field.

The Pageant of the Yorktown Campaign was a military and naval pageant, depicting, through historical scenes, the planning and execution of the Yorktown campaign, including preliminary battles. This was a spectacular show. The chronicler, by means of a public address system, kept the audience informed as to the historical significance of the events that were being portrayed on the large field in the stadium. Scenes on the large revolving stage in the center of the field represented events that took place away from Yorktown. The participants in this pageant were drawn almost entirely from military personnel.

The Pageant of the Yorktown Campaign included scenes of the conference between Washington and Rochambeau at Weathersfield, Connecticut, May 21, 1781; the fight at Green Spring when Mad Anthony Wayne, under Lafayette, charged the British under Cornwallis, July 6, 1781; Washington at his headquarters on the Hudson, receiving word that de Grasse was sailing for the Chesapeake, August 14, 1781; Sir Henry Clinton, at his headquarters in New York learning of the American and French march to Virginia; and the besieging of Yorktown including the taking of Redoubts 9 and 10, the bombardment of Yorktown, the capitulation of the British, and the order to cease firing.

The Anniversary Day Pageant portrayed the historical scene representing the surrender of the British forces at Yorktown in 1781. The banquet given to Lord Cornwallis and General Rochambeau by General George Washington was reproduced, and was followed by a masque dealing in symbolic, or allegorical, form with the great development of America after Yorktown, with the main motifs Peace, Liberty, and Democracy. At the close of the masque, the British flag was raised from the British redoubt and the national salute was fired.

This Pageant, which was witnessed by the President of the United States and many other dignitaries, was a most stirring one, intensely interesting throughout. The sight of the British and Hessian soldiers, in their new and colorful uniforms, filing out of their fortifications at Yorktown with General O'Hara at their head, their colors cased, and marching to the music of the appropriate British air, "The World Turned Upside Down," was one that will live long in the memories of those who were fortunate enough to see it.

The personnel participating in the pageants were drawn from nearby communities—Yorktown, William and Mary College, High Schools, Military Posts, Theatrical Societies, and other organizations. Army officers played many of the important parts.

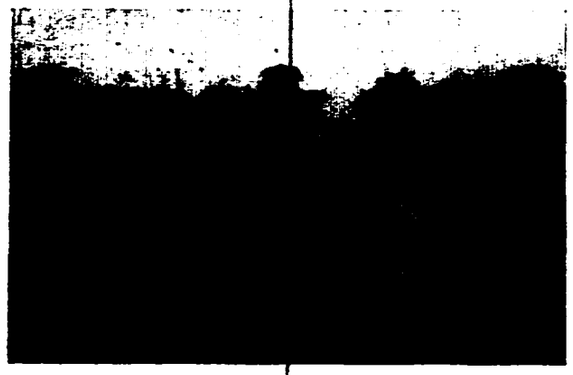
The Grand Military Review, which officially closed the Yorktown Sesquicentennial Celebration, was one of the most colorful and impressive military formations that has been conducted in the last decade. It was a sight that would stir the souls of all loyal and patriotic Americans—the appropriate finale to a great Celebration.

A cool brisk October day, not a cloud in the dark blue sky, groves of trees with multi-colored leaves in the distance, and a military spectacle headed by the

Commanding General, Brigadier General S. D. Embick, and his Staff, consisting of a column several miles long with the smart Corps of Cadets from the Virginia Military Institute bringing up the rear, the thunderous applause of over one hundred thousand Americans—this is a picture not often seen in these times.

Units of the Regular Army, a detachment of French Marines, the United States Navy, the United States Coast Guard, the United States Marines, the National Guard, the American Legion Drum and Bugle Corps from Delaware and West Virginia, and the Corps of Cadets, Virginia Military Institute, all participated in this great spectacle.

Many of the National Guard organizations wore special uniforms that added color to the formation.



George Washington Firing First Shot Against Yorktown

The somber drabness of the regular's uniform was sharply contrasted with the orange, gold, red, and blue colors of the National Guard. The Governor's Foot Guards of Connecticut, the composite Battalion from New York, the Governor's Troop of Cavalry from Pennsylvania and the famous "Black Horse Troop," Troop B, 102d Cavalry from New Jersey, were outstanding.

The President of the United States arrived at Yorktown aboard the U. S. S. Arkansas on the morning of October 19. As the presidential party steamed up the river, the entire fleet rendered the prescribed salute. President Hoover disembarked, received the Guard of Honor, and then motored to the stadium between lines formed by National Guard organizations from the various States.

The 3rd Cavalry with their gold standards and lances escorted the President and his party through the Virginia Arch into the huge amphitheater, and then into the center of a hollow square formed by the 12th Coast Artillery, the massed colors, the 3rd Cavalry, and the United States Army Band. As the President alighted from his automobile, the band played the National Anthem, while the vast throng arose and paid homage to the nation's Chief Executive. President Hoover then advanced to the speaker's stand and delivered his address over the radio and the public address system. Following the President's address the party of distinguished guests was escorted through a pathway formed by two lines of sentinels in special uniforms, to the official luncheon tent where approximately fifteen hundred guests were seated.

The President and his party rested in the President's tent after the luncheon and then returned to the stadium where they witnessed the Anniversary Day Pageant, and the Grand Military Review.

It was a difficult and delicate problem to handle so many dignitaries as were present at the Yorktown Celebration, but the problem was successfully solved by detailing aides to important guests. A careful plan was prepared in advance, the aides were well informed and instructed, and all details were coordinated.

Units from the Regular Army filled out the celebration program with drills and exhibitions that were very interesting to the public. On October 19, after the Grand Military Review and the departure of the President, it was expected that there would be a big rush to depart in automobiles, thereby causing intense traffic congestion and possibly serious accidents. This exodus was counteracted by arranging an attractive military demonstration which held a large part of the audience in the stadium and allowed the automobiles to clear the Yorktown area gradually.

The 3rd Cavalry from Fort Myer made a big hit in all of their demonstrations. The 16th Field Artillery conducted several battery field artillery drills that fascinated our civilian friends.

One of the best military exhibitions of the whole celebration was the silent drill conducted by a special platoon from the 3rd Battalion, 12th Infantry. This crack outfit drilled through several hundred movements that lasted at least twenty minutes without a command or signal, or a flaw in their performance. It was a demonstration that won the admiration of and drew applause from the entire audience.

Battery C, 12th Coast Artillery, conducted a spectacular antiaircraft demonstration that night, the illumination being furnished by the sixty-inch antiaircraft searchlights of Battery A, 12th Coast Artillery. In the first phase of this demonstration, the plane was illuminated and Battery C opened fire with blank ammunition. The pilot did a falling leaf, snapped out his running lights, the searchlights were extinguished, giving a very realistic impression that the plane had been shot down.

On the Celebration grounds, there were many exhibits that held the attention of the visitors. The National Park Service filled two large tents with relics, pictures, models of mother nature's wonders and specimens from all over the United States. Major Eugene B. Walker, C. A. C., arranged a War Department exhibit that proved to be very interesting and well attended. The exhibit included a miniature mine system, a modern tank, an airplane motor, and other military materiel.

The United States Navy exhibit contained samples of Navy materiel and models of ships. The State of Virginia arranged a fine agricultural exhibit. Descendents of the Pamunkey and Mattaponi Indian tribes established an Indian camp that fascinated the kiddies (Yes, the Army pitched their tepees and built their latrines for them, also)! The State of Virginia had many specimens of wild life in the zoo on the Colonial Fair Grounds.

The Colonial Fair Grounds, a section of the Celebration grounds, included a childrens' playground and checking tent, a free marionette show, a dancing pavilion, a colonial tilting arena, and many top and souvenir concessions.

Sunday, October 18, was designated Religious Day. In the big stadium, Catholic field mass was held at 9:30 a. m., union Church Services at 10:30 a. m., and military religious services at 4:30 p. m. The latter service was attended by a vast throng. Two thousand sailors from the fleet, all of the Regular Army and National Guard personnel attended in formation, and the stands were well filled with civilians. Chaplain Ivan B. Bennett, U. S. Army, who had general charge of the program on this day, arranged a very impressive stage background for the 4:30 p. m. service. Chaplain Julian E. Yates, Chief of Chaplains, delivered the sermon while Chaplain Morris S. Lazaron, Lieut. Col., Chap.-Reserve, Chaplain Bart D. Stephens, Chief of Chaplains, United States Navy, and Chaplain J. W. Turner, U. S. Navy, also took part in the service.

The part taken by the United States Navy in the celebration lent much color to the occasion and assisted greatly in making the celebration the success that it was. In addition to transporting the President of the United States between Annapolis and Yorktown, the Navy participated in many of the formations, permitted visitors to board their ships every afternoon for inspections, illuminated their ships at night—a sight that inspired the visitors, conducted searchlight demonstrations that could be seen for miles in the dark skies, besides escorting the French cruisers bearing the French delegation from outside the Virginia Capes to Yorktown.

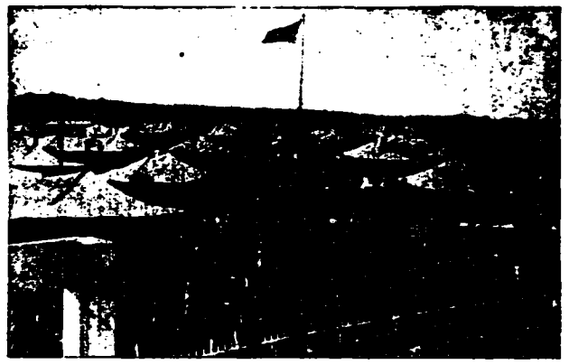
The Coast Guard assigned anchoring grounds on the York River, controlled water traffic, and participated in the Grand Military Review.

The Provost Marshal, Captain B. L. Milburn, C. A. C., was charged with the responsibility of traffic control, special transportation services, and police protection. It was his duty to formulate the general plan for traffic control, secure cooperation from state, county, and municipal authorities, and to arrange for the housing, feeding, deputization, and employment of civilian police personnel.

During the weeks preceding the Celebration, the Provost Marshal devised a plan for the control of all traffic in the Celebration area, and in the vicinity of Yorktown. This was done after consultation with Mr. T. McCall Frazier, Commissioner of Motor Vehicles for the State of Virginia, and local police authorities near Yorktown. Two traffic maps showing the routing of traffic were published in many newspapers, and distributed in information circulars at gasoline stations and other points all over the eastern states. Signs were posted along the highways near Yorktown

As can be imagined the handling of traffic was one of the most difficult and important problems occurring during the four days of the Celebration. One hundred ninety state police, five officers and one hundred thirty enlisted men of the Marine Corps and twenty-eight officers, one hundred eighty-five enlisted men of the Regular Army comprised Captain Milburn's traffic force. The Provost Marshal established telephone lines to critical traffic points. Parking stands were provided for buses and taxis. Additional parking space was provided for the great number of private cars present. Army tractors and trucks were present to assist cars encountering difficulties in traversing the parking lots and temporary roads. Some idea of the immensity of the traffic problem can be realized when it is stated that 40,000 cars were parked in the parking areas on the last day of the celebration.

A force of twenty-three uniformed patrolmen and six detectives was used to operate in the Celebration grounds proper, to prevent disorders and thefts, to return lost or stolen articles, and to return lost chil-



General View of Sesquicentennial Grounds

dren and ladies to their families. It was found that a force of at least double this number could easily have been used. The crowds were orderly and well behaved. There was very little drunkenness, and the operations of the pickpockets were kept at a minimum by Sergeant Foler and his detectives.

In using the military police of the Army and the Marine Corps, the Provost Marshal adopted the general policy of turning over all serious police cases to the civilian police so as to avoid any embarrassing situations that may arise concerning the use of Federal troops for police purposes. The military police and the civilian police functioned very well together. There was not a single case of friction between members of the police forces.

One of the most important phases of the celebration was the part taken by the Army Medical Department under Colonel D. F. Duval, M. C., in caring for the sick and injured, in the prevention of disease, and in the promulgation and enforcement of sanitary regulations.

A model camp hospital was constructed. During the period from October 5 to October 20, with a varying strength of approximately 4000 men in camp, 463 cases were handled including 248 civilian cases.

The American Red Cross established and maintained five first aid stations during the four days of the Celebration. The Surgeon had general charge of these

stations, and the Army furnished the tentage, chairs, beds, bedding, litters, and telephone service. 896 cases of minor injuries and illnesses were treated by the first aid stations during the four day period.

Three ambulances, manned by experienced personnel, treated many cases in the stadium during the exercises.

As the Army camp site was on the water shed of the city of Newport News, all wastes were removed daily. The National Park Service hired laborers, and the Army furnished transportation for this purpose. Manure was hauled away to a nearby farm. Liquid kitchen wastes were satisfactorily disposed of in sewage pits near the kitchens. Dry earth closets, that is, covered pail latrines with wooden seats and covers, were used in the Army area. These latrine pails were emptied daily, thoroughly cleaned and disinfected.

Fire regulations were published and widely distributed because the fire hazard was very great in the celebration area. The area was divided into fire zones, and two-wheel chemical carts were placed at key points. One 2½ gallon extinguisher was placed in each large assembly tent. Hand extinguishers were placed in kitchens and in other places of danger.

The city of Newport News loaned the Army six experienced firemen, one water pumping unit, and one chemical unit. A G. M. C. chemical engine was borrowed from Fort Monroe.

Only one fire occurred during the celebration caused by a careless person tossing a lighted cigarette butt on the canvas side wall of one of the large assembly tents. The fire was immediately extinguished by the 2½ gallon extinguisher placed in that tent.

The Fire Marshal, Captain P. E. Bermel, 13th Engrs., arranged for emergency details to report to each tent in the area to maintain them in case of a bad storm.

The Communications Officer, Captain Creighton Kerr, 12th C. A., established and maintained a complete system of communications at the celebration grounds. The Army switchboard was a 150-drop local battery board that maintained telephonic communication with all important points. There were three trunks from the Army switchboard to the commercial switchboard. About one hundred telephones and eighty miles of wire were used in the installation of the telephone system.

An S. C. R. 136 radio set was installed, and regular schedules were maintained with Fort Eustis, Fort Monroe, and the U. S. Navy.

The lighting contract with the Virginia Light and Power Company permitted lights to be installed in all kitchens and certain latrines only in the army camp. To supplement this service Captain Kerr installed a 25 KW set mounted on an Ordnance trailer, that furnished lights for over three hundred officers' tents, the motor park, the quartermaster area, recreation rooms, and other places where lights should have been provided.

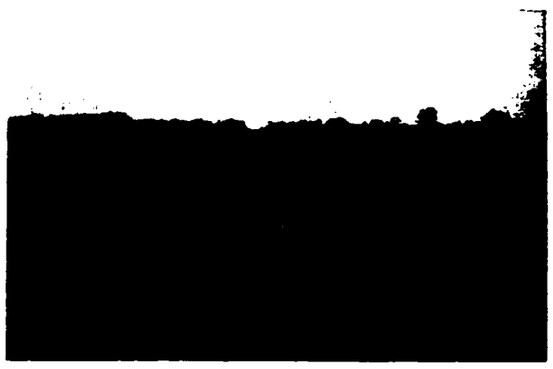
The Army Motion Picture Service installed a talking moving picture machine and the communications officer furnished a motor generator set driven by a Mack searchlight unit. Shows were conducted every evening except during the four days of the celebration.

One large tent in the celebration area contained a complete commercial switchboard unit with trunk lines to Newport News, Richmond, Washington, and New York; a Western Union Telegraph Office; a Postal Telegraph Office and a United States Post Office.

The messing problem was successfully handled by unit messes, and the restaurant concessionaire, Mr. W. M. Cease. In the Regular Army camp, one mess was provided at the head of each company street. Each mess served over two hundred men. Mess officers submitted their requisitions to the unit mess officer, Captain G. M. O'Connell, C. A. C., who obtained the supplies from the rail head and supply depot at Fort Eustis. Deliveries were made before 8:00 a. m. daily.

What is reputed to be the largest restaurant in the world, was erected on the Celebration grounds to feed the public at the rate of 5300 persons per hour. The restaurant, erected by Lieut. Norman and his detail, covered an area of 7500 square feet.

An information bureau, organized and operated by G-1, Major T. C. Cook, C. A. C., and Captain R. P. Ratay, F. A., and their staffs, performed an invaluable service to the public. This bureau registered all guests of the U. S. Commission, maintained a money exchange



Americans Taking Redoubt Ten

(for the benefit of the French sailors) disseminated general information and transportation, helped to locate missing children, helped to find wanted persons, delivered hundreds of messages, helped to find lodging for hundreds of visitors, etc. Reserve Officers, Boy Scouts, and volunteer assistants were used to great advantage in this service.

Many commendations for their splendid work on this occasion were received by the Army. These commendations came from the President, Cabinet Members, Senators, Congressmen, Governors, Foreign Dignitaries, the Navy, Marine Corps, and the Coast Guard, and many other distinguished persons and organizations. The high point of these is the President's message which was sent shortly after he had embarked at Yorktown, October 19.

"2919 for Commanding General, U. S. Troops, Yorktown. The President sends his congratulations to you and all troops participating in the exercises today 1700."

The Effect of Mechanization Upon Cavalry

By Major John B. Smith, 57th Cavalry Brigade, Kansas National Guard

HAS the Cavalry gone "Dodo"? John Doe and Richard Roe, called upon so frequently to express a general opinion, believe that it has. The briefest of conversations on the subject will suffice to establish the fact that there is a wide-spread notion that the World War proved Cavalry to be an anachronism, wholly unable to "carry on" in the intensity of the modern bulleted war; that it has been or is being abandoned by the nations of the world as a major means of prosecuting war or of establishing a system of defense.

If John or Richard were questioned for support of his belief, we would find his opinion to be built upon a chain of thought of general acceptance and of considerable apparent strength. Barbed-wire, Tanks and Gas, Airplanes, Machine Guns and Cannon—these are the weapons of modern war. Modern vehicles, modern weapons and more important still, modern thought are required to cope with them.

A "motor-minded" public tacitly endorses the advocacy of the mechanization of attack. And while such conclusions are not entirely without foundation, the dropping of the Cavalry and the horse represents an extremity not yet justified by developments or experience.

That the matter has received highly intelligent thought and study goes without saying. Let us see what reasons are advanced for the retention of Cavalry in our plan of National Defense and on the public pay roll.

What is the Cavalry's job? How does it fit in? It is assigned a variety of missions in the performance of which its distinguishing characteristics are utilized to the utmost. These characteristics, fire power, shock action and mobility, are employed so as to form a screen behind which major movements are accomplished and forces are disposed. It moves far to the front to gain early information of an approaching enemy and to maintain contact with him. It delays hostile advances until proper dispositions can be made to meet them. It guards the rear of a retreating force, holding pursuit at arm's length until the retiring force may turn and face its adversary. It prevents hostile ground reconnaissance within prescribed areas. It guards vulnerable flanks. It raids the enemy's rear. It pursues a retiring force, keeping contact with it and encircling the main body to harass his flank and delay his retreat. It is a force in reserve that may be moved quickly to critical points as needs require. It is a liaison agency that maintains contact between or within other organizations. Thus it is trained and thus is it prepared to assist the Infantry. In asking if Cavalry is obsolete, a prior question arises which demands a prior answer. Can an army dispense with the performance of those services we have just enumerated as Cavalry missions? The newest recruit answers in unison with the seasoned commander. No graduation from military school is necessary to enable any one to see that an army must have flank protection, must have time to deploy, must be ready to initiate pursuit, must have distant ground reconnaissance; in short, must have some means at hand for the accomplishment of those varied missions heretofore assigned to and performed by the Cavalry.

There is no point in proving the 19th Century Cavalry to have been proficient in the performance of these duties. Contemporary events and developments must justify its maintenance. The old saying "Handsome is as Handsome does" is applicable here. Did Cavalry so function, so perform in the World War? Was it of any assistance to the Infantry of the latest war? Our estimate of our Cavalry's value will depend somewhat upon the answer to these questions.

The Cavalry, in accordance with its mission and training opened the World War by moving far to the front to gain contact with hostile forces, to delay advances and to gain time for the disposition of main bodies. In accomplishing its traditional security and reconnaissance missions, the Cavalry operated over distances and with a versatility of performance not then possible in any other branch of service or by any other means then available. The British, French and Germans employed Cavalry to good advantage, in some instances with most excellent results.

With one flank of the armies resting upon neutral Switzerland and the famous race to the sea placing the other upon the ocean, opportunity for maneuver and flanking movement was lost to both sides. Both fortified their fronts, digging trenches and interposing barricades of barbed entanglements in the wastes of "No Man's Land." The "war of material" with the "tactics of the battering ram" ensued. With a veritable network of highways and railroads forming perfect arteries of supply, with impregnable flanks and fortified fronts, the tactician of movement and his valued weapon, the Cavalry, became entirely inactive for the duration of that phase of the war.

In the Cavalry's inactivity, a mobile shock element of considerable fire power was lost. This being the trump of the tactician and of prime importance in attack, the introduction of the tank for the purpose of recovering that trump factor followed. As near as mechanical ingenuity could devise, the tank was endowed with mobility, with fire power and with shock action. Along with these characteristics, this substitute for Cavalry possessed a measurable defense against small arms fire and a gay indifference to the perils of the barbed wire. Its first appearances were calculated so as to give it full advantage of the element of surprise. The initial success obtained by this

mechanized combat unit was most gratifying to its sponsors. However, its then mechanical limitations were such that its powers of mobility restricted its operations to local areas. So erratic was its performance rendered by its lack of dependable mobility that it remained of value only when its employment could be accomplished with surprise to the defender, and even then only for shallow penetrations.

This method of stabilized warfare has few present day advocates. The American plan, the American conception, was and is of a war wherein movement is predominant. Even in preparing men for the World War, Pershing insisted upon a minimum of training in trench warfare and a maximum of training in the open warfare of movement.

As it was upon the Western Front that a decision was most assiduously sought and as it was upon this area that our attention as participants was focused, it is not surprising that so many have fallen into the easy fault of supposing that the period, area and method of our participation encompassed the chief phase, if not the only consequential phase of the war. And as stabilized warfare had reached a high state of development that was never entirely abandoned on the Western Front, stabilized warfare is assumed for the same reasons to constitute modern warfare.

Potent and potential as was our contribution to the final result, it did not encompass all. Hindenburg, in recounting the disasters which befell the Central Powers immediately preceding the collapse of Germany, tells of Turkey's plight in September, 1918. He felt the impact of the Allied Cavalry. He gave great weight to the importance of the decisive thrusts and drives of Allenby's Cavalry, saying with a sigh that almost breathes from the pages of his book, "the rapid advance of the Indo-Australian Cavalry Squadrons sealed the fate of the two Turkish armies on the Syrian Front."

Other instances of Cavalry employment in engagements of importance can be read with a consuming interest. Rather than to repeat here all that is recorded on the subject, it is our purpose to suggest that instead of rendering or proving Cavalry obsolete, the World War emphasized anew its value in situations permitting its employment; that where the situation does not favor the employment of horsed Cavalry then a mechanized substitute with the characteristics of the Cavalry must be devised.

We would suggest also that the geographic features of our country differ from those of France. Here it would be difficult in the extreme to concentrate the same number of men in a comparable area with fixed and impregnable flanks and with a correspondingly efficient system of supply to support them as was done on the Western Front.

All this would indicate that the Cavalry is of vital aid to an army. Also, that, as late as the close of the World War, Cavalry was performing its missions with traditional éclat. When it is recalled that there was not a single World War commander to contend that the abolition of Cavalry was justified by the lessons of the war, it is apparent that this arm has not atrophied because of desuetude or disutility. If it be considered of shrinking worth, that consideration must be based upon the conjecture that Cavalry as at present equipped is less able to perform today's work than yesterday's Cavalry was able to perform yesterday's work. And behind that conjecture lies the pervading thought of mechanization. What with motorized cannon, motorized infantry, motorized messengers, with tanks, airplanes, machine guns, radio, and television, all connected to the ubiquitous button that needs but pressing, what with all this, Cavalry must equip itself with a button, else become obsolete.

Let us pause here a moment to make a few observations that should be noted. Our Cavalry with its horses has heard of all this before. All that appears in this article has been said and repeated times without number. But in spite of the doubting glance cast in its direction, the morale of our Cavalry was never higher than it is today. Nor was it ever possessed of a greater confidence in its ability to perform its allotted missions.

This attitude is not to be ascribed to a stupid braggadocio. That branch which has received beardless youths, mothered them, trained them, tested them, and released them to a waiting world as leaders of men is among the last of all places where inertia shall find harbor. It is a branch thoroughly permeated with the spirit and desire of accomplishment. In maneuvers, it still delays the hostile advance; it searches out the enemy and reports his strength and movement; it still supplies vital information to dispel the fog of war, that fog rising from doubt and lack of information; it still guards the flanks; it still rushes forward to secure and hold the bridge necessary to an army's advanee. All this is done on the field where are armored cars, machine guns and cannon; under skies infested with hostile planes; under the eyes of insatiable tacticians and unfriendly critics. Results are carefully studied; the critiques are analyses, cold and stark, of shortcomings and accomplishments. Better, faster, more complete methods of securing the same or more far reaching results are constantly sought, both within and outside the Cavalry ranks.

The prosperity or fall of nations has been made to depend upon some slight advantage or disadvantage vigorously pressed to the decisive point. History abounds with examples. As a consequence, nations and armies are ever alert to discover some idea, vehicle, plan or instrument that would place an enemy at a disadvantage or that would improve their own position or armament.

The employment of mechanization in combat has long been recognized as a necessity, long been expected also, to produce that elusive advantage that would be exploited to paralyze an enemy. With improvements in mechanization, its use has spread to every branch of the service. Has the idea of mechanization been stopped abruptly at the threshhold of Cavalry and been forbidden to enter?

