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COAT OF ARMS AND INSIGNIA OF THE FIRST FIELD ARTILLERY

THE COAT OF ARMS

THE shield is red for artillery. The stand of grape is to commemorate the remark attributed to General Zachary Taylor at the battle of Buena Vista, "A little more grape, Captain Bragg." Bragg's Battery (now "E," 1st Field Artillery) is credited with having saved the day at that battle. The tower represents participation by Battery "D" (then "E," 1st Artillery) in the defense of Fort Sumter under Major Robert Anderson in 1861. The maple leaf commemorates the participation of Batteries "D" and "E" in the War of 1812 in Canada.

DISTINCTIVE INSIGNIA

The War Department has recently approved a distinctive insignia designed by the Regiment for wear on the uniform. It is made in a solid piece one and one-quarter inches high, embodying the Regimental Coat of Arms. The shield will be of red enamel with the stand of grape in gold. The wreath will be made of gold with red enamel, above which the tower will be of gold and the maple leaf in green enamel. The motto, "first or nothing," will be in black enamel on a gold ribbon.

Officers of the Regiment will wear this distinctive insignia on the upper portion of the shoulder loops of the coat of their service or white uniform and also on the front of their service hat midway between the band and crease. When the mess jacket is worn the insignia will be on both lapels above the line of miniature medals. Enlisted men will wear the insignia on both sides of the collar of their service coats in rear of the service insignia and on the front of their service hats, the same as the officers.

REGIMENTAL DAY OF THE FIRST FIELD ARTILLERY

COMPILED FROM A REGIMENTAL REPORT

JULY third was selected as Regimental Day for the First Field Artillery on account of the fact that Hazlett's Battery from which is descended Battery "F" of the First Field Artillery, made such a glorious record for itself and the Artillery on that day in 1863 at the Battle of Gettysburg. Every artilleryman should be familiar with this extract from the report of General Henry J. Hunt, Chief of Artillery of the Army of the Potomac, concerning this battery:

> "The enemy was already advancing when, noticing the approach of the Fifth Corps, Warren rode to meet it, caused Weed's and Vincent's brigades and Hazlett's Battery to be detached from the latter, and hurried them to the summit. The passage of the six guns through the roadless woods and amongst the rocks was marvellous. Under ordinary circumstances it would have been considered an impossible feat, but the eagerness of the men to get into action with their comrades of the infantry, and the skilful driving, brought them without delay to the very summit, where they went immediately into battle. They were barely in time, for the enemy were also climbing the hill. A close and bloody hand-to-hand struggle ensued, which left both Round Tops in our possession. Weed and Hazlett were killed, and Vincent was mortally wounded—all young men of great promise." * * * "Hazlett was killed whilst bending over his former chief to receive his last message. Lieutenant Rittenhouse efficiently commanded the battery during the remainder of the battle."

—A glorious paragraph in the history of the organization, which should be suitably inscribed and posted in it for everyone to read, and which should be reverently read to the command at every Regimental Day!

Other pages demand an equal recognition. We can only plead that each cannot be chosen to fix our Regimental Day. The following extract is taken from Don C. Seitz's new book, *Braxton Bragg, General of the Confederacy:*

"On the evening of February 22nd, an attack began which developed into the Battle of Buena Vista, where the batteries of field artillery commanded by Major J. M. Washington, Captain W. T. Sherman and Captain Braxton Bragg were to play a decisive part. Bragg and Washington were first to be assailed. On the morning of February 23rd, the Second Indiana Regiment, in support of the field pieces, was forced out of line, leaving the guns to take care of

themselves. This they did, falling back slowly, limbering and unlimbering from time to time and checking the Mexican forces, which came on in heavy order. Colonel Jefferson Davis, with the Mississippi Regiment, went to their aid. By this time, Taylor's forces were well together. Ammunition was plentiful and well served. Davis formed his regiment in a "V" for the charge and moved ahead of the guns. At this instant he was wounded in the foot, but remained in action. After a volley, the regiment retreated to the rear of the batteries, the Mexicans getting too close for comfort. It was at this critical moment that Bragg's name was immortalized. While it seems a pity to spoil the alleged sayings that survive in history, General Richard Taylor always maintained that his father never said, 'A little more grape, Captain Bragg,' when he saw the Mexicans rallying. Such delicacy of expression was not customary in 'Old Rough and Ready's' vocabulary. Colonel David Urquhart, of Bragg's staff at Stone River, in a contribution to the 'Battles and Leaders of the Civil War,' says that Bragg himself, at Murfreesborough, was in a genial humor and often entertained the staff with stories of the old army and the Union Officers who were in the field against him. He, too, denied that famous order, saying that as he went into action, General Taylor cried out: 'Double-shot your guns and give 'em hell, Bragg!' In view of the existing excitement, this seems more probable. It was also Dick Taylor's version. Historians know just what Cambronne said in reply to the summons for his surrender at Waterloo, but 'La garde meurt, il ne se rend pas!' sounds much better.

"Bragg's response to this rough command was extraordinary in rapidity and efficiency. He had but three guns, the fourth being at Saltillo. These fired an average of 250 rounds each during the combat, an amazing record for muzzle-loaders. 'When he wheeled his guns into battery,' says Major General Lew Wallace, who served in the Mexican War as lieutenant in the First Indiana, 'the enemy was within a few yards of their muzzles and at first gave ground as the pieces recoiled.'

"This shower of grape from Bragg's guns did its work. The Kentucky, Illinois and Third Indiana regiments, concentrating with the Mississippians at the danger point, added the fire of their musketry. With enormous losses the Mexicans turned and fled in confusion, with the 'grape' still pursuing. The Americans had beaten about five times their own number."

In order to provide a fitting program for the celebration of Regimental Day, July 3, 1923, it was determined to present a pageant which would portray an important event in the history of each battery and in the ensemble, the history of the regiment. A

study of the history of each organization, showed a wealth of material for the tableaux, from which the following were chosen and presented in chronological order:

Battery "D," piece in draft of the period of the War of 1812.

Battery "E," piece in draft, representing Bragg's battery of the Mexican War, which received the famous order, "A little more grape, Captain Bragg," at the Battle of Buena Vista.

Battery "F," float, representing Hazlett's battery on Little Round Top, at the Battle of Gettysburg.

Battery "C," float, representing the battery at San Pedro Macate, during the Philippine Insurrection.

Battery "B," section in draft, representing the battery during the World War.

Battery "A," section in traction, representing the Knox Trophy Battery.

These units were formed in column at 10:00 A.M., the colors and band leading and at twenty-five yards distance between tableaux. The column was marched around the post to the parade, where it was reviewed by the post and regimental commanders. The band turned out in front of the reviewing stand. The column increased distances to seventy-five yards between tableaux and passed by the reviewing officers again, to appropriate music for the periods represented.

As the head of the column approached with the white cross belts and stiff caps the band played "Yankee Doodle" for the War of 1812. "La Paloma" for the Mexican War, shifted to "Marching through Georgia" for the Civil War and this in turn gave way to "Hot Time in the Old Town" for the Philippine Insurrection, as the mules of San Pedro Macate drew near. These past, the shining guns, the steady sleek horses and steel helmets of the World War were greeted with "Over There." The end of the column passed with the First Field Artillery of today, Battery "A," holding the Knox trophy, to the music of "The Caissons Go Rolling Along." The column was then formed in close line in front of the reviewing stand and all were invited to inspect the tableaux at close range.

The command was then addressed by the regimental commander, who reviewed the history of the regiment. He indicated the different wars and engagements that the units of the regiment had participated in, as shown by the streamers on the colors, and pointed out how closely the history of the regiment was bound up with the history of our country.

At 11:00 A.M., some minor athletic competitions were engaged in between the batteries. These events were amusing in character, like the "three-legged" race, shoe race, etc., and served to balance in a degree, the solemnity of the other part of the program. This concluded

the morning exercises. In the afternoon, at 2:00 P.M., a baseball game was played, between picked teams of the First and Second Battalions.

This was the first time that this regiment or any of its units had celebrated its Regimental Day. The above program appeared in general to fulfil the requirement. It was calculated to balance the solemnity of the occasion with enough of the spectacular and divertive elements to make a pleasing blend and sustain the interest of the command to the end.

The Driver

I'm a slouch and a slop and a sluffer,
And my ears they are covered with hair,
And I frequent inhabit the guardhouse,
I'll be "priv." until "*fini la guerre.*"
But my off horse, she shines like a countess,
And my nigh made the General blink,
And they pull like twin bats fresh from Hades,
And they're quick as a demimonde's wink.

Oh, its's often I'm late at formations,
And it's taps I completely distain,
And my bunk, it brings tears from the Captain,
And the cooties are at me again.
But when there's a piece in the mire,
With her muzzle just rimming the muck,
Then it's hustle for me and my beauties—
If they don't they are S.O. of luck.

And when there's some route that's receiving
Its tender regards from the huns,
Then we gallop hell bent for election
To our duty o' feeding the guns.
The gas, the H.E., and the shrapnel,
They brighten our path as they burst,
But they're never got me or my chevals—
They'll have to catch up to us first.

I'm a slouch and a slop and a sluffer,
And my ears they are covered with hair,
And I frequent inhabit the guardhouse,
I'll be "priv." until "*fini la guerre.*"
But my hosses, they neigh when I'm comin',
An' my sarge knows how hefty they drag,
An' the Cap lent me ten francs this mornin'—
Here's to him an' to me an' the flag.

F. M. H. D., F.A.,
In *The Trail*.

ARTILLERY PREPARATION IN THE ATTACK

THIS DISCUSSION WAS PREPARED BY A COMMITTEE OF THE ARTILLERY SUB-SECTION AT THE GENERAL SERVICE SCHOOLS, CONSISTING OF LIEUTENANT COLONEL R. S. PRATT, MAJOR N. B. REHKOFF AND MAJOR J. R. DAVIS.

CLASSES OF PREPARATION

The attacks on the Western Front from 1915, to include 1917, were marked by strictly limited objectives. It was considered necessary, before launching the infantry attacks, to entirely destroy all the hostile defensive elements on the front of the attack.

To accomplish such destruction required accurate location of objectives, direct observation and precise firing, the result being a very slow rate of fire. Precise firing was limited to that part of the day during which visibility was good. During the night and when visibility was poor precise firing ceased, but to prevent the enemy from reconstructing demolished works interdiction fire was kept up continuously on positions already destroyed or partly destroyed.

The preparation was continued until air photographs indicated that the destruction contemplated had been secured. No time limit could be set on the completion of the preparation, the duration of which depended mainly on the extent of the hostile organization to be destroyed, conditions of visibility (which cannot be accurately foreseen), and the hostile reaction to the preparation, especially by counter-battery and air service and anti-aircraft activity. Such preparations are called *Unlimited Preparations*.

The period of unlimited preparation lasted from six to fifteen days. At the jump-off the destruction was so complete that, usually, the infantry, with very small losses, could occupy the terrain so prepared.

Such preparations precluded the possibility of surprise, and beyond the terrain involved in the preparation the adversary had time to prepare new defensive organizations. Moreover, the terrain captured was so broken that artillery and supplies could not cross it except with great difficulty, and further immediate advance was thus frustrated by the duration and intensity of the preparation itself.

The closing year of the World War was marked, on the Western Front, by a radical change in the methods of attack. Strictly limited objectives were largely abandoned, and the unlimited artillery preparation was almost entirely replaced by a preparation of only a few hours' duration, executed mainly for the purpose of neutralizing the

hostile forces and positions by intense shell and gas fire. Such a short preparation is called a "*Limited Preparation,*" and receives its name from the fact that it lasts for a definite period of time, fixed in advance, and is stopped at the expiration of that time, regardless of the results obtained.

In a few operations, notably in the Aisne-Marne Offensive on July 18, 1918, complete success was obtained without any artillery preparation whatsoever, thanks to complete surprise, the use of tanks, and the weakness of the hostile defence.

The principal considerations which brought about the substitution of the comparatively short limited preparation in place of the unlimited preparation were:

(*a*) An effort to obtain surprise.
(*b*) The development of the tank and its use for making breaches in the wire. This greatly reduced the amount of artillery fire required.
(*c*) The use of gas in artillery shells. This greatly increased the neutralizing power of the artillery.

PRESENT TENDENCY AS TO CLASS OF PREPARATION USED

As stated above, the unlimited preparation had, by the end of the World War, been almost entirely supplanted by the limited preparation.

It is believed that in the future the unlimited preparation will be employed only when a certain specified amount of destruction is considered absolutely necessary before an attack can be launched. Such preparation will be long or short, depending upon the results obtained, but as a rule will extend over a considerable period. Since its length will be dependent upon the results to be accomplished in each case, a discussion of proper length is not practicable. The employment of the unlimited preparation in any but highly stabilized situations will be exceptional, and even here it will be more usual to direct a limited preparation of sufficient length and intensity.

GENERAL DISCUSSION OF LIMITED PREPARATIONS

Result Sought.—It is sought by a short preparation of great intensity, to neutralize the hostile artillery, machine guns, and other forces; and so disrupt hostile command, communication, and supply arrangements that enemy activities will be paralyzed and the power of resistance to the attacking infantry greatly reduced or destroyed.

General Ludendorff's views, expressed in 1918, were: "A long bombardment of weakly defended positions in the advance zone is useless. Too long a bombardment of the probable lines of resistance

is likewise of no great advantage. A complete destruction of trenches and obstacles cannot be counted upon; experience shows this cannot be effected, even after a bombardment lasting several days.

"The aim must therefore be—and this is indeed the spirit of our conceptions up to the present—to strive to effect a partial and comparatively slight destruction; but on the other hand, to paralyze the adversary and exploit this success through the immediate action of the infantry."

It is further sought by the preparation to so lower the enemy's morale that the result, combined with the effect of the neutralization and destruction obtained, will be a great lowering or destruction of the enemy's power of resistance to our attacking infantry.

In this connection it is to be observed that it seems to be well established that the enemy will generally suffer a greater loss of morale from a comparatively short preparation of great intensity than from one of long duration but of less intensity. This is due to the fact that in a prolonged preparation the hostile personnel recovers, to some extent, from the fear and confusion occasioned during the first few hours of the bombardment.

The destruction obtained will ordinarily be largely incidental. However, for short operations, such as raids, where the destruction desired is of very restricted amount, the object sought may be mainly destruction.

Distinct Mission.—Preparations should never be undertaken without a distinct mission in view, and the effect desired and expected should be understood. The artillery should be given all possible information of the enemy and should be consulted as to what it is possible to accomplish within the time and with the guns and ammunition available.

Methods of Execution.—Fire of great precision is not practicable or necessary for limited preparations. The quality of the fire is replaced by quantity. The artillery seeks to cover with fire every known or probable location of important hostile elements. Observations, while desirable in all fire, will usually be dispensed with. Limited preparations will very often be fired at night when observation is impracticable, with a view to gaining surprise and enabling our infantry to advance at daybreak. By daybreak the preparation should be completed for all hostile elements within machine-gun range of our infantry. For more distant elements the preparation is completed in accordance with the progress of the infantry.