While aerial vehicles startled the world with their speed and versatility, experiments have gone on with Cavalry on the ground and the planes in the air, each

studying the possibilities and limitations of the other. Each found vulnerable practices in the other: each sought to correct its observed errors, each to avoid the conduct which rendered it particularly vulnerable to the other.

A case in point will illustrate. A regiment of Cavalry marched to a designated point, unobserved, from which it was to move to a destination of its own choosing at its selected rate of march. The air service was to "destroy it." When ready the regiment moved. An airplane flying high, observed and radioed the regiment's position and direction of march to the Air Service Commander at the airdrome. Two later observations were made and from the datum thus obtained the probable route and rate of march of the regiment were estimated. A study of the map disclosed that, if the regiment continued its rate of march and direction, it would be definitely committed in a steep-banked defile at a calculated hour and minute. The distance and flying time from the airdrome to the defile was likewise computed and the hour and minute at which an attack plane should leave the drome, in order to encounter the regiment in the defile, determined. At the proper time the attack plane took off. Flying low, hopping over such hedges and bridges as lay in its path it struck the hemmed-in Cavalry without warning and with complete surprise. There was no doubt but what the Cavalry must change its method of observation and the method of its march if it were to move while the hostile air service was active.

As a result of that and similar experiments, Cavalry march formations were revised, the disposition of machine guns so planned, air scouts so disposed and signals so arranged that Cavalry moves with greatly reduced exposure to aerial fire or observation.

Indeed, it was recently demonstrated that it is possible to move a considerable body of Cavalry in daylight over perfectly flat and open country undetected by the air service, even though a "hostile" plane was informed of the area and time at which the movement would occur and directed to watch for it.

The law of compensation operates to delay perfection in the plane. For the acquisition of a bewildering speed, it loses the advantages of a prolonged and accurate fire. While it utilizes the highly destructive bomb or machine gun as an offensive weapon, such weapons are satisfactorily employed against personnel only when the target remains in mass formation. The vulnerability of the ground target diminishes as its ability to disperse, assume irregular formations or reach concealment increases. Here it should be noted that the development of the plane has affected the Cavalry less than other ground troops, because of the Cavalry's superior ability to disperse, assume irregular formations or reach concealment.

The aerial gun loses in accuracy as the altitude of the carrier increases. It loses in time to fire as its altitude decreases. As ground troops are equipped with guns similar to the guns in the planes, it follows that the plane must come within range of the ground guns in order to use its own. To remain in operation it must remain out of range of ground guns, which is most likely to keep it too high, or beyond the effective range of its own.

Out of the maze of the considerations pro and con, emerges the conviction that ground troops and particularly Cavalry need not wilt merely at the sight of a hostile plane.

Add to all of this the fact that ground troops will have the aid of friendly planes, equipped and manned as efficiently as the other fellow's, and we find reason for the maintenance of a ground force and for the inclusion therein of Cavalry.

It is now generally accepted that airplanes will not supplant ground troops. Each in its element is highly effective. But each must remain in its element to remain effective. The plane is not a competitor for the Cavalry's place nor for the privilege of performing any other ground mission.

It is from mechanization of ground combat groups that the challenge to Cavalry comes. It is against the motorized armored vehicle that the Cavalry must compete. If the armored, motor driven vehicle can travel faster with as great a degree of dependability and with a gay indifference to rifle fire thrown in, then the horse and his rider have seen their noon, and their sun is already setting to bring their day to a close.

Will Rogers recently gave us a glimpse of a motorized horseless Cavalry. He and his companions in adventure were apprehended while wandering in the territory of a hostile queen. They were tried, found guilty and sentenced to death all in short order. They were in a predicament not to be envied when the rescuing force, all in motor vehicles, arrived to avert what seemed to be certain disaster. It was well calculated to inspire a confidence in the ability of the motorized force to arrive at the designated point at the designated hour, prepared for further action. It may be prophetic, who knows?

Europeans have been most assiduous in experimenting with the mechanized group. They have been prodded into a fervency of experimentation by ardent advocates of mechanization. The time they have devoted to the work must be measured in years and the money in the millions of dollars. This mountain of labor has brought forth some rather positive conclusions. It has been found that the ground vehicle propelled by motor is a very promising chap, but possessed of disheartening shortcomings when faced with problems incident to combat.

Here too the law of compensation operates to retard perfection. If armored enough to ensure the necessary protection, it loses speed, which is as vital as armor. When they stop to fire their guns, they become prominent and profitable targets, if they fire while moving the fire is inaccurate, sometimes wholly ineffective, except as to effect upon morale. It is obvious also that the accuracy of fire decreases as the speed of the vehicle or roughness of the road increases. If compelled to abandon the road and take to the field, the wheeled motor vehicle becomes but a child of chance; deep water, steep banks, woods, all or any one of these constitute an obstruction to their movement.

Darkness often proves a barrier unless the route has been carefully gone over and marked prior to the movement.

While the faults are far from fatal to the aspirations of the motor vehicle, they are limitations that must be considered when giving thought to the proposal that they entirely supplant the horse.

Startling as the statement may appear to a generation which takes the motor vehicle as a matter of course, it can nevertheless be made with confidence and assurance born of observation and experiment, that there is no machine on earth today possessed of the same valuable capabilities as the horse. Woods, streams, banks, hills are no bar to the horse's travel. The Cavalry swim their horses through streams that would cause even the heaviest and largest tanks to flounder. While night or adverse weather may affect his speed, they do not prohibit his movement. He is possessed of a dependable mobility. A provisional squadron recently moved a hundred miles in twenty-three hours elapsed time including time for all halts. Roads, while convenient, are not essential to his advance.

These statements are not to be earmarked as partisan claims and dismissed; they come from the laboratory where years and millions have been spent in the hope of discovering a vehicle or a plan for mechanizing combat groups with a dependable mobility.

The maneuvers of our Cavalry to which were attached experimental armored cars have demonstrated the value of the armored car as an adjunct of Cavalry. Under conditions permitting their employment and when manned by resourceful personnel they are indispensable. The armored car cannot be dismissed with contempt, nor must its limitations be permitted to weigh so heavily that its possibilities are ignored.

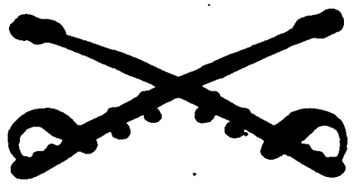
The War Department News release which served as the basis for the recently appearing articles noting the passing of the Cavalry was a brief but meaty resumé of War Department policies affecting the equipment and reorganization of Cavalry. So far from abandoning the Cavalry does this policy go that it gives to the Cavlary a concurrent responsibility and opportunity to develop a system of tactics for the employment of the motorized combat group. The new mobile unit becomes Cavalry. It is given the sponsorship of the Cavalry Spirit, which is frankly recognized as a vital factor in combat.

The Cavalry Post and Camp of tomorrow will have garages as well as stables; gasoline storage tanks as well as hay barns. A new, a strange jargon of such terms as "crank shafts," "bore and stroke" and "Detroit," will mingle with the time honored "hands high," "gelding" and "Kentucky." New faces will appear in the Cavalry regiment bringing with them blue prints, strange tools and iron monsters. Iron monsters that can do what the horse cannot, and the horse will continue to do what the iron monster cannot. Thus a complemented force is born. The Cavalry goes modern, Modernized, complemented, it will perform faster, more thoroughly, any ground mission which may be assigned to it. Cavalry Officers will have a more powerful weapon at their disposal than existed in the most fanciful dreams of their illustrious predecessors.

The inspiring sight of horsed Cavalry on the march is preserved for the eye of man to behold. The primary weapon that has served Morgan, Stuart and Sheridan—that has served a whole galaxy of leaders, from Frederick to Allenby—survives. That weapon which Forrest, Forrest who "couldn't fight by note," employed so successfully "to git there fustest with the mostest men" is preserved for your use—but added to and strengthened so that it be not compelled to yield its high place in the estimation of leaders in the art of war.

The missions of Cavalry are unchanged as are its characteristics. Cavalry becomes intensified, and its means of accomplishing its missions are enhanced tenfold. There will be a variety—one vehicle for the swamp, another for the prairie, yet another for the hills. And in or on the mobile unit will be Cavalrymen, possessed of the Cavalry spirit and versed in the tactics and spirit of manuever. The Cavalry takes on a cosmopolitan air, a heterogeneuos appearance. A regiment may have a squadron of horse, a squadron of armored cars and a squadron of tanks. Or it may be that the brigade will have a regiment of horse and a regiment of motors. It will be interesting to watch the reorganization of the modernized Cavalry grow out of future maneuvers and experimentation with the motorized units.

The horse remains today as an integral part of Cavalry and of the Army. While it is conceivable that his hoof print will someday be found only in the fossilized exhibits of the museum, the tire tread cannot as yet claim mastery over his domain.



War Policies

By Major Dwight D. Eisenhower, Infantry

FOR ten years several of the veterans' organizations have persistently advocated legislation intended to eliminate, from any future war, opportunity for profiteering and to insure an equitable distribution among all citizens of the burdens that must inevitably accompany war. The worthiness of this objective has been universally recognized, but it has been difficult to secure any substantial agreement on measures for its attainment. As Congressman Laguardia once very aptly remarked:

> ". . . the subject of equalizing the burdens of war and minimizing the profits of war is about the easiest of any to make a speech on, but probably the most difficult to work out in detail."

These difficulties arise from a variety of causes. Pertinent statistics of past war experiences are by no means complete, nor are they easy to interpret intelligently. Every proposal made must rest to some degree upon abstract reasoning, and even on pure conjecture. Class fears and prejudices are easily aroused —while a mass inertia engendered by the feeling that "any war is a long way off" has likewise contributed to the defeat of efforts to secure decisive action.

It gradually became apparent that no progress would be realized unless the many factors involved were thoroughly investigated and a comprehensive plan presented to Congress that would embody the considered opinions of those best qualified to speak.

War Policies Commission

Finally, in June, 1930, by a Joint Resolution entitled, "To Promote Peace," Congress created the War Policies Commission. It was directed to consider amending the Constitution "to provide that private property may be taken by Congress for public use during war;" to study methods for equalizing the burdens of and removing the profits from war; and to develop "policies to be pursued in event of war." The Secretary of War is Chairman of the Commission, which is composed of six Cabinet officers, four Senators, and four Congressmen. During open hearings held in March and May, 1931, the Commission listened to some fifty witnesses, many of them nationally prominent citizens.

The press has devoted much space to the Commission's activities, both in news columns and editorially. War Department interest in the proceedings is quite natural, as the subjects under consideration by the Commission constitute some of the most vexing problems confronting the Department in the preparation of war plans.

An interesting feature of the testimony presented at the hearings was the great diversity of individual opinion expressed concerning the tasks confronting the Commission. In general, each witness gave his own interpretation to the resolution creating the Commission. For example, a considerable number insisted that the entire effort should be devoted to the promotion of peace,—some even going so far as to say that investigations carried out under the remainder of the Congressional directive would adversely affect our friendly relations with other powers.

Methods for Preventing War

Among those who confined their attention almost exclusively to methods for preventing war were a retired admiral of the Navy, two ministers of the Gospel, a leader of the Socialist party, an oculist, editors of magazines of so-called "pacifist" leanings, and officials of various peace associations.

Admiral Samuel McGowan advocated amending the Constitution of the United States,

> ". . . so as to require that, before war can be declared or participated in (except only in the event of attack or invasion) there must be a referendum. . . ."

He was supported in his view by a later witness, Dr. Thomas Shastid, who heads an organization known as the "War-Check-Vote, Incorporated." Both of them argued that the people that have to fight the battles never desire war—that they are rushed into hostilities by "big interests" and governmental officials. In the Admiral's words:

> ". . . the only good war is a war that doesn't take place; and it will never take place in this or any other country, if the people back home, the mothers . . . all through the country, are allowed to have their say."

In response to questions by Commission members, other witnesses vigorously opposed this proposal. Newton D. Baker, Ex-Secretary of War, voiced the substance of this opposition as follows:

> "If the question were submitted to popular vote in the United States—shall the United States go to war with X—and we had a great debate about it over the United States, . . . country X would in the meantime be . . . making all the preparations, and we would not be making any until we found out what the vote would be. Our people would be separated into opposite camps about war, and if a small majority decided in favor of the war, it would be a practical advantage to our adversary by our *going to war with a divided people whose feelings were split wide open;* it would put us in a very weak situation."

Neither Admiral McGowan or Doctor Shastid advocated disarmament as a definite means of preventing

war. The latter, although intensely interested in methods for maintaining the peace, characterized many of the so-called peace movements as futile "gestures." Among these he included the League of Nations, and disarmament.

Dr. Arthur Call, Secretary of the American Peace Society, concluded, as did the others of this group, that the only real solution to the problems given the Commission was through positive prevention of war. Unlike most of the others, however, he believed that conditions of the "living world" were such as to require the maintenance of military force of approximately the size now existing in this country. He said:

> "I am quite of the opinion that the 'reasonable defensive posture,' as phrased by President Washington, remains still a necessary posture on the part of our people . . . we could not wage a war in a foreign country by our Navy alone; it has to be waged by the Navy in cooperation with the Army. Since our Army is as small as it is, I am of the opinion that our Military Establishment, as is, does not constitute, therefore, a menace to the peace of the world and that it is not necessary to think that it does."

On the other hand Rev. John Sayre, representing the Fellowship of Reconciliation; Tucker Smith, Secretary of Committee on Militarism in Education; and Miss Dorothy Detzer, Secretary of the Woman's International League for Peace and Freedom, bitterly attacked our present military program. They said that it was a hindrance rather than a help in maintaining the peace; that it tended to make our population "war-minded;" and that it encouraged the adoption of economic and imperialistic policies likely to lead us into war. While it was generally agreed that there was small chance for other countries to take measurable steps in disarmament at present, it was nevertheless urged that America should by "example" show its complete reliance upon the Kellogg-Briand peace treaty—a document by the way that came in for considerable discussion before the Commission. Mr. Smith had the following to say about military preparation:

> ". . . your report must recognize that military preparedness that envisions the ability to strike hard and fast makes peace almost impossible in a crisis, and that the task before humanity is a task of getting a degree of disarmament that will prevent that situation; . . ."

Surprisingly though, Mr. Smith did not concur in the popular assumption that the hope of profiteering by "business" has a great effect in influencing us toward war. In this he differed sharply with the following statement of policy contained in the Democratic National Platforms of 1924 and 1928:

> "In the event of war in which the man power of the Nation is drafted, all other resources should likewise be drafted. *This will tend to discourage war by depriving it of its profits.*"

Miss Detzer likewise did not entirely agree with Mr. Smith on this point. She contended that the searching for trade by the munitions industry in time of peace, and its hope of large profits in war, both tend to bring on conflict.

Most of the witnesses just named advocated adherence to the World Court and to the League of Nations; withdrawal of Marines from Nicaragua; independence of the Philippines; recognition of Soviet Russia; and revision of national policies with respect to Latin American countries. Some also recommended cancellation of war debts. They opposed the development of any "policies that should be pursued in the event of war." They insisted that to admit the possibility of war was to make war more likely, and helped to make our people "war-minded." Such expressions as "peace-minded," "war-minded," "atmosphered in the psychology of war," "peace policies," and "preparation for peace" were used repeatedly, but no attempt was made to define them.

A listener gained the distinct impression that the members of this group, with possibly one or two exceptions, were earnestly and unselfishly laboring for the promotion of an idea in which they implicitly believed. One—Dr. Mercer Johnston—wore in his lapel the ribbon of the Distinguished Service Cross, won while serving with the A.E.F. in 1918.

Equalization of War's Burdens

Other witnesses addressed themselves to the more specific tasks laid down in the resolution creating the Commission. They urged the intensive study in time of peace of the serious economic, industrial, and social disturbances that are certain to occur in war, and the development of a comprehensive program designed to minimize the effects of these disturbances. They believed the Commission's efforts to do this were perfectly proper and could not logically be interpreted by any foreign nation as indicating "double-dealing" by the United States. Congressman Laguardia said:

> "As I understand the purpose of the resolution . . . it is entirely separate and distinct from the question of the prevention of war . . . The mere fact that one takes an interest in the purpose of this resolution is no indication he is . . . not doing all he can to avoid war.
>
> "Anyone who contemplates the terrors of another armed conflict, I believe, will see the necessity of providing ahead of time, as far as we can, for equalizing the burdens of war."

Bernard M. Baruch, Chairman of the War Industries Board in 1918, stated a similar view even more emphatically:

> "I take it that we are of the common belief that war ought to be avoided if possible, but that we must plan in such a way that, if war comes, we shall meet the enemy with our maximum effectiveness. . . .
>
> "War on this vast modern scale has hitherto so violently disturbed the pattern of the normal economic structure of belligerent nations that, . . . the aftermath of the struggle prostrates both the conqueror and the conquered. With these most serious considerations you must deal. . . . The neglect of them is, in my opinion at least, one of the most threatening aspects of our governmental policy. It is for these reasons that I regard the work of this commission very seriously. . . ."

Proposals concerning these matters naturally varied as widely as did those submitted by the "peace" contingent. On one question, however, witnesses were divided of necessity into two camps. This question was: "Should the United States, in the event of war, actually seize, and take title to, all private property during the period of the conflict?"

Congressmen Frear and Laguardia, as well as Dr. Shastid and others, took the affirmative. Congressman Royal C. Johnson and Past Commander P. V. McNutt of the American Legion, approved the idea in principle, but expressed doubt that it would be accepted by the majority of the people.

Directly opposing the idea of actual seizure of all property were Newton Baker; Daniel Willard, President of the Baltimore and Ohio Railroad; Commander Ralph O'Neil of the American Legion; Walter S. Gifford, President of the American Telephone and Telegraph; Dr. Leonard P. Ayres, Statistician and Economist; A. H. Griswold, Executive Vice President of the International Telephone and Telegraph; C. B. Robbins, Ex-Assistant Secretary of War; William Green, President of the American Federation of Labor, and many others.

Since the American Legion has long advocated "Universal Draft" in time of war, Commander O'Neil's testimony was particularly interesting from the standpoint of establishing just what was meant by the phrase. Remarking that this term had been used largely as a "symbol," it developed that he did not believe in the actual confiscation of private property, but rather in a strict governmental control over it. The true purpose of the program he advanced was clearly stated in answers he gave to questions by Commissioners:

> MR. COLLINS. And in event of war, you think they (Producers of munitions) ought to be paid up to 7 per cent per annum?
>
> MR. O'NEIL. That is a fair return; yes. If they do not get any more than that, it will help considerably. That is a maximum, you understand.
>
> SENATOR VANDENBERG. You are talking about taking the exploitation profits out of war?
>
> MR. O'NEIL. That is what I am trying to do.
>
> MR. MCSWAIN. In other words, eliminating what is ordinarily called profiteering; that is, unreasonable and excessive profits?
>
> MR. O'NEIL. Yes.

Some witnesses maintained that the recognized right of government to tax wealth to any extent it saw fit, and to commandeer property for public use, was in fact a recognition of the principle of "conscription of wealth." This view was rejected by those who want to extend materially the right of government to seize private property. Mr. Laguardia was in favor of a constitutional amendment to

> "give the government the broad, all-sweeping powers that it needs to take over property, nationalize industry, stop speculation, and *suspend all normal gains and profits;* nothing short of that will equalize the burdens of war."

Mr. Frear was in substantial agreement with this suggestion. It is curious to note, in view of this statement of Mr. Laguardia's that he later disclaimed any intention of "equalizing the burdens of war." He put it thus:

> "If any plan is to go through *to take the profits out of war*, it must do just that thing. . . . everybody in the United States, whether in the infantry, in a bank, or in a factory, will enter the service of the country, taking all the chances of war and *chancing the inequalities that war brings.* In other words, to do this we have to nationalize all of the industries and militarize everybody from Texas Guinan to J. Pierpont Morgan. . . .
>
> "It is difficult, and it is going to involve a lot of details and perhaps chaos. . . .
>
> "Now, it is quite possible that one man's factory will be used and abused and he may come out of the war almost ruined, while another man's factory may not have been used at all—*yet no one will have made any profits.* . . .
>
> "You can not stop and worry . . . *Whether one is going to suffer more than the other* . . . ."

The opponents of actual conscription of property based their arguments largely upon their convictions of its impracticability in operation. Mr. Baruch summarized his reasons as follows:

> "Nobody with any familiarity with industry could seriously urge a wholesale assumption by any Federal Bureau of the responsibility for management of any or all of the vast congeries of manufacturing establishments upon which we must rely for extraordinary effort in event of war. Even if such bureau management could prove adequate to the task (which it could never do) the mere process of change would destroy efficiency at the outset."

He said that when similar suggestions with respect to specific industries were made during the World War the proposal split upon the rock of the following argument:

> "Who will run it? Do you know another manufacturer fit to take over its administration? Would you replace a proved expert manager by a problematical mediocrity? After you had taken it over and installed your Government employee as manager, what greater control would you have then than now? Now, you can choke it to death, deprive it of transportation, fuel, and power, divert its business, strengthen its rivals. Could any

disciplinary means be more effective? If you take it over, you can only give orders to an employee backed by threat of dismissal, and with far less effect than you can give them now."

No witness that advocated an actual seizure of all private property without giving owners the "just compensation" required by the 5th Amendment to the Constitution came forward with a detailed plan for administering the system. Statements were made that the population should be rationed—that the government should put our 125,000,000 people on its pay roll—that money would cease to circulate, or be used only by the government in foreign trade—that property would be returned to the original owner at the end of the war on an "as is" basis—but no one explained through what agency all this should, or could, be done.

Finance and Price Freezing

With respect to the use of money in war, Mr. Eugene Meyer, Chairman of the Federal Reserve Board, expressed an interesting view.

> ". . . The obvious lesson is that the course of war depends upon resources in man power, supplies, and morale, and that finance is only incidental to these, for, after all, money is only a medium of exchange, and to the extent that men, material, and morale are available some medium of exchange will be available or will be developed so as to permit their continued functioning to the maximum limit."

Mr. Meyer thus indicates that under certain conditions something might be substituted for money as a "medium of exchange." With a system of universal conscription this medium could scarcely be anything else than governmental orders.

Mr. Baruch advocated a so-called "price freezing" system. Because this proposal came in for much discussion during later meetings of the Commission, newspaper accounts presented it generally as constituting the whole of Mr. Baruch's plan. Actually, it was only one of the features of his complete proposal. He favored the development in peace of broad plans for setting up promptly in emergency an administrative machinery corresponding generally to that existing in the fall of 1918—and the preparation of specific plans for procuring the supplies that would be needed initially. He praised the work now being done along this line in the War and Navy Departments and emphasized the necessity for its continuance. His "price freezing" plan was advanced as an added means of securing justice and efficiency, and was proposed particularly to assist in *preventing inflation*. Simply stated, the proposal is to place on the statute books a law that would empower the President in emergency to declare that the maximum prices existing in each locality for all services and things, at the time of the promulgation of the order, should not be exceeded during the war. A "Price Fixing Board" would be created to adjust prices where found necessary. The serious effects of rapid inflation in war, which the "price fixing" scheme is intended to eliminate, are described by Mr. Baruch as follows:

> "Inflation enormously increases the cost of war and multiplies burdens on the backs of generations yet to come. The war debt of the nation is necessarily incurred in terms of debased dollar values. In the inevitable post-war deflation the debt, of course, remains at the inflated figure. Thus the bonds that our Government sold in the World War for 50-cent dollars must be paid through the years by taxes levied in 100-cent dollars."

Much discussion centered about the constitutionality of this part of the plan. At first it was thought Mr. Baruch intended that the government should *compel* the sale of private property to individuals or to the government at prices fixed by fiat, thus constituting a "taking" of property without according what the owner might consider "just compensation." Later it was explained that no compulsion was intended—it was expected only to *prohibit* a buying or selling at a higher price than that specified. Doubt was expressed by some witnesses as to the possibility of administering such a law. Objections of other kinds were raised—objections that Mr. Baruch in a second hearing attempted to meet by presenting an additional brief in support of his idea.

Aside from Mr. Baker and Mr. Baruch, many other witnesses had had unusual experience in the World War, from which they were able to offer valuable suggestions. Among these were Daniel Willard; Walter S. Gifford; William Green; and Howard Coffin, head of the Aircraft Production Board during the World War, and a devoted advocate of industrial preparedness long before we entered that conflict. Others were J. Leonard Replogle, Director of Steel Supplies, War Industries Board; George N. Peek, Commissioner of Finished Products, War Industries Board; Herbert Bayard Swope, prominent newspaper man and editor, and Benedict Crowell, Assistant Secretary of War during the period 1917-1920.

Mr. Willard and Mr. R. H. Aishton, President of the American Railway Association, outlined the program the railways have developed in cooperation with the War Department to insure the effective use of transportation systems in emergency. Assistant Secretary of the Treasury, Arthur Ballantine, discussed the operation of tax laws in war. Clyde B. Aitchison, member of the Interstate Commerce Commission, described the proper functions of that body under emergency conditions. Honorable William Ramseyer, Member of Congress, presented an interesting paper on "*Paying for War as You Go.*" In the World War about 27 per cent of current expenses were met by current taxation—the remainder of loans. It is Mr. Ramseyer's view that all of the expenses should be paid for out of current revenues. He argued that by taxing incomes heavily enough to do this, people would not have money to spend freely, inflation would be automatically prevented, expenses would be kept at a minimum, and there would be no serious economic aftermath to the war.