Neutralization of hostile batteries is of primary importance in an artillery preparation. Unless this is accomplished effectively, hostile artillery fire may cause the attack to break down in the early

stages, or render ground gained by our infantry too costly to be maintained.

It is thought that in the future, it probably will be the rule that, by executing ordinary daily fire missions with roving guns or batteries and keeping other batteries silent and carefully camouflaged until an emergency has arisen, the enemy will be able to keep the bulk of his batteries from being located prior to our attack. In such circumstances attempts at neutralization of unlocated hostile artillery will necessarily be by means of neutralization of limited areas which map and other studies indicate may reasonably be expected to contain the greater part of the unlocated hostile artillery.

No definite rule can be stated as to the number of guns or batteries necessary for counter-battery fire to produce effective neutralization of a given number of hostile guns or batteries. The number required will depend upon factors, such as range, opportunities for observation and adjustment of fire, character of terrain, general training and morale of the enemy, and reaction of hostile artillery to our attempts at neutralization.

If the hostile artillery, abandoning for the time being other missions, devotes itself to counter-battery fire against our artillery engaged in counter-battery fire, it is reasonable to assume that, battery for battery, it will be a stand off.

The committee believes that except in exceptional cases of an enemy of low morale or training, complete neutralization of hostile artillery cannot be expected. The degree of neutralization attained will vary between wide ranges, dependent upon the density and accuracy of fire, the state of training and morale of the enemy, and other factors.

The committee does not believe that the rule to the effect that when hostile batteries do not cover over 100 yards front each, an efficient counter-battery can be undertaken at the rate of one gun per two to be attacked, is sound, as a rule of general application. It is believed this rule can be applied properly only to the most favorable conditions where the hostile artillery is accurately located, when at least intermittent observation of fire is possible, and where the hostile artillery under counter-battery remains silent or devotes itself to targets other than our own batteries engaged in counter-battery.

The principal obstacle to be surmounted by the infantry, in the present state of development of defensive organization, is barbed wire, and the infantry usually must be assisted in surmounting extensive wire organization through the creation of openings or breaches by artillery fire, or by the employment of tanks.

The extent to which artillery will be called upon to make breaches in the wire will depend largely on the quantity of tanks available to

assist the infantry, and the contemplated manner of their employment. It may be anticipated that in many situations tanks will be available in such quantity, and will be employed in such manner, that no wire cutting will be required of the artillery.

The kind of fire most suitable for an artillery preparation is high-explosive shell. Smoke is exceedingly valuable for neutralization of observation. Shrapnel is ineffective when not properly adjusted, and it can be adjusted only in daytime under good visibility conditions.

In case gas is employed, neutralization fire, especially over large areas, can be made more effective, and the length of preparation correspondingly reduced. The relative value of gas as a means of neutralization, in the future, probably will undergo marked change as a result of developments in the manufacture of gas and gas defensive equipment.

Length of Preparation.—The artillery preparation for the various attacks of the last part of the World War varied, as to duration, from a total omission of the preparation to a preparation lasting seven or eight hours.

Information relative to the duration and other features of the attack on Riga in 1917, and the principal German attacks on the Western Front in 1918, is given in Appendix "B."

The principal considerations affecting the duration of the preparation are:

(*a*) Surprise.

The surprise sought is both strategical and tactical. Strategical surprise is not lost through the execution of a preparation of a few hours. Tactical surprise is complete only when there is no preparation, but it may be fairly well realized, even for comparatively small forces, after a short preparation. For larger forces it may be sufficiently realized after a preparation of several hours.

In order that the hour of attack may be a surprise, it is important that the length of preparation be varied for different attacks.

(*b*) Extent to which tanks will be employed.

As already pointed out, the amount of work required of artillery in the preparation will be greatly reduced if tanks are employed for making the necessary breaches in the wire.

(*c*) Enemy organization.

The duration of the preparation will largely depend on extent, strength, and importance of hostile forces

and organization (machine guns, batteries, trenches, shelter, strong points, command posts, etc.) to be neutralized.

(*d*) Enemy morale.

(*e*) The quantity and calibre of artillery available for the preparation.

(*f*) Ammunition available and the possibilities of replenishment. This consideration usually will render impracticable artillery preparations of any considerable duration in open warfare situations.

(*g*) The degree of accuracy of the fire.

This will depend on the state of training of the command, accuracy and sufficiency of maps, accuracy and sufficiency of ballistic data secured, weather conditions, the opportunities for adjustment of fire prior to the preparation, the possibilities for observation of fire during the preparation (dependent on time of day, terrain, weather, and possibilities of aerial observation), and the hostile reaction to our fire.

In view of the many considerations affecting the duration of the preparation, it is obvious that no rule for guidance as to length of preparation can be laid down. The length in each particular situation must be determined after a careful consideration of existing influencing conditions.

The following is quoted from a Critique on French Manœuvres 1920–1921:

". . . The time allowed for artillery preparation was generally too short. Except when absolute surprise was sought *with tanks*, ten to twenty minutes is not considered enough, even when the enemy is not well intrenched."

Considerations Affecting Preparation in Various Types of Attack.—In a meeting engagement of divisions or smaller forces, the artillery will, by early entry into action, cover the development, deployment, and advance to first firing position by the infantry. This fire in a way partakes of the nature of a preparation, and merges almost imperceptibly into the fire executed during the advance of the infantry in the attack.

Ammunition supply limitations, requirements of surprise, and other considerations will usually preclude any considerable delay in the attack for the purpose of executing an artillery preparation proper.

In a deployed defence the enemy will have had more time for

defensive measures, and this usually will necessitate a more deliberate attack than in a meeting engagement. The artillery preparation, if fired, usually will be longer and more methodical than the artillery preparation proper, in a meeting engagement. As in a meeting engagement, the ammunition supply will be one of the controlling factors in deciding upon whether or not a preparation will be fired, and upon its length, if fired.

The size of the forces engaged will have often an important bearing on the duration of the preparation, the duration usually being greater for large than for small forces.

In an attack on a prepared position, stronger defences, usually including wire, will be encountered. The enemy will be disposed in greater depth and the supply arrangements of the defence, including ammunition, will be better organized. A still more deliberate attack is therefore indicated, and the preparation will, therefore, usually be longer than for an attack against a deployed defence. Ammunition supply and other factors already enumerated also will vitally affect the duration.

In a defensive zone the enemy occupies a highly organized position of great depth, with ammunition and other supply fully established, and with elaborate arrangements for communication. The successful attack of such a position is much more difficult than that of any of the above types of defence, and a very deliberate and carefully planned attack is required. Much more powerful artillery means, including heavy artillery, will be necessary, and an artillery preparation of several hours' duration usually will be required. The decision as to length of preparation will be affected by the considerations already enumerated, especially by the quantity of tanks that will participate in the attack, and the extent to which they will be used in making breaches in the wire.

Continuation of the Preparation During the Attack.—The artillery fire delivered during the execution of an attack, that is, during the infantry advance, is, in effect, a continuation of the artillery preparation, the principal object sought both before and after the beginning of the attack being neutralization of hostile elements. The targets and methods of fire of a large part of the artillery will often be unchanged by the arrival of H hour. This is particularly true of the heavier calibres engaged in neutralization in the more distant areas. As the infantry progresses, the preparation will continue on targets further to the rear. Even the fire of the lighter calibres immediately supporting the infantry by rolling barrages or concentrations is, in effect, preparation fire, as it seeks

to neutralize the hostile elements immediately in front of the advancing infantry.

PRINCIPLES

Based on the foregoing, the committee deduces the following principles in relation to the artillery preparation in the attack:

Unlimited preparations will be rarely used and will be confined to those cases where a certain amount of destruction is considered absolutely necessary before an attack can be launched.

Limited preparations will be used preceding most attacks.

Preparations may be omitted altogether, under favorable circumstances, in order to obtain complete surprise. Against a defensive position, strongly defended by wire, this procedure will seldom be possible unless the infantry is supported by sufficient tanks to make the necessary breaches in the wire.

An artillery preparation should never be ordered without a distinct mission as to targets and effects desired.

Fire of extreme precision is not practicable for a limited preparation. Quality of fire is compensated for by quantity of fire.

Neutralization of hostile artillery is of primary importance in an artillery preparation.

No definite rules, to cover all conditions, can be laid down as to the number of guns required to neutralize effectively a given number of hostile guns or batteries.

Complete neutralization of artillery, or other hostile elements, cannot be expected. The degree of neutralization obtained is dependent upon several factors and varies between wide ranges.

The principal factors affecting the length of the artillery preparation are the surprise element; the extent to which tanks are to be employed for making breaches in the wire; the strength and morale of the hostile forces; the extent, strength, and importance of hostile defensive elements; the artillery means available to the attacker; the state of the ammunition supply; and accuracy of fire.

Generally the length of the preparation will be greater as the size of the forces and the extent of the hostile defensive organization increase.

No definite rule to cover all cases can be laid down as to the duration of the artillery preparation. The length in each situation must be determined from a consideration of all existing factors which affect it.

The fire delivered during the execution of the attack is, in effect, a continuation of the artillery preparation.

In general, attacks will be preceded by limited preparations, the length of which will vary between a few minutes and several hours.

The length and other details of artillery preparations will be determined by the consideration of a number of factors, the principal ones being: surprise, available tank support, extent of hostile defensive organization, and artillery means available, including ammunition supply.

BATTERY "B" OF THE TWELFTH FIELD ARTILLERY DURING THE LATE WAR

BY CAPTAIN GEORGE D. WAHL, F.A.

FOREWORD

OUR late allies, the French, have an expression which freely translated means, "He who excuses accuses himself." This is not intended as an excuse. This article is undertaken solely at the request of the FIELD ARTILLERY JOURNAL and consists mainly of a "rehash" of certain chapters of a book published by Captain P. W. Foster, Jr., which were originally written by the author of this article. The original work was undertaken for the edification of the enlisted men who served under our command and at their request in order that they might have some record of the places and things which we had visited and done together. It is therefore more the reminiscences of comrades in arms over a series of mutual experiences rather than a formal history.

The record of the battery in the United States and during the training period in France is written from memory. The author assumed command of this battery after relinquishing command of another of the same regiment during our service at the front. The source of the remaining chapters is the author's personal diary which is almost entirely a diary of the battery.

ORGANIZATION OF THE 12TH FIELD ARTILLERY AND TRIP TO FRANCE

Under *Histories of Units* in the Army Register it may be seen that the Twelfth Field Artillery was organized in 1917 from the 2nd Battalion, Third Field Artillery, by the transfer of men. This transfer occurred about the middle of that year after the 2nd Battalion of the Third had returned to its home station, Fort Myer, Virginia, from the Mexican border. Each battery of the old Third was split into three parts. Two of these were transferred to the Twelfth while the third part remained to form a nucleus for a battery of the new Third. In this manner E Battery, Third Field Artillery, became the mother battery for B and E Batteries of the Twelfth. B Battery, although a brand new battery formed during the war, thus had quite a few of our old service men to leaven the recruits, who came to us and to impart to them the traditions which have tended to make the United States Army what our friends the enemy thought us.

Our first home station was on the old race track at St. Asaph's, Virginia. Recruits, horses, guns and other impediments gradually materialized, and by August, 1917, the regiment was a going concern.

The Regimental Commander during this time was Colonel Manus McCloskey. Throughout the war the regimental spirit was that of a large, healthy and, at times, somewhat boisterous family. It never, even under the most adverse conditions, doubted its own ability to do any job allotted to it, but went in with the serene confidence that the old Twelfth could do it if anyone could. These ingredients of success were part of its legacy from its first commander and they were a large help on several occasions when we found ourselves in localities where the traditional angels would have hesitated to tread.

We were kept at Camp St. Asaph's for some time waiting for some fire control and signal equipment which was long overdue. This finally arrived, and on December 17, 1917, the regiment entrained for Camp Mills, Tenafly, New Jersey, preparatory to embarking for France. The weather was very cold at Camp Mills but the change was welcome. At St. Asaph's we had been in tents, while at Mills we drew down billets in frame buildings equipped with quasi modern plumbing. The real charm of adequate bathing facilities can only be truly appreciated by one who either attempts to go through the motions of enjoying a brief shower while the water tries to freeze on the skin or, still worse, tries to dispense with bathing entirely.

The health of the regiment at this time was excellent. Due to hard work and outdoor life at St. Asaph's, we were all as hard as nails, and many minor epidemics which caused other units much trouble passed us by entirely.

During the stay at Camp Mills the appearance and spirit of the regiment rose rapidly. The food was good, our quarters were comfortable, comparatively speaking, and we were on the way to France. In a spirit of competition, readily returned by adjacent units, the men were continually engaging in fistic encounters with other organizations. Some of these small wars grew to fair proportions. It kept the officers continually on the watch lest someone get seriously hurt. At one time, it was a rare occurrence to see men from other organizations enter our quarters.

After many mysterious whisperings of "official" secrets and several examinations of personnel to detect possible "Alien enemies," the regiment sailed without convoy from New York on board the *Olympic*. This was one of the best vessels in the service at that time, so our trip was short and uneventful. Due to the large crowd of troops on board the men were fed only twice a day. On most days the food was good, but the hours were quite strange to those used to Army three squares a day. Some of the most reliable men from each battery were detailed as submarine lookouts. Unfortunately for excitements' sake, we ran into none on the trip.

We disembarked at Liverpool about January 15, 1918. We were immediately escorted to the popular English version of a train and sent right on to Camp Winall Downs near Winchester. There was a shortage of ships about this time and here we were forced to spend about a week before we could again move on.

We spent this delay mostly in taking short sight-seeing marches through the old, historic town and around the countryside. The place was very attractive and had quite the appearance of a well-kept garden. We also made vain attempts to eat Brussels' sprouts, oatmeal without cream or sugar, cheese and jam with little bread, and inferior coffee every day, and tried to like it. Many attempts were made by members of the outfit to try to solve the mystery as to why Brussels' sprouts never grew up into full-grown cabbages. The only solution which presented itself was that due to the submarine campaign, then in full bloom, everyone was so hungry that as soon as this queer fruit poked its nose above the ground it was picked for food and so never had a real chance. At any rate, our souls (and stomachs) were in truest sympathy with old man Jiggs in a longing for good old corned beef and cabbage long before our stay at Camp "Dwindled Down," as this place was popularly known in the regiment, was over.

The attitude of the men toward discipline during this period reflected great credit upon them. On passes, and at all times, their appearance and conduct were carefully watched. They were told that we were practically the first American Regular Army unit to pass through this region, and that the reputation of our Army would depend largely on us. Without further caution they left nothing to be desired along those lines. An American soldier who takes a pride in his outfit will suffer anything for it. The Twelfth, as we have said, had always been proud of itself. On this occasion we even managed to suffer the Brussels' sprouts in injured silence, publicly, although internally our feelings would hardly bear publication.

The regiment crossed the channel to Le Havre, France, in two boats, the names of which are not remembered. D and E Batteries crossed in one boat and the rest of the regiment used another.

By some queer chance of ingenious staff work the two parts of the regiment were camped in widely separated areas. Both parts immediately started out to attempt a reunion. After many fruitless inquiries usually answered by *"Comprens pas,"* liaison within the regiment was finally reëstablished about twenty-four hours after our arrival in France.

Our next orders directed us to entrain at Le Havre for Le Valdahon in southern France. The amusement of the personnel at the first sight of the little toy train of box cars, so familiar to us

later in the game, was great. On being told that the "40 Hommes" stencilled on the door meant that forty men would occupy the car, someone remarked, "Well, in the next war I'm going to be one of these here chevaux. I see where only eight of them goes in a car."

After much tooting of penny whistles, many stops for black coffee and cognac at all unreasonable hours and more stops for no reasons at all, we finally arrived at our training centre at Camp du Valdahon on or about January 26, 1918. We were taken to excellent stone quarters, issued our new French "Soixante-quinze" matériel and told to make ourselves "to home." This we did, rapidly making the acquaintance of our sister regiments in the 2nd Field Artillery Brigade—the Fifteenth and Seventeenth Field Artillery—and of those prime soldier favorites who did so much to lighten our gloomy hours in this foreign country—Colonel Van Blank and Major Van Rouge.

WE START IN TO LEARN OUR TRADE

By February 1, 1918, the Battery had been fully equipped with its new matériel, including fire control equipment. (The equipment we had strived so hard to get so that we might sail was not to be used.) Training in real earnest was also commenced. Several French officers were on duty with the regiment and the scheme of instruction was for them to demonstrate the method of handling the new matériel to the officers and then our own officers would train the batteries. The men picked up the new methods very quickly as they were not much at variance with those which we had used for such a long time in the United States.

The signal details were grouped and trained under instructors from the Brigade Training Centre. The equipment supplied us at this time for the signal details was the standard French equipment and differed considerably from the "buzzers" with which the men had been trained in the States. It is interesting to note that this equipment was again changed very shortly and we then drew the phone which is in use today for our service at the front.

Within a week from the time instruction started, service practice on the range commenced. One battery of each battalion of the regiment fired every morning. The afternoons were devoted to instruction indoors, lectures and similar activities. Great stress was placed on trench warfare methods and topographical operations. The training period ended on or about March 16, 1918, with a problem fired by the whole brigade simulating a minor trench operation of some sort, the exact nature of which is forgotten. It was intended merely to show the coördination, adjustment and lifting of fire on a time schedule.

Meanwhile rumors began to circulate about that we were scheduled

to leave soon for service in a quiet sector with our division under French command. Everyone began to perk up and show new interest in life. This included, particularly, all headquarters, who immediately began to harass battery commanders for returns and reports of doubtful value but of voluminous size.

Up to this time we had had no horses at all. Between March 1st and March 15th, the animals for the brigade arrived. By March 15th enough of all types were on hand to completely hitch out the brigade. These animals certainly possessed the cheering appearance of muchly neglected orphans. They had come from the United States and to judge from appearances they had received no attention for months. The first grooming lasted for three hours and hardly made an impression. The animals all needed shoeing. All in all we had a job of man-sized proportions ahead during the next few days.

Our shipments from the States had arrived and included our harness and the precious fire control equipment we were destined never to use. After much cleaning and adjustment of harness, to make no mention of rather frequent informal rodeos, we were finally able to hit the dusty trail for one or two short marches in light draft. The horses were all out of condition and many of them were inclined to balk or dispute the supremacy of the rider on the least provocation. To make matters still more interesting, a very casual inspection would disclose that the man who had made the American harness had not considered the French limbers. The line of the traces was very peculiar to say the least. However, as we had to use the two together, we hitched everything up in some manner and decided to let nature take its course until we could do better.

About March 19th, the Brigade started for the front. The entraining point was Besancon, about 30 kilometres away. One battery, complete, was sent on each train. The batteries of the brigade left Valdahon at two-hour intervals and the trains likewise left Besancon at the same interval. B Battery left Valdahon in the early evening. The first hour of the march was quite discouraging as the green horses did not want to pull. However, things did straighten out. Before the late war we had looked upon the entraining of a battery as an event. We talked about it and fussed over it and then did it in one or more days. This proposition of only two hours to load a battery looked rather short, but true to the regimental spirit the regiment went at the job saying to itself. "If the French can do it, the Twelfth certainly can." It is not believed that any battery loaded in more than one and a half hours. Later in the game entraining and detraining became as familiar as "Forward march."

After a rather uneventful trip the battery was directed to detrain in the small hours of the morning at Souilly. From that point it

took the road which runs east through Ancemont, but soon turned off into a veritable sea of mud, covered by small trees, called Camp Cinq Freres (Camp Five Brothers). One look at the place decided us that those five were no brothers of ours. A less inviting or more rat-infested place the Twelfth had never seen to date. One thing which had a particularly depressing effect on the whole picture was the recent memory of our comfortable billets at the Training Centre. We were quite pampered at this time. We had not yet learned to look a cootie in the face with feelings of absolute indifference.

On the whole, we were quite disappointed. In our imaginations we had figured on rather exciting and bloody experiences, such as one reads about in *Diamond Dick, The Boy Artilleryman*, and similar pieces of pure fiction. It is true that Ancemont and Dieu showed some signs of war. There were occasional whines from the projectiles of long-range guns, starting from somewhere in the German lines, passing overhead and bursting so far off that the detonation could not even be heard. Occasionally our anti-aircraft batteries would take some hostile plane under fire, but as they seldom seemed to hit anything they soon ceased to be thrilling. All told, everything was quite quiet and peaceful and not nearly so hair-raising to a country-bred youngster as trying to cross Fifth Avenue, at 42nd Street, in New York City. However, as mentioned above, the rats and mud did their best to impress on us the reasons upon which Sherman based his famous definition of war, pending the actual emplacement of the batteries in the line.

VERDUN

While the greater portion of the battery was engaged in the first skirmishes of the great battle of the mud and rats, the officers were ordered forward on reconnaissance. Early on the morning of March 26th little groups might have been seen navigating the rather deep, muddy channel, generally suspected of being a road, which led from Camp Cinq Freres toward the little town of Ancemont. From there the road ran in a general easterly direction through Sommedieue to P. C. Solferino in the Bois d'Huivaux. This Point was to be our first regimental command post on the great battle line.

As we approached the front the scenes of desolation increased. It was with a variety of feelings that the different members of the party looked for the first time on the ravages which attend four years of war and listened at close range to the whine of the first few hostile shells seeking company on our side of the line. Possibly the most prominent as well as predominant feeling was a slight sinking in the pit of the stomach at this concrete evidence of how small and inconsequential a thing man's life and property may suddenly become.

SOMMEDIEUE

THE PERFECTION FIELD FACILITIES MAY ATTAIN IN A STABILIZED SECTOR
Division Observation Post Near Eix.

Two days later the battery was safely emplaced and firing from its position (1) near Bernantant Crossroads. The battery was assigned defensive barrage missions from just south of Bonzee north to about Ronvaux. We were directly responsible for the area around Villers while on other parts of the front our fire was superimposed on that of other batteries. The area in which these missions lay constitute part of the great grassy Woevre plain. The battery position lay in a wooded range of hills which completely dominated the plain.

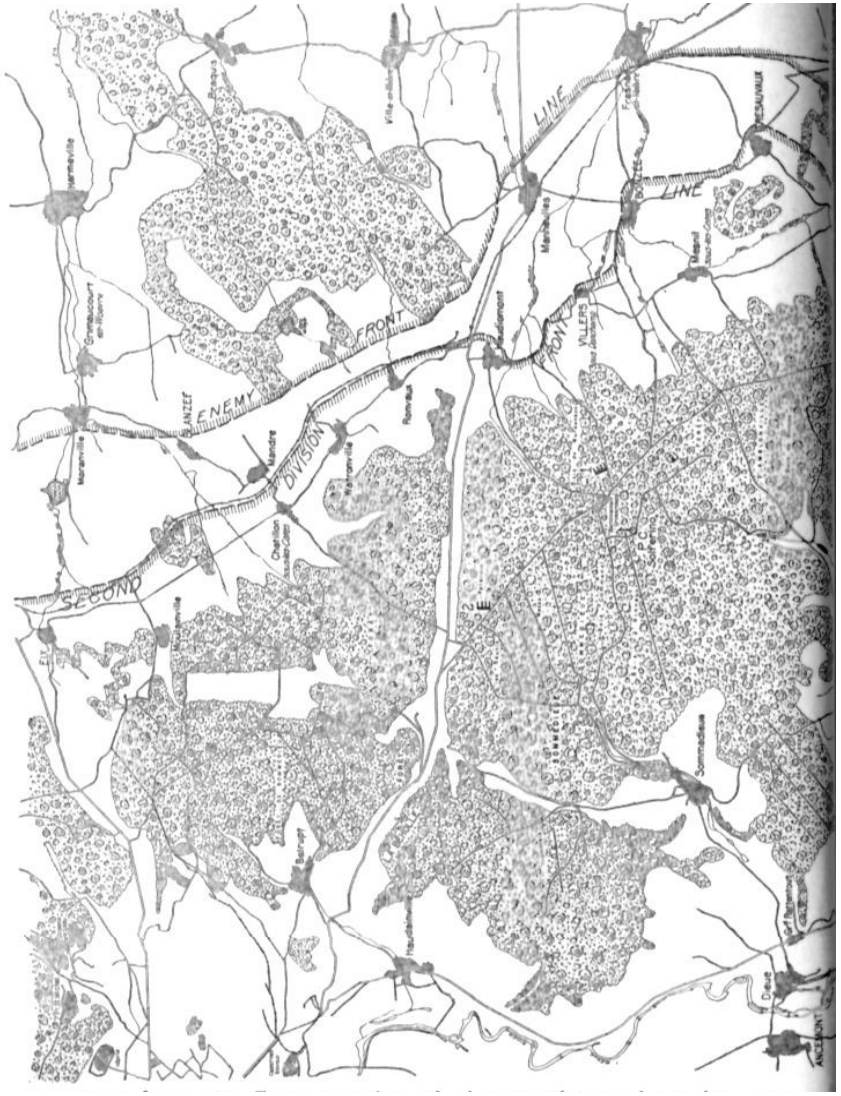
The battery position was a very well prepared one. It was a striking example of what one can do to make things secure, given an unlimited supply of material, time, labor and patience, highly stimulated by hostile encouragement. It had all the conveniences of trench warfare including a "dinkeyville" railroad station, a cemetery, and an unlimited supply of running water in all dugouts whenever it rained.

The position, in reality, consisted of two positions—a main and a reserve one. One platoon was posted in each position, although either one could have accommodated the whole battery. The reserve position was about 400 metres southwest of the main position. The main position executed all ordinary missions and, consequently, could be considered as located by the enemy sound and flash ranging stations after a limited amount of activity. The reserve position was given only the most urgent missions and fired only when the main position was in action. In this manner the activity of the reserve position was accredited by the enemy to the main position. This system was employed in order that all the guns of the battery might not be neutralized in case the Germans decided to take the supposedly located part of the battery under fire.

The cemetery, enumerated above as being among the attractive features of the position, lay midway between the two emplacements. Lieutenant Richard Daly, the commander of the reserve platoon, soon came to regard the small enclosure and its wooden crosses with a real personal interest. Almost invariably on his way home from a quiet evening spent with the officers of the main position, he would encounter a few stray rounds of harassing fire intended for the big Bernantant Crossroads near by and be forced to take shelter among the mounds of the cemetery.

The sector was very dead at first. However, under the combined influence of new American Artillery wanting to shoot, new American Infantry anxious to practice recently acquired trench warfare, and inquisitive Germans curious to see what the new troops were worth, the place soon assumed signs of renewed life. The following incidents will give some general idea of the military activities of the sector.

The first event was a raid on Tresauvaux, which took place on the evening of April 6th. It was preceded by about twelve hours of more or less constant bombardment. This raid was not a huge success from the German



point of view as the total results were, for them, a total of four killed and nothing more.

Their next attempt was attended with greater results. In the middle of the night a very accurate and quite unexpected concentration

of mustard gas was laid down on the bivouac of the 74th Co., 6th Marines, located at Fontaine St. Robert. Several case hits were made on the shacks before the men were really awake. Our casualties were heavy and amounted to about 250 men, of whom 40 subsequently died.

For our part, we put on a raid from Eix on April 17th. The raiding party was composed of French and American troops. The American contingent was furnished by the 5th Marines.

About this time the Artillery staged a party known as "The ringing of the bells." A large naval gun had taken position near Sommedieue and was to fire on Conflans. The presence of this gun in the sector was believed unknown to the enemy and its firing position was to be kept secret if possible. In order to mask the fire of this big gun from the enemy sound ranging stations, all light artillery along that part of the line was to fire while it was in action. Each battery was assigned a separate objective. The signal on which we were to open fire was the message, "The bells will ring at * * * o'clock," sent to us over the 'phone. On the appointed day we all climbed into our gas suits to be prepared for any emergency, and when the message came the show started. We never learned how the big gun came out, but we all got a small amount of retaliation fire on our battery emplacements, for our share in the affair.

April 21st is memorable in our annals as being the date on which two hostile raids were directed against the lines covered by the Twelfth Field Artillery. One came, between 4 and 5 A.M., against the lines held by the 5th Marines at Eix. The second raid was against the 2nd Battalion, 6th Marines, near Villers. This last affair was on the part of the line for which the battery was directly responsible.

The battery was commended by the French for the speed and accuracy with which the call for barrage was answered. The German raiders used only flame throwers, hand grenades and daggers on this occasion, but failed to get anywhere after encountering our outposts. The next morning several dead Germans and a large collection of wicked looking knives were brought in from the scene of the fight.

While the battery was firing the barrage mentioned above an incident occurred which is a good index to the spirit of the battery at this time. Everyone was keyed up to high pitch over the affair as a barrage was a comparatively novel thing in our lives. Corporal Perdikeas was one of our gunners. As one round started off from his piece to make its journey into the German lines he shouted, "Taka-dat, you Kaiser Bill, a little present from youse Uncle Sam!"

Our rear echelon had remained up until this time at Camp

Cinq Freres. It was now moved to Camp La Beholle. It had been too far to the rear to be bandy to the battery in case of need. In its new position the echelon was not far from Verdun and the Holy Road, so famous in the history of the war.