War Department Plans

On May 13, 1931, General Douglas MacArthur discussed before the Commission the principal features of War Department plans for the mobilization of men and material in emergeny. In describing the premise on which these plans are built he said:

> "We have a General Mobilization Plan. This plan does not envisage any particular enemy. It contemplates the mobilization, *by successive periods*, of six field armies and supporting troops, or approximately 4,000,000 men.
>
> "This general plan establishes the basic policies for a . . . systematic mobilization of the manpower of the United States. *Being arranged by successive periods, the mobilization plan is flexible and can be made to fit the manpower needs of any military situation. . . .*"

The press generally jumped at the conclusion that in any emergency the War Department would insist upon raising immediately an army of 4,000,000 men. The language quoted above, of course, conveys no such meaning. Other remarks of the Chief of Staff further emphasize his real intent.

> "An emergency involving no more than the Regular Army, raised to its full strength and perhaps strengthened by some National Guard units, would cause scarcely a ripple in American life and industry. . . . there would be no occasion for the application of any governmental control not usually applied in peace. . . ."

After discussing the basic provisions of the selective service system that the War Department believes should be applied if it ever becomes necessary to mobilize large land forces, General MacArthur took up those portions of the plan, prepared under the supervision of the Assistant Secretary of War, that affect the economic problems of war. He described the effects that proposed measures would have in war in equalizing burdens and minimizing profits.

The War Department Plan provides in detail for the orderly procurement of all supplies it will need so as to occasion the minimum of disturbance in the normal economic life of the nation. Beyond this it provides for a civilian organization to exercise, under the President, an efficient control over all resources. It makes provision for setting up promptly, in an emergency, all the administrative machinery that will be necessary. The plan conforms to existing constitutional provisions and to the laws that could be reasonably expected to be passed promptly in an emergency. General MacArthur's address—which, with the War Department "Plan for Industrial Mobilization," is published in Part II, Hearings before the Commission authorized by Public Resolution 98—contained these general conclusions:

> "Modern war demands the prompt utilization of all the national resources. Measures for transforming potential strength into actual strength must work in emergency with the utmost speed and effectiveness. . . .
>
> "The human burdens of war must be equalized in so far as possible. To this end liability for combat service must be determined under a selective service system developed along the general lines of that used in the World War.
>
> "The economic burdens must be equalized through:
>
> *a.* Systematic registration of wealth and all accretions thereto during the period of the emergency; and tax legislation framed to place an equitable burden thereon.
>
> *b.* Orderly and economic procurement by the government itself.
>
> *c.* Strong and intelligent leadership . . . exercised through an organization adapted to the purpose.
>
> *d.* Application of governmental controls . . . to prevent any profiteering at the national expense.
>
> *e.* Prompt resumption of normal peace conditions upon the termination of the war. During the progress of any war the President should appoint a committee to study and prepare plans for demobilization. These plans must facilitate the reemployment of men returning to civil life from the Army and Navy, and the freeing of industry of the accumulations of stocks produced to meet war requirements.
>
> "All of the above demand an intensive and intelligent planning program carried out continuously in time of peace. Because of their peculiar responsibilities, the War and Navy Departments must be definitely required to carry on this work as the agents of the whole government.
>
> "Congress should satisfy itself at frequent intervals as to the progress of plans under development by requiring their presentation to appropriate committees of Congress."

In commenting on the War Department plan, many witnesses, including a representative of the Navy Department, gave their endorsement to its general provisions. Mr. Coffin, a thoughtful student who has had a wealth of experience, studied the whole plan carefully and expressed the opinion that it is splendidly conceived, and practicable in every respect. He believes that, in case of need, it would work with the maximum speed and effectiveness, with the least possible injustice to individual citizens.

After acknowledging the debt of the Department to the many public spirited civilians who have been of so much assistance in bringing plans to their present state of development, General MacArthur said:

> "It must be apparent to the Commission that the principles on which War Department plans are based do not differ essentially from those expressed by the majority of the witnesses who have previously appeared before you. The goal we seek is that sought by the men responsible for the drafting of Public Resolution No. 98. Our plans simply set forth the methods whereby it is believed these principles and theories could be applied in the event of another great emergency."

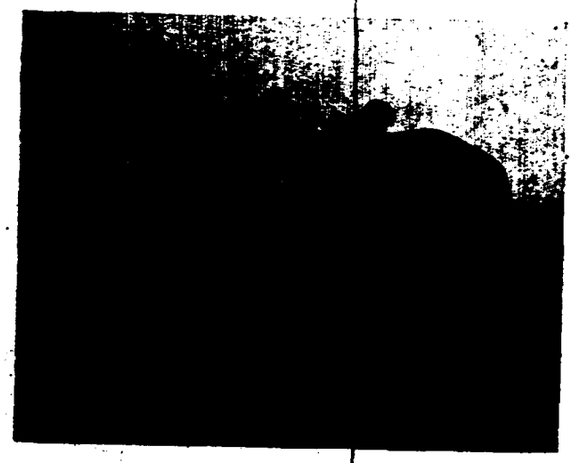
The McClellan Saddle and Its Proposed Modifications

By Lieut. Colonel Edgar M. Whiting, Cavalry

THE horse equipment of the cavalry trooper has been improved in a number of ways during the past twenty-five years, but its improvement has not kept pace with the improvement of weapons and other articles of equipment. Although a better saddle than the McClellan might be devised, the large number on hand precludes any change of saddle other than modification of those on hand.

We have done away with quarterstraps, spider rings and hair cinches and substituted a girth, which, buckling to leather billets, reduces the weight and reduces the time needed in saddling. The long cylindrical cantle roll, so difficult to make and attach to the saddle and so difficult to climb over, has been changed to a broken roll, which is lashed down by coat straps and lies close to the horse. The old nosebag, so wasteful of grain, has been replaced by a very practical and efficient grain bag. The picket pin and lariat have served their purpose and departed. The bridoon came to relieve tortured jaws of the curb, and now the curb is disappearing from most troops, and the horses are bettered mannered in consequence. The bit and bridoon is the ideal thing in the hands of a good rider, but we do not get many good riders in war. Horsemanship was not taken account of on the qualification cards of the last war. Taking account of it might have saved us some money. Leather flaps have been attached to the tree, and woven felt attached to the panels. The first gives more comfort to the rider, the second reduces slipping of saddle blankets.

But the McClellan saddle in its present form, and packed according to existing regulations, leaves much to be desired in comfort. I am going to enumerate the faults as I see them.



Regulation Pack—Near Side

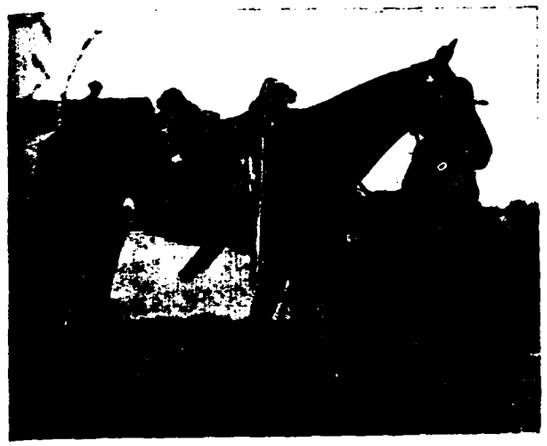
Modified McClellan Saddle—Near Side

1. A great many men have tried a great many ways of carrying a rifle under one leg and a saber under the other, but not one has found a way that is comfortable. The most fervent advocates of carrying these weapons on the pommel are those who do not have to carry them.

2. The present regulation pack is nearly ten pounds heavier on the near side than on the off side. This is especially disadvantageous, as the trooper is very apt to pull the saddle toward the near side in mounting, and the excess increases the harm done by the disarrangement in mounting.

3. When the raincoat is folded the long way, inside out, the collar hangs down to be spattered with mud, and the coat being folded inside out, all the dust of the road accumulates on the inside of the coat, and when worn by the friction of coat straps and saddle, the coat leaks in places where leaks are least wanted. And, for some unknown reason, when grain is carried, it is carried on top of the raincoat. When a rain begins, the column must halt that men may unpack, repack and put on their coats. Many officers and men have asked me the reason of this arrangement, but I could not give it, because no one could ever give it to me.

5. The stirrup leathers are too heavy and clumsy, and their great size does not confer appropriate strength. The buckles appear to have been designed for duty as trace buckles. After shins and saddle blankets had been sufficiently rubbed over a period of about forty years, a means was found of holding these buckles down to the stirrup post, but this arrangement



Regulation Pack—Off Side

causes the loose end of the stirrup leather to dangle down from the hood like a cow's tail, marring the appearance of the most perfectly groomed horse and polished equipment.

6. The McClellan hooded stirrup is heavy, bulky and clumsy. The weight of the hood causes the tread of the stirrup to fall forward, so that the trooper cannot depress the heel as prescribed without lifting the whole weight of the hood. The width of the stirrup at the top causes acute discomfort to the ankle when the foot is thrust home. After more than twenty-seven years' service, mostly with troops, in cold climates and in hot climates, in fair weather and foul weather, the only possible virtue that I can attribute to it is its protection to feet stuck out too far in close order drill. As a matter of fact, such feet occupy the same relative position as heads thrust out of car windows; they need bumping.

7. The two lower slots mortised in the cantle were intended for use with the now obsolete cylindrical roll. In order to lash down the present broken roll, it is prescribed that the coat strap have one of its turns brought down as near the end of the roll as possible. This sounds easy but is not as easy as might be supposed, and it is therefore not generally done, resulting in the roll flapping about and eventually coming open. The lack of uniformity of rolls due to this feature is not pleasing to the eye, to say the least. Since the pommel roll is smaller than the cantle roll, the cantle straps and pommel straps are of different lengths; a complication of manufacture.

8. The leather flaps are unnecessarily wide at the top. It is difficult to attach saddle flaps by sewing to such a long wavy line as the McClellan tree. The extra width in rear serves no purpose and is really a cause of weakness, as it causes a wrinkle in the flap.

9. The stitches attaching the leather billets to the linen strips which are in turn attached to the tree are worn rather rapidly by the friction of the flaps over them, and must be countersunk to last. This item is too often overlooked by saddlers.

10. The weight of the saddle blanket is out of proportion to its efficiency. Its size is so great that it

Modified McClellan Saddle—Off Side

must be folded in six thicknesses. In this folding, we have what might seem a simple operation, but a look at any mounted organization will reveal a great many badly folded saddle blankets. Unless one estimates the thirds correctly in one phase of the folding, he will have one of two results. Either the inner fold will be too short and form a ridge on the withers, or the inner fold will be too long and double back, also forming a ridge over the withers. What will happen to the withers is a foregone conclusion. It takes a keen and experienced eye to spot these irregularities of folding at the inspection that should precede the march. Too few officers look for these things, and then they wonder why there are so many sore withers. I believe that this folding is responsible for nearly as many sore withers as failure to push the blanket off the withers before girthing.

11. The bed blanket looks to the inexperienced like a saddle blanket, but though its quality is equally poor it is not exactly like the saddle blanket, being smaller and often thinner. It is too small to be folded in the same way as a saddle blanket and too large and too thin to be folded in any other way for use under the saddle, and under the saddle it must go, over the saddle blanket, as soon as troops go in a campaign. It is surprising how many bed blankets get mistaken for saddle blankets among partly trained troops, and their suffering horses pay for the error.

12. The rifle scabbard is too small for the rifle and is not properly shaped. This was true also of the old carbine scabbard. Much damage is done to both front and rear sights by jamming the rifle in a scabbard too small in the first place.

13. The surcingle is not needed in the field. One of a pair of double reins will perform its only function, which is to hold a cold compress on a bunch that would otherwise develop into a sore. The surcingle belongs in garrison, where if used with the saddle blanket judiciously and frequently instead of the saddle in the first months of would-be cavalrymen's service, the young men would learn the correct military seat. Recruits would thus sit up straight in their saddles and avoid many of the faults caused by putting men on saddles before they learn to ride. I am aware that this is a digression but I do not intend by any means

to belittle the surcingle in its proper sphere. It is the best assistant instructor of equitation that any man can have, modern doctrines notwithstanding.

The Cavalry Board has developed a modified McClellan saddle that when packed for the field will eliminate some of the undesirable features of the present saddle and pack. The purpose of these modifications is to reduce the weight, improve the balance, simplify and speed up packing and make horse and rider more comfortable. There is nothing new to cavalrymen in these modifications except their application to the McClellan saddle.

All wool bed and saddle blankets, identical in size, weight and quality, 75"by 60", weigh 2 lbs. 4 oz. less than the present bed and saddle blankets. They cost less than the present combination of saddle and bed blanket. The saddle blanket is folded in four thicknesses in precisely the same manner as the present bed blanket when placed on the shelter half preparatory to rolling up. This method of folding is simple and avoids the possibility of a ridge over the withers. It is realized that we have enough of our present bed and saddle blankets to last our little army for a great many years to come, but it is not a bad plan to have better replacements in view. While on the subject of saddle blankets, there is no blanket made that can compare with the mohair pad as a protector of the back of the horse. Light olive drab in color, it is attractive in appearance, it lasts for years, and its only disadvantage is that it cannot be used as cover for horse or man in cold weather. But if the trooper has a warm overcoat and puts his bed blanket over his horse, which none of them ever does, he can sleep on his mohair pad with some degree of comfort.

The weight is further reduced by the use of metal stirrups and the same kind of leathers used on officers' saddles; these save 2 lbs. 13oz. Omitting the surcingle saves 6 oz., and a metal scabbard instead of a fibre scabbard for the saber saves 8 oz. The total saving in weight is 5 lbs., 15 oz. Not a startling amount, but every bit of saving helps.

In order to speed up packing and unpacking, saddlebag straps have been substituted for the cantle and pommel straps. These cantle and pommel straps are of different lengths, complicating manufacture, and it takes time to wind each twice around the cantle and pommel rolls, and going around twice adds nothing to strength or security. The saddlebag straps are shorter, wider and stronger than the present coat straps, and they go only once around the rolls. Two slots are mortised about an inch and a half below the lower cantle slots—these slots that were intended for the cylindrical roll—so that when the straps are buckled around the roll, the roll is tied down snugly in the place where it belongs. Five of these straps are used on the pommel. One through the center slot on top secures the center of the pommel wallets, the feed bag and the raincoat, keeping them clear of the withers; two, one on each side, pass through staples fixed to the front of the tree and slots in the top piece of leather joining the wallets, securing them to the tree; and two more, one on each side, pass through leather staples on the under sides of the wallets and the front part of the flaps, around the wallets, making them still more secure. The upper pair of these straps pass around and secure the feed bag and raincot. The raincoat is folded in rectangular form, and then rolled up on the principle of folding a pyramidal tent—only the outside of the bottom of the skirt is exposed to wear.

Instead of the linen strips on the present saddle, to which the billets are sewn, staples are attached to the tree, and the billets attached to the staples, secured by thong lacing. This permits replacement by the trooper of a broken billet and eliminates linen from materials used.

The equipment is distributed in the experimental pack as follows:

Near Pommel	lbs.	oz.	Off Pommel	lbs.	oz.
Feed bag, heavier end	1	10	Feed bag, lighter end	0	4
One-half feed of grain	2	0	One-half feed of grain	2	0
One-half alligator raincoat	1	6	One-half alligator raincoat	1	6
Stirrup irons and leathers	1	9½	Stirrup irons and leathers	1	9½
Saddle soap and sponge	1	0	Grooming kit	1	1
Toilet articles	1	4	Mess kit and lunch	1	10
Canteen, filled	3	7	Rifle and scabbard, part	3	0
Coat straps	0	3	Coat straps	0	3
Pommel wallet	1	14	Pommel wallet	1	14
Total,	14	5½	Total,	12	15½

Excess on near pommel, 1 lb. 6 oz. Total weight on pommel, 27 lbs. 5 oz. Excess of pommel over cantle, 1 lb. 9 oz.

Near Cantle	lbs.	oz.	Off Cantle	lbs.	oz.
Saber and carrier	4	14	Rifle and scabbard, part	9	0
Horse shoes and nails	2	3	Shelter half and rope, part	1	4
Shelter half and rope, part	1	14	Tent pins	0	12
Tent pole	0	15	Bed blanket, part,	1	14
Bed blanket, part	1	14	Coat straps	0	3
Coat straps	0	3	Under clothing, summer	0	6
Under clothing, summer	0	6			
Total	12	5	Total	13	7

Total excess on near side, 4 oz. Total weight on cantle, 25 lbs. 12 oz. Excess on off cantle, 1lb. 2 oz.

The saddle bags were converted into pommel wallets—a very simple matter after we found out how to do it—lighter than the saddle bags and holding all the articles carried in the saddle bags except the underclothing. They will hold the underclothing also, but it was thought best not to require too nice a fit, so the underclothing is placed in the cantle roll. Most saddling in campaign is done in darkness, and one purpose of this modified pack is to make it simple and easy to put on quickly. I have always believed that when transportation is available all of the pack except arms, ammunition, the feed bag with grain and the raincoat should be taken off the horses. I think that an officer does not fully appreciate the difference made by weight until he has raced a little. You will never see an officer or trooper, for that matter, who has raced putting any more weight on his horse than he can help nor will you see him sitting on his horse when there is no reason for it.

The issue rifle scabbard was remodeled by wetting and stretching over a wooden form, so that it is shaped for the rifle, and it permits the rifle to be drawn and returned with ease and without damage to the sights. In order to hold the rifle steady at all gaits and shift some of its weight from the cantle, a stiff leather brace, reinforced by a piece of spring steel (actually a piece of an old phonograph spring) within is attached to the scabbard and secured to the girth by means of the rear billet, made long for the purpose and buckled to the girth. Carried in this way, the rifle is entirely out of the way of the trooper's leg, and the stiffness of the brace holds it steady, even over obstacles. The brace was copied from an old British rifle scabbard. The rifle is placed in the scabbard before mounting and presents no difficulty in mounting or in withdrawing after mounting. The careless trooper will crack his shin only once on the butt plate.

The saber carrier is a modification of the British carrier and carries spare horse shoes and nails where they are readily accessible on the march. This carrier may be used on any saddle and the modification permits carrying any type of saber or seabbard. As we now have three different types of scabbard, the carrier had to accommodate any of them. The carrier is suspended by a stout strap from a staple on the cantle bar and secured by a light strap that snaps into a ring near the center of the girth. In the photograph, the shoes were unfortunately not placed in the carrier, which lowered the position of the saber until it is too near the end of the cantle roll. However, there is no difficulty in drawing it, even in this position. It must be remembered that to ride steadily and not interfere with one's own horse or others, the saber must be in a vertical plane, and the thickness of the two shoes acts in the same way as the small block of wood placed on a German saber carrier that one of my regiment picked up on a battlefield.

Four of these saddles were ridden by student officers on the recent 100-mile forced march. All four preferred them to the regulation pack. Upon their recommendation, the rifle was raised higher on the saddle and the steel spring added to the leather brace. Two of the saddles will shortly be turned over to the Second Cavalry and two to the Thirteenth Cavalry for a test covering several months, after which they will be submitted to the Cavalry Board.

The intelligent testing and criticism by Capt. Harrison and the skilled work of Sergt. Phillips of the Cavalry School Detachment made the development of this modified saddle and pack a fact instead of a theory. The only way of finding out about equipment is by trying it.

Use of the Modified McClellan Saddle Pack by other than members of the Rifle Platoon.

By Gyles Merrill, Captain, Cavalry.

If the modified saddle pack is adopted, all troop commanders will at once be confronted with the problem of preserving its balance when used by those soldiers whose equipment is not identical with that of the private in a rifle platoon. There are many of these men, for example: members of the machine rifle platoons who carry no sabers, first sergeants and buglers, who carry no rifles and certain members of the machine rifle platoons and machine gun and headquarters troops, who carry neither rifles nor sabers.

The new saddle pack lends itself readily to the solution of this problem if one but takes the trouble to prescribe standard methods of packing the equipment of the soldier who falls in one of the groups mentioned above.

The following tables have been prepared on the assumption that the weight on the pommel should always exceed the weight on the cantle and that the weight on one side should balance within two or three pounds of the weight on the other side. It is believed that the preservation of this balance is more important than the lack of uniformity arising when some men of the troop carry the saber on the near side and others on the off side. The tables offered are by no means the only solution and possibly not the best, but they serve to illustrate the flexibility of the modified saddle pack.

If the saber and scabbard are not carried, the equipment is distributed in the experimental pack as follows:

Near Pommel	lbs.	oz.	Off Pommel	lbs.	oz.
Feed bag, heavier end	1	10	Feed bag, lighter end	0	4
One-half feed of grain	2	0	One-half feed of grain	2	0
One-half alligator rain coat	1	6	One-half alligator rain coat	1	6
Stirrup iron and leather	1	9½	Stirrup iron and leather	1	9½
Underclothing	0	12	Grooming kit	1	1
Toilet articles	1	4	Saddle soap and sponge	1	0
Mess kit and lunch	1	10	Rifle and scabbard, part	3	0
Coat straps	0	3	Coat straps	0	3
Pommel wallets	1	14	Pommel wallets	1	14
Total	12	4½	Total,	12	5½

Total weight on pommel, 24 lbs. 10 oz. Excess on pommel, 3 oz. Excess on off pommel, 1oz.

Near Cantle	lbs.	oz.	Off Cantle	lbs.	oz
Horse shoes, nails and carrier	3	1	Rifle and scabard, part	9	0
Canteen, filled	3	7	Shelter half and rope, part	1	4
Shelter half and rope, part	1	14	Tent pins	0	12
Tent pole	0	15	Bed blanket, part	1	14
Bed blanket, part	1	14	Coat straps	0	3
Coat straps	0	3			
Total	11	6	Total	13	1

Excess off cantle, 1 lb. 11 oz. *Total excess off side, 1 lb. 12 oz.*

If neither rifle nor saber is carried, the equipment is distributed in the experimental pack as follows:

Near Pommel	lbs.	oz.	Off Pommel	lbs.	oz.
Feed bag, lighter end	0	4	Feed bag, heavier end	1	10
One-half feed of grain	2	0	One-half feed of grain	2	0
One-half alligator rain coat	1	6	One-half alligator rain coat	1	6
Stirrup iron and leather	1	9½	Stirrup iron and leather	1	9½
Saddle soap and sponge	1	0	Grooming kit	1	1
Toilet articles	1	4	Mess kit and lunch	1	10
Canteen, filled	3	7	Coat straps	0	3
Coat straps	0	3	Pommel wallet	1	14
Pommel wallet	1	14			
Total	12	15½	Total	11	5½

Excess on near pommel, 1 lb. 10 oz. Total weight on pommel, 24 lbs. 5 oz. Total excess on pommel, 11 lbs. 9 oz.

Near Cantle	lbs.	oz.	Off Cantle	lbs.	oz
Shelter half and rope, part	1	14	Horse shoes, nails and carrier	3	1
Tent pole	0	15	Shelter half and rope, part	1	4
Bed blanket, part	1	14	Tent pins	0	12
Coat straps	0	3	Bed blanket, part	1	14
Underclothing, summer	0	6	Coat straps	0	3
			Underclothing, summer	0	6
Total,	5	4	Total	7	8

Total weight on cantle, 12 lbs. 12 oz. Total excess on offside, 10 oz. Excess on off cantle, 2 lbs. 4 oz.

If the rifle and scabbard are not carried, the equipment is distributed in the experimental pack as follows:

Near Pommel	lbs.	oz.	Off Pommel	lbs.	oz.
Fed bag, heavier end	1	10	Feed bag, lighter end	0	4
One-half feed of grain	2	0	One-half feed of grain	2	0
One-half alligator rain coat	1	6	One-half alligator rain coat	1	6
Stirrup iron and leathers	1	9½	Stirrup iron and leathers	1	9½
Saddle soap and sponge	1	0	Grooming kit	1	1
Toilet articles	1	4	Mess kit and lunch	1	10
Underclothing	0	12	Pommel wallet	1	14
Pommel wallet	1	14	Coat straps	0	3
Coat straps	0	3			
Total	11	10½	Total	9	15½

Excess on near pommel, 1 lb. 11 oz. Total weight on pommel, 21 lbs. 10 oz. Total excess on pommel, 2 lbs. 3 oz.

Near Cantle	lbs.	oz.	Off Cantle	lbs.	oz.
Canteen filled	3	7	Saber and carrier	4	14
Shelter half and rope, part	1	14	Horse shoes and nails	2	3
Tent pole	0	15	Shelter half and rope, part	1	4
Bed blanket, part	1	14	Tent pins	0	12
Coat straps	0	3	Bed blanket, part	1	14
			Coat straps	0	3
Total	5	5	Total	11	2

Excess off cantle, 2 lbs. 12 oz. Total weight on cantle, 19 lbs. 7 oz.

Antiaircraft Tactics for Moving Columns

*By Second Lieutenant Frank T. Ostenberg, C.A.C.**

THIS article deals entirely with the tactics of antiaircraft machine guns in connection with the tactics of the command protected. No consideration is given to the use of the larger caliber antiaircraft guns, since the writer believes that these guns will not be assigned to protect columns but that they will have relatively permanent positions protecting defiles, bridges, etc. within bombing radius of the enemy planes.

It is not desired to submit the plan for antiaircraft machine gun protection of a moving column, but rather to present a few of the problems which have developed while operating with the Mechanical Force on its maneuvers; and to show how these problems have been solved by the antiaircraft platoon. These solutions were developed under the most difficult situation a highly motorized or mechanized column capable of traveling a hundred or more miles to attack might encounter. It is believed that these same principles can well be applied to slower columns made up of foot or mounted troops.

The mission of antiaircraft artillery, equipped with .50 caliber antiaircraft machine guns, assigned to protect commands, is; *to maintain continuous protection of the command from low flying air attacks.* This mission continues during three general situations. First: protection of the moving column. Here the mission is to furnish antiaircraft protection without hindering the progress of the column.