Taking advantage of this proximity to Verdun, some of the officers from the echelon decided to ride over and take a look at the famous city. However, on arriving before a gate in the city wall a French sentry stopped them and demanded passes, informing them that no one could be permitted to enter without one. Things seemed to be at a dead end. On returning home no way could be thought of by which the necessary passes could be obtained. Some one finally had a brilliant idea. The officer wrote out a pass in the most flowery English, using many capitals and, after signing it himself, affixed the regimental "Passed by the Censor" stamp at the bottom to lend dignity to the imposition. Dressed in their best and most showy equipment the party then presented themselves before another gate to the city. This time they were not stopped. The sentry came to a respectful if somewhat sloppy salute at the sight of the formidable looking document.

A considerable change among the battery officers also was made at about this time. The battery commander, Captain Woodbridge, became ill and was replaced by Captain Wahl. Lieutenant Fairfax Downey, Lieutenant Faber Downey and Lieutenant James C. Lysle were transferred to regimental headquarters and Lieutenants Scroggs and Brown took their places.

Pursuant to orders concentrating the American troops further to the north, the battery was withdrawn on April 25th from its position near Bernantant Crossroads and moved to a new position (2). Our sector was also changed. We now covered the area from Haudiomont north to Blanzee. Our particular mission was the protection of the town of Ronvaux.

This new position was organized into a main and reserve position in the same manner as the last one had been. We had no cemetery here, however, but a quite complete little French Co-operatif store furnishing fair champagne and other delicacies, more than replaced it in our affections.

The observation post in this new position was located in the Infantry second line trenches. These trenches were sited along the military crest of the line of wooded hills which we mentioned above as dominating the Woevre plain. It was about one kilometre due west of Ronvaux. From the observation post it was very convenient to get down to the front line.

The novelty of being in the line began to get somewhat shopworn, so the custom of a visit by battery personnel to the front line troops was gradually established. These expeditions started more or less by way of being something new to do. At least twice a week

RONVAUX FROM THE VICINITY OF THE BATTERY OBSERVATION POST—LOOKING EAST

THE RUINS OF BLANZE

The Hills in the American Lines Are Seen in the Distance

some one from the battery would go "slumming." These visits were a great help in acquainting the officers and men of the battery commander's detail with the particulars of the organization and plans for the infantry defense of the sector. On one such visit information obtained from the 2nd Battalion, 6th Marines, through the courtesy of Major Holcomb, led to harassing fire on roving machine guns which were worrying our front lines at night. No other indication of the effect of these impromptu shoots could be obtained other than that the machine guns promptly ceased their nocturnal activities in our sector completely.

Some infantry officers came back to spend a few days with us to observe our work. They were greatly interested in the shooting and the day was never too hot or rainy that they would not come down to watch the registration from the O.P. If the daily ammunition allowance permitted, they would be given a chance to conduct fire themselves on some point in front of the lines held by their units. This exchange of officers between the different arms did much to promote mutual sympathy and understanding.

In the early days of May rumors of our relief began to become quite prevalent. On May 11th, some French troops appeared in our sector. That night one of our platoons was relieved by a platoon from the 25th Battery, 220th R.A.C. This battery had just seen some of the hard defensive fighting incident to the recently started German offensive on the Somme. Needless to say, we looked upon them with envy and not a little awe, although outwardly we conducted ourselves with the *savoir-faire* of veterans. (Had we not been a whole month in the line?)

Incident to the relief a small dinner was given by the battery officers in honor of the officers of the relieving French battery at the conclusion of which the officers of the French battery were carefully put to bed. There are some things which even French veterans can not do.

The next morning the combined Franco-American battery was fired to show the new Battery Commander his barrage and registration points. The command of the combined organization was then turned over to him and we prepared to leave the sector.

On the evening of May 12th the remaining platoon of the battery was withdrawn and the entire battery was concentrated at Camp La Beholle. Wheels were greased, harness fitted, wagons packed, and we prepared to move—where, we did not know. As the French say with that expressive shrug of the shoulders, *"C'est la Guerre!"*

This ended our first experience in actual war. We had met the enemy and, while he could not be called ours, we had gained confidence in ourselves and in our ability to exchange compliments with him at any range of which our little guns were capable. We

had met our Infantry. We knew and respected them and they returned to us their fullest confidence. Here was the place that really marked the birth of the Second Division, for a Division really exists only by reason of the spirit of the troops which compose it and this spirit had its beginnings during this first tour on the front line.

EN REPOS

While in the line near Verdun the regiment had been separated into three parts. The rear echelons of the First Battalion, the Headquarters Company, and half of the Supply Company, had been at Camp La Beholle. The rear echelons of the Second Battalion and the remainder of the Supply Company made their homes some four kilometres northeast of Camp La Beholle at a place called Camp Savoyardes. The firing batteries had been grouped, of course, under the two Battalion Commanders in the line.

When the batteries were withdrawn and we prepared to move, the first step was to assemble all the scattered elements of the regiment into one cantonment. Consequently, on May 14th, both battalions were put in motion and that night the regiment found itself reunited in our first camp in the line—Camp Cinq Freres.

As mentioned before, Camp Cinq Freres had once seemed the most undesirable of all possible locations. On this occasion, however, it did not look at all bad. Our standards had changed somewhat!

The reunions that took place on this occasion will long be remembered. In fact, it would be difficult indeed to forget some of the marvellous reminiscences recounted around the supper tables that night! Every one was certainly glad to meet old friends from other batteries again and we all looked forward to the events of the near future which promised more excitement.

On May 15th we started our first march under anything like normal conditions. Strange to relate, the sun came up bright and clear and it did not rain. For once we were able to appreciate the meaning of the words "Sunny France"! The long battalion columns with their fluttering red guidons formed an inspiring spectacle in the clear sunlight. The sound of wheels on the hard road and the tread of many hoofs were a welcome change after a month in dugouts and trenches.

We continued this march for three days. The region covered in this time is famous in history. Everyone in France and many in America know it well. It is the region of the first great battle of the Marne. Our route may best be followed by our stopping places for the night, which were as follows: May 15th, Issoncourt; May 16th, Vaubecourt; May 17th, Possesse.

We remained in Possesse for three days. The usual rest routine was inaugurated at once. To avoid possible misunderstanding the reader is requested not to look up the meaning of *rest* to ascertain what our activities were at this time. A rest, in a military sense as applied in France, might be defined as an indefinite period of time devoted to acquiring a fervent longing to return to the front and its friendly, bursting shells in order to obtain a little peace from inspecting Generals, Colonels, Majors, Captains, and even Lieutenants, each having a widely differing opinion from any one else as to how everything should be done, and all trying to put their ideas into execution at the same time. In other words, a rest period is one devoted to getting as much work out of the troops as possible without injuring them permanently.

However, we were very fortunate in having a mill stream near at hand in which to drown our troubles (and cooties). Most of us soon began to suffer from unaccustomed exposure to water in the form of baths. The habit got such a hold on the command finally that even the horses were bathed.

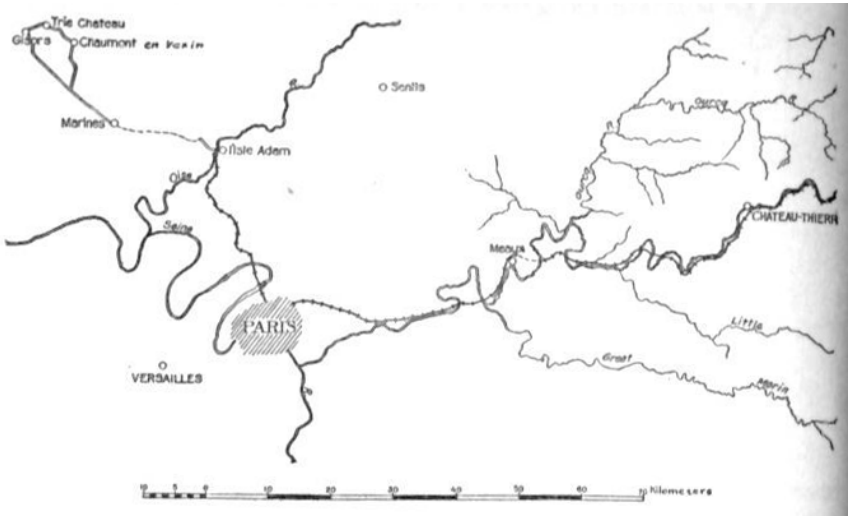
Moving time came again. On May 20th we left Possesse for Vitry-le-François where we camped for the night on the town race track.

During our march through Vitry, Mickey, the battery mascot and personal pet of First Sergeant Nally, strayed away and was taken captive by some French children. The men searched the town thoroughly, but although many small, white, non-descript dogs were located, Mickey's whereabouts are a mystery to this day. We thus lost our mascot, doubly precious to us because he had come all the way from home with us in a barrack bag in defiance of all transport regulations.

On the morning of May 21st we entrained from the Vitry railroad station. The battery was loaded on a standard military train. These trains consisted of fifty cars and were always moved together, hardly ever being even uncoupled. Two of the cars were cabooses. These were for the use of the train crew. Thirty were box cars significantly labelled "Hommes 40 ou Chevaux 8." Seventeen cars were flat to accommodate the materiel and one was a so-called day coach for the officers.

The actual time taken to load the battery aboard this train was forty-two minutes. In this time everything was on board and tied down—ready to roll. The rations, hay and grain had been drawn and loaded. The battery at this time consisted of five sections, a Battery Commander's Detail, and five supply wagons of various design. This totals up to approximately 16 vehicles, 120 men, and about 130 horses.

The Marine noncommissioned officer on duty at the entraining point became quite enthusiastic over the battery's performance.



Amidst his glowing praise of the battery to the battery commander, he indicated the nearest café and suggested his willingness to stand the cost of the proposed refreshment. The day being quite warm, the suggestion was gratefully accepted.

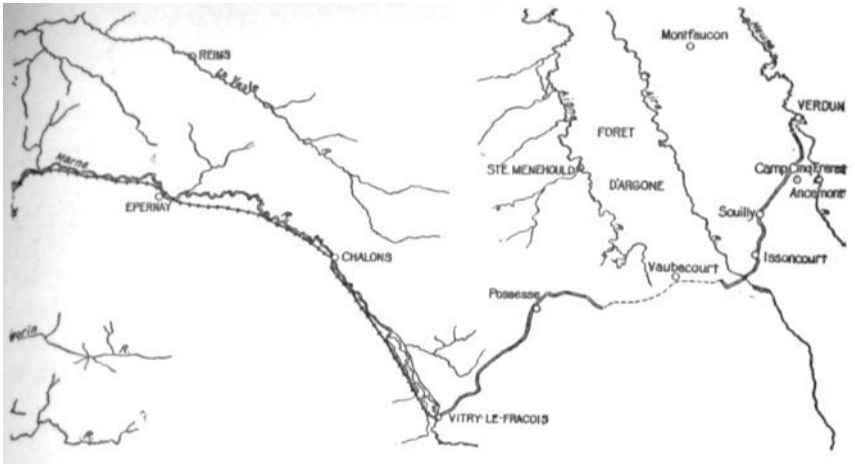
The discipline of the battery on the march and while in town had been excellent. There was seldom anything needed except directions for accomplishing something, and few of these were needed. The men knew what work had to be done and did it without urging. The organization was a far different thing from the recruit battery of August, 1917. The men were proud of the outfit and anything for its welfare was done without question.

Late on the evening of May 21st we arrived at the station of l'Isle Adam, having passed through the outskirts of Paris about dusk. Orders were received to detrain and march to Verville, about five kilometres away.

The loading facilities at the detraining point were very bad. Some Marines had been left at the station to assist with the transportation on that account. Their help was eagerly accepted.

During the detraining some German airplanes started to bomb Paris. The flickerings of the aerial protective barrage were plainly visible and the sound of the bombs quite audible. The entertainment was greatly enjoyed until an unexploded anti-aircraft projectile came down in our immediate vicinity. In the wild scramble for cover which ensued, the rolling kitchen, which was being unloaded, was overturned and the coffee spilled. This sad mishap dampened the enjoyment in the spectacle, particularly for those men handling the kitchen. Hot coffee was never intended as a soothing bath.

We marched to Verville as ordered, but Verville had no facilities sufficient for our needs. The march was continued on to the next



town. No fields could be secured there, so after a short but snappy debate with the Mayor, the battery bivouaced in the town square. It was then about two A.M., and further reconnaissance was impracticable.

We broke camp shortly after dawn and made a very short march to Theuville, where good accommodations could be had. Good grazing for the horses was also available. The grazing, however, had to be paid for out of the battery officers' private funds. The government neither furnished hay nor money with which to buy it on this trip. In fact, many times during the war a battery commander had to purchase necessaries out of his own funds or see his unit suffer for lack of them.

Early on the morning of May 23rd we broke camp at Theuville and started a twenty-one mile march to Trie Chateau. This march was one of the pleasantest the battery ever took. The weather was cool and a brisk flank breeze kept the dust out of the column. At the end of the march neither horses nor men showed signs of fatigue.

As was the custom in the battery, the battery commander's detail marched on some distance ahead of the battery to locate and mark the best route. During the march, Sergeant Bechter, the signal sergeant, was thrown from his horse and his skull was fractured. A passing ambulance rushed him to the hospital at Gisors.

When the battery commander's detail arrived in Trie Chateau representatives from battalion headquarters came out to meet the battery bringing our assignment to billets. The entire battery was placed in one farm—the Ferme de la Croix Blanche—which was to be a very happy home for us for the next week. It was a typical French farm in every sense of the word. Large stone barns closed in three sides of a stone courtyard. The farm house itself closed in the fourth side. The only entrance was through an archway with heavy wooden doors. It was almost a mediæval fort.

The guns and wagons were parked in the courtyard. The horses had a picket line in an adjoining field. The men took to the hay lofts and every one was comfortably fixed.

Sergeant Bechter, who had been injured on the march, died on the morning of May 27th. He had been a universal favorite in the battery and his death was deeply felt. In addition to being well liked, his military record was exceptionally good. He was buried with military honors in the cemetery of Gisors. The regimental chaplain read the burial service. The body was carried to the cemetery on a caisson from the battery and men from the battery were the pall bearers. A guard of honor was furnished from the French troops in the town and almost the entire civil population turned out at the cemetery.

Our stay in Trie Chateau was mainly occupied in training for open warfare. Everything that could possibly be done away with was discarded and the loads considerably lightened. It was whispered about on all sides that we were to be used to relieve the First Division in the Montdidier sector. We looked forward with great pleasure to meeting this famous sister division. We knew its history and were proud of it. The impression made on the French by the attack of May 28th at Cantigny and their comments upon it were soothing indeed to the American pride. Apparently there were some of us who were not too proud to fight!

May 30th was Memorial Day. In compliance with G.O. No. 76, May 22, 1918, G.H.Q., the regiment assembled in Trie Chateau near Regimental Headquarters. Some impressive exercises were held, and after a talk by the Regimental Commander on the history of the Regiment to date, the troops were dismissed for the remainder of the day. In addition to the holiday, the news of Cantigny which began to circulate added zest to the celebration.

On May 30th things began to happen to us. Shortly after the news of Cantigny was received, orders came for us to move to Beauvais to prepare to relieve the First Division. These orders were cancelled almost before they were received. Next came word that we were to be prepared to move in any direction on two hours' notice. Rumors began to drift about that there had been a successful German attack and a collapse of the Allied line. Finally orders arrived for us to entrain at Gisors. That we were going against this big hostile attack we all felt certain. Where it was formed food for considerable speculation. All we knew was that we were headed for active service at last and we were all happy in the prospect.

On May 31st the battery's turn to entrain came. We marched to Gisors and at 7:47 P.M. we were aboard and on our way. Our tour *"En Repos"* was over!

(*Continued in our next issue*)

ANNUAL REPORT OF THE CHIEF OF FIELD ARTILLERY

INTRODUCTION

ACTIVITIES in the Field Artillery, during the past year, have been directed, not only to increasing the efficiency of the three categories of the Field Artillery of the Army of the United States—Regular, Reserve and National Guard, but also to preparing these components to meet the necessary expansion and changes incident to a mobilization.

Visits of inspection made by the Chief of Field Artillery or his representatives to all Regular Army Field Artillery commands and R.O.T.C. units, as well as to a number of National Guard and Reserve Field. Artillery commands, have shown clearly a marked advance in the efficiency of the individual units; but, as regards advancement in preparation to meet the demands of a mobilization, the same is not true. The controlling reasons for this condition are set forth in the text of this report.

Immediately following the World War, a chaotic condition existed in the Field Artillery, as set forth in the Annual Reports of the Chief of Field Artillery for the years of 1920 and 1921. However, during these years, steady progress was noted and by the present time, it reasonably might have been expected that this arm would meet all requirements as to efficient progress and preparedness for mobilization. And such undoubtedly would have been the case, were it not for legislative restrictions and other causes beyond the control of this office. A study of these causes is considered of the utmost importance in framing legislation, and in correcting conditions inimical to efficiency.

Every effort has been bent to improve the efficiency of the components of the Field Artillery of the United States Army by coördination of training along sound and uniform lines. To this end, the various Field Artillery schools have, under the direction of the Chief of Field Artillery, coördinated their training with the General Service Schools of the Army and, in strictly field artillery matters, have taught well-established principles, consonant with the American psychology in war, while at the same time eliminating those teachings suited to a particular situation, condition or people, which under the conditions of training during the World War, were accepted in part by our service. In connection with training, it is pertinent to point out the excellent progress made during the last year in the compilation of the various Field Artillery training

memoranda. These fill a long-felt want. Since the war, there has been a crying need for these training regulations. The use of foreign texts and the incorporation of foreign principles into our methods of fire, which texts and principles were, in part, either wrong in principle or improperly translated, led to a confusion of ideas and subversion, in part, of sound doctrines and principles. The difficulties encountered in preparing these new manuals, and the progress which has been made in issuing the same to the service, is fully covered under the chapter on Training.

Development of Field Artillery matériel since the war has progressed steadily. This in a large part may be attributed to the close coöperation of the Ordnance Department and the earnest endeavor of that service to meet the wishes of the using service. In addition to the development of new guns and the increasing of the ballistic efficiency of older types, close attention has been given to the development of motor-traction for Field Artillery. The progress made and the difficulties encountered in forwarding this latter work make a most interesting study.

No activity of this office may be considered of more outstanding importance than the development of the Field Artillery War Plans.

The experience of this office, particularly during the opening months of the World War, has stressed this point. Work along this line must always be subjected to constant changes. Alterations in plans are the result of changes in matériel, personnel, and national policies; and it may truly be stated that a war plan is never completed. However, the development of a basis for a sound war plan is essential; and, with great satisfaction, it may be pointed out that during the last year, the greatest strides in the development of these plans have been made. The details of these plans are obviously of a secret nature; but the general considerations in developing these plans, and the outline of the general scheme of mobilization are of national importance and of interest to the layman as well as to those in the military service.

In submitting this report, an effort has been made to avoid a chronological or detailed report of Field Artillery activities during the year, but rather to stress the important developments in which due pride may be taken, and to detail those avoidable, or in part unavoidable conditions which have hindered the normal efficient progress of this arm.

REGULAR PERSONNEL

The number of officers in the Field Artillery, including those commissioned in the arm and those detailed for duty with it from other arms, on June 30, 1923, is shown herewith:

	Colonels	Lt. Colonels	Majors	Captains	1st Lieutenants	2nd Lieutenants	Total
Commissioned in Field Artillery	24	49	208	426	307	243	1257
Detailed from other Arms	9	10	2		3	7	31
Total	33	59	210	426	310	250	1288
Ideal allotment per General Staff Program	62	76	226	453	565*		1382**
Shortage, June 30, 1923	29	17	16	27	5		94

* Includes 1st and 2nd Lieutenants.

** This does not include the full proportion of the D. O. L. which should be Officers of Field Artillery.

	Colonels	Lt. Colonels	Majors	Captains	1st Lieutenants	2nd Lieutenants	Total
Losses during 1922-1923							
Discharged				36	27		63
Retired	2	4	8	7	2		23
Transferred to other arms				4	6	1	11
Resigned			1	3	7	5	16
Deaths	1				2		3
By promotion	1	1	2	3		24	31
By demotion			42	67	176		285
Wholly retired					1		1
Dismissed					1		1
Total	4	5	53	120	222	30	434
Gains during 1922-1923							
By re-appointment			1				1
Transfer from other branches	1	2	7	26	14	5	55
New appointments, U.S.M.A.						50	50
New appointments, Civil Life						19	19
By promotion	1	2	3		24		30
By demotion				42	67	176	285
Total	2	4	11	68	105	250	440

The distribution of officer personnel on June 30, 1923, is shown on the following page.

The accompanying table, on the second page following, shows the tentative distribution of the regular commissioned personnel allotted by the War Department for the coming year and the manner in which this office proposes to carry out this distribution.

The Reorganization Act of June 4, 1920, provided for a material increase in the Field Artillery, and at the same time established the "single list" for the promotion of Regular Army commissioned personnel. While the Field Artillery furnished a large percentage of original vacancies, the other arms got the promotions. There was no objection to this, provided the army as a whole benefited thereby. After three years of trial it is debatable whether the Army as a whole has benefited. Individuals have benefited.

In presenting this legislation, it was generally understood that where an arm of the service fell below in its quota of commissioned personnel that the service so affected would be provided with its full quota of officers from services which had an excess.

DISTRIBUTION OF OFFICER PERSONNEL ON JUNE 30, 1923

	Colonels	Lt. Colonels	Majors	Captains	1st Lieutenants	2nd Lieutenants	Total
Duty with Branch:							
Office Chief of Field Artillery	1	1	9	3			14
Field Artillery Board	1		6				7
Organizations, United States	7	11	44	196	172	153	583
Organizations, Foreign Stations	3	5	7	80	77	33	205
Special Service Schools	1	7	27	25	13	4	77
Graduates, U.S.M.A.						50	50
Miscellaneous Duties	1	2	1	6	3		13
Total	14	26	94	310	265	240	949
Detached Officers List:							
Army War College	2	2	1				5
General Service Schools	2	5	18				25
United States Military Academy			9	12	5		26
Organized Reserve	1	10	11	7			29
Reserve Officers' Training Corps		1	30	39	24	3	97
National Guard	3		26	49	5		83
Aides to General Officers				1	6	6	13
Assistants General Staff and Military Attaches	2	4	4	1			11
Miscellaneous Duties		1	6	5	4	1	17
Total	10	23	105	114	44	10	306
With Other Branches:							
General Staff and Military Attaches	8	10	8		1		27
Inspector Generals Department			2				2
Signal Corps				2			2
Air Service			1				1
Infantry	1						1
Total	9	10	11	2	1		33
Recapitulation:							
Duty with Branch	14	26	94	310	265	240	949
Detached Officers List	10	23	105	114	44	10	306
With other Branches	9	10	11	2	1		33
Total	33	59	210	426	310	250	1288

The Act of Congress under discussion provided 1901 officers of Field Artillery, exclusive of the Field Artillery's proportionate share of the D.O.L. Not from the day of the Act's approval to the present time has the Field Artillery had this number of officers, nor anything like it. As a result of the last Army appropriation bill

(Act of June 30, 1922), the number of officers in each arm was reduced to seventy per cent. of the number authorized by the Act of June 4th; *i.e.*, in the Field Artillery, seventy per cent. of 1901. The Field Artillery did not at

TENTATIVE DISTRIBUTION OF THE REGULAR COMMISSIONED PERSONNEL FOR THE COMING YEAR

	War Department tentative distribution	Proposed distribution	Remarks
On Duty with Branch:			
Office Chief of Field Artillery	13	13	
Field Artillery Board	5	5	
Field Artillery School (Staff and Faculty)	40	40	
School Troops, Field Artillery School	49	49	
School Troops, Infantry School	20	20	
Troops, United States	457	457	
Troops, Foreign Garrisons	263	263	
Students, Special Service Schools	118	118	
Students, Special Courses	7	7	
Total	972	972	
Detached Service:			
General Staff	30	27	
Inspector Generals' Department	2	2	
Army War College, Staff and Students	14	19	
Command and General Staff School, Staff and Students	39	43	
Naval War College		1	
United States Military Academy	16	26	
National Guard	83	79	
Organized Reserve	24	36*	*Later in the year as more officers become available the number on duty with the Organized Reserves will be increased
Reserve Officers' Training Corps Units	63	70	
Infantry and Cavalry Schools, Faculty		2	
Recruiting and Disciplinary Barracks	7	5	
Aides to General Officers	9	9	
Foreign Language Students	3	4	
Office Assistant Secretary of War	1		
With other Arms		3	
Total	291	316	
Recapitulation:			
Duty with Branch	972	972	
Detached Service	291	316	
Total	1263	1288	

that time, however, have seventy per cent. of 1901 officers. But it was reduced still further.

As it became apparent during the six months following the approval of the reorganization Act of June 4, 1920, that the Field Artillery was not getting its quota of officers, a conference was held

on January 11, 1921, at which it was agreed that chiefs of branches having surplus officers in the grade of Colonel and Lieutenant Colonel should write to certain officers in their respective arms, suggesting a transfer to the Field Artillery. As a result of this conference, no colonels and no lieutenant colonels transferred to this arm. On October 1, 1921, a second conference was held, at which it was decided to invite certain colonels and lieutenant colonels of other arms to accept a four-year detail in the Field Artillery. As a result of the invitations, which were forwarded October 6, 1921, two lieutenant colonels applied and were detailed in the Field Artillery. As by January, 1922, no colonels nor lieutenant colonels had applied for transfer to the arm, and but two lieutenant colonels had applied for detail in the arm, it was apparent that efforts to procure officers in these grades through their voluntary efforts had failed. The Deputy Chief of Staff then selected certain officers to be arbitrarily detailed into the Field Artillery. Seven colonels and four lieutenant colonels were so detailed; but through one cause or another, only two colonels and two lieutenant colonels were procured.

On January 9, 1923, the Field Artillery had but thirty-four per cent. of the colonels and sixty-three per cent. of the lieutenant colonels it should have (see Table, page 33). Accordingly, a list containing the names of fifty-five colonels and thirty-eight lieutenant colonels of other arms was submitted to the War Department, with the request that officers be selected from this list for detail in the Field Artillery, and as many as possible be made available to be sent to Fort Sill to pursue a special course of instruction beginning February 15th. It was further recommended that officers selected for detail, who could not be made available by February 15th, be made available by September 15, 1923. No officers were made available by February 15th. On April 3, 1923, with a view to relieving the shortage of officers in the higher grades to at least some slight extent, a request was submitted that the detailing of officers to the Field Artillery to fill the authorized quota be spread over a period of three years, thus making at least a few officers immediately available. Under this plan, which was approved, it was directed that the Infantry furnish annually one-third of 13 colonels and 2 lieutenant colonels; and the Cavalry, one-third of 21 colonels and 22 lieutenant colonels. Compliance with these instructions would have provided 12 colonels and 8 lieutenant colonels; whereas, only 7 colonels and 5 lieutenant colonels were detailed. The above statements, show that roughly twice a year since the passage of the "single list" for promotion, in June, 1920, efforts have been made, along various lines, to procure for the Field Artillery its quota of colonels and lieutenant colonels. The three-year efforts have resulted in failure.

As previously stated, a shortage exists in all grades of the Field Artillery (see Table, page 33). It has been hoped that the shortage in the grade of major and below could be filled by the voluntary transfer of officers from other branches, and by the usual method of supply of new second lieutenants from the Military Academy and civil life, so that detailing officers in these grades has not been made. In view, however, of the comparatively few who have transferred in the grade of major, it may be necessary to resort to the detailing of officers in this grade also.

This shortage of senior officers of Field Artillery affects every activity of this service. Regiments of Regular Field Artillery, lacking senior officers, suffer in their training and morale. Junior officers are required to perform double duties, necessarily feeling that their status of senior commander is but temporary in nature, subject to change at any time, and not of the major importance that it in fact is. This adversely affects the morale of the troops and the *esprit* of the command as a whole. Under the present conditions our quota of Regular officers to be assigned to duty with the Organized Reserve and National Guard cannot be filled. Officers detailed or newly transferred to the Field Artillery may not in the best interests of the service be sent immediately to duty with these two components of the Army. Even those transferred officers who have completed the short special course at the Field Artillery School cannot be considered, in all instances, as sufficiently grounded in the tactics and technic of Field Artillery to fill these important posts. The result of this condition is that Regular units are required to stand the shortages and to accept for further training officers whose training has been but all too brief, with the consequent result of lowered efficiency.

As regards assignments with the R.O.T.C., here again we must look for the officer well grounded in his subject. The recently transferred or detailed officer, even with a brief course of instruction, cannot meet the requirements.

As a further result of this shortage, the representation of this service on the General Staff fails of its quota. The necessity for proper representation on this most important body must at once be apparent. Second only to the Infantry in numbers, and the peer of all the services on the field of battle, it is imperative that the essential needs of the Field Artillery be fully understood by the staff. Questions of ammunition supply, animals, training, equipment, and not least of all personnel, must be fully grasped by officers handling these subjects. Officers not grounded in Field Artillery subjects cannot properly represent this service. This again constitutes a drain on the Regular Army units.

As of outstanding importance in this connection, is the effect of this shortage on our War Plans. No chain is stronger than its weakest link. The effective mobilization of our forces in an emergency is dependent on an effective, fully equipped and trained regular force. The Regular Field Artillery, the active associates, so designated for mobilization, must as a first requisite of efficiency have its full quota of trained and efficient personnel, both commissioned and enlisted.