Second: Protection of the troops when going into battle or bivouac. The mission in this case is to be in position to protect the column when it is closed up on the road and the attention of the troops is directed to unloading.

Third: Protection of the carriers, kitchens, and supply train while the command is engaged in battle or is in camp or bivouac. The mission in these situations is to deny the enemy the use of the air for low flying air attacks over the area desired to be protected.

In war time the commander who is able to move his troops from one place to another in the shortest time, in the best condition to fight, under good control, has a decided advantage. Troops are transported by motor vehicles to expedite the movement and to keep the men in good fighting condition. Control is a result of plans and training. A commander should use every means available to accomplish these ends. Unless the antiaircraft troops can carry out their missions without loss of speed by the column and with ease of movement, it should not be used to protect the column.

There are two principal advantages in the use of antiaircraft artillery to protect a column. The mere fact that guns and men with the sole purpose and responsibility of protecting the column from low flying air attacks are present in the column adds to the morale of the troops protected and at the same time renders attacking enemy aviators less confident before and during an attack. This is especially true if a previous attach has ended with planes destroyed or showing the effect of fire.

The mission of antiaircraft is primarily a defensive one. It is accomplished if, by its presence alone, it can keep the enemy from attacking. The antiaircraft detachments must establish a reputation for allowing no air attacks to pass without some evidence of effective fire. Once this reputation is established the moral effect on the enemy should decrease the frequency of air attacks; or in the event of attack, the effectiveness of his fire.

The advantage of having antiaircraft weapons in the column is important to our own troops. The officers and men of the column can devote all their attention to their primary mission of reaching a certain point or going into battle or camp without the added responsibility for and worry over proper antiaircraft defence and discipline.

The following is quoted from Field Service Regulations: "The antiaircraft artillery reinforces the antiaircraft measures of the arms and units and operates especially against hostile aircraft flying beyond the range of their material." This principle is kept in mind in discussing the method of coordinating antiaircraft artillery with the antiaircraft fire of other arms and units. The tactics of the Air Corps assigns considerable importance to "hedge hopping" in attacking columns. Due to the difficulties of meeting the hedge hopping plane with effective fire it should be the responsibility of the antiaircraft personnel to identify the target and initiate the fire. After the antiaircraft artillery has initiated the fire, all weapons available in the column should be used to augment it.

This responsibility requires that it be constantly on the alert for air attacks and places the power of decision in the initiation of fire upon one responsible officer and trained individuals under his command. By providing antiaircraft artillery for the protection of the column, the volume of the fire is increased and each subordinate unit commander is relieved to a great extent of the responsibility of the defense and fire discipline against attacking planes. However, against attacking planes this does not lessen the incentive of these subordinate commanders to have trained antiaircraft men who may be depended upon to defend the organization in case antiaircraft artillery is not assigned for protection. Using its normal weapons the column can assist the antiaircraft detachments greatly against low flying air attacks, which measure in turn permits the antiaircraft artillery to decrease to a mini-

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mum the number of trucks and men furnished the column. This minimum may be considered the number required to initiate fire in case of attack and to fire at harassing planes which stay beyond the effective range of the smaller caliber machine guns. Due to the great expenditure of ammunition and to difficulties of technique encountered, only the best trained and most skillful antiaircraftsmen should be allowed to fire on planes which remain at a distance of more than two hundred yards from the column.

Firing on enemy airplanes should be accomplished, not only by the antiaircraft detachments but by all units, without causing the column to slow down, as movement is not only essential to accomplish the mission of arriving at a designated place quickly but is also, to some extent, a defense against airplane fire. If the enemy learns that he can stop the column and cause the troops to seek shelter by merely having a plane or a flight of planes make a feint at the column, and still remain beyond range of the antiaircraft guns, what more could he ask? His planes would accomplish the desired mission of delaying the column and by repeated feints at irregular intervals would render it inactive. Furthermore, when a column stops and troops seek cover or deploy, control is decreased, and the fighting condition of the men is reduced due to physical exertion and mental strain. It is believed that in case of air attacks the column should keep moving and, if possible, increase its speed.

Antiaircraft machine guns mounted in trucks may be used in three ways: first, to protect a column by moving by echelon and by bounds; second, to protect a column by taking a fixed position along a road; and third, to protect it by being distributed within the column in depth.

Protecting the column by moving by echelon and by bounds is the method prescribed in Field Service Regulations, which were written, no doubt, with the larger caliber antiaircraft guns in mind. This method should be used only in case the machine guns have to be removed from the trucks to fire. It has several disadvantages, the first of which is roads. In peace time it is difficult to find roads wide enough to pass the column without being held up by civilian traffic. It is usually impracticable to travel on parallel roads, as there is usually only one good road. What will it be in war time with very little choice as to roads to be taken and with all roads jammed with traffic? The second disadvantage is lack of freedom of movement. With fast transportation covering great distances situations will change quickly. The antiaircraft unit, if this method is used, will have to precede the column by several minutes at the beginning of the march in order to take its initial position off the roads before the column passes. If this is not done, it will be difficult to pass the entire column to go into the first position or to repass it to take a new one. With the antiaircraft weapons in position, covering several miles of the road ahead of the column, the column commander has no choice of roads in case some unforeseen situation develops, unless the change of route is made without antiaircraft protection. The column commander will also be forced to have his column travel as one group instead of being allowed to send the heavy group over one route and the light group over another route if desired. A third disadvantage is the additional amount of material and the larger number of men required to carry out the defense of a column traveling about a mile every two minutes. There are many additional situations where this method will fail, such as defiles in mountainous or wooded country or muddy roads where the column closes up or delays for any reason. Unless these unforeseen situations develop near the antiaircraft position, the column would not be adequately or effectively protected.

Situations appropriate for the antiaircraft artillery to take a fixed position along a road will no doubt be the unusual in war time. When the opportunity arises this method of defense may easily be adopted. If the antiaircraft artillery is able to function as described in this article, firing from stationary positions will be simple.

It is believed that the method of distributing the antiaircraft machine guns within the column in depth will overcome all of the above disadvantages and will give maximum protection at all times and under all conditions. In the depth formation the length of the column on the road, traveling at its normal speed, must be known, as the number of antiaircraft machine gun trucks required to protect it depends on its road length. Consideration must also be given to whether or not the column is divided into groups because of speed

Antiaircraft Detachment of the Mechanized Force in the Travelling Formation.

or load so that the battery commander may divide his platoons so as to have one complete unit in a group.

The antiaircraft commander distributes his command by platoons. In this article a battery of antiaircraft artillery consisting of four platoons is assumed, each consisting of three or four machine gun trucks protecting the column. In war time a battery could be substituted for the platoon in the distribution of antiaircraft artillery if required. The platoon commanders distribute their platoons, if possible, so that each antiaircraft machine gun truck when traveling will be close enough to the antiaircraft truck in front and in rear to be able, on a straight road to bring effective fire on attacking planes flying above the road during

Antiaircraft Machine Gun Mount T2.

Showing—gunner, 2 assistant gunners, and 2 observers—firing position—giving 360 degrees observation while firing—(shows how quickly the mount may be manned and changed to the firing position if seats are provided as shown in picture No. 1.)

the dead time (time required to traverse through 180 degrees) of the guns of the preceding and following trucks It is desirable that the distance between machine gun trucks be as small as practicable due to curves in the road and to the fact that the elevation of the guns, firing at "hedge hopping" planes, is small if the distance to the target is great. In order to prevent the possibility of any effect of our antiaircraft fire on our own troops, it is believed that antiaircraft machine guns should not be fired parallel to the column at an elevation less than that which will give maximum range. The distance between antiaircraft machine gun trucks should be reduced if the road is winding or passes through defiles.

The control of the antiaircraft machine gun trucks is as follows: The antiaircraft commander rides in a command car in the column near the column commander. The command car should be equipped with a radio to enable the antiaircraft commander to be in constant communication with the column commander and his platoon commanders. The antiaircraft commander should also have motorcycle messengers. The platoon commander rides in a command car preceding his platoon to enable him to assemble his platoon in case of going into battle or bivouac. He communicates with his machine gun trucks by motorcycle messenger or runners.

Due to the vulnerability of motorized or mechanized troops when concentrated on the road before going into battle or bivouac, the distribution of the antiaircraft artillery in the column should be such as to allow them to take up a regular area defense without losing time or causing confusion. The above described distribution is believed to be the solution of this problem. The change from the column defense to the area defense is as follows: The column commander makes his decision as to the place the troops are to unload and park their vehicles. He gives his orders to the antiaircraft commander who locates each platoon on the map so as to cover the desired area. The antiaircraft commander radios to his platoon commanders the general map locations for their platoons, leaving the exact locations to them. The primary mission in this situation is to have the platoons in a firing position before the column reaches the unloading point. The antiaircraft commander should issue orders so that the leading platoon forms the apex of a triangle on or near the road on which the column is traveling. The second and third platoons by moving about half a mile to each side of the road from the base of the triangle. The fourth platoon, which covered the camp when it was broken in the morning, would be back with the kitchen and supply group and should go into position on or near the road on which the column is traveling when that group is ordered forward. The defense formation therefore takes the shape of a square. This formation should be kept until the column is ready to move when the antiaircraft commander would order the platoon commanders to distribute their trucks in the column as they were before the area defense was assumed.

When the platoon commanders receive their orders, they should, moving independently, place their platoons in the positions ordered as soon as possible. The platoon commander should immediately, after reaching his position for area defense, post the two observers from each truck as outposts with the dual mission of engaging and holding any attacking enemy ground force and of warning the platoon commander by prearranged signals of the approach of low flying enemy aircraft. The second part of the mission for the outposts does not relieve the observers at the gun position of their responsibility of watching for planes. The outposts merely supplement the alertness of the men at the guns. The outposts are not so necessary in bivouac due to the protection given by the outposts of the unit protected, but if contact is about to be made with the enemy, their mission is considered very important. The observers should work in pairs and should be armed with light, one-man machine guns, capable of great fire power. In case of a ground attack these men would no doubt be sacrificed in order to save the materiel, trucks and men of the platoon.

The tactics of antiaircraft artillery must correspond to the tactics of the enemy. In peace time we have to visualize the attack tactics of a probable enemy or develop our defense from the tactics adopted by our own troops. The usual method advocated for attacking marching columns by airplanes is in formations of three planes. Three planes in line can effectively cover

a road, one down the center and one on each side. Plans for defense should be made to meet this formation. The planes may come from any direction and at any altitude. The probable attack will be down the road and the probable altitude, just clearing obstructions. This method of attack allows the planes a better target and a continuous one with a surprise approach, practically unseen or unheard, and a very short time during which the planes are targets for ground troops (about forty seconds).

The following arrangement of guns is believed best to meet all probable attacks. The number of antiaircraft trucks should be kept down to a minimum as road space should not be sacrificed for defensive purposes at the expense of our attacking forces or supply trucks. It is believed that one truck can accomplish the mission of bringing under effective fire three planes simultaneously. In order to accomplish this mission each truck should have three machine guns, each free to move quickly to any position and each capable of firing at targets from any direction. This arrangement differs from present multiple mount having two or more guns rigidly fixed so as to be controlled by one gunner. The multiple mount gives great fire power, but if the one gunner is off the target, the increased fire power is wasted. With trucks of the type described firing at one target, the chances of hitting are three gunners against one, and the probability of all three gunners being off of the target is greatly reduced. There is also a very big advantage in the speed by which each of the three gunners should be able to move their guns regardless of the slant of the body of the truck. This feature is now lacking in the present multiple mount even when the body of the truck is level. There is also the principal advantage of being able to bring three planes simultaneously under fire.

Three gunners and two observers for each truck should be allowed. A truck of this type should be able to replace a platoon of four trucks now required to bring a flight of three planes coming from any direction under fire. Each truck should have seats provided for eight men; driver and assistant driver in the cab; a non-commissioned officer, three gunners, and two observers on the mount. These seats should be arranged so that each man on the mount may observe for enemy planes; distributed, so that each man can reach his position for action without loss of time and so that there will be 360 degrees observation. Each man should face the guns. With this arrangement of guns, used with the above described distribution, it is believed that very few flights of enemy aircraft will attack without having fire brought upon each ship.

When traveling each man is an observer. When a target appears the gunners move to their firing positions, the two observers watch for planes coming from directions not covered by the guns. In order to carry out the antiaircraft mission without hindering the progress of the column, the gunners should be able to fire while the truck is moving at the speed of the column. In case they are not able to bring effective fire on targets while moving, the driver at the command "target" should pull out to the side of the road and halt. This halt should be accomplished without loss of time—if possible, before the gunners reach their position and get their guns trained on the targets. There will be occasions when the antiaircraft truck will be placed at a disadvantage by pulling out of the column, such as soft shoulders, deep ditches, muddy roads, or blinds for the gunners as trees, hills, etc. In these situations the driver makes the decision, and the truck should continue moving. The gunners will have to fire as best they can. Plans for war time should be made with the most unsatisfactory conditions in mind. If the antiaircraft artillery can fire effectively from moving vehicles, there should be no trouble when firing from stationary mounts. It is believed that the antiaircraft artillery when protecting moving columns, will be called to fire while moving due to the danger of causing road congestion by pulling out of the column and the subsequent attempt to regain position. Without the antiaircraft trucks regaining their positions, the head of the column would soon be without antiaircraft protection.

Identification of aircraft is a big problem in protecting a moving column. The identification of aircraft must be immediate. Seconds lost, with a forty second target, are valuable. It must be certain to prevent firing upon our own aviators.

There are two main methods of identification of aircraft—sight and sound. Both are almost useless against "hedge hopping" planes, due to the fact that

Antiaircraft Machine Gun Mount T4-1

Showing sides of body lowered—working platform including ammunition boxes 11 ft. by 12 ft.—gun in firing position mounted on experimental pedestal mount.

the planes are not seen or heard until they are well within effective range. Also, what will keep our mythical enemy from having planes with the same sound or silhouettes as ours?

There is one plan which will go far towards eliminating doubt on the part of the gunners, thereby reducing the time lost and uneasiness of them. It is cooperation between the antiaircraft artillery and the friendly Air Corps. In this plan the column commander will keep the Air Corps advised as to the location of his column and the Air Corps should notify the column commander if it becomes necessary to send planes near the column stating the number of planes, the direction from which they will approach the column, altitude, and the approximate time. This

method will be especially necessary for "hedge hopping" planes. With this cooperation the antiaircraft artillery should be authorized to open fire immediately on any plane seen if no information had been received concerning friendly planes. With the antiaircraft commander in communication with the column commander and with each platoon commander by radio, and the platoon commander in communication with each machine gun truck by messenger, the information concerning friendly planes should reach the machine gunners with very little loss of time after it has reached the column commander.

From time to time discussions arise as to whether men and guns with the primary mission of antiaircraft defense are necessary to protect the column in addi-

Antiaircraft Machine Gun Mount T4-2

Showing sides of body lowered—working platform including space for ammunition boxes 11 ft. by 12 ft. .50 caliber machine gun mounted on antiaircraft tripod M1.

tion to the normal armament with which the different organizations have to perform their primary mission. Experience on maneuvers with the Mechanized Force has shown that there must be some unit distributed throughout the column with the primary responsibility for initiating antiaircraft fire; otherwise some individuals of the column acting on their own responsibility may expose it unnecessarily to the enemy. When a column is traveling under cover of darkness no matter how many enemy planes presenting good targets are flying overhead, the antiaircraft should not begin firing unless it is reasonably certain that the enemy observers have seen the column. The antiaircraft guns should track these different planes so as to be able to open effective fire the moment a flare or some other means of notification of discovery by the enemy observers is used; but the decision as to fire should be made by the troops who are responsible for the defense. This means controlling fire and discipline, centralizes the responsibility of initiating the fire with the antiaircraft commander and permits the organization commanders to devote their attention to the problems of the moment.

With the necessity of bringing untrained civilians into the Army in case of an emergency, duplication of effort should be avoided, that is, Infantry should train to accomplish Infantry missions, Artillery, Artillery missions, etc. Time, material and men should not be wasted in trying to train one organization to accomplish dual missions. It is believed that in a large organization protection against aircraft should be the principal mission of one special unit.

This unit should be composed of intensively trained specialists, familiar with the tactics and technique of antiaircraft defense. Under our present organization the troops best qualified to carry out this mission can be best furnished by the antiaircraft artillery regiments. If the weapons which the main combat force uses in its mission are suitable and can be mounted for antiaircraft protection without increasing the number of vehicles required to accomplish their mission, they should be carried ready for antiaircraft defense and used in close-in defense after the antiaircraft troops of the column of which that organization is a part, have initiated the fire.

Having trained men with guns and transportation for only antiaircraft purposes is believed essential to properly protect a column from low flying air attacks because at the time the column is most vulnerable, when it is closed up on the road unloading, the troops of the column which may have been available for antiaircraft protection during the march are performing other duties; guns may have been removed to be used in other places or to allow the unloading of the carriers. This is a time when there is a great deal of confusion with little thought to antiaircraft protection. With antiaircraft artillery assigned to a column with the mission *of maintaining continuous protection of the command from low flying air attacks,* and the responsibility of the defense, including the initiating of fire, centralized under one command, equipped and distributed as described above, adequate protection for any column, at all times, and in all situations, should be obtained.

October Eighth at Aberdeen

HAD you journeyed early to the Ordnance Proving Ground at Aberdeen, Maryland, on October eighth of this year, you might well have imagined yourself witnessing the swarming of a huge hive of bees. From all points of the compass they came, by train, automobile and plane, about ten thousand in all among whom were members of the National Industrial Conference Board, the United States Naval Institute and the Army Ordnance Association, on their way to attend the thirteenth annual session of what is now commonly called "Army Ordnance Day." Leading Engineers and Officials of our country's industrial life, ranking officers of the army, the navy and the marine corps, scores of the younger representatives of industry, of the organized reserves and the national guard assembled here with one thought and interest—to observe tangible evidence of the relation that exists between industrial preparedness and military armament development for defense of our country.

Promptly at 10:00 A. M., Colonel E. M. Shinkle, the Proving Ground Commanding Officer, extended a welcome to all those present. Then followed a most efficiently regulated and coordinated series of demonstrations. By means of the Signal Corps Public Address System, every one was able to hear all announcements and to know just what was happening. The various demonstrations of equipment, firings, and exhibits, presented in the morning to this vast gathering, were staged at the main front where a large percentage of the crowd were seated comfortably on bleachers.

First on the program were demonstrated, by firing of a few rounds, three types of the most recently developed semi-automatic shoulder rifles. Then followed firings of caliber .30 and .50 Browning machine guns, with tracer ammunition, and the 37-mm. automatic gun on AA mount, also with tracer ammunition. This concluded the actual demonstration of small arms materiel. Other newly developed guns of .30 and .50 caliber, of particular interest to the cavalry, were on display in the Small Arms Shop. These latter had just been received at the proving ground, had not yet been tested and were therefore not given a firing demonstration.

The next groups of firings illustrated the various developments in artillery ammunition. The trajectory of the 75-mm. gun was traced physically in the sky by air bursts of shrapnel with the fuze settings of successive rounds decreased by two seconds. This quite spectacular demonstration gave a very clear picture of the trajectory. Then followed firings of other 75-mm. materiel including the infantry mortar, the pack howitzer and the new gun. The model 1916 gun was fired mounted on a track. The 3-inch AA gun on truck mount, new models of the 155 howitzer, the 155 gun on model 1921 mortar carriage, and the 4.2 inch chemical mortar of the Chemical Warfare Service were next shown.

One rather interesting new item was the pneumatic tired carriage which will carry either the 155-mm. gun or the 8 inch howitzer. This howitzer, when on its old mount, was formerly towed by a very slow moving 10 ton tractor and had a maximum range of 6 miles. Mounted on the above mentioned new carriage, it has an appreciably increased elevation which gives a range of 10 miles, and it can now be towed at modern road speeds.

The last number before lunch time was a demonstration of the application of automotive equipment in a miniature attack. To allow the spectators to see all of the vehicles and because of the space limitations imposed thereby, the picture naturally had to be somewhat distorted. However, a quite successful attempt was made to illustrate tactical employment of modern vehicles in battle. Armored cars on reconnaissance, tanks supported by men in carriers moving to the attack, machine guns going into action, artillery in support, anti-aircraft guns strafing planes—all had a brief but quite realistic fling.

Some one of the efficient proving ground staff with a good head for managing things had taken adequate precautions to arrange luncheon facilities for this huge crowd. That feature was no small job. Immediately following the luncheon period, most of the crowd inspected the exhibits in the large museum.

The afternoon program commenced with an Air Corps demonstration of pursuit, attack and bombardment planes. Everyone was then taken to the plate range where the 62nd Coast Artillery (AA), with the latest developments in anti-aircraft equipment, gave an excellent demonstration of firing at (and incidentally thru) sleeve targets towed by planes. This firing was done by caliber .30 machine guns and 3 inch anti-aircraft guns.

From the plate range, the scene shifted to the aviation field where various types of planes were inspected, parachute jumps were made, and an autogiro gave a demonstration.

In the afternoon, also, there was firing of the 14-inch gun, Model 1910, mounted on disappearing carriage, which is "disappearing" from the picture, because its range is limited by its maximum angle of elevation, 15 degrees. The 16-inch gun on barbette carriage replaces the disappearing type for present and future manufacture, as its principle of construction permits elevation to 55 degrees.

Anti-aircraft firing had been planned for the evening, but this had to be called off on account of the weather.

On journeying homeward, one could not but be impressed with the thought that Ordnance Day is a most important one. The sincere interest here displayed by thousands of our leading citizens in the serious problems of defense for our country could not be mistaken.

Courtesy, The Pennsylvania Guardsman

CURRENT TOPICS

To the Members of the U. S. Cavalry Association:

To date, December 1, 1931, $2,798.00 have been received by the Secretary, U. S. Cavalry Association, in response to my appeal for donation of funds to assist our Association to perform the duties required of it in connection with conducting the Equestrian Events and the riding phase of the Modern Pentathlon in the 1932 Olympic Games, Los Angeles, California.

While all contributors have been thanked by letter, I wish to thank all again publicly. The special thanks of the Cavalry Association go to the Polo Association, Second Corps Area, which under the leadership of Major General Hanson E. Ely, Corps Area Commander, Brigadier General Lucius R. Holbrook, Commanding the First Division, and Lieutenant Colonel Kenyon A. Joyce, G. S. C., Second Corps Area Polo Representative, gave to our fund the sum of $1,000.00; and also those members who, while not now in active cavalry service, were most generous.

Guy V. Henry,
Major General, U. S. A.,
Chief of Cavalry,
President, U. S. Cavalry Association.

International Military Horse Show at Nice, France

THE 12th International Military Horse Show of Nice will take place from April 15 to April 30, 1932 under the presidency of Monsieur Jean Médecin, Mayor of Nice. The Honorary Presidents are: the President of the French Republic, the King of Italy, the King of Belgium, the King of Sweden, the Queen of the Netherlands, the President of Poland, and the Prince of Monaco.

As in former years, the show is organized by a Committee, and prizes will be awarded by a jury, the president of which is General Delattre, commander of the 10th Brigade of French Cavalry.

The show includes ten international events, or "prix," each one of which is subjected to special regulations. If horsemen are looking for thrills, there is no place where they could find a better course of varied and difficult obstacles.

The Municipal Council of Nice, several military organizations and various French civilian or military personalities are planning a number of entertainments to be given in connection with the show.

The success of the International Military Horse Show of Nice increases from year to year. It constitutes one of the brightest and most interesting events of the Winter season on the French Riviera.

Belgian, Spanish, Irish, Italian, Polish, Portuguese, Rumanian, Swiss, and French teams competed in the 1931 show.

All applications for information must be addressed to "Monsieur le Vice-President du Concours Hippique, 2 Rue Saint François de Paule, Nice, France."

N. G. Preparation For Service School

WITH a view to preparing officers to better pursue the course for officers of the National Guard at the Cavalry School, the commandant of that institution has had the course examined in connection with the subjects included in the newly revised Army Extension courses.

As a result of this survey he has recommended that officers who contemplate attending the Cavalry School should complete certain subcourses of the extension courses. They are divided into two categories; those considered essential for admission to the resident courses, and those which will serve to assist the student in the pursuit of the course.

Field and Troop Officers' Courses

ESSENTIAL.

Subcourse 10–3 Organization of the Cavalry.
Subcourse 10–7 Map and Aerial Photograph Reading.
Subcourse 20–2 Weapons and Musketry.
Subcourse 30–2 Combat orders and the solution of problems, Cavalry.

ASSISTANCE.

Subcourse 20–1 Care of Animals and Stable management.
Subcourse 20–3 Security and Information.
Subcourse 20–4 Combat principles, the rifle squad and platoon, mounted and dismounted.
Subcourse 20–5 The Machine Gun platoon.

In publishing these recommendations of the Commandant, the Chief of the Militia Bureau has not specifically directed that officers must have completed the subcourses specified, but it is expected that they will have done so. Those who do not complete them will find themselves very much handicapped in their school work.

Notice of Annual Meeting

.....193...

I { shall / shall not } be present at the annual meeting of the U. S. Cavalry Association at the Army and Navy Club, Washington, D. C., 8:00 p. m., January 25, 1932.

I hereby designate the Secretary of the Association

or .....

as my proxy, to cast my vote at said meeting, or any adjourned meeting thereof, subject only to the following instructions:

Signature .....

Rank and Organization .....

Fill in, cut out and mail to U. S. Cavalry Association, 1624 H Street, N. W., Washington, D. C.