Under the present system of promotion, that is the "single list," it seems to be impossible to fill the vacancies in the higher grades in the Field Artillery. It will be noted that the number of transfers to the arm is almost negligible, so that resort is now being had to four-year details (and even so, unsuccessfully). But providing the higher commanders for a combatant arm, by detailing them therein, without their consent and at times over their protests, is at best but a make-shift, and of no more than doubtful value. Field Artillery is a great arm. It causes more casualties to the enemy than any other arm in modern warfare. It is accordingly entitled to more consideration in providing it commanders than a make-shift policy of detailing such officers in an effort to bolster up an unsuccessful system of promotion. It seems to me that however high may have been the motives of the proponents of the present law, and however successful their anticipation may have been, the time has now come to recognize the fact that three years actual trial has proven the inefficiency of the law in its application to the Field Artillery.

The services with excess officers have failed to supply the needs of the Field Artillery; at the same time, the Field Artillery today has excellent junior officers, fully capable of filling these positions of higher command if they could be promoted thereto. In view of which facts, it is recommended that promotion in the Field Artillery be made lineal, as formerly. This recommendation is made reluctantly, but three years of failure of the present system leaves me no alternative, except a recommendation the execution of which I know would place the Field Artillery at once on its feet and apparently thus only, can the first prerequisite of an efficient regular force be obtained.

It may be noted from the table on page 34, that the units of Field Artillery on foreign service are in accordance with the accepted policy of the War Department, kept at full peace strength. This policy accordingly throws the complete shortage of the personnel in question on the forces remaining in the United States, from which must be drawn the assignments to duty with National Guard, Organized Reserve Corps, R.O.T.C., Regular units, etc. Every effort has been made to fill these existing vacancies; but, in view of the

shortage of commissioned personnel, this has been done only in part. A contributing cause to this condition is the recently adopted policy of the War Department which provides that officers, who may become due for foreign service with a year's time, will be sent on foreign service as soon as they become available for assignment upon relief from some other duty, such as student or instructor. This policy will tend to increase the number of officers on duty with units on foreign service over the prescribed peace strength and at the same time reduce the number available for the various assignments required in the territorial limits of the United States.

It is recommended that in computing the peace strength of the commissioned personnel for service in our foreign possessions that the number of officers so assigned be reduced in proportion as the total number of officers in any particular grade bears to the total authorized for that particular grade. This would result in a saving of transportation charges and would materially alleviate the condition in the United States while not seriously affecting our present war plans.

NATIONAL GUARD

Every effort has been bent toward maintaining the allotted quota of Field Artillery officers as instructors with the National Guard. Of the 84 allotted, 79 are now on this duty. It is appreciated that if for no other reason than the maintaining of close liaison with this most important element of the Field Artillery of the Army of the United States and the coördination of all artillery instruction, this quota should be maintained.

In detailing officers on this class of duty, it is considered essential that assignments for duty with regiments of National Guard and lesser units should be made from recent graduates of the Field Artillery School. This to the end that uniformity of instruction in the Field Artillery may be maintained in its three components.

For assignment to units higher than the regiment, every effort has been made to assign recent graduates of the General Service School. The reasons for this are at once apparent. However, the serious shortage now existing in the grade of field officer renders this impracticable, except in a few cases. This shortage of field officers has necessitated, on occasions, the relief of an officer from a National Guard detail before the expiration of two years, in order that he be permitted to attend one of the various schools. This is, without question, not to the best interests of the service, as it requires considerable time for officers detailed with the National Guard to acquaint themselves with their duties and establish the relationship necessary for such an assignment.

OFFICERS' RESERVE CORPS

The following table shows the status of the Field Artillery Section of the Officers' Reserve Corps.

Of the 1806 National Guard officers less than half—719—hold commissions in the Reserve Corps.

FIELD ARTILLERY RESERVES

Total number of officers June 30, 1923 7401

LOSSES

Died	14	
Transferred	63	
Discharged	94	
Dropped	4	
Resigned	45	220
		7181

GAINS

Regular acceptances	1113	
Transferred	94	
R.O.T.C. acceptances	341	1548
	Total June 30, 1923.	8729

DISTRIBUTION OF OFFICERS IN F.A., O.R.C.

	Colonels	Lt. Colonels	Majors	Captains	1st Lieutenants	2nd Lieutenants	Total
Branch Assignment Group.	4	8	56	266	223	73	630
General Assignment Group.		2	4	5	1	1	13
Total in B.A.G. and G.A.G.	4	10	60	271	224	74	643
Territorial Assignment Group:							
1st Corps Area	8	8	25	79	107	404	631
2nd Corps Area	9	19	58	155	189	671	1101
3rd Corps Area	2	5	28	69	167	530	801
4th Corps Area	3	9	30	70	145	499	756
5th Corps Area	5	5	17	57	117	578	779
6th Corps Area	7	4	32	73	124	615	855
7th Corps Area	7	5	36	85	139	623	895
8th Corps Area	2	1	26	89	116	450	684
9th Corps Area	8	8	29	88	142	558	833
Panama Canal Zone			1	1		4	6
Hawaiian Dept.			1		6	9	16
Philippine Dept.				2	2	6	10
Total in T.A. Group	51	64	283	768	1254	4947	7367
Dual commissions in Reserve Corps and National Guard and assigned to National Guard Units	25	22	54	264	251	103	719
Grand Total	80	96	397	1303	1729	5124	8729

FIELD ARTILLERY NATIONAL GUARD

Total number June 30, 1922 1491
Gain 315
Total number June 30, 1923 1806

At the present time, there are enrolled in the Field Artillery Section of the Officers' Reserve Corps some 8729 officers. Considering

that at least 20,000 reserve officers would be essential in a major emergency, it is at once apparent that the strength of the Reserve Corps should be increased and means should be devised to accomplish this result. At the present time, the most fruitful source for maintaining and increasing the strength of this corps is the R.O.T.C. units established at various colleges and universities.

Of the above 8729 officers, there are some 1800 whose status is still uncertain, and who have not as yet been given a classification. Several efforts have been made to complete this work. In March, 1923, 1816 letters were mailed out with return envelopes. To date, only 683 have replied, so that in all probability, a considerable proportion of the remaining 1133 will have to be dropped.

The following table indicates the number of reserve officers made available from the various R.O.T.C. units since 1921 to 1923, inclusive:

	1921	1922	1923	Total
Tendered commissions	82	283	598	963
Accepted	57	239	341	637
Certificates of Eligibility issued		42	70	112

It is to be noted that a certain percentage of the students completing the advance course of the R.O.T.C. instruction do not accept reserve commissions; however, in a national emergency, it may reasonably be expected that these students would accept commissions, and being trained, should be considered in estimating the total number of reserve officers made available from this source.

From the above table, the inadequacy of this source at the present time is at once apparent, and the question immediately arises: Is this source being developed to its maximum?

During the last year, the General Staff in allotting the commissioned personnel of the Field Artillery to the various military activities, to meet the demands of the Act of Congress reducing the commissioned personnel of the Army, found it necessary to reduce the number of instructors allotted to these institutions. At the present time, the number of instructors allotted to the various institutions has been reduced to the absolute minimum if the present standard of instruction is to be maintained. The future growth and development of these units will require more instructors lacking which the number of students accepted for R.O.T.C. training at the various institutions must be limited and held below the number necessary to carry out effectively the spirit of the National Defense Act.

This latter action could be recognized only as the turning point in the heretofore progressive development of these units. It would result in undermining the building up of the reserve and the weakening of our present war plans.

It is urgently recommended, that the attention of Congress be invited to this important subject and that steps be taken to provide an adequate instructor force at these institutions to assure their progressive development.

REGULAR ENLISTED PERSONNEL

No one thing during the past year has more seriously affected the efficiency of the Field Artillery of the regular army than the shortage of enlisted personnel. The routine duties of an enlisted man in the Field Artillery are much more arduous than those of a soldier in any other branch of the service. He not only has, comparatively speaking, the personal equipment of the Infantryman to take care of, but the horse equipment of the Cavalryman as well. In addition he has his guns and carriages. Finally he has drill and field training of a similar nature to those of the Infantry and Cavalry soldiers. Experience has shown that as a result of this condition, in posts where the artillery is serving with another branch, that there is a certain reluctancy on the part of the artillery soldier to reënlist in his own branch of the service. The result is, that the Field Artillery units throughout the service are generally under strength, which necessitates even more work being thrown on the few remaining soldiers in the unit and, naturally, greater dissatisfaction. In considering this shortage, it is desired to invite attention to its effect on the war plans. Under the present war plans, each active unit, except the 1st, 2nd and 3rd Divisional Brigades, has one or more inactive associates. To be prepared to meet the demands of a major emergency, it is required that each active associate designate and train certain of its personnel in peace to form the nucleus of the inactive associates when organized. Regardless of the merits of this plan, and there is no doubt but that it has great merit, it is impracticable of efficient execution in view of the present existing shortage of personnel.

The following are regarded as the outstanding causes of this condition:

1. The reduction of the strength of the Army by Act of Congress, approved June 30, 1922.
2. The reduction in the number of enlisted grades and ratings as affecting the morale of the enlisted personnel and mitigating against reënlistment.
3. Economic conditions at the present time.
4. Demands on Field Artillery units for special duty details at divisional and other higher unit headquarters and as laborers.
5. Methods of recruiting.

It is recognized that the first and second of these causes are avoidable only through the action of Congress, and that the third cause noted is unavoidable.

PERCENTAGES OF STRENGTH IN THE VARIOUS ARMS

	July	August	September	October	November	December	January	February	March	April	May	June
Infantry	92.9	89.8	89.7	90.2	89.0	89.5	90.6	90.9	90.5	89.9	89.3	88.2
Cavalry	96.4	96.3	96.0	95.8	95.8	94.1	95.8	94.7	93.5	92.9	92.8	92.6
Field Artillery	80.3	78.8	83.0	80.7	81.2	83.5	85.2	84.2	83.7	84.1	82.6	80.9
Coast Artillery	123.4	119.0	115.1	109.6	104.3	102.9	102.4	101.0	99.4	96.9	96.2	95.5
Engineers	88.2	88.7	94.3	92.1	88.9	91.1	90.1	91.0	88.7	89.1	89.3	86.9
Air Service	103.6	97.4	100.5	99.0	97.2	99.4	101.5	100.4	101.0	97.2	97.8	98.2
Signal	119.2	115.5	113.2	106.7	106.8	105.4	105.4	103.3	102.2	98.9	101.2	96.7
Quartermaster	122.6	115.2	108.1	103.4	100.4	100.4	100.6	102.6	103.7	102.9	101.5	100.3
Ordnance	120.1	116.3	112.1	108.9	105.1	102.2	100.1	100.3	98.6	99.4	96.8	96.0
Finance	126.2	118.1	124.2	108.4	113.0	109.2	108.9	110.9	108.9	99.7	98.7	96.7
Chemical Warfare	116.0	112.6	117.1	96.6	94.6	85.6	84.7	83.1	82.5	82.7	83.4	82.7
Medical	110.4	105.7	100.8	99.1	96.1	93.3	94.1	94.3	92.9	94.8	92.7	92.6

The fourth cause is avoidable and should be corrected. At certain of the large camps and stations in the United States, the demands of the Divisional and Camp Headquarters for personnel from the Field Artillery to perform special duties connected with these headquarters has resulted, practically, in rendering the artillery units ineffective. In making these details, the nature of the duties of a Field Artillery soldier in comparison to the duties of soldiers of the other branches has apparently been disregarded, with the result that the few men not called on for such duty have been required to perform additional duties with their organizations. This condition should receive the prompt attention of the War Department or the Corps Area Commander concerned, and, if necessary, the headquarters concerned or the artillery unit should be moved.

As regards the fifth cause, noted above, it is believed that more strenuous efforts should be made, in view of the comparative nature of the work of a Field Artillery soldier to keep the Field Artillery units abreast of, or ahead of, the other combatant services as regards the number of enlistments. It has been noted at certain posts that an associate arm will have at times an excess strength, while the Field Artillery is below strength. This in itself tends to make the duties in the Field Artillery more arduous in comparison to that of the other arm. In part, this condition may be attributed to the shortage of Field Artillery commissioned personnel available for recruiting duty; but whatever the cause, the condition should receive immediate attention and should be corrected.

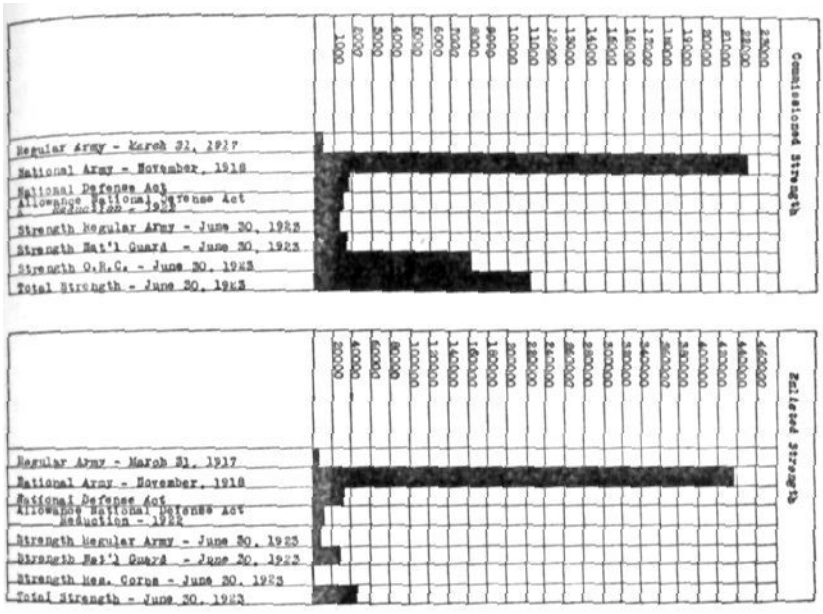
A study of statistical reports for past fiscal year reveals the comparative percentages in strength of the various arms set forth in the accompanying table.

RÉSUMÉ

The efficiency of the Regular Army can only be gauged by its ability to meet the demands of a national emergency of major proportions. Only in part is the efficiency of the individual units a criterion of the efficiency of the Army. Of greatest importance is the ability of the Army to meet efficiently the demands of expansion under a mobilization. Considering the number of inactive associates which must be organized by the Regular Army units in case of an emergency and the personnel for training purposes which would be necessary, it is questionable if the elastic limit of the Field Artillery has not been exceeded. The diagrams on the following page illustrate the demands for trained personnel which might be expected in an emergency of major proportions.

While I have painted a rather gloomy picture of the personnel situation in the field artillery, I do not want to leave the impression that conditions are wholly bad. On the contrary, the officers, as a

whole, are excellent, their spirit is fine, they are deeply interested in their profession, and they are working hard. The regular organizations are doing better than could reasonably be expected under the present trying conditions. The morale of both officers and men is high. Such handicaps as both work under are beyond their control, and hence I have pointed them out in this report, in order that higher authority may correct or alleviate them.