Events Overseas

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

The League in Manchuria

JAPAN'S sudden coup in Manchuria, September 18, confronted the League of Nations with a problem rightly regarded as the most serious in the history of that body. Its powers of persuasion—and coercion—over small Powers has been proved sufficiently, but never before has it faced a major Power. How seriously the League Council regards the issue between Japan and China is clear from the speeches before that body in its memorable October 23d session, when that issue was characterized as "the pivotal point of the world political situation, its solution essential to the approach of nearly all the great problems which the Occidental nations are facing." It bears directly on the question of world disarmament, on the whole efficacy of international machinery for preventing war; it thrusts forward all the questions of security, of boundaries, and of the sanctity of international treaties. A British speaker went so far as to state that the world cannot hope to deal soundly with the economic crisis until the Manchurian mess has been cleaned up.

Contrary to the misgivings widely expressed in the world press, the League Council boldly attacked its problem. Three lines of approach were open,—the League Covenant, the Nine-Power Treaty, and the Paris Pact. At the very outset, the Council avoided the possible snarl involved in separate courses of action by the League and the United States, after our Secretary Stimson had opened the door for such collaboration. Joint deliberation, if not joint action, was assured on all questions arising under the Paris Pact. Mr. Prentice Gilbert took his seat with the Council as American representative, over the protest of the Japanese delegate, Kenkichi Yoshizawa, and the Japanese and Chinese representatives were given their day in court. Japan insisted in effect that the problem could be solved only through her direct negotiations with China; and declared that the presence of any outside Power in the negotiations would make a solution impossible. China in turn demanded League intervention to require the withdrawal of Japanese troops within the boundaries demarked by the Portsmouth Treaty, prior to any negotiations. In the face of that deadlock the Council, not unmindful of continued aerial bombings by Japanese aviators, adopted on October 23 a resolution under Article XI of the Covenant, which virtually demands the withdrawal of Japanese troops to within the Treaty zone by November 16. Japan's single vote against the resolution renders it technically ineffective, in that a unanimous vote is necessary. It does not abate the moral pressure brought to bear on Japan by the Council's action, as well as by the almost unanimous voice of world opinion. Moreover, it does not affect Japan's obligations under the earlier action of the Council, September 30, in which Japan joined in a unanimous vote for pacific procedure. The Japanese Foreign Office has drawn a sharp distinction between those two votes, refusing to recognize the validity of the October 23d resolution.

Hopes of peaceful settlement were lessened by the report of the three-hour battle November 4, at the Nonni River Bridge between the Japanese and General Mah Chan-Shan's Manchurians. That clash followed hard on the heels of Briand's announcement that China had complied in detail with four of the five provisions of the October 23d resolution; and with respect to the fifth, covering the validity of the 1915 treaties, had announced that she respected the validity of all treaties under the League of Nations. Briand indicated that it was now Japan's turn to make clear her pacific intentions by conforming to the League's wishes. In the face of the new crisis Briand has summoned a special meeting of the League Council for November 17. That session and its aftermath will go far to inform the world as to the efficacy of the League in handling a major problem.

The British Empire

"England yet shall stand."

Philip Snowden's quotation of Swinburne's lines at the moment when the whole edifice of British credit was collapsing, was more than prophetic. It became a challenge to the radical socialism which the vast body of Labor's adherents had come to espouse, a guidepost to the voter who was to determine whether or no British destiny was to be drowned in the public feeding-trough. And even as Henderson and his adherents chanted:

"They're starving men and women there
For the saving of the pound,"

the British voter gave his verdict.

His choice is the harder road. It means higher taxes, a ten per cent cut in the dole, a substantial tariff involving the definite abandonment of the free trade corner-stone of Britian's one-time dominant position in world trade. It ends the slipshod casualness which has given the name of revolution to every socialistic gesture in Parliament since 1924. In short, it may be called counter revolution.

There can be no quibbling over the following returns (November 3, with 5 constituencies undecided):

NATIONAL GROUP

Conservatives	471
National Liberals	68
National Laborites	13
Total	552

OPPOSITION PARTIES

Labor	52
Lloyd George Liberals	4
Irish Independents	2
Total	58

In summary, Labor lost 214 seats and gained none. Among the discards are practically every leader of the old Labor group, all of the small coterie which had joined Oswald Mosley last year in his New Party, and the faint fringe of communism in the person of S. Saklatvella. Lloyd George has lost even the shadow of his once proud estate as former premier and Liberal Leader. Reelected himself, he no longer has a party. The bulk of the Liberals, adhering to the Nationalist coalition, retained some of the substance of a party, then selected Sir Herbert Samuel as their leader. Ramsay MacDonald chose the path of courage in standing for reelection in his home (Seaham) district, a Labor stronghold, and was rewarded with a substantial majority. Snowden and Thomas, his closest colleagues, fared equally well.

The top-heavy Conservative majority over all other parties apparently ensures that group a full five-year tenure of office. Even as MacDonald confers with the King on his choice of a new ministry, it appears obvious that eventually he must be shelved in favor of a Conservative leader. It is probable that the tariff issue will compel such a parting of the ways.

A brief resumé of British domestic politics since 1925 will show the present situation in proper perspective. In that year a Baldwin ministry, displacing a short-lived Labor government, chose to impound British wealth behind a dam whose foundation was the pound sterling stabilised at par. So long as the dam held, British investments abroad, valued at $20,000,000,000, were payable in gold at face. But England faced grave difficulties; free trade against world-wide tariffs, high living standards against low, and a heavy burden of social services. Maintenance of prestige and desire to hold the lucrative invisible export, which was worth $250,000,000 yearly to the world financial capital, made the effort seem worth while.

Within three years she found herself collecting from her debtors in currency revalued at an insignificant fraction of its contract figure while paying her debts at face. With the world depression, her income shrank, while her social expenditures multiplied. Taxes inevitably remained high, almost at war levels. So too, costs of production, while trade became anemic. Labor's return to power had served to hasten the process of disintegration. It needed only the Quixotic effort of last summer to save Germany and Austria from collapse to undermine finally the British financial dam. The torrent broke through, the flight from the pound was on. In twenty-four days $158,000,000 gold left the Bank of England. During August $100,000,000 more was exported in spite of protective credits of $650,000,000 supplied by Paris and New York.

Unable to agree upon remedial measures, the Labor cabinet gave way to a coalition government, pledged to balance the budget and foreign trade. Bolstered by a vote of confidence and plenary power to act by fiat, Philip Snowden brought in a supplementary budget for 1932 and a proposed budget for 1933. Economies were effected by cuts in all social services, government salaries, and in the military, naval, and air forces. Additional revenues were created by increased taxes. Debt conversion furnished the remaining necessary funds.

Immediate results were a violent break between Mr. MacDonald and his party, disorderly demonstrations in London, mob rule in Glasgow for 48 hours, and, most alarming of all, mass insubordination in the Navy. Parliament was warned by a delegation of bankers September 17 that these had so shaken confidence that panic was threatened and that no further credits were available. In the following three days $165,000,000 gold took flight. On September 20 the world was shocked by the fall of the pound from the gold standard.

It now remained for the National government to balance foreign trade, unfavorable by $1,000,000,000 in the first eight months of 1931. A protective tariff was essential and recourse to the country necessary. How gravely the situation was viewed by the government is apparent from the orders to military reservists to stand in readiness for mobilization in the event of post-election outbreaks. Surprisingly, the election and its aftermath were taken calmly by the public.

CANADA.

Premier Bennett is urging the early reassembly of an Imperial Conference. The death of British free trade removes the most serious obstacle to a strong economic integration of the British Commonwealth of Nations. In short, a system permitting relatively free interchange of Empire products between units of the Commonwealth, while checking with tariffs the inflow of foreign goods, has drawn appreciably nearer.

Western Europe

Spain—"No official state religion shall exist." With this pronouncement, the National Assembly disestablished the Catholic Church in Spain on October 13. While the vote was overwhelming (227-41) the debate on the measure was accompanied by violence and disorder. Christianity has existed in Spain since the 2d Century. Each of Spain's Bourbon Kings has been "His most Catholic Majesty." Even under the Republic of 1873-75, Mother Church was not molested. But the present Cortes was to go further. By a vote of 178 to 59, that body wrote into the Constitution an Article expelling the Jesuits and barring education under Catholic auspices.

President Alcala Zamora resigned in protest, and after 50 Basque and Navarra deputies had walked out of the National Assembly, War Minister Manuel Azaña was elected in Zamora's place. The new Provisional President announced that there was no intention of persecuting the Church, but instead that religion was to be placed in the same position as in America.

Less spectacular than the act of disestablishment, was the action of the Cortes in granting the franchise to women who had attained the age of 23. It will have the effect of doubling the electoral vote, raising it to 10,000,000. Following that step, the Cortes decided by a vote of 150 to 130, that Presidents will be chosen by an electoral college elected by direct suffrage, voting in joint session with an equal number of Deputies from the Cortes.

Central Europe

Germany—The Bruening government continues to lead a charmed existence. When Dr. Curtius, Foreign Minister, failed at Geneva in achieving the Anschluss with Austria, the government wabbled insecurely for a space. Curtius was forced to resign. Then, after a brief flurry of reorganization, the Bruening government resumed control.

When Hitler succeeded in uniting Hugenberg's Nationalists, the Steel Helmets, and the Peasant League with the Nazi, defeat again threatened the Bruening government. Hastily, President von Hindenberg summoned Hitler for a secret conference. As soon as the Reichstag convened, the no-confidence motion came to a vote, with the Bruening government emerging as the victor by the slim margin of 25 votes (295 to 270 with 3 not voting). With the Reichstag adjourned until February, government by decree will be the order until that time. Meanwhile, the Nazis bide their time, confident of ultimate success, as local elections indicate their increasing popularity.

The makeup of the reorganized cabinet indicates the government's preparations against internal disorder in the coming winter. The vital portfolios of the Ministry of the Interior, with its control of the state police, and the Ministry of Defense have been entrusted to General Wilhelm Groener. Such a concentration of authority ensures prompt mobilization of the State forces.

Several bright spots appear on the German political horizon. While the intangible results of the visit of Laval and Briand to Berlin are stressed as the more important, much may develop from the plan formulated for the economic exploitation of the Balkans and Eastern Europe, with France furnishing the capital and with Germany supplying the labor and the factories. Von Hindenberg has appointed an "Advisory Economic Council" consisting of 25 leaders of business and labor to devise means to stimulate industrial activity. And above all, Germany's war-debt creditors are giving active consideration to her clamors for a scaling down of reparations.

The League of Nations arms statement now lists the German defense personnel at 120,000 for the Army, 16,500 for the Navy, with the naval armament below the margin set by the Treaty of Versailles. Nothing appears as to the various auxiliary forces capable of immediate induction into the Army in the event of emergency.

Austria—Chronic unrest and active fomentation of civil disorder continues. Austria's extremely straitened financial situation forced the entry of the League of Nations, under the terms of the 1922 international loan, placing Austrian finances under League supervision. Economy proposals dictated by the League financial committee, and accepted by Austria, include the reduction of the Army from 30,000 to 20,000.

Italy—Amidst a troubled Europe, Italy remains relatively calm. The recent trouble with the Pope has been amicably settled. The Catholic Action Society will no longer meddle in politics. While this appears to be a triumph for Mussolini, actually the Fascist state made a far-reaching concession when the Church was given full freedom in administration of religious matters.

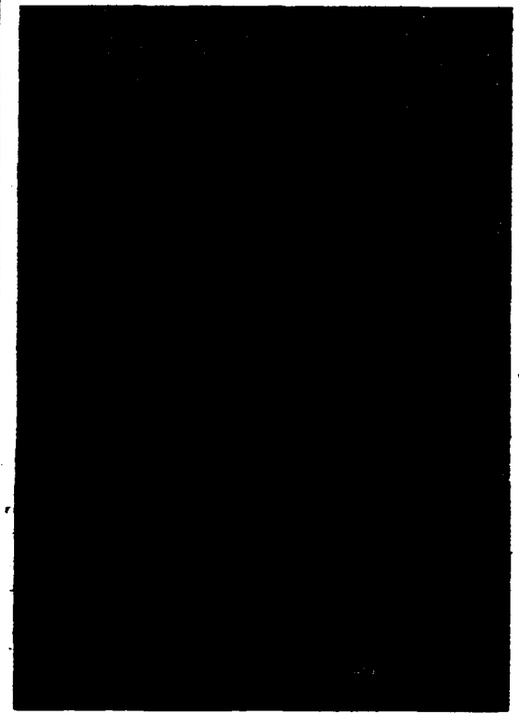
To combat shrinkage in government income Mussolini has instituted a tariff increase of 15% and has authorized new cuts in wages. The fighting forces, which suffered a 10% reduction in pay last year, will probably receive another cut of 8%. Despite these financial difficulties, Italy is rapidly advancing her aerial development. A comparison of the expenditures for the Air Force in 1931 and 1923, 783,758,695 lire as against 95,000,000 lire, is significant. So too, the flight of General Italo Balbo, Air Minister, leading 24 planes to New York in November, and thence around the world. The quality of Italian military planes is attested by her increasing exports. Turkey having just purchased 28. Formerly, Angora bought its planes in France.

Eastern Europe

A Russian moratorium in the near future has become probable. From Germany comes the word that no funds will be available to meet Russia's foreign obligations aggregating at least $100,000,000, due December 1. The terrific "tempo" of the Five-Year Plan necessitated increasing purchases of foreign machines, tools, and other finished products. It entailed the hiring of a growing army of foreign engineers and foremen. To meet the financial drain, Russia depended chiefly on the funds realized from the sale of her raw materials abroad.

With the fall of world prices, Russia's raw materials became a drug on the market. In the first eight months of 1931 the nation's trade balance was unfavorable by $105,000,000. Shipment of gold in quantity was out of the question, in view of the already dubious metallic reserves supporting the nation's currency. Moscow's suggestions that foreign credits be renewed and that additional credits be extended fell on deaf ears. Meanwhile, with Stalin finding it necessary to raise the national standard of living by providing an increased supply of consumer's goods in the Soviet stores, word comes that the 1931 wheat harvest is appreciably lower than last year's, and inferior in quality. And in spite of the frantic efforts to bring laggard industries, notably coal mining and transportation, abreast of the "*pialetika*" requirements, there is little improvement. Under such circumstances it is easy to understand the closing of ten Esthonian and Latvian factories, due to their inability to discount Russian bills abroad. Russian credit, never strong, has vanished for the time being. Moscow, however, denies any intention of demanding a moratorium, realizing that such a demand would halt the Five-year Plan in midstream, at the same time opening the dam to no end of unpleasant domestic repercussions.

Compulsory military service has finally been inaugurated for the basic nationalities of the Central Asian Republics. Not since the days of Tamerlane have those peoples known the meaning of compulsory service. Their furnishing of voluntary contingents had previously been accepted by Czarist and Soviet regimes as proof of their loyalty.



Willis Virlin Morris

Willis Virlin Morris was born at Marion, Indiana, on January 12, 1876. He graduated from the U. S. Military Academy in 1900.

Throughout his career he was identified with polo. Regimental polo was his forte; unceasing were his efforts to encourage and develop young regimental players. Army polo was in its infancy when he joined the 6th Cavalry. He was one of the pioneers and through his energy and foresight 6th Cavalry regimental polo became firmly established. From about 1908 to 1915 the name Morris was synonymous with 6th Cavalry polo. From 1915 until 1918 Colonel Morris played on the polo team of the 9th Cavalry, then stationed at Camp Stotsenburg, P. I. From 1919 to 1923 Colonel Morris was identified with polo at San Antonio. He was next heard of as playing on the Fort Leavenworth team. Then came a tour in the Chief of Cavalry's office, which led to more polo with the War Department teams on the fields in Potomac Park. Thereafter, a tour of duty at the Cavalry School, where full use was made of his long and varied polo experience. He was polo representative and under his watchful eye many a young Cavalry lieutenant received careful instruction. Next came the General Staff detail at Governor's Island, where once more Colonel Morris became a polo master, this time in charge of Army polo in the 2nd Corps Area, a most important polo center. In 1930 he was appointed an officer in charge of the team of American army officers that journeyed to the Argentine.

And, then, July 11, 1931, "Billy" Morris was fatally injured in a polo game.

He was editor of the Cavalry Journal from October, 1924, to October, 1927.

"He was a verray parfit gentil knight," *Chaucer.*

BOOK REVIEWS

Horse Training; Outdoor and High School. By ex-Captain E. Beudant, French Cavalry. Translated by Lieut. Col. John A. Barry, Cavalry. Charles Scribner's Sons, New York. $3.00.

A clearly written book, containing many valuable ideas, less a "Manual of Equitation" than a general treatise on the subject.

Of the author's skill there can be no doubt. The efficacy of his methods is proved conclusively in the latter part of the book which is dedicated to the "Results of Training." Such results could have been obtained only by a "Master," possessed of knowledge, skill and finesse little short of miraculous.

As to the principles advocated, they differ basically but little from those accepted and taught at the French Cavalry School at Saumur, and similarly at our own Cavalry School.

The author decries (rightly, we believe) the emptiness of thories and scientific formulae and the use of complicated aid signals.

He prefers simple direct aid signals, inspiring impulsion with the legs, controlling with the hands, leaving the horse all liberty and initiative possible for the execution of the movement. He suggests that there is frequently more force than brains used in equitation and believes in the employment of common sense rather than absolute rules in horse training.

He insists that the horse must be suppled, but disapproves of the time-honored usage of "two tracks" and "shoulder in" to that end. He maintains that calmness, patience and persistence to the *n*th degree are requisites of the good horse trainer. He advises the rider to study himself as well as the horse and the laws of nature, and then to reflect (most worthy advice; how many of us practice it?). He claims that most resistances encountered are the result of the rider's failure to apply the aids with the necessary tact and precision. He overcomes resistance by ceasing the exercise, permitting the horse to regain calm and relax, then resuming. How much simpler and more rational a scheme than the stupid fights we engage in when our horse is so excited and fearful that he hasn't the faintest idea of what is wanted!

He asks the rider to make use of his superior intelligence to anticipate the horse's action and to suppress resistances before they arrive. He urges the rider to develop his "taste" for the work, which is healthy exercise for both himself and his mount and, as a character builder, has no replacement in the study of theories.

His treatment of the *Haute Ecole* is excellent, though his undoubted mastery of the subject has caused him to omit many details of importance to horsemen less advanced. Nevertheless, his description of the "Airs" and the training of the horse in them should be of value to those interested in these masterpieces of Equestrian Art.

Wm. W. West, Jr.
Lieutenant Colonel, 9th Cavalry.

The Foreign Military Press

Reviewed by Major Alexander L. P. Johnson

Czechoslovakia—*Vojenské Rozhledy*—Jan., 1931.
"A Project for the Reorganization of the Cavalry," by Colonel J. Eminger.

The author considers the reorganization of cavalry along modern lines imperative. He proposes a plan for such reorganization. He proposes a cavalry tróop (escadron) of five platoons organized as follows: 1 reconnaissance platoon with six automatic rifles; 3 M. G. platoons with 9 medium type M. G.'s each; 1 M. G. platoon with 2 heavy machine guns. The proposed Machine Gun troop would consist of four platoons, as follows: 2 M. G. platoons with 4 heavy machine guns each; 1 A. A. platoon with 4 heavy machine guns; 1 cannon platoon with two 47 mm cannons. The author contemplates a cavalry regiment consisting of headquarters, 3 cavalry troops (18 automatic rifles, 27 medium and 6 heavy machine guns); 1 M. G. Troop (12 heavy machine guns, and 2 cannons cal. 47 mm); 1 auxiliary troop (communications—technical—and headquarters platoons); 1 Armored Car platoon, (3 cars carrying 1 M. G. and 1 cannon each.) The proposed Cavalry Division would consist of headquarters and staff; 1 cavalry brigade of 3 regiments; 1 "Speed Regiment" (motorized regiment) consisting of 1 cyclist battalion and 1 motorized infantry battalion; 1 artillery regiment consisting of one F. A. battalion of 75 mm guns, and 1 portée battalion of 10 cm howitzers; 1 Armored Car Troop (4 platoons); 1 Technical Company (Engineers); 1 Signal Company, and a motorized divisional train. The author believes that divisional cavalry should be separated from the "Army Cavalry" in time of peace.

France—*La Revue d'Infanterie*—July, 1931.
"The Japanese Infantry," by Captain Vautrain.

Constituting about one-half of the entire military establishment of the Mikado's empire, the Japanese infantry reflects the national character and traditions in its esprit, its training and indoctrination. All officers, irrespective of the manner of their original entry into commissioned ranks (corps of cadets, secondary schools, or corps of NCO's), are put through a course of training which produces a high standard of uniformity. Officers report at the barracks at reveille and work with their troops until retreat. All officers lunch at the Mess. Once a week, company officers lunch with their units; battalion commanders have their lunch with each company once a month. Relations between officers and men are more or less feudal in character, reminiscent of the days of shoguns and the samurai. The size of the standing army permits absorption of only 18 per cent of the annual contingent arriving at military age. This allows the selection for active service of young men of the best type and highest intelligence. As a result, illiteracy does not exist in the Japanese army. In effect, the Japanese soldier represents the flower and cream of the nation. Those desirous of a military career must signify their intention when they enter the service. They are then assigned to special training cadres which provide a reservoir for NCO personnel.

The essential characteristics of the Japanese tactical doctrine are: the spirit of resolute offensive, and the endeavor to attain the highest possible mobility. Well-trained Japanese infantrymen march easily 50 km. per day. Going into action, Japanese infantry takes up the approach formation only when it comes under hostile artillery fire. In order to reduce its vulnerability, Japanese infantry employs camouflage far more extensively than is done by other armies. Upon arrival within assaulting distance, the rear sections pass rapidly through the line and drive home the charge.

The defensive, according to the Japanese doctrine, is merely a temporary suspension of offensive action, which must be resumed at the first opportunity. Hence, in the defence of the main line of resistance, the Japanese infantry is taught to counterattack at the moment when the enemy assault wave reaches the barbed wire obstacle.

The Japanese make a specialty of combat at night. This they practice constantly and to an extent far beyond the generally accepted theories. They believe apparently in the practicability of maneuvre at night, and consequently provide for the employment of reserves in a night attack either to reinforce the assault echelons, or to pass through the line to continue the attack.

"Indeed, while we are applying the lessons of the war we have fought, the Japanese are preparing for a war which they believe will be quite different."

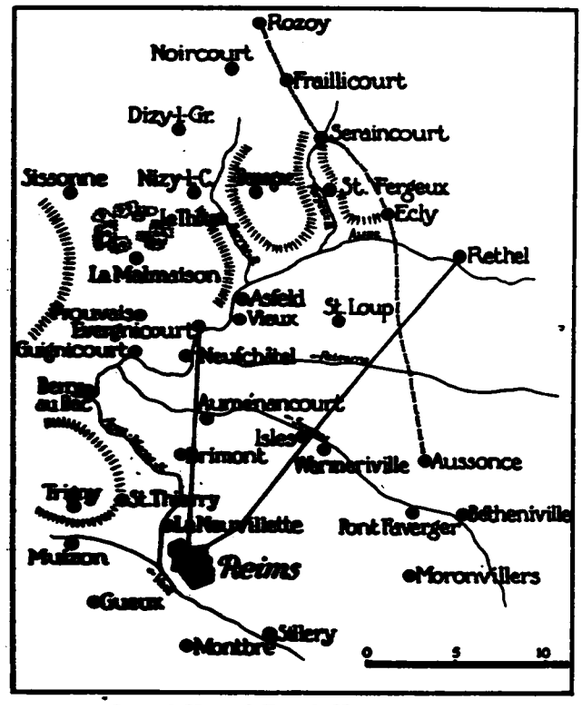
The organization of the Japanese Infantry in a general way conforms to that of western nations. Each of the 17 divisions consists of two brigades of two regiments each; a total of 68 regiments or 204 battalions. In addition, there are two independent regiments on the island of Formosa; 4 battalions on railway guard duty in Manchuria, besides the units stationed at Pekin and Tientsin. The Infantry regiment consists of headquarters, three battalions, one M. G. Company, and one Howitzer platoon. The battalion consists of headquarters and three companies of three platoons each. The M. G. Co. and the How. Plat. are apparently but training cadres for wartime expansion. It had been noted, that in maneuvers each infantry battalion had three rifle companies and one M. G. Co. of four pieces. The machine gun is of Japanese manufacture resembling the French Hotchkiss gun. Each company carries six automatic shoulder rifles of Japanese model.

Six rifles per company are equipped for rifle grenades having a range of about 200 meters. Ammunition for rifles, automatic rifles and machine guns is interchangeable. The howitzer resembles the French 37 mm gun. The mortar fires a 70 mm projectile and has a maximum range of about 1,500 meters.

GERMANY—*Militär-Wochenblatt*—11 October, 1931.

"The French Maneuvers of 1931."

Mobilizing 50,000 men and 500 pieces of artillery—corresponding to half of the German Reichswehr and four times its total artillery—the French army held its maneuvers in the general area northeast of Reims. The line Rozoy-Ecly-Aussonce represented the boundary between two states at war, Blue, west and Red, east. Its mobilization still incomplete, the Red army invaded Blue territory with immediately available forces, (VI A. C. comprising the 12th Div.; the 4th Cav. Div. and the 7th Separate Cav. Brig.), to prevent Blues II A. C. with 3d and 9th Divs.) from completing their defenses still in course of construction. Blues organized for defense along the line: Brimont-Guignicourt-Sissone, with covering detachments along the imaginary frontier charged with the mission of delaying Reds sufficiently



General Map of French Maneuvers, 1931

to permit completion of the defensive works. On September 10, the 4th Cav. Div. (Red), on the right, advanced on a broad front between Fraillicourt and St. Fergeux to the Aisne. The 12th Division, less one regiment, advanced in a more compact formation in contact with the cavalry. Both elements were to drive back the Blue covering detachments, and to reach the Barre-sector. At the same time, the 7th Cav. Brig. (2 mounted regiments, 1 motorized Regt. of Dragoons and 2 battalions of artillery) advanced south of the Aisne in the general direction of Neufchatel to secure the Aisne bridges at that place. The 12th Div. effected a crossing of Fergeux Creek and made considerable progress south of Banogne. The 4th Cav. Div. encountered little resistance and, in spite of its overextended front, reached the line, Noircourt-Banogne.

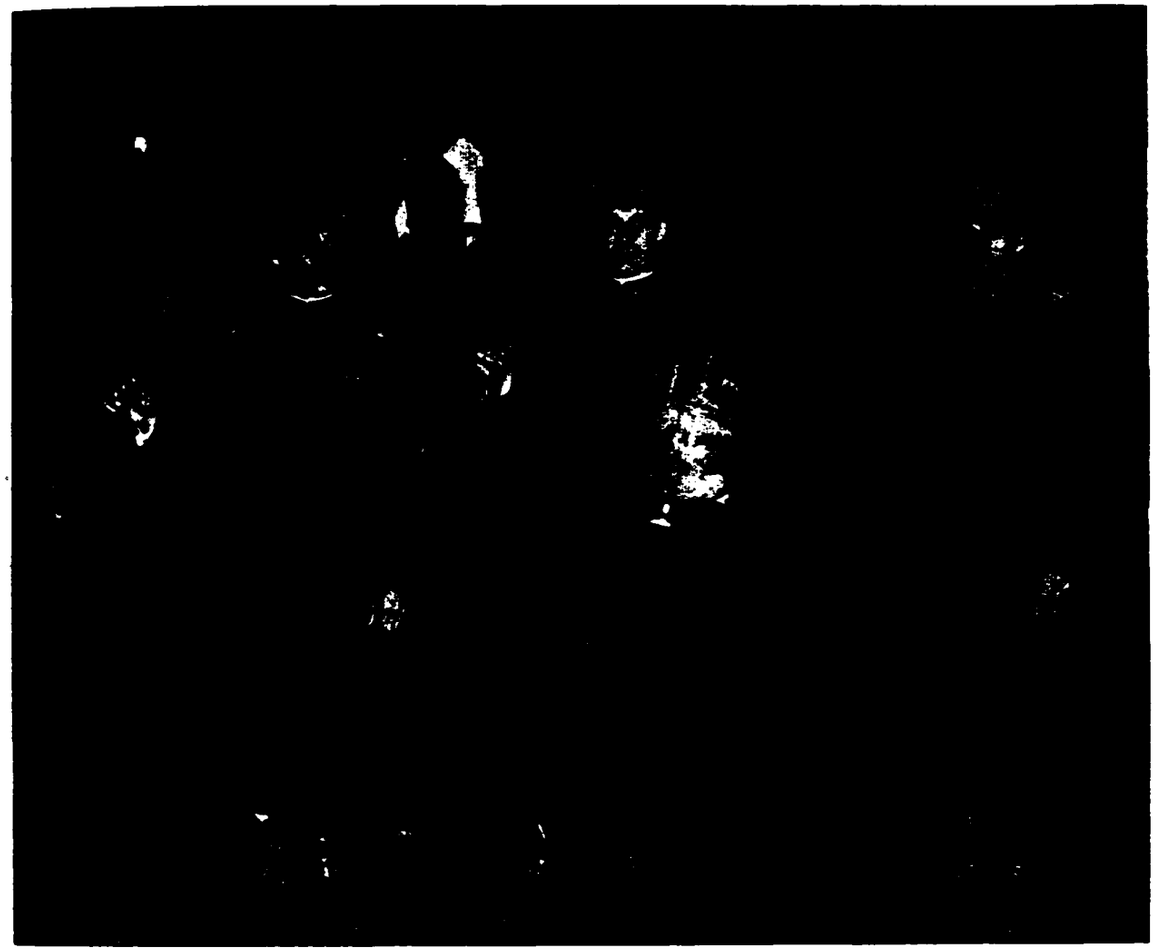
The Red plan of attack for the following day assigned the main effort to the interior flanks of the 12th Div. and 4th Cav. Div. The Dragoons and light How. Bn. were ordered to move by truck via Rethel to support the spearhead of the attack. Similarly the 150 Inf. of the 12th Div., which had been made available at Verdun was directed to move by truck to Seraincourt so as to arrive there at 2 p. m. This regiment experienced unforeseen difficulties. The truck-train included a new type of charcoal-burning motors. A considerable number of these stalled on the road. Moreover, one battalion got lost during the night. At the appointed hour only 34 out of 114 trucks were able to reach their destination. Only one-half of the command had arrived by 5 p. m. The hour of the attack had to be postponed and as a result the element of surprise was lost. When the troops finally arrived, they were fatigued from the prolonged trip. This unexpected delay also enabled Blues to complete the organization of their defenses.

The desire of the umpires to preserve the schedule development of the maneuver, made it possible for the Reds to capture Le Thour in a comparatively short space of time, and to effect a crossing of the Barre. The 7th Cav. Brig., south of the Aisne, took Asfeld and Vieux, but failed to cross the Aisne. By evening, Reds were in contact with the Blue outpost line of resistance north of the Aisne. The plan of attack for Sept. 11 directed the 4th Cav. Div. to deliver a holding attack on a broad front. The 12th Div., reinforced by a Tank regiment, was directed to penetrate the Blue position on both sides of La Malmaison, while the 7th Cav. Brig. was to push forward astride of the Aisne, behind a smoke screen laid down by the air force, as far as the line: Prouvais-Guignicourt, covering the left flank of the 12th Div. The attack progressed as planned. In six hours Reds had penetrated the Blue position to a depth of 10 km. on front 14 km. wide.

The second phase of the maneuver (Sept. 14-16) was based upon a new situation, and had no connection with the first. The VI A. C. with the 3d, 9th and 12th Divs. and the 4th Cav. Divs. represented the left wing of the Red army advancing from the north, echeloned in great depth, to locate and destroy hostile forces east of Reims to enable the Red main army to cross the Aisne west of Reims. The Blue army was represented.

The maneuver concluded with formal parades and reviews in the vicinity of Reims. Thirty representatives of 21 nations attended these exercises, among them the Chief of Staff of the United States Army.

SPORTS



AMERICAN ARMY TEAM: Left to right, Capt. W. B. Bradford and "Suzanne"; Major H. D. Chamberlin and "Tanbark"; Lt. C. W. Raguse and "Ugly."

Splendid Victories by the Army Horse Show Team

The United States Army Horse Show Team, consisting of:

MAJOR H. D. CHAMBERLIN, 9th Cavalry.
CAPTAIN W. B. BRADFORD, 9th Cavalry.
1ST LIEUTENANT J. W. WOFFORD, 13th Cavalry.
1ST LIEUTENANT C. W. A. RAGUSE, Cavalry.
1ST LIEUTENANT A. A. FRIERSON, Cavalry.
2ND LIEUTENANT E. W. CURTIS, 9th Cavalry.
Six enlisted men, 9th Cavalry.
Eighteen horses,

left Fort Riley, Kansas, October 10th and participated in horse shows in St. Louis, Boston, New York, and Toronto, Canada.

The officers and horses composing this group have been in training at Ft. Riley, Kansas, during the past six months. The group represents the nucleus of the *Prix des Nations* Team for the 1932 Olympic Games Equestrian Teams.

The team was most successful on this trip. It competed with the outstanding horses and riders of this country and, while in the East, competed with horses and riders representing the armies of England, France, Canada and the Irish Free State.

ST. LOUIS

At St. Louis there was no International competition. However, the team made entries in a number of the hunter and open classes. Among the outstanding classes won at this show were the following:

Light Weight Hunters

Show Girl ..... Lieut. Frierson.

Jumper Stake

Clysmic ..... Lieut. Wofford,

and the other six places in this class were likewise won by the team, as the result of a tie.

Hunter Stake

Show Girl ..... Lieut. Frierson.

Triple Bar

Avocat ..... Lieut. Frierson.

Hunter Team

Show Girl ..... Lieut. Frierson.
Tan Bark ..... Major Chamberlin.
Suzanne Captain Bradford.

Olympic Class

Suzanne ..... Captain Bradford, first.
Clysmic ..... Lieut. Wofford, second.
Tan Bark ..... Major Chamberlin, third.

At the St. Louis Show the team won a total of eight blue, six red, six yellow, six white, and three pink ribbons.

BOSTON

During the week of October 25, the team was at the Boston Horse Show. Here the team encountered its first International competition on the trip. Among the outstanding classes won were:

Handy Hunters

Buckaroo ..... Captain Bradford.

Touch and Out Sweepstakes

Tyrol ..... Captain Bradford.

In the International Team Class and the International Individual Class the team placed second, while in the International Military Stake Class the team won all five places with five clean scores. The toss up resulted in the first five places going to:

Ugly ..... Lieut. Raguse.
Show Girl ..... Lieut. Frierson.
Sonia ..... Lieut. Frierson.
Suzanne ..... Captain Bradford.
Tan Bark ..... Major Chamberlin.

NEW YORK

The team then proceeded to the National Horse Show, Madison Square Garden, New York, November 5-11, where one of the most brilliant victories ever attained by a group of American Army riders was won. Our riders won every International event in which they competed. The principal International events follow:

International Pair

Officers' jumpers to be ridden by officers of the same Nation won by:

Tan Bark ..... Major Chamberlin.
Suzanne ..... Captain Bradford.

International Military Stake

Open to officers of all nations and all branches of service, was won by: ***Tan Bark*** .. Major Chamberlin. Third place in this even was won by Lieutenant Raguse riding ***Ugly***.

International Individual Military Jumpers

Open to officers of all Nations, was won by *Ugly*—Lieut. Raguse.

International Military Trophy

On Tuesday night Major Chamberlin, Captain Bradford and Lieutenant Raguse riding respectively *Tan Bark*, *Suzanne* and *Ugly* realized the goal and ambition of the United States Army Horse Show Team by winning the International Military Trophy, open to teams of three officers and three horses, one of the most sought after events in International competition. Although our team had won this class at other shows they had never been able to win the class at Madison Square Garden. Not only did our team win but they won with an absolutely clean score, a most unheard-of thing in International team competition. The International team event consists of ten jumps varying in height from 3′ to 4′6″. The jumps include natural rail, picket gate, oxer, triple bar, triple in-and-out, 4′3″ in height and 24′ apart.

In addition to the International class the team competed in a number of hunter and open classes. Major Chamberlin riding *Tan Bark* won the Pen Jump; Captain Bradford on *Buckaroo* placed second. In the Handy Hunter Captain Bradford placed first on *Tyrol*; he likewise placed second with *Suzanne*. Captain Bradford on *Suzanne* won the Bowman Challenge Cup. The C. L. Scott Challenge Trophy was won by Lieutenant Frierson riding *Show Girl*.

At Toronto the winning stride was maintained. Our team won first and second in the International Military Teams of three jumpers abreast; *Tan Bark* and *Show Girl* won the Blue and Red respectively in the International Stake. Out of seven International events we won four.

Tribute to U. S. Army Team by New York Herald Tribune

THE winning by the United States Army team of the International Military Trophy at Madison Square Garden is more than a thrilling victory in this searching test of horse and rider. All the nine obstacles were cleared by the three horsemen without a single fault. The record had hitherto been held by the Polish team, which lost a point and a half only. The Germon team, which won last year, lost five points and a half. The slightest flick of a horse's hoof is enough to make a bad score. The brief period of jumping represents hours of assiduous horse management and indicates a physical co-ordination which counts as much in equitation as any other sport, if, indeed, it does not count more.

An absolutely perfect performance in whatever line of human activity is sufficiently rare to call forth warm applause. But the achievement of Maj. Harry Chamberlin, Capt. W. B. Bradford and Lieut. Carl Raguse speaks well not only for them but for the branch of the service to which they belong. Because the war on the Western Front was fought on foot the impression has been gained that the day of the mounted man is over, in spite of the fact that the British alone used 1,361,000 animals during the war and the United States had at least 350,000 animals in training. This false impression has been deepened by the widespread use of automobiles, a use which has led some people to forget that in time of war roads are systematically destroyed and that less than 10 per cent of the world's present roads are improved.

The cavalry exists, and amply justifies its existence, because there will probably never be a war in which rapid movement across rough country will not be essential. Every glimpse which the civilian has had of the cavalry since the war strengthens belief in its efficiency. It is largely due to this branch of the service that the breed of horses in the United States has been so markedly improved. The New Mexico Cavalry maneuvers in the Spring showed that mounted men can operate in country where no vehicle can possibly move. The winning of the International Trophy is in the spirit of that thorough efficiency which Americans like to see in their Army. It is a pleasure to congratulate the Cavalry on a well deserved triumph.

1st Cavalry Division Horse Show

FOLLOWING is a list of winners of first place in the events of the 1st Cavalry Division Horseshow, October 6-10:

CLASS 1. *Prix des Nations;* Olympic Jumping Course. *Kaiser*, ridden by Corpl. Dugdale, 8th Cavalry.
CLASS 2. Equestrian Championship; Olympic 3-Day Event.
Blue, Sergt. Hartless, 8th Cavalry.
CLASS 3. Division Commander's Trophy-Jumpers, Championship.
Apology, Corpl. Long, 7th Cavalry.
CLASS 4. Ladies' Jumpers.
Chestnut, Mrs. Grepe, 7th Cavalry.
CLASS 5. Touch and Out.
Kaiser, Private Bobbitt, 8th Cavalry.
CLASS 6. Novice Jumpers (Officers).
Sleepy, Lt. Col. Mann, 7th Cavalry.
CLASS 7. Officers' Private Mounts.
Berk Boy, Major Creed, 8th Cavalry.
CLASS 8. Officers' Chargers.
Overall, Lieut. Reybold, 5th Cavalry.
CLASS 9. 2nd Cavalry Brigade Trophy-Team Jumping.
Red Wing, Lt. Mudge;
Spark Plug, Capt. Short; Special Troops.
Chas, Lt. Grear.
CLASS 10. Enlisted Men's Mounts.
Overall, Corpl. Owens, 5th Cavalry.
CLASS 11. Novice Jumpers (Enlisted Men).
Lone Star, Sergt. Witaski, 7th Cavalry.
CLASS 12. Recruit and Remount.
Nick, Pvt. Heintschel, 1st Cavalry.
CLASS 13. Artillery Driving Contest.
Battery A, 82nd F. A.
CLASS 14. 1st Cavalry Brigade Trophy.
8th Cavalry.
CLASS 15. Novice Hunters.
Patti, Lt. Mudge, Special Troops.
CLASS 16. Hunters (Lightweight).
Bobo Baxter, Corpl. Bennett, 5th Cavalry.
CLASS 17. Hunters (Middleweight and Heavyweight).
Garry Owen, Major Wilder, 7th Cavalry.
CLASS 18. Handy Hunters.
Apology, Corpl. Long, 7th Cavalry.
CLASS 19. Ladies' Hunters.
Blue, Mrs. Creed, 8th Cavalry.
CLASS 20. Hunters Privately Owned.
Don Jose, Lt. Bromley, Special Troops.
CLASS 21. Horsemastership Cup Hunt Team.
Blue, Lt. Byers
Berk Boy, Mrs. Creed
Woodrow, Major Creed
8th Cavalry.
CLASS 22. Hunter Championship.
Bobo Baxter, Corpl. Bennett, 5th Cavalry.
CLASS 23. Novice Polo Ponies.
Italia, Capt. Short, Special Troops.
CLASS 24. Polo Mounts, (Lightweight).
Norma, Lt. Byers, 8th Cavalry.
CLASS 25. Polo Mounts, (Middleweight and Heavyweight).
John Chip, Major Creed, 8th Cavalry.
CLASS 26. Polo Pony Championship.
Norma, Lt. Byers, 8th Cavalry.
CLASS 27. Group of 12 Polo Mounts.
8th Cavalry.
CLASS 28. Ladies' 3-Gaited Saddle Horses.
Berk Boy, Mrs. Creed, 8th Cavalry.
CLASS 29. Pair Road Hacks.
Miss Springtime, Capt. Culton, 7th Cavalry.
Kitty, Mrs. Culton.
CLASS 30. Children's Ponies.
Barbara Bassett.
CLASS 31. Children's Jumpers.
Harry Clark.
CLASS 32. Civilian Jumping.
Chestnut, Mrs. Grepe.
CLASS 33. Light Wagons.
Troop B, 7th Cavalry.
CLASS 34. Ambulances.
Pvt. Armstrong, 1st Ambulance Troop.
CLASS 35. Pack Mules.
Cinco, 3rd Pack Train.
CLASS 36. Pack Horses.
Hickman, 8th Cavalry.
CLASS 37. Artillery Gun Teams.
Battery B, 82nd F. A.
CLASS 38. Reel Carts.
Battery B, 82nd F. A.
CLASS 39. Escort Wagon.
Pvt. Ficca, 8th Cavalry.
CLASS 40. Exhibition drill by Troop A, 8th Cavalry.
High School Exhibition by Sgt. Shrout, 7th Cavalry, riding *Angel*.
CLASS 41. United States Cavalry Association Cup, awarded to Major Creed, 8th Cavalry, the officer scoring the highest number of points in the show.
CLASS 42. General Howze Trophy, won by Sergt. Hart-

less, 8th Cavalry, the enlisted man scoring the highest number of points in the show.

CLASS 43. Show Championship (Prize by Special Troops), won by 8th Cavalry.

Standing of Units

8th Cavalry	80	5th Cavalry	26
7th Cavalry	55	1st Cavalry	20
Special Troops	39	82nd F. A.	4

CLASS 44. 82nd Field Artillery Trophy, won by *Monocle*.

CLASS 45. Best Young Horse.

Jim Clamp, Lt. Carnes, 5th Cavalry.

CLASS 46. Best Playing Polo Pony in the Senior Tournament.

Mabel, Major Creed, 8th Cavalry.

CLASS 47. The Military Championship (Prize by Special Troops, won by 8th Cavalry.

11th Cavalry Polo

FROM October 11th to 25th inclusive, the Regimental Polo team were guests of the Uplifters Polo Club, Santa Monica, an annual event.

The teams lined up as follows:

Uplifters.	*11th Cavalry.*
Will Rogers	Lt. Claude Feagin
Charles Crawford	Lt. T. T. Thornburgh
Dr. Wilson	Lt. Col. A. H. Wilson
Claire Brunson	Lt. H. S. Jernigan
	Capt. J. Rodwell, subst.

The first game was won by the Uplifters, 11 to 4.

The 11th Cavalry then disposed of the Warner Brothers Los Indios Team by a score of 11 to 4. Los Indios Players: Hubbard, Zanuck, White and Griffith.

In a second game with Los Indios, the Cavalry again won, 12 to 6.

In the final game the Uplifter Team did not have Will Rogers and Dr. Wilson, their places being taken by Winslow Felix and Reggie Weiss. The 11th Cavalry won 16 to 6, Colonel Wilson and Thornburgh scoring freely.

Fort Des Moines Horse Show

FOLLOWING is a list of the winners of first place in the events of the Fort Des Moines Horseshow, September 9th and 10th, 1931:

BEST TRAINED TROOPER'S MOUNT—*George*, ridden by 1st Sgt. Timberlake, M. G. Tr., 14th Cav.

OFFICERS' CHARGERS—*Cloofas*, Capt. H. L. Earnest, 14th Cav.

LADIES' JUMPERS—*Jimmy*, owned by Lt. C. H. Gunderson, 18th F. A. and ridden by Mrs. Gunderson.

OFFICERS' JUMPING—*Starlight*, owned by Mr. Volney Dilts and ridden by Capt. W. F. Pride, 18th F. A.

RECRUIT RIDING—Private Ford, Troop F, 14th Cav., on *Devil*.

HANDY HUNTERS—*Nibs*, owned by Mrs. P. N. Henry and ridden by Lt. P. W. Smith, 14th Cav.

PAIR PARK HACKS—*Cloofas*, owned by Capt. H. L. Earnest and *Tex*, Government mount, ridden by Capt. and Mrs. Earnest.

POLO MOUNTS—*Pety*, Government mount, ridden by Lt. W. P. Campbell, 14th Cav.

CHILDREN'S HORSEMANSHIP, 12 AND UNDER—Betty Macdonald on *Footlights*.

ESCORT WAGONS—M. G. Troop, 14th Cav., shown by Pvt. Simons.

ARTILLERY TEAMS—Battery E, 18th F. A.

BEST YEARLING OR TWO YEAR OLD—*Simonette*, owned by Mrs. P. M. Henry.

MARES—*Cleofas*, owned by Capt. H. L. Earnest, 14th Cav.

GUN SECTIONS—4th Section, Battery E, 18th F. A. Sgt. E. B. Robinson.

JUMPING—MODIFIED OLYMPIC COURSE—*Chicken*, Government mount, ridden by Lt. W. H. Nutter, 14th Cav.

ENLISTED MEN'S JUMPING—*Chicken*, Government mount, ridden by Sgt. Gimondo, Hq. Tr., 14th Cav.

PAIR JUMPING—*Black Lady*, owned by Lt. S. F. Little and ridden by Mrs. Little, and *Gopher*, Government mount, ridden by Lt. Little, 18th F. A.

HUNT TEAMS—*Flighty*, *Black Botton* and *Amy McPherson*, Government mounts, ridden by Sgts. Byrne and Grider, Troop F, 14th Cav.

ROAD HACKS—*Moneen Lad*, owned and ridden by Col. H. H. Polk.

STAKE RACE—*Smoky*, Government mount, ridden by Lt. J. B. Wells, 14th Cav.

CHILDREN'S HORSEMANSHIP—Patrick Henry on *Molly Morgan*.

RESERVE OFFICERS' COMPETITION—Lt. Maurice Fletcher.

FOLLOWING are some of the places won by officers of the 10th Cavalry and members of their families in the American Royal Horse Show, Kansas City, Mo. No. 14-21, 1931:

CAPTAIN C. E. DAVIS: Olympic Class, 1st Place. *Dandy Dude* $500 Lightweight Hunter Stake, 6th place, *Lucky Boy;* Jumpers, 4' 6", 4th Place, *Prominent Tom;* Polo Ponies, 1st Place, *Lucky Boy*, 2nd Place, *Gold Mark;* $1000 Jumper Stake, 3rd Place, *Prominent Tom;* $500 Middle and Heavyweight Hunters, 3rd Place, *Dandy Dude;* $1000 Hunter Stake, 5th Place, *Dandy Dude*.

CAPTAIN P. C. FEBIGER: Touch and Out Class, 3rd Place, *Tiny Foot;* $1000 Jumper Stake, 4th Place, *Tiny Foot*.

MRS. P. C. FEBIGER: $500 Lightweight Hunter Stake, 5th Place, *Maui Girl;* Olympic Class, 3rd Place, *Dynamite;* Jumpers, 4'6", 1st Place, *Wop;* $1000 Jumper stake, 1st Place, *Wop;* Thoroughbred Road Hacks, 2nd Place, *Maui Girl;* Ladies' Hunters, 3rd Place, *Maui Girl;* Jumpers, 5', 4th Place, *Wop*.

Second Place, Pair of Hunters, was won by Capts. C. E. Davis and P. C. Febiger on *Dandy Dude* and *Dynamite*.

Second Place, Hunt Teams, was awarded to Capt. C. E. Davis, Major C. B. Lyman and Capt. P. C. Febiger on *Dandy Dude, Maui Girl* and *Dynamite*.

A team from Fort Leavenworth of which Frank Richmond, Jr., was a member took 3rd Place in Children's Hunt Teams.

Professional Notes and Discussion

Mechanized Cavalry

Introductory. The future organization, armament and equipment of our Cavalry are of present and vital interest to that arm.

Recent War Department instructions disbanding the Mechanized Force with a view to organizing a Mechanized Cavalry Regiment in the near future, together with the fact that the armored car troop appears to be the only unit of the late Mechanized Force designated for incorporation in the new Mechanized Cavalry Regiment, indicate the termination of what might be termed the first experimental phase and the initiation of a new phase in the development of the organization of a type Mechanized Cavalry Regiment in our service based upon study and experience gained from a practical application of the mechanization idea over quite an extended period. It indicates a fresh start from an eminently practical basis: building upon the existing organization of our Cavalry which has developed from a century of experience and effort to accomplish the varied but unchanged missions of Cavalry.

It is, perhaps, early to comment on proposed changes in organization and equipment, as complete study and comprehension by Cavalry officers have not matured, but certainly some discussion of the developments to date is pertinent.

Organization. It is trite to say that any military unit should be organized, armed and equipped to fulfill definite missions assigned to it for accomplishment.

Our existing "horse" Cavalry organization has developed to meet specific missions in war, and these missions are unchanged. The utilization of the latest inventions in motorization, mechanization and armament as applied to Cavalry are for two purposes:

Increase of mobility.
Increase of fighting or fire power.

The Cavalry, to fulfill its missions, must be the most mobile arm and have sufficient fire power to strike hard in the culmination of its missions.

The Cavalry Division. Consider the present organization of the Cavalry Division. It contains all the elements of the experimental mechanized force (recently disbanded), except portée anti-aircraft guns.

Its machine guns are pack, however, not portée. But it has armored cars, artillery and tanks organically available as Special Troops.

To increase the mobility of these elements they may be modified appropriately to either self-propelled, motorized or portée.

The Troop Horse. There is no mechanical means yet devised which is an adequate and satisfying substitute for the troop horse as the most reliable mobile means of transportation for the individual rifleman.