TRAINING

During the years immediately following the war, when units were adjusting themselves to peace requirements, it was found that many fallacious and erroneous methods of training had been accepted by the Army. Foreign principles, possibly misinterpreted or special to a particular situation, had been adopted. Coördinated texts and training regulations were not available. This condition has in large part been corrected by reason of the instruction at the Field Artillery School, Fort Sill, Oklahoma, where uniformity of methods of training and essentially sound principles of fire have been ennunciated; and by the publishing of the more important training regulations which have insured the necessary coördination.

The value of the training received at the Field Artillery School and the issuance of the Training Regulations cannot be overestimated. Comparatively speaking, the number of officers who have had an opportunity to attend the Field Artillery School since the

war is small, but the results of the training which these officers have received has been far reaching.

The following table shows the number of regular field artillery officers in the various grades who have attended the various schools, or received a corresponding training, and the number at the present time in the service whom it is desired to send eventually to the various schools:

TABLE

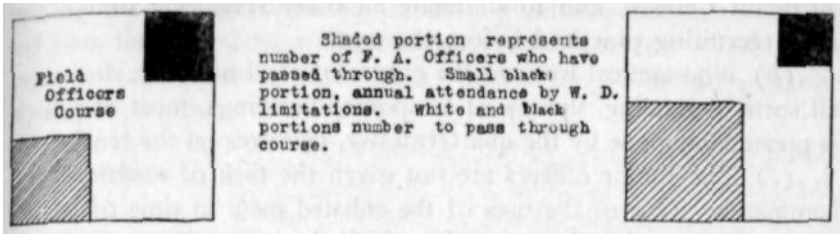
Showing Status of Instruction of Officers of Field Artillery of the Regular Army in Special Service Schools as of June 30, 1923

(This does not include officers detailed in the arm)

Courses included in reports of Boards convened by Par. 44, S. O. 175, W. D. 1922, and S. O. 185, W.D. 1922	Age and Grade				
	Field Officers		Captains and Lieutenants		Total
	Over 38 years of age	38 years of age and under	Over 38 years of age	38 years of age and under	
Number in branch	185	107	50	915	1257
Number who have completed company officers' course or equivalent	185	107	8	158	458
Number still to take company officers' course	. . .	. . .	42	757	799
Number who have completed advanced course or equivalent	93	25	0	4	122
Number still to take advanced course	92	82	50	911	1135
Number who have completed special courses in civilian institutions	1	2	0	12	15
Number still to take special courses in civilian institutions	Present allotment of seven annually.				
Number who have taken courses in Special Service Schools of other branches	0	1	0	7	8
Number still to take courses in Special Service Schools of other branches	Four annually.				

NOTE:—The detail of officers to foreign schools is considered desirable for liaison purposes, but they should not be sent to any of these schools until after they have completed the equivalent course in one of our schools. For this reason no officer who has taken a course in a foreign school is included in above report.

In so far as this table pertains to the two courses (company officers and advanced), the number of officers who have completed the courses, the number who attend annually, and the number who have yet to take the courses is shown graphically below.



The deduction to be made from the above is that it will take from 8 to 10 years to pass present eligibles through the course, at the present limited annual attendance, not allowing for new officers who will join the field artillery during this period. The annual quota of students should, therefore, be increased.

Organizations

During the past year all organizations of Field Artillery, with the exception of the Philippine Regiment, have been visited by the Chief of Field Artillery, or by some one of his representatives. As a result of these visits I am of the opinion that the training of the Field Artillery is far from satisfactory.

There is no question as to the soundness of the Field Artillery doctrine or methods of training. The fault lies in the lack of ability to put these doctrines and methods into practical application. The reason for this condition may be summed up as follows:

(*a*) Shortage of enlisted personnel.
(*b*) Demands made upon troops for all sorts of work not connected with training.
(*c*) Tendency of senior officers to interfere with proper command of juniors.
(*d*) No adequate opportunity for field training with organizations having their complete personnel.

Taking these in the order named, the field artillery this date, June 30, 1923, has an authorized strength of 16,771. It actually has a strength of 14,504, including 939 Philippine Scouts.

This shortage is serious. The fact that it is not evenly distributed throughout the country makes conditions in certain sections absolutely impossible, in so far as real training is concerned. In the 9th Corps Area is a Field Artillery Brigade (less ammunition train). The authorized strength is 1986. The actual strength is 920. This condition has existed for the past three years. While this is the most serious condition the same holds true to a lesser

extent in many other places, based upon the recruiting conditions in the different Corps Areas and upon precedence given certain organizations in assignment of recruits. The only practical solution for this is to return to the General Recruiting service under the Adjutant General, and to eliminate all other recruiting except the local recruiting practiced before the war.

(*b*) Non-tactical work in the nature of road building, drainage, all sorts of hauling, upkeep of temporary buildings, most of which is presumably done by the quartermaster, devolves on the troops.

(*c*) The junior officers are not given the task of *making* their commands. One of the uses of the enlisted men, in time of peace, is that they furnish the means by which the young officer is developed in his ability to command, to assume responsibility, and to gain assurance and initiative. He should be given a definite task to accomplish in a definite time, leaving it to him to select ways and means. The command of higher officers should interfere with this no more than is necessary to prevent the young officer from flying off at a tangent. But actually I think the young officer is over-commanded. This tendency is caused to a certain extent by distrust of the young officer. This distrust is unwarranted, as I believe the average young officer of today will compare favorably with the young officers of the past.

I believe it to be axiomatic, that the future development and efficiency of the army depends upon these young officers of today. From their entry into the service as officers, they should be trained in taking responsibility, thus preparing themselves for future usefulness.

(*d*) Each summer the greater part of the Field Artillery is devoted entirely to Summer Training of R.O.T.C., National Guard, Organized Reserves and C.M.T.C. activities. This may be stated as extending from June 1st to September 15th the time during which, in former days, the organizations spent in their own field training, when all their men were available. During this period as now used, the organizations are actually disrupted by the loaning of their horses, harness, matériel and equipment to the different activities named above, the furnishing of additional instructors, both commissioned and noncommissioned, and in most cases doing a large amount of manual labor in connection with the camps. I do not wish to be understood as opposing these camps; I am in favor of them, but this is a statement of facts. During this period of Summer Camps the regular organizations are supposed to be models for demonstrations of what Field Artillery should be. In the continental limits of the United States there are two separate battalions,

and one separate battery which might be classed as fitted for this rôle. Beyond these there is none.

This is a serious situation. As the regular organizations are to be used as stated from June 1st to September 15th, annually, they can only reach the proper standard, by suitable and adequate training during the period from September 15th to June 1st. I believe the result can be accomplished during this period, if the organizations are given a chance.

To show how the organizations, during their own nine months of the year are now restricted in their training, the following facts should be borne in mind. When the present tables of Organization—Peace—were made up, the idea was to reduce the strength to the smallest organizations which could take the field and function. This was done. For efficient training seventy per cent. should be present daily for training—at least for one-half day—the remaining thirty per cent. should include organization overhead—horseshoers—cooks, etc., sick, men on furlough, recruits and special duty. How near the Field Artillery is approaching this is shown below:

Field Artillery in continental limits of U. S. has	.69% Strength
Average of Table of Organization strength present for drill	.37%
Average of actual strength present for drill	.47%
Highest average of any organization (Tables of Organization Strength)	.72%
Lowest average of any organization (Tables of Organization Strength)	.08%

To say that any field artillery organization can reach the desired standard of efficiency by drilling only thirty-seven per cent. of its men is an absurdity. Yet this is the *average* condition throughout the arm today.

It becomes apparent, therefore, that the following remedies are essential:

(*a*) The recruiting of organizations to full peace strength, and their maintenance at that strength. General recruiting is the only promising solution of this problem.

(*b*) At least a month, preceding summer training of citizens' camps, be given for field training of each Field Artillery unit, where the commanders have *all* their men.

(*c*) Administration and fatigue to be in the afternoons only. This is thoroughly practicable.

(*d*) The initiative of the young officers to be developed.

With the above recommendation carried out, the Field Artillery

will be able to function as it should. Until something of this sort is done, I feel sure the Field Artillery Training will prove unsatisfactory.

The Field Artillery School, Fort Sill, Oklahoma

During the summer of 1922, the Field Artillery School was consolidated at Fort Sill, Oklahoma, and the number of regular courses for officers reduced to two: the Battery Officers' Course and the Advanced Course. The former is primarily technical and designed for battery officers, the latter tactical and designed for field officers and senior captains.

It is felt that the progress of the training of the Field Artillery is more accurately and justly measured by the results obtained at this school than by those in the regiments where advancement of training has been so seriously handicapped by shortage of men and other causes. Most satisfactory reports have been received from the regiments upon the training received by those officers who have attended the school and there can be no doubt that their value to the service has been greatly enhanced by the instruction received there.

During the past year the following courses have been given by the school:

a. Courses for Regular Officers:
  (1) Battery Officers' Course (one hundred and twenty-four officers completed this course, two of whom were of the Cuban Army).
  (2) Field Officers' Course (twenty-six officers completed this course).
  (3) Special Course for Field Officers detailed for four years' duty with F. A. (four officers completed this course, from Sept. 15, 1922, to Feb. 3, 1923, two of them later completed the regular advanced course).
  (4) Special Refresher Course for General Officers (three general officers completed this course, length two months).

b. Course for National Guard Officers:
  Sept. 15 to Dec. 10, 1922 (thirty officers completed this course).

c. Course for Reserve Officers:
  March 15th to June 14, 1923 (thirteen officers completed this course).

d. Courses for enlisted specialists Regular Army:
  (1) Signal Communications
    Feb. 12, 1923, to June 13, 1923 (twenty-five men completed this course).

(2) Horseshoers
Feb. 12, 1923, to June 13, 1923 (seven men completed this course).

e. Courses for enlisted specialists National Guard:

(1) Horseshoers
Sept. 15, 1922, to Feb. 3, 1923 (four men completed this course).

(2) Signal Communications
Sept. 15, 1922, to Feb. 3, 1923 (fourteen men completed this course).

(3) Battery Mechanics
Feb. 14, 1923, to June 13, 1923 (nine men completed this course).

Other projected courses for enlisted men could not be given and the classes actually held could be no larger, due to the limited transportation funds.

Special effort has been made at the school to prepare Field Artillery officers not only for duty with troops, but for duty with the Organized Reserves, National Guard, R.O.T.C., etc., as well. With this object in view qualified officers, experienced in duty connected with these activities, were sent to Fort Sill, to give the student officers there the benefit of their practical knowledge along these lines.

The strength of the Field Artillery School Detachment (White) has proved to be too small to carry out the work at the school. The present strength, 151 men, does not provide for sound and flash ranging personnel, motor drivers to operate current school motor transportation, allowance for sick, a.w.o.l., etc.

Relief is necessary in the situation of the school as regards motor vehicles. The policy of non-replacement is resulting in a systematic reduction in this transportation as the vehicles become unserviceable. Due to the great distance of the firing ranges from headquarters, from two to five miles, much valuable instruction is lost if horses are used for the transportation of the classes. Figured on this basis the use of horses is not regarded as economical.

The initiation of a permanent building program is considered to be imperative. The old temporary buildings are deteriorating so rapidly that they can no longer be maintained with economy. In addition, they constitute a really serious fire hazard. It is doubtful whether any city would tolerate the fire risk we have at the school.

Special Courses for Officers

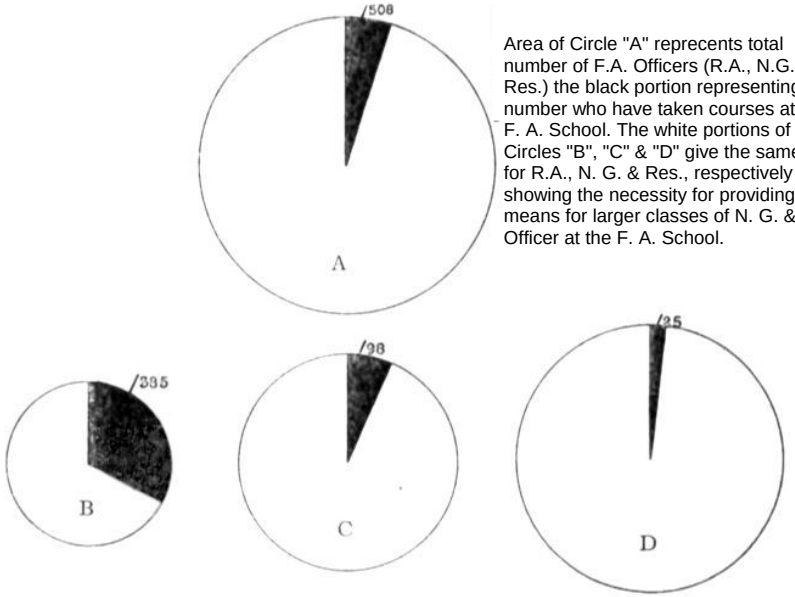
Field Artillery officers during the past year have taken courses at other than Field Artillery schools, as follows:

Massachusetts Institute of Technology	4
University of Chicago	1
Yale University	1
Signal Corps School, Camp Vail, N. J.	7
Ecole de Guerrè, France	1
Saumur, France	1
Fontainebleau, France	1
Cavalry School, Fort Riley, Kansas	1

These courses have had as their object the qualifications of Field Artillerymen in knowledge of subjects of special value to this arm.

The following diagrams show the progress being made in sending officers through the Field Artillery School and the necessity for increasing the size of the classes:

FIELD ARTILLERY SCHOOL



Area of Circle "A" reprecents total number of F.A. Officers (R.A., N.G. & Res.) the black portion representing the number who have taken courses at the F. A. School. The white portions of Circles "B", "C" & "D" give the same data for R.A., N. G. & Res., respectively showing the necessity for providing means for larger classes of N. G. & Res. Officer at the F. A. School.

The General Service School and the War College

Appreciating the important rôle which the General Service School and the War College have in the training of the commissioned personnel of the Army, the Chief of Field Artillery and his representatives have visited these institutions during the year for the primary purpose of improving the coördination of the field artillery with these institutions. For the same purpose, instructors at the General Service School and the Field Artillery School have, during the present term, exchanged visits.

The Chief of Field Artillery, being responsible for the enunciation of the field artillery doctrine for the United States Army, has appreciated his responsibility as regards the General Service School in this respect and has felt that his responsibility did not end with the perfecting of instruction at the Field Artillery School. In this the Commandant of the General Service School coöperated wholeheartedly, with the result that during the period when approved and authorized training regulations were not available the most intimate liaison was maintained between this office and the field artillery instruction staff at the General Service School, with eminently satisfactory and successful results.

Texts on field artillery subjects published by the General Service School; problems, in so far as practicable, and questions related to field artillery subjects have been reviewed in this office to the end that coördinated and efficient training be attained.

Without exception, the field artillery officers who have attended these schools have been impressed most favorably with the value of the training which they have received, and at the same time the Chief of Field Artillery has noted with just pride the excellent standing of the field artillery personnel at these schools and the excellent results of their training.

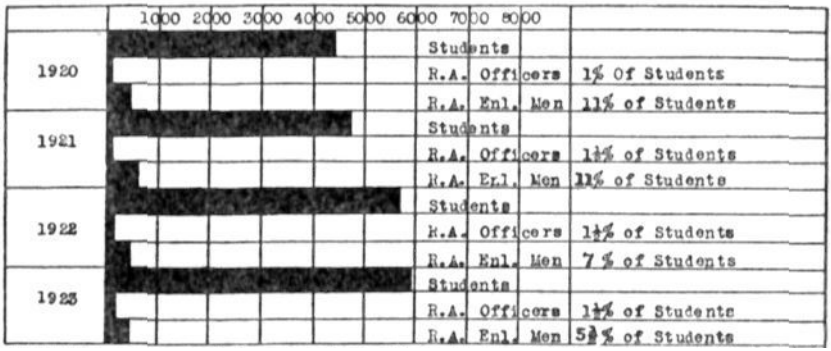
Reserve Officers' Training Corps

The Field Artillery units of the Reserve Officers' Training Corps have continued to progress. The popularity of the course is gaining steadily both with the students and with the University officials. The cooperation between the latter and the units has been highly satisfactory. It is significant that many instances can be cited where college authorities at first either openly hostile or indifferent to the idea have now become its staunch supporters.

The conditions mentioned above are reflected in the growth of the units and in the increased credits allowed by several colleges for the work, placing the military course on an equal footing with the academic and scientific courses of the colleges. One instance can be cited where the initiative in the matter was taken by the college authorities after a study of the course being given. The perpetuation of this attitude is dependent upon maintaining the standard of the instruction on an even basis with that of the other departments. This brings us to one of the most actual needs of the R.O.T.C., that of personnel, both commissioned and enlisted, adequate for the efficient instruction of the growing units. During the two years intervening between June, 1921, and June, 1923, the total number of students undergoing instruction in these units increased from 4857 to 5978, over 23 per cent. The number of students in the advanced course increased from 581 to 989, over 70 per cent. During

the same period the number of officers and warrant officers detailed on duty with the units was increased from 72 to 84, only 16 per cent., and the number of enlisted men actually reduced from 563 to 333, over 40 per cent.

The following diagram shows graphically the condition of the Reserve Officers' Training Corps during the years 1920 and 1923, inclusive:



There is urgent need for more instructors, both officers and enlisted men in the F.A. B.O.T.C.

The importance of this activity as a feeder for the Officers' Reserve Corps can hardly be overemphasized. Its continued success depends entirely upon the maintenance of a high standard in the instruction given. The need of an increase in the number of officers on this duty is rendered even more necessary by the fact that as the course becomes grounded the proportion of advanced students rapidly increases as shown above. The nature of the instruction in the last two years does not admit of the large sections that are practicable during the first two years, if the value of the instruction is not to be impaired.

The decrease in the strength of the enlisted detachments has also been viewed with concern at the several colleges. It has in almost every case forced a reduction in the number of animals available for instructional purposes since these must be cared for daily. In addition to this it has entailed great difficulty in keeping in order the matériel supplied these units.

It is strongly felt that this matter of adequate strength of these detachments, both in officers and in men, is one deserving of the most careful and full consideration.

Summer camps for the students opened on June 14, 1923, at the following places: First, Second and Third Corps Areas, Camp Meade, Md.; Fourth Corps Area, Fort Bragg, N. C.; Fifth, Sixth and Seventh Corps Areas, Camp Knox, Ky.; Eighth Corps Area, Fort Sill, Okla., and Fort Sam Houston, Texas; Ninth Corps Area, Del Monte, California, and Camp Lewis, Washington.

Although this distribution of camps is in keeping with the decentralized plan of administration of the War Department, it is felt better results could be obtained by bringing the students together in three camps, one for the East, one for the Middle West, and a third for the West. The tremendous advantage gained by the contact of students from different units, resulting in a broader understanding of the movement and a friendly rivalry that can only promote the progress of the instruction, is most important.

During the year 1922-23, 580 students were commissioned in the Officers' Reserve Corps.

Correspondence Courses

These are courses for Reserve Officers. The response of these men to the courses during the year has been poor. But, on the other hand, I admit frankly that the courses were far from being satisfactorily gotten up. So the system has not had a fair test.

Work is progressing on the revision of the Correspondence Courses for Field Artillery, and an effort is being made in the revision to present the subjects in a more interesting and instructive manner, eliminating, as far as practicable, subjects which from their nature are not suitable for such a method of instruction.

This work has been delegated to a selected board of officers at the Field Artillery School, Fort Sill, Oklahoma, and will be completed this summer.

Field Artillery Training Regulations

Much progress has been made towards the completion of the Training Regulations to be prepared by this arm.

The status of this work at this date is given below:

430–15	Service of the Piece 75 mm. Gun, model 1897	Published
430–20	Service of the Piece 75 mm. Gun, model 1916	Published
430–25	Service of the Piece 75 mm. Gun, model 1917	Published
430–30	Service of the Piece 155 mm. gun	Completed and in hands of printer. Has also been printed by F.A. School, Ft. Sill
430–40	Service of the Piece 4.7 gun	Not yet started
430–45	Service of the Piece 150 mm howitzer (German)	Not yet started
430–50	Service of the Piece ..... 8″ howitzer	Completed. Now being reviewed

430–60	Service of the Piece 240 mm. howitzer	Completed. Now being reviewed
430–65	Service of the Piece 155 mm. howitzer	Published
430–70	The Firing Battery	Published
430–75	The Field Artillery Driver.	Completed. Manuscript in hands of public printer
430–80	Manœuvres Limbered.....	In hands of public printer
430–85	Field Artillery Firing.....	Published
430–100	Field Artillery Instruction and Training	Not started
430–105	Tactical Employment of Field Artillery	Now being reviewed in connection with recommendations of concerning services
430–115	Pack Artillery.....	In course of preparation
430–125	Field Artillery Ammunition Service	Included in 430-105
430–130	The Observation Battalion.....	Not started
430–135	The Artillery Information Service	Not started
430–155	Reconnaissance and Occupation of Position	Completed manuscript in hands of public printer
430–	Care of Field Artillery ..... Matériel and Equipment	In course of preparation
430–	Officer's Handbook.....	Not started
430–	Transportation of Field Artillery by rail and water	Under study by Board
430–	Camps, Marches and Field Equipment Field Artillery	Completed. Being reviewed
430–	Dismounted Tractors ..... Drill and Ceremonies, F.A.	Under study by Board
75–90	The Tractor Driver.....	75% completed

This important work is being pushed to completion as rapidly as possible with due regard for the extreme care which is essential in the preparation of these regulations. When finished their influence in securing uniformity in instruction, it is believed, will be incalculable.

(*Continued in our next issue*)

RECENT MARCHES MADE BY BATTERY "C," SEVENTY-SIXTH FIELD ARTILLERY

BY CAPTAIN RAY L. BURNELL, 76TH F.A.

ON the 28th of last September, at 12: 30 A.M., Battery "C" of the 76th Field Artillery completed the third march that it has made in the last thirteen months between Fort Douglas, Utah, and Fort D. A. Russell, Wyoming, a distance of approximately 500 miles.

I believe that the experience gained from these three marches is of some value to field artillery officers, particularly so to those younger officers who have not made any long marches with the present equipment (French 75-mm. guns and breast-collar harness).

The route of march was over the Lincoln Highway and the roads were for the most part excellent for marching. The country of course is mountainous and there were many hills to climb, several of them being long and steep. At one place the Highway reaches an altitude of 8900 feet.

During the first two marches, which were made from Fort Douglas to Fort Russell, in September, 1922, and from Fort Russell to Fort Douglas, in June, 1923, many of the draft animals suffered from sore necks. In spite of the very best care and the thorough cleaning of collar pads at each halt, it was necessary to take some of the animals out of draft to allow their necks to heal. When the Battery reached Fort Douglas at the end of the second march, it would have been impossible for many of the animals to continue longer in draft without serious infections.

At the close of the C.M.T. Camp at Fort Douglas, in August of this year, I was assigned to Battery "C" and assumed command immediately. At that time there were eighteen sore necks; *i.e.*, the hair and skin were rubbed off and two of the necks were infected.

Having been informed of the difficulty encountered on the previous marches and knowing that the Battery would probably be ordered to march back to Fort Russell in a few days, we put forth every effort to determine the cause of the trouble and to remove it if possible. The following changes and adjustments were made:

1. All choke straps were removed, not that it was thought that these straps had anything to do with the sore necks, but that they were not necessary with this type of harness. This proved to be the case.

2. The loin straps were removed from all wheel harness and "holding-up straps" substituted in their stead, in accordance with the recommendations of Lieutenant Colonel Austin, 1st Field Artillery, made in a lecture to the Battery Officers' Class at Fort Sill last spring. "Holding-up straps" are straps placed

through the stirrup strap staples on the saddle bars inside the stirrup straps and buckled to the trace loops, which were removed from the spare loin straps. The traces were run through the loops and the "holding-up straps" adjusted so that when the animals were in draft the traces from the lead and swing horses would not cause a downward pull on the traces of the wheel horses.

3. The breast collars were adjusted as high as possible without bringing pressure to bear on the windpipe, by shortening the front forks of the neck straps and adjusting the rear forks of the neck straps loose enough to prevent any weight coming on these straps when the animals were in draft.

4. All leather collar pads were removed and metal pads, which arrived at this time, were used in their stead. The first trial demonstrated that their sides were not long enough to hold them in place. They were continually slipping to one side or the other off the collar seat of the neck. All were of the same size and much too small for the average neck. After spreading and otherwise fitting the metal pads to the necks, we placed the leather pads on top of and strapped them to the metal pads to hold them in place. This worked out very well, but of course it would have been unnecessary if the metal pads had been of the same design as the leather pads. There is no doubt in my mind that the metal pads are much cooler and easier to keep clean and are, in that way, much better than the leather pads.

5. All carriages were carefully balanced so that, when limbered, the poles would remain in approximately horizontal positions. This removed a dead load from the necks of the wheel horses which in some cases was quite appreciable, and it was accomplished by one or more of the following methods; Spare wheels were hung on the limber pintles by straddling the pintles with two spokes and strapping the upper parts of the wheels to the handles of the limber seats; kegs of spare horseshoes were secured to caisson footboards; and, wherever necessary, sandbags were placed on, and secured to, the trails of the pieces and caissons. I believe balancing of the carriages was important.

6. The reel, water and ration carts were each coupled to a caisson in accordance with the recommendations of the previous battery commander, who had found that when hitched to those carts the wheel animals suffered excessively from sore necks and exhaustion. Coupling these carts to caissons further unbalanced these carriages and that had to be corrected. The additional load made no apparent difference in the condition of the animals concerned.

RECENT MARCHES MADE BY BATTERY "C," 76TH F.A.

Orders were received for the Battery to march back to Fort Russell and we left Fort Douglas on August 31st. After a week on the road, it became apparent that some of the necks were getting worse in spite of the care and attention that was being given to cleanliness, draft and road discipline. Sore necks were not confined to the wheel horses, but included lead and swing animals as well. There was only one conclusion to be drawn and that was that with the present breast collar there is a tendency for the collar to slide down on the average horse when he is in draft, due to the fact that the line of draft is below the normal to the bearing surface of the animal's chest and shoulders even when the collar is properly adjusted. This downward pull, which is the vertical component of the force acting through the traces, is transmitted through the neck strap to the animal's neck. This weight on the necks was so great that abraisons resulted. In order to remove this weight, "Holding-up straps" were placed on the lead and swing horses and the loin straps removed. The "holding-up straps" were so adjusted that the line of draft from the front of the collar to the "holding-up straps" was approximately horizontal. The "holding-up straps" on the wheel horses were also raised to the same height. The next day's march was sufficient to demonstrate that the principal cause of sore necks had been removed and from that day on the necks improved daily and as rapidly as did the necks of the few horses that were being led.

Adjustments so far made had removed all forces of any consequence from the necks of all save the wheel horses, and those that remained were due to a slight holding back exerted through the neck yoke strap before the breeching could come into play. This could not be eliminated because to do so would require an adjustment of the breeching so short that the animal's movements would have been restricted at the walk and trot. A constant use of the brake, even on the slightest down grade reduced this to a minimum.

At the end of each day's march all necks were carefully examined and washed with clean water and castile soap. Necks with even the slightest abraisons were then treated with an ointment furnished by Lieutenant F. M. Lee, of the Veterinary Corps. This ointment, which was very satisfactory, was made up of one part tannic acid powder, two parts boric acid powder, held in suspension with petrolatum.

The use of "holding-up straps" caused no soreness of the back in the entire Battery. There can be no question that this march was a severe test for the straps because the Battery not only started out on a long march with sore necks, but it completed it with two unusually long day marches.

On September 24th, when the Battery arrived at Bosler, Wyoming,

the weather had become very threatening. At that altitude severe blizzards are not infrequent at that time of year and, in as much as the only available camp site furnished no protection to man or beast, it was decided to push on to Laramie where some protection could be obtained. The day's march was 40.5 miles.

After two days of cleaning and polishing at Laramie, the Battery left for Granite Canon. About 11:00 A.M., as the Battery was nearing the top of Pole Mountain, it began to rain, which later turned into hail and snow. The storm grew steadily worse and at 2:30 P.M., when the Battery reached Granite Canon, the camp site was completely under water. The men were wet through and nearly frozen. At times it was all they could do to keep the animals from leaving the road to get their backs into the storm. Under the circumstances the only thing that could be done was to push on to Fort Russell. This was done and the Battery reached Russell shortly after midnight, making the march for the day 50.1 miles.

The next morning a thorough examination of all the necks was made. There were no infected sores and only a few irritated necks; most of the necks that had been sore in the earlier part of the march were not even irritated. A comparison with the condition of the necks before the Battery left Fort Douglas showed a marked improvement throughout the Battery, so much so that I am thoroughly convinced that any difficulty in making long marches due to sore necks can be entirely removed by making the changes mentioned above.

It is not the purpose of this article to recommend changes in the present equipment, although I believe that at present it is not all that is to be desired. Two-wheeled vehicles, even of the best design, are particularly hard on wheel animals. These carts must be carefully balanced, and I consider it very essential that they be provided with efficient brakes if they are to be hauled any distance as separate vehicles.

GOSSIP FROM MADISON BARRACKS

August 24, 1923.

Dear Rob,—

You were right in saying that I did not come up here merely for the fun of coming. If you were a Xavier boy you could easily understand why I gave up a good position with all its bright prospects, sacrificed my week-ends at the shore, and nailed myself down to the strict discipline