His all-round capabilities in this respect are still unsurpassed, and he is able to perform astonishing feats of mobility when properly trained, conditioned and used; as evidenced by his past record and his recent exploits during the 1st Cavalry Division maneuvers and the mobility test last April at the Cavalry School.

The bicycle, the motorcycle and portée Infantry have their valuable applications, but for average, all-round, reliable mobility, anywhere at anytime, the horse is still unequalled.

As soon as some adequate substitute can be found the Cavalry wants it and welcomes it, mechanical or animate.

At present the best we have been able to do is to improve his quality so that we may get more and better service from him.

Strategic Mobility. Our Cavalry, as at present organized, has been criticized for lack of strategic mobility as a detriment to its missions of:

Long distance strategic reconnaissance, and
Capture and control of the theatre of reconnaissance.

Such criticism is neutralized, however, when it is remembered that the reconnaissance is initiated after strategical deployment which places the Cavalry in its jump-off positions by rail and motor in front of the other less mobile arms.

Cavalry will usually conserve its horseflesh until the strategic reconnaissance commences.

Means of mobility of troops and transport are variable dependent upon the nature of the theatre of operations and will vary from rail and motor through animal-drawn to pack. As road nets improve and multiply, motor transport will increase in military utility. We need more motorized trains to keep up with our horses and we are procuring them by hook or by crook, but their limitation to roads and weather, mechanical and supply difficulties, inhibit the elimination of the horse and mule. At the best the cross country capability of a wheeled vehicle is limited, and self-propelled track-laying vehicles have not yet developed a degree of reliable mobility which justifies unreserved incorporation with the wheeled type.

Cavalry Missions. All of the other missions of Cavalry: seizing and holding, tactical reconnaissance, pursuit, delay, exploitation, mobile reserve; point still, as always, to:

Mobility and
Power,

the two irreconcilables, for power means weight and destroys mobility. Beware of too much loading. Cavalry are light troops and cannot take over the missions of the heavy troops, the Infantry, without losing their *raison d'être*.

So mobility must have priority, and Cavalry or-

ganization must never lose sight of this primary, controlling factor.

The Mechanized Force

From the well-prepared description by Captain Wilson published in the May-June and July-August issues of the Cavalry Journal and other sources, it is assumed that the mechanized force, now disbanded, was tentatively organized, armed and equipped to assume all of the missions now assigned to horse Cavalry.

Armament. Excluding its administrative, supply and maintenance overhead, its armament consisted of:

Cal. .50 Machine Guns	3
Cal. .30 Machine Guns	43
37-mm. Guns	20
75-mm. Guns	5
75-mm. Howitzer	1

The anti-aircraft guns, sub-machine guns, rifles and pistols included in the armament are defensive weapons only.

The 20 fighting tanks of the Tank Company armed with .30 Cal. machine guns and 37-mm. guns are described as the "fighting backbone of the force."

The reconnaissance element is the armored car troop of 11 cars armed with machine guns.

Supporting fires for offense and defence are found in the battery of 75's and the machine gun company.

Analysis. The mechanized force thus organized was not well adapted to purely reconnaissance missions. In fact not more than five (5) small reconnaissance detachments of 2 armored cars each could be used simultaneously and without reserves.

Although their cruising speed and radius much exceeds that of horse detachments, their activities are confined to roads and reconnaissance is confined to limited areas. Their use for distant ground reconnaissance supplemented by horsed Cavalry, as now practised in the Cavalry Division, is invaluable.

The portée tanks are a powerful striking offensive element, but tanks cannot hold ground nor exploit a success, and all that remains to hold ground gained are the 9 machine guns, or actually 8, as one gun is held in reserve.

The artillery is a supporting force only.

The whole unit seemed heterogeneous and only fit for use in conjunction with the brigade or division as a special attached force.

I am not able to visualize its independent use in the manner that one of our war strength Cavalry regiments may be employed. It lacks men, troopers, for close reconnaissance, seizing and holding, for pursuit, delay, exploitation.

Comparison with War Strength Cavalry Regiment.

The War Strength Cavalry Regiment with its three 37-mm. guns, sixty-four Cal. 30 water and air-cooled machine guns and 1048 rifles, all packed on horses, is much more self contained and logically organized for Cavalry missions. True it has no guns, tanks nor armored cars but these are available in the division for attachment for special missions.

In short, it is my opinion that the mechanized elements of the Cavalry belong with the echelons above the regiment, *i. e.*, the brigade, division and corps; that the time has come to motorize more of our train.

The Cavalry Spirit. No comment on mechanization would be complete which omitted from consideration the intangible advantages bred of intimate association between man and horse. Rapidity of thought and action, quick decision and prompt execution are bred of necessity when time and space are limited by rapid motion; mobility.

Combine the two animals, man and horse, in sympathetic understanding of nerve and muscle, stimulated by the knowledge of their combined speed and power and you have a different and exalted being; superior in daring, dash, élan, and all-round "ground" mobility to any combination of man and machine.

Conclusion. The Cavalry arm has always attracted a high type of young officer. It is high in priority in selection of arm, but the tendency to underestimate the value and capabilities of the horse in favor of the machine, in our experiments in mechanization, is injecting a feeling of uncertainty and uneasiness as to the future of our Cavalry which is bound to reflect unfavorably until some definite assurance of the nature of the ultimate outcome is reached.

The Chief of Staff and the Chief of Cavalry have done much to reassure us of the conservatism with which mechanization will be developed and utilized within our arm. The logic and wisdom of building on our present excellent organization confirms this assurance. The Cavalry watches with passionate interest the new developments. I believe that the results will give us more mobility, more fire power, more machines, and more horses.

ALEXANDER M. MILLER,
Colonel, G. S. C. (Cavalry)

The Cavalry

(A digest of an article from the French Revue de Cavalerie by Major Brenet on modern Cavalry. The article is introduced with the following editor's note, "This study, full of ideas, will be read and pondered with benefit by all Cavalrymen; they should not, however, look for anything else than an exposition of the personal theories of the author.")

No arm has been the subject of more controversies than the Cavalry. An unbelievable number of people think themselves competent to judge it. Therefore, the clash of diametrically opposed opinions.

Some observe its evolution only with regret because they liked it a lot in its old form. Others desire resolutely its immediate and complete mechanical transformation.

In our study, let us remember that an arm should not be defined by the means of combat or of transportation that it is using at the moment, *but by its missions.* Scouting, screening, fighting in *liaison* with the other arms are the missions that the Cavalry has as the heritage of its long traditions. But these missions are sensibly different for large Cavalry units (Cavalry divisions or corps) and Cavalry which is an organic part of Infantry divisions and army corps. Let us, therefore, study the different kinds of Cavalry separately.

Organic Cavalry of Infantry Divisions

The Cavalry of Infantry divisions does not play a spectacular rôle in the course of the battle. It is then the command's reserve of fire power, small but nevertheless precious, on account of its mobility.

Its rôle is more important in other circumstances, such as the breaking off of the fight, a retreat, the exploitation of a success, and pursuit. Its most interesting work is in the preliminaries of combat, principally in the approach march which is the prelude to a *meeting engagement.* For this essential mission, the Cavalry squadron (French *escadron*), which is alone available except when usable roads leading in the enemy's direction lie within the division's zone of action, is insufficient.

At the present time, mechanical means are incapable of fulfilling completely the mission of divisional Cavalry. Horse Cavalry alone can do it in all circumstances, in any terrain, night and day. And we are of the opinion that a whole regiment of Cavalry is necessary for the Infantry division. Our conception of the proper organization is three squadrons of four platoons each, armed uniformly with the individual automatic rifle, and one squadron of machine guns of four groups, or eight guns. (French *escadron*, which corresponds to our troop, though larger).

But this is not all. The divisional Cavalry regiment should be capable of reconnoitering, and also of screening. Its mobility and the armament we propose permit it to do so against all elements except armored elements. To fight these it should have, also, a squadron of anti-tank engines, something purely defensive in character. A large gun of small caliber of the type used in the Navy carried by agricultural track-laying vehicles (very low and not armored; speed that of the Cavalry—8 kilometers an hour), or machine guns of medium or large caliber would answer the purpose. The anti-tank squadron could be of four platoons of two pieces each.

On the other hand, the regiment of divisional Cavalry would have no need of 37's nor Stokes mortars. These engines overload the Cavalry enormously. Besides, the Infantry division is stuffed with them, so that the small support that the Cavalry could give it with a few of these would be negligible.

The Organic Cavalry of Army Corps

On any given evening, the commander of an army corps needs to know whether, in the march of the morrow, the enemy may be met or not and what kind of an enemy it will be. The reconnaissance elements must then precede the main body by 25 or 30 kilometers.

It appears, then, that the Cavalry of the army corps should be motorized Cavalry; two or three squadrons (24 or 36 reconnaissance vehicles), squadron transported on track-laying vehicles, and a few motorcyclists.

Why different means in the corps from those in the division? Because the needs are not the same. The commander of an army corps is interested in large bodies of the enemy, important forces which armored cars can easily find, follow and report.

Henceforth, the vehicles adapted to all terrains should be considered as *being able to act alone without support by dismounted men.*

A reconnaissance vehicle to be taken seriously should weigh not less than eight or nine tons, though it might have auxiliaries especially fast and only partially armored.

The Cavalry Division

Its principal missions are: screening during the concentration and in the course of operations, raids, strategic reconnaissance, exploitation, intervention in the battle to stop a gap, cover a flank or to participate in a turning movement, etc.

Although horse Cavalry has shown itself to be adapted to all these missions, it has not been sufficiently numerous to avoid introducing into the Cavalry division an important motorized element, the regiment of *portés* dragoons. This was hailed with enthusiasm, but we have since had to recognize that in the alliance of horse and machine the disadvantages of each are accentuated and the good qualities of each disappear. Example: on the road and far from the enemy, the trucks cannot utilize their speed which is limited by that of the horses. In the approach march the horse brigades cannot exploit their supple qualities and allow opportunities to escape because they have to wait for and cover the *porté* regiment. We have the right to say, then, that a Cavalry division of three horse brigades is superior to a division comprising two horse regiments and a regiment of *portés* dragoons. A Cavalry division must be entirely horse Cavalry or entirely mechanized.

Mechanized Cavalry may be in two forms:

a. The units on a basis of *combatant personnel* (*portés* dragoons, artillerymen—) to which are organically assigned means of transportation, preferably adapted to any terrain.

b. The units on a basis of *combat matériel*, such as armored vehicles and tanks.

The disadvantages of units on a basis of *transported personnel* (even in vehicles adapted to any terrain) are evident. The command of them will be difficult; they will be heavy. When moving the long columns will be very vulnerable to aviation, very vulnerable to long range artillery. It will be impossible to assure the security of their flanks. In the fight the vehicles will never be able to unload the combatants at the desired point. Even dispersed they will be a target for artillery of all calibers. They will always have to have a guard left with them, which disposition will reduce the force in the firing line. They will not be adapted to missions requiring suppleness.

Units on the basis of *combat matériel* escape all these reproaches. They are indifferent to the threats of the air. Of artillery they fear only direct hits, made difficult by their speed and dispersion.

We have seen that modern armored fighting vehicles can operate alone if in sufficient numbers and should do so. It is not worth the trouble, indeed, to have vehicles that can do 25 or 30 kilometers an hour if, at a given moment, they must be stopped to wait for foot combatants. It is not worth the trouble

to furnish them with thick cuirasses if unprotected men must come to their aid.

For all these reasons we think that the tendency of Cavalry mechanization must be towards the basis of *combat matériel*, not the basis of *personnel*.

At night, however, armored fighting vehicles will need the support of fighting men.

A tactical unit of mechanized cavalry should comprise:

1. Reconnaissance vehicles: three or four squadrons with a squadron of motorcyclists (for certain reconnaissances and liaisons).
2. A regiment of medium tanks (15 to 25 tons) well armed, armored, of the type sometimes called "battle cruiser." Three battalions of twenty tanks each.
3. One battalion (of four squadrons of *portés* dragoons and a machine gun company) transported in track-laying vehicles.
4. A mixed artillery group (one battery of 75's and one battery of 105's) on track-laying carriages.
5. An air squadron.

Call this unit a division or not, it could perform the missions ordinarily assigned to Cavalry divisions.

The principal use of the *portés* dragoons will be to occupy at night the objective attained by the tanks during the day.

The mechanized unit has the following noteworthy advantages:

1. It economizes effectives.
2. Its speed and radius of action are remarkable; 20 kilometers an hour,—more than 100 kilometers a day with comparative ease.
3. It has considerable power in the attack.

It is incontestable that it has some disadvantages. One of these is the impossibility of crossing a water course, the bridges over which have been destroyed. However, a unit of such mobility should be able to seek a passage somewhere else.

Another disadvantage, likewise more apparent than real, is the alleged incapacity of tanks to occupy the terrain they have conquered. But there are two ways of occupying the ground: one is to go there and defend it; the other is to drive away the enemy as often as he tries to go there himself. The dynamic form of the defensive this latter, which modern revolutionary means may well substitute for the first, or static, method.

Another objection is that most of our bridges have not been built to support a weight of 20 to 25 tons. However, the pressure per square centimeter is less for track-laying vehicles than for wheeled vehicles. Besides, the bridges could be reinforced. We cannot get along without tanks; we must, then, provide bridges for them.

Conclusions

If we pass in review the points acquired in the course of this study, we see first in regard to the Infantry division:

1. That it needs horse Cavalry to reconnoiter its zone of action. The horse Cavalry alone is capable of searching woods or a village, of assuming in any weather, in all seasons, in all kinds of terrain, the protection of the Infantry division.
2. The Infantry division cannot get along with a simple curtain of patrols; it needs deep security.
3. The Infantry division needs to be covered against armored fighting vehicles.

By reason of all these necessities, we think that the divisional Cavalry should be composed simply of a regiment of Cavalry somewhat different from the present regiment (should be three squadrons of four platoons each, armed uniformly with the individual automatic rifle, and one squadron of machine guns of four groups, or eight guns, one squadron of anti-tank weapons).

We have said that the needs of Infantry divisions take precedence and that these divisions should be served by Cavalry as the first consideration. If this is not done, division commanders not anxious to meet the enemy unexpectedly will deploy at a great distance. Then movements will be very slow—armies will be almost paralyzed. The enemy will have every chance to take the initiative, to maneuver, to choose his field of battle. Slowness of movements has always brought armies to defeat.

With regard to the army corps, it needs, at the end of each day, to be informed as to the possibilities of meeting the enemy the next day. It must have, then, elements pushed out 30 or 40 kilometers ahead of the main bodies—distant security. Horse elements can do it, but with great difficulty. That is why the Cavalry of the army corps should be mechanized and on the basis of auto-machine guns (two or three squadrons of auto-machine guns, one squadron *porté* in track-laying vehicles).

At a certain moment corps Cavalry will be overtaken by the divisional Cavalries. It will then be necessary to coordinate and combine the action of these Cavalries. That will be the rôle of the commander of the Cavalry of the army corps.

The Cavalry divisions may be either of horse type or mechanized type, but a mixed type must be avoided. There may be moments when mechanized means and horse Cavalry will fight in liaison, but in a general way the constant "organic" amalgamation of these different means should be rejected, for, as we have shown, it is their respective defects which add together, eliminating their respective good points.

Mechanized Cavalry on the basis of combat matériel realizes to a high degree speed, radius of action, power. It has the precious advantage of being very economical in personnel.

This kind of Cavalry would be the ideal arm for screening. It would find its use in zones where fortification is impracticable; it would supplement that and might even replace it advantageously.

It seems that it is the type to be realized in time of peace. In time of war, divisions of provisional horse Cavalry can be formed at need with elements of divisional and corps Cavalry not in use. These will be commanded by major generals acting with the commanders of armies or groups of armies.

Thus will be realized a Cavalry well suited to its missions and assured of fulfilling them.

Notes from the Cavalry Board

The Mohair Pad—A number of experiments have been conducted by troops stationed at Fort Riley and by the Cavalry School, under the supervision of the Cavalry Board, to determine a suitable pad for use under the saddle which would have the combined qualities of good appearance, ability to absorb sweat without becoming stiff, ventilation, freedom from tendency to scald, and general comfort to the horse without undue bulk under the saddle.

The nearest approach obtainable to such an ideal article is the mohair pad. These pads were purchased by individual officers, and the greatest cooperation given the Board in its test. In some cases these articles have been in use for six years or longer without apparent wear. They are of material similar to that of the pads used with the Phillips Pack saddle. They are 27 by 30 inches and weigh three pounds each.

Folding Tables For Field Use.—Both the Second and Thirteenth Cavalry regiments recently have rendered very favorable reports on the test of a folding table submitted by Brig. Genl. Chas. J. Symmonds for test. These tests were made to ascertain whether or not the new article was superior to the issue table.

In all tests the new table has stood up well, being of exceptionally rigid construction and comparatively light in weight. In being transported the legs are quickly and easily collapsed into such position as to protect them from being either broken or sprung out of place. These tables are easily set up and will support the weight of a heavy man without any apparent strain. They give promise of a very considerable improvement over the present issue folding table.

Armored Car, T-4—The first of the new Cunningham six wheel, four wheel drive armored cars arrived at Fort Riley from Aberdeen Proving Ground via Rock Island Arsenal on October 28, 1931, for test by the Cavalry Board.

This car has completed a three weeks test and is accompanying Troop A, First Armored Car Squadron, to Fort Bliss for further test. It previously underwent a test by the Mechanized Force at Fort Eustis, Virginia.

After the completion of tests by these agencies, another car will be built by the Ordnance Department embodying all approved changes.

Improvements in the Browning Machine Gun, Model 1919 A1

(a) Elimination of the Muzzle Attachment Plug.—In its initial report of test of the sights of the Browning Machine Gun, Model 1919 A-1, as the newly adopted Cavalry aircooled machine gun is now officially known, the Cavalry Board found that the flash of this gun was so excessive as to prevent observation of strike by the gunner while firing. It was demonstrated that the flash could be practically eliminated by the removal of the muzzle attachment plug. This operation had the effect of reducing the cyclic rate of the gun. It was deemed highly desirable to eliminate the flash, without increasing the total length of the gun, and to incorporate a muzzle brake if possible for the purpose of adding stability. It was not thought that the reduction in cyclic rate was as objectionable as was the flash.

Tests were immediately instituted to ascertain the correctness of these beliefs. These tests have borne out the Board's contentions to a very marked degree and have demonstrated that to remove the muzzle attachment plug reduces the cyclic rate of fire of the gun by approximately thirty percent, and that this reduction in cyclic rate permits the employment of single shot firing—a very difficult proposition with the muzzle plug in place. It was further found that muzzle blast was almost entirely eliminated by the removal of the plug and that it did not appear with the plug removed until the gun became very hot. There were no malfunctions due to lack of power of recoil due to absence of the muzzle attachment plug, and the accuracy of the gun was materially improved thereby. The Ordnance Department suggested that absolute elimination of the plug would be inadvisable due to the possibility that sometime the action of the recoil mechanism of the gun might become sluggish and that in such case the attachment of the muzzle plug might be desirable. It has been recommended, therefore, that the plug be removed and carried in the spare parts box.

(b) Heavy Tripod Mount.—It is recognized that, as issued, the Browning Machine Gun, Model 1919 A-1 is not highly accurate, mounted as it is, on the Emergency Tank tripod, Mark 1 E-1. Accordingly the Board has been experimenting with various types of mounts for this weapon looking to its improvement.

In the development of a suitable light satisfactory mount Captain Thomas J. Heavey has been of great assistance. Captain Heavey has produced a tripod mount whose total weight is ten and one-half pounds which can be readily packed attached to the gun and which can be set up in two quick movements, in negligible time. This tripod is designed with two long legs to the rear and one short leg to the front.

The yoke of the mount is very low allowing the gun to set very close to the pintle. The feet have been enlarged considerably over the size of those of the tank tripod, and steel toes attached thereto for the purpose of obtaining maximum grip on the surface on which it is set up. This mount has a horizontal bar extending between the two rear legs and at a position approximately below the elevating bracket, upon which a slide block operates to provide for deflection and to which is attached an elevating screw. When the traversing bar is used a maximum traverse of approximately eight hundred mils is obtainable. The slide block may be readily lifted from the traversing bar, and the gun is immediately a free gun.

Actual field firing tests with a gun mounted on this tripod have produced shot groups which compare favorably with those of a gun mounted on the tripod of the Browning Machine Gun, Model 1917 (water-cooled). The Board expects to submit shortly a full report to the Chief of Cavalry covering these tests.

Organization Activities

1st Cavalry

Fort D. A. Russell, Texas

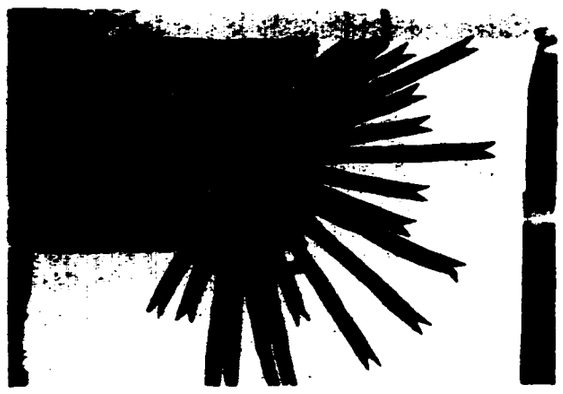
The 1st Squadron, 1st Cavalry, marched to Tippet's Ranch in the Davis mountains on the 22nd of October. Distance marched 46 miles.

On October 28th the 1st Cavalry marched to Old Fort Davis and returned to Fort Russell on the 30th. While at Fort Davis the Regiment participated in several tactical exercises. Retreat was sounded on the evening of the 29th by the Band and assembled buglers of the 1st Cavalry for the first time since the abandonment of the Post in 1891. Distance marched, approximately 75 miles.

The 2nd Squadron and Machine Gun Troop marched to the Fischer Ranch on the 12th of November. The hospitality of Mr. W. P. and Lee Fischer in granting camp sites and maneuver ground to the 1st Cavalry is greatly appreciated. Distance marched, 45 miles.

During the above marches frequent problems were held in addition to combat firing with ball ammunition.

Armistice Day was suitably celebrated by the 1st Cavalry. In the morning a horse show was held with several races interspersed among the events. At Noon the Regiment was host to a large number of citizens of



HISTORICAL HEADLINES
1st Cavalry Standard with Battle Streamers

Marfa and the Big Bend at a barbecue in the patio of the Officers' Club. The afternoon was occupied by a football and polo game.

The following letter has been sent:

November 17, 1931

Subject: Mechanization of the 1st Cavalry.
To: Commanding Officer, 1st Cavalry, Fort D. A. Russell, Marfa, Texas.
Through: The Adjutant General.

Under War Department instructions issued this date the 1st Cavalry is, within a few months, to be converted from a horse to a mechanised regiment.

It is with a feeling of sadness that we see this change in our oldest mounted organization with memories of a century's service as such.

However, it is most befitting that the 1st Cavalry should be designated as our first mechanized cavalry regiment. A few years hence its personnel will point to this fact with the same pride as its present personnel cherishes its gallant history since 1832 as the first mounted organization in the Cavalry of our Regular Army.

Guy V. Henry,
Major General, U. S. A.,
Chief of Cavalry.

2nd Cavalry

Fort Riley, Kansas

Second Cavalry annual practice march, October 2[illegible] 1931. About 200 miles. Spent 5 days at Sal[illegible] Kansas, witnessing and participating in Salina [illegible] and Horse Show. Weather fair with few exceptio[illegible]

Troop "B" Second Cavalry, Captain G. H. Wi[illegible] Commanding, represented the Regiment in Good[illegible] Trophy Test.

One platoon, Troop "F", Second Cavalry, 1st Lieutenant George W. Read, Jr. Commanding, participated in test of Leadership of Small Cavalry Units.

3d Cavalry (Less 1st Squadron)

Fort Myer, Virginia

The 2d Squadron, with 3rd Cavalry Band attached, commanded by Major A. D. Surles, was a unit of the Fort Myer Troops participating in the Yorktown Sesquicentennial Celebration at Yorktown, Virginia from October 16th to 19th. In addition to taking part in the reenactment of the concluding battles of the Revolution, which were the feature events of the celebration, the squadron gave exhibition rides and furnished escorts for President Hoover, Marshal Petain, the Secretary of the Navy, the Assistant Secretary of War, General Pershing, the Governor of Virginia, and the visiting state governors.

Major General Paul B. Malone, commanding the 3rd Corps Area reviewed the troops at Fort Myer and held a combined garrison and field inspection on October 28th. One platoon of Troop E engaged in a combat exercise for the Corps Area Commander, at Fort Humphreys on November 3rd.

In the National Horse Show, New York City, November 5th to 11th, the Fort Myer Horse Show Team had three entries ridden by Colonel C. P. George, 16th Field Artillery and 1st Lieutenant W. A. Bugher, 3d Cavalry.

Machine Gun and "E" Troop escorted the Foreign

Minister [illegible] Italy, Dino Grandi, on his visit to the Tomb of the Unknown Soldier, November 17th.

1st Lieutenant Peter C. Hains III has been ordered to the regiment from Fort Riley.

1. The following letter, Headquarters Third Corps Area, dated October 22, 1931, has been received by the Regimental Commander Colonel Harry N. Cootes:

"The splendid appearance of your troops and their conduct at the Yorktown Sesqui-Centennial was a matter of great pride to me and was the subject of the most favorable comment on all sides.

The remarkable drills they presented as part of the entertainment were a revelation to our civilian friends and received unstinted praise from members of the regular Service. Such results are possible only under competent leadership, coupled with the loyal cooperation of your officers and men, to whom I wish you to convey my appreciation and commendation.

Machine Gun Drill at West Virginia State Fair, Wheeling, W. Va., Sept. 6 to 12, 1931, by Machine Gun Troop, 3d Cav.

For yourself, in addition to expressions of my official approval and commendation, I wish to add my personal congratulations over the performance of your Command.

Paul B. Malone,
Major General,
Commanding."

4th Cavalry

Fort Meade, South Dakota

Fort Meade, in addition to its many trails and bridle paths, now has a Russian Ride course. This course is a little over *six miles in length* and covers greatly varied terrain. Fourteen jumps, natural ravines, etc. throughout the course makes it a very interesting and beautiful ride.

The new ride was formally opened, when, just after a regimental review, all members of the 4th Cavalry and other officers of the garrison were led over the course by the Commanding Officer.

5th Cavalry

Fort Clark, Texas

1st Lieutenant David A. Taylor recently assigned to the Regiment joined on November 14th, 1931.

Captain Alden H. Seabury and 1st Lieutenant Kevin O'Shea have been assigned to duty in the Philippine Department to sail from San Francisco on or about February 4th, 1932.

Arrangements have been made for a series of Regimental Horse Shows throughout the winter months. All individuals and organizations stationed at Fort Clark, Texas, have been invited to submit entries.

A most successful party raising funds for the Army Relief Society, was held November 14, under the direction of Mrs. Mitchell, wife of the Commanding Officer of the regiment.

6th Cavalry

Fort Oglethorpe, Georgia

The Regiment qualified 100% with the service rifle during the regular target practice just completed. This was the first time in the history of the Regiment that all men have qualified.

The Polo season was closed Sunday, November 15, with the Regiment winning the 3d game of a series with Chattanooga. Fort McPherson recently trimmed the Regiment in a three game series by two games to one. Both of Fort McPhersons' wins were made with a margin of one goal, the handicap given them by Fort Oglethorpe.

The Commanding Officer has adopted the policy of determining and recognizing the champion in each of the weapons of Cavalry. These men were photographed and their pictures with appropriate stories published in the local papers and their home papers. The Championships were determined after severe competition in which the keenest interest was taken. In the Mounted pistol competition it was necessary to place a target L on the figure in order to find the best shot as there were many perfect scores on the regular target. The Horsemanship tests included horseshow jumping and a flight over the Steeplechase course, as well as tests in equitation. The latter included figure eight at a canter, turn on the haunches at speed, right and left about, and changes of lead on a straight line at a canter.

The Champions

Weapon	Name	Score
Rifle	Sgt. James L. Cotton, Troop F	334
Horsemanship	Corp. Carl S. Brush, Troop A	
Pistol, Mounted	Sgt. William T. Akers, Troop F	231
Machine Rifle	Corp. Kenneth Carver, Troop F	702
Pistol, Dismounted	1st Sgt. C. B. Townsend, Tr. B	94.16%
Saber	1st Sgt. Chester A. Clark, Hq. Tr.	96%
Machine Gun	Corp. Fred F. Burger, MG Tr.	360

7th Cavalry

Fort Bliss, Texas

The regiment acquitted itself very well in the championships that are determined at the close of the summer athletic season. The polo supremacy of the Seventh was maintained by winning both Senior and Junior tournaments, the Horse Show team placed sec-

ond in the annual Division Horse Show, and the regimental baseball team won the post championship, defeating the Eighth Cavalry in the final series.

At present, the regimental basketball league is being played, with Troop E, B and Headquarters as the strongest contenders for first place. Excellent new material has been developed and the Seventh should repeat the performance of its last year's championship team.

In view of the approaching winter social season, the regimental officers club held its annual elections at a very enjoyable hunt breakfast. Plans were made for the coming season and should result in an interesting and diversified time for all.

8th Cavalry

Fort Bliss, Texas

Troop "E", 8th Cavalry, commanded by Captain Harvey N. Christman, represented the regiment in the Goodrich Trophy Test which was held north of Fort Bliss, November 24th-25th. This troop last represented the regiment in the Goodrich Trophy Test in 1927.

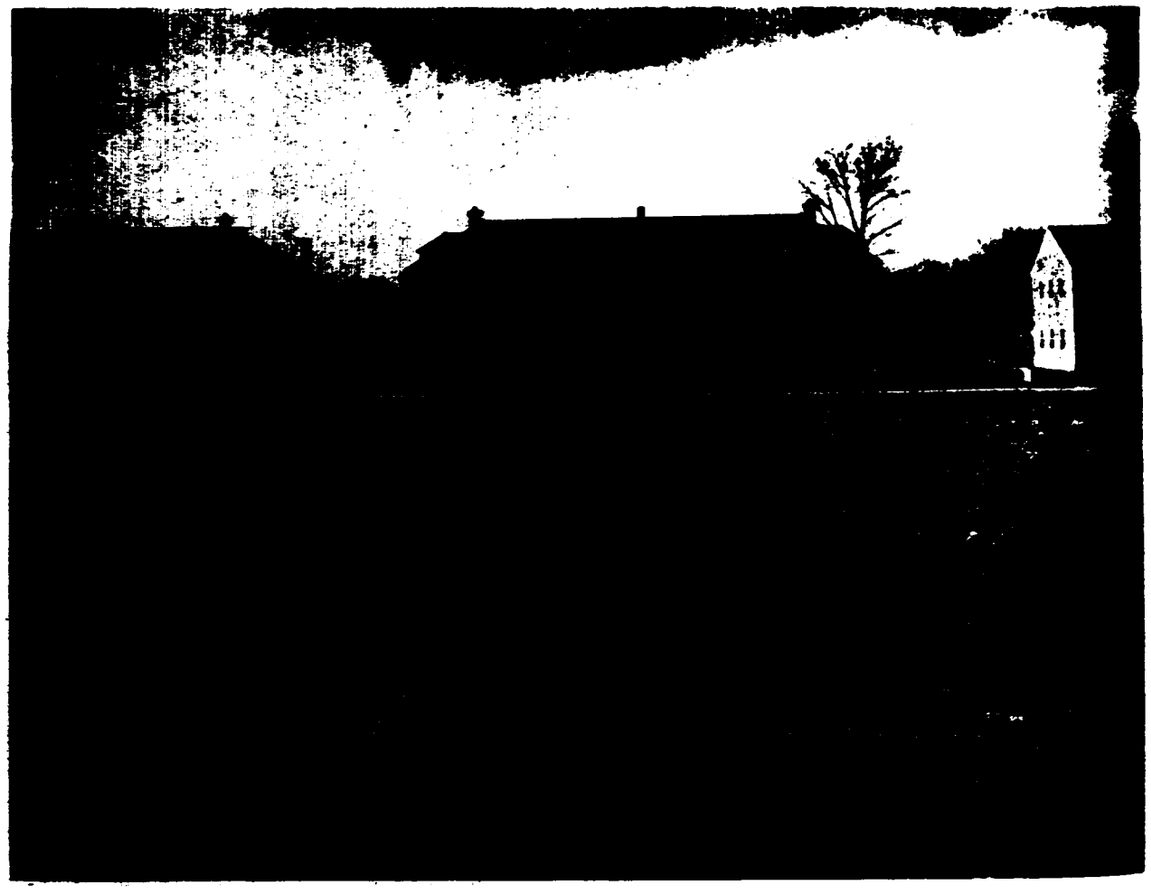
The regiment celebrated its 65th Anniversary Saturday, November 28th, with appropriate ceremony. In the morning Colonel W. R. Smedberg, Jr., the regimental commander, addressed the assembled regiment and read congratulatory letters from the Chief of Cavalry and former regimental commanders. During the day there was a program of field and track events. At night the officers and ladies of the regiment gathered together at the Paso Del Norte Hotel for the annual Organization Day Dinner.

9th Cavalry

Fort Riley, Kansas

Major H. D. Chamberlin, Captain W. B. Bradford and 2nd Lieut. R. W. Curtis, 9th Cavalry, have been placed on detached service in connection with the U. S. Army Horseshow Team, which is visiting St. Louis, Mo., Boston, Mass., New York, N. Y., and Toronto, Canada.

Lieutenant Colonel Charles L. Scott and Captain John T. Cole, 9th Cavalry, have been relieved from duty at Fort Riley, Kansas, and ordered to proceed to Fort Rosencrans, California, in connection with the U. S. Olympic Equestrian Team.



MACHINE GUN TROOP, 10th CAVALRY.

TROOP F, 10th CAVALRY

2nd Squadron, 10th Cavalry

West Point, N. Y.

THE 2nd Squadron, 10th Cavalry, now numbers 5 officers and 315 enlisted men.

The Squadron is quartered in a single spacious barracks, Troop "E" occupying the lower floor, Troop "F" the upper.

A platoon of selected privates and noncommissioned officers has been equipped with blue uniforms and constitutes the Escort of Honor which escorts all notables visiting the Military Academy. A squad of our best riders is kept on special duty training remounts and reclaiming horses, very interesting and productive work.

The Squadron has its own swimming pool just outside of barracks and its own gymnasium in barracks where basketball games, social and athletic events, and dances are held. The athletic teams of the Squadron are all of a superior nature. Not content with Post Championships they invade neighboring cities and states. During this fall the football team, coached by Chaplain A. B. Kinsolving, completed the season without defeat. It won the post championship and played many games away against college and professsional teams. Scores of these games were:

	2nd Sq.	10th Cav.	Opponents
Lincoln University ..... (at Lincoln, Penna.)		13	6
Passaic Red Devils ..... (at Passaic, N. J.)		0	0
Pittsfield A. C. ..... (at Pittsfield, Mass.)		36	2
Irvington A. C. ..... (at West Point, N. Y.)		36	6
Passaic Red Devils ..... (at Passaic, N. J.)		31	18

The basketball squad has been cut to 18 active players who hope to repeat last year's record of being undefeated.

On November 30th, 1931 Staff Sergeant Roy Burch was retired having been bidden farewell by the entire squadron at a dinner given in his honor.

M. G. Troop 10th Cavalry

Fort Myer, Virginia

This organization has an authorized strength of two officers, one hundred and six enlisted men.

Mounted and dismounted training is now being conducted.

Instruction in equitation is being carried on to include jumping. It is contemplated to organize a horse show team and compete in horse shows with other organizations at Fort Myer.

During the summer months range practice will be held and all men trained in firing both the rifle and pistol.

10th Cavalry

Fort Leavenworth, Kansas

The Headquarters, Tenth Cavalry, and 1st Squadron arrived at Fort Leavenworth, by rail, 6 P. M. October 12, 1931. The men were in excellent spirit and health and have occupied their new quarters. They seem to enjoy their new surroundings. The cities of Leavenworth and Kansas City afford all the opportunities for pleasure and recreation for a soldier, particularly the colored soldier, as there are many colored people in these communities who own homes. The cities have good schools, many athletic and social activities and Lodges. General Heintzelman, the Commandant, his staff and about two hundred members of officers' and enlisted men's families of Fort Leavenworth met the train at the station. The troops and train were commanded by Lieutenant John L. Ryan, Jr., 10th Cavalry. Their arrival here was a great reunion for old friends, former members of the 10th Cavalry, both officers and soldiers, and their families.

Brigadier General Stuart Heintzelman, Commandant, Command and General Staff School, inspected the regiment October 17th, talked to each soldier, individually, and made a short talk to each troop, mentioning the fine appearance of the men and his delight and that of the post in having such a distinguished regiment in the garrison.

11th Cavalry

Presidio of Monterey, California

The Eleventh Cavalry participated extensively in the Monterey Peninsula—Presido Horse Show at Del Monte in May. Troop A winning over all competitors in total score having a final total of 34 points against 11 points for its nearest competitor.

After the close of the summer camps late in August, the regiment participated in Ninth Corps Area 1st Instruction Group Maneuvers at Gigling, California.

The commanding officer has instituted a series of Monthly horse shows which are proving most interesting to members of the regiment and the 2nd Battalion, 76th Field Artillery stationed with us at the Presidio of Monterey.

12th Cavalry

Fort Brown, Texas

A mechanical training test was conducted by the Commanding Officer, 12th Cavalry, Colonel Francis W. Glover on September 29th, and a series of demonstrations and field exercises on October 29th and 30th, involving the training in Chemical Warfare. In connection with the latter two planes from the Attack Group, stationed at Fort Crockett cooperated in the field exercises on the 30th, laying a smoke screen to conceal the attack of the Regiment. These exercises proved highly instructive both for the ground and air troops involved.

Troop B, 12th Cavalry, completed the Goodrich Trophy Training Test on November 13-14, 1931.

Field Meets were held in September and October which were closely contested, Troop A, 12th Cavalry, under command of Captain Benners B. Vail, winning the former, Headquarters Troop, under command of Captain James M. Adamson, Jr., the latter.

13th Cavalry

Fort Riley, Kansas

In September the regiment marched to Wichita in order to participate in the Labor Day parade and to give a review for the delegates to the state convention of the American Legion. Due to the cordial reception extended to the regiment in Wichita and in other places it visited, this march was a very pleasant one.

The 1st Platoon of Troop E, commanded by 1st Lieut. Paul G. Kendall, won the Leadership Test for Small Cavalry Units, 1931, held at this post in October and participated in by platoons from the 2nd, 13th, and 14th (Fort Des Moines) Cavalry regiments.

The regiment has been much pleased by the fine showing made by Lieut. Raguse in the Eastern horse shows on "Ugly", a bay gelding formerly belonging to Troop "A". "Ugly" first broke into the limelight by jumping over the sideboards of a truck in which he was being "porteed." This jumper was broken by Corporal Willie Mc. Hackworth and developed by Major and Mrs. Edwin N. Hardy.

The following letter has been sent:

November 20, 1931.

Subject: Commendation.

To: First Lieutenant Paul G. Kendall, 13th Cavalry.

Through: The Commandant, The Cavalry School, Fort Riley, Kansas.

It is with great pleasure that I extend my sincere congratulations to you and the members of your platoon in winning the Leadership Test for Small Cavalry Units—1931.

The individual ability displayed by yourself and members of your platoon, as well as leadership of the unit, reflect great credit upon yourself and are matters in which your entire regiment will take pride.

Guy V. Henry,
Major General, U. S. A.,
Chief of Cavalry.

14th Cavalry (Less 1st Squadron)

Fort Des Moines, Iowa

The garrison at Fort Des Moines has recently been increased by the addition of the 3rd Battalion, 17th Field Artillery (motorized).

The 14th Cavalry, less 1st Squadron, returned to Fort Des Moines, by rail, on September 21st after its annual march and maneuver which took it to Burlington, Iowa.

While at Burlington the troops of the 14th Cavalry gave two splendid exhibitions of fancy riding and a gymkana. The people of Burlington were most friendly, opening the moving picture theaters to the men free of charge. There were dances and a general round of good fellowship.

On September 19th, Colonel C. E. Stodter, our new Commanding Officer visited the regiment at Burlington and announced that he was highly pleased with the appearance of the troops.

A platoon from Troop F, 14th Cavalry, won the 1931 Cavalry Rifle Platoon Competition. This platoon was commanded by 1st Lieutenant Charles H. Martin, 14th Cavalry. The platoon made an aggregate of 422.602 almost six points ahead of their nearest competitor.

Their average score in each of the arms used is indicated in the following table:—

Rifle	308.875
Pistol, Mounted	22.727
Swordsmanship	91.000

1st Lieut. Martin deserves a lot of credit for his untiring effort in working with this platoon and all the members of the platoon are to be congratulated upon the splendid co-operation given their platoon leader.

On October 9th there was a reception and hop at the Service Club. Colonel and Mrs. C. E. Stodter, 14th Cavalry and Major and Mrs Mert Proctor, 17th Field Artillery were in the receiving line.

Sunday morning, October 18th twenty three officers and ladies turned out for a paper chase.

The old War Department Theater has been moved from its present location to a situation directly in rear of Post Headquarters, this move has been made so as to make room for the new theater which will be built some time this winter. The old theater will continue in use until such time as the new theater is erected.

On Sunday November 1st, the Officers Club sponsored a mounted treasure hunt, there were about twenty members of the garrison who turned out for this hunt, the course covered about five miles. 1st Lt. William H. Nutter and 2nd Lt. Philip W. Smith were the winners.

Troop B, 102nd Cavalry, N. J. N. G.

Newark, N. J.

"For an organization to win the National Trophy for excellence in rifle marksmanship once is a signal honor, but to have achieved this honor more than once is worthy of the highest commendation."

This is a quotation from the letter of Major General William G. Everson, Chief of the Militia Bureau, to Captain Morton W. Huttenloch, the Commanding Officer of Troop B, 102nd, Cavalry, New Jersey National Guard, stationed at Newark, New Jersey, which organization has six times been awarded the trophy set aside for the state.

Here is an indication of the degree of excellence that is required to win the National Trophy. Sixty officers and men of the troop fired the course. Of this number, 13 qualified as Expert Rifleman, 12 as Sharpshooter and 34 as Marksman, a total of 59 qualifications with only one man unqualified. Multiplying these qualifications by the numbers allotted, the total is 4870, and this divided by 60 gives a figure of merit of 81.16. Two brothers, Private Michael A. Jury and Private Frank J. Jury, tied for first place with a score of 239 points.

As far as is known Troop B is the only National Guard outfit in the service which has won the trophy so many times.

1st Squadron 103d Cavalry, Pa. N. G.

Philadelphia, Pa.

1. The Inter Troop Rifle Match of this Squadron fired at the Essington Range on July 26, 1931, was won by Troop C, 103rd Cavalry, PNG., Troop C, is therefore awarded the Major Hoopes Trophy to be held by that troop for one year. This match was fired under strictly National Match Conditions, using the "A" target at 300 yds Rapid Fire.

2. Pvt. 1cl Spencer Rawlins, of Troop C, 103rd Cavalry, was high man for the day with a score of 130 x 150. The other members of the winning team are 1st Sgt. H. Sailer, Sgt. J. Williams, Sgt. J. Daly, Pvt. W. L. Stevens and Corp. Mills Thompson. Total score of Troop C, was 662.

Troop B, 103rd Cavalry (Second City Troop, Phila., Pa., City Cavalry) the second place winner with a score of 659 was represented by 1st Sgt. J. Rule, Sgt. J. Weeks, Corp. E. Elwell, Pvt. 1cl. R. Sangro, Pvt. 1cl. A. Vasey, and Pvt. L. Masiel. Troop A, the third place team was represented by Sgt. R. O'Brien, Sgt. C. Fulton, Corp. G. Ruffee, Corp. E. Grady, Pvt. G. Culbertson, and Pvt. K. Palmer, total score for the third place team, 632.

305th Cavalry

Philadelphia, Pa.

Wednesday, October 7, 1931, the inactive duty training period commenced with a noon conference and a two-hour ride in the evening.

The Regiment is scheduled to train with the 3rd Cavalry next summer at Fort Myer, Virginia. The inactive training schedule has been written with a view to preparation for the drilling and tactical handling of the regular unit. As near as possible each Reserve instructor at the Wednesday noon conferences presents a tactical problem dealing with the combat principles of a cavalry regiment. The training given in the two-hour period at the First City Troop Armory is so arranged as to qualify the officers of the Regiment as Platoon and Troop leaders. The turnout for this night training has also been excellent.

306th Cavalry

Baltimore, Md.

The inactive season's training opened with a well attended meeting at the residence of Colonel John Philip Hill on October 26, 1931, at which 1st Lieutenant R. Earle Lafferty, Cav-Res., gave an interesting talk on Aerial Photographs. Instruction in equitation has been resumed at Fort Hoyle, Maryland, classes being held each Sunday morning from ten o'clock until twelve, noon. Interest in this phase of instruction has increased to such an extent that the horses available will not accomodate all officers who desire to attend.

The active duty period next summer for the 306th Cavalry will consist of training the students at the Cavalry C. M. T. Camp at Fort Myer, Virginia, during the last two weeks in July.

2nd Squadron and M. G. Troop, 306th Cavalry

Washington, D. C.

Washington members of the 62nd Cavalry Division celebrated the beginning of the inactive training period by turning out to the number of fifty-three for the first conference, held October 1st at Reserve Headquarters. This was the first opportunity many officers had had to welcome the new Unit Instructor, Major H. C. Dagley, Cav. DOL., who recently reported for duty.

October 15th, the second conference was held with an attendance exceeding all previous records, there being fifty-six officers and men present. After dispensing with the usual business, Major Dagley took for his subject "The Horse", discussing the various breeds, with their characteristics and qualifications, and suggesting available references for further study to those interested.

The Squadron is pleased to have Major H. E. Carrico, Cav-Res., of the 63rd Cavalry Division, associated with it while he is on duty in Washington with the General Staff.

307th Cavalry

Richmond, Va.

The first conference in the 1931-32 inactive period was held October 29, 1931 with seventeen officers present.

Colonel Arthur W. Lloyd, Engr-Res., President of the Virginia Reserve Officers Association, Major Bennett A. Moelter, National Secretary and Captain Henry M. Taylor, Inf-Res., President of the Richmond Chapter were present and made brief addresses.

Equitation classes for officers in this vicinity will be held Sunday mornings weather permitting.

The 307 Cavalry will train the students at the C. M. T. C. at Fort Myer, Virginia, next summer during the period July 3rd—July 16th.

The following officers have recently been assigned to the 307th Cavalry and to units as follows:

2nd Lieut. William F. Hope, Jr., Cav-Res., Norfolk, Va., to Troop K.

2nd Lieut. Patten R. Spracher, Cav-Res., Richmond, Va., to Troop A.

The address of the Regimental Commander, Lieutenant Colonel William Henry Clifford, Cav-Res., for the present, is Care Bankers Trust Company, 3 Place Vendome, Paris.

3d Squadron and Machine Gun Troop, 307th Cavalry

Norfolk, Va.

The mission of the Squadron, for the summer of 1932, is the training of students at the C. M. T. C., at Fort Myer, Va., during the period July 3 to 16. With this end in view the inactive duty training is being conducted so as to prepare the officers for this duty. An extensive use will be made of the War Department Training films in this work.

Two aspirants for commission in the 307th Cavalry have been enlisted at Norfolk, Va., and have been assigned to the Hq. Tr., 307th Cavalry. They are Private Howell G. Counell, Asst. Mgr., Yellow Cab Company, and Simon E. Leverett, Engineer for the Texas Oil Company.

The Squadron Commander Major James R. Mullen helped to make the Sesqui-Centennial, held at Yorktown, Va., October 16 to 19, a success.

308th Cavalry

Pittsburgh, Pa.

The 308th Cavalry riding classes at the Hunt Armory have been well attended this Fall, ranging in numbers from 43 to 52.

Polo for the indoor season is being organized under the Regimental Polo Representative, Second Lieutenant Elliott E. Perritt, Jr. Prospects are bright for another winning season. Tournament play will commence later in the season.

The Ladies Riding Class has been well attended. Many of last year's class have returned.

With the coming of frost the 308th Cavalry Club House at Aspinwall with its cheerful fireplace has again been the scene of regimental gatherings which we have thoroughly enjoyed.

Extension School work is progressing satisfactorily as many officers are taking advantage of the opportunity to prepare for the examination for their certificates of capacity.

The number of new enlistments also indicates a healthy interest in the Organized Reserves and especially in the 308th Cavalry in this vicinity.

862nd Field Artillery, (Horse) 62nd Cavalry Division

Baltimore, Md.

The inactive status training of the 862nd Field Artillery, (Horse), was resumed on the first of October. Two conferences and two riding classes were held during the month. The Baltimore Reserve Units are fortunate in being so situated that there are avail in this vicinity officers well qualified to conduct struction in almost any military subject. During month the regiment has received instruction Captain W. W. Wise, C. W. S., on Defense Ag Chemical Warfare, from Lt. Colonel B. F. Mille A., on Motor Transportation for Field Artillery, from Lt. Colonel W. F. Sharp, (FA), G. S. C., Command and Staff Functions.

The riding classes were held at Fort Hoyle, M land, the horses and equipment being loaned by 6th Field Artillery. These classes are especially po lar among the Reserve officers, which is attested by fact that although Fort Hoyle is about twenty- miles from Baltimore, some one hundred Reserve cers living around the city have applied for mem ship.

Units of the 66th Cavalry Division

Kansas City, Mo.

OFFICERS of the 15th Cavalry—inactive, 3 Cavalry and 466th Armored Car Squadron, a the 66th Cavalry Division, attend a general lec and a class of instruction each Wednesday even The class is conducted by Major Duncan Rie (D. O. L.), who also conducts a class in equitation drill each Sunday morning at Ft. Leavenworth. T Sunday morning classes were originated by Maj. C. R. Schwenck, when he was unit instructor, have been carried on by his successors.

The cavalry class room at the armory is our ticular pride. It holds the National and Regime Standards of the 15th Cavalry as well as a large p ing of its coat of arms, done by one of the mem A sand table, obtained under Maj. Otto Wagner, the first installed in the armory and is the scen many bloody battles.

Interest in cavalry activities have increased Kansas City yearly, and the past school year sh the largest attendance. Major Richart, who is e tionally experienced in machine guns, devoted siderable time to this subject. Many new officers pleted their requirements for a commission, and ot added to their credits.

January 31st was the most convenient date to our annual banquet, this time in celebration of 30th anniversary of the creation of the 15th Cav 49 officers and enlisted reservists attended at Ambassador Hotel.

Due to shortage of money and horses, many off were unable to attend camp at Fort Riley, althou were attached to the 114th Cavalry, Kansas Nati Guard for training.

The cavalry officers here consider themselves lu in that Ft. Leavenworth is only 32 miles away its school, instructors and riding facilities they generously offer. It is the aim of each officer t more worthy of this generosity and of the cav spirit of both tradition and of modern times, w is understood but is indefinable. With this in they are ready for the coming year of activity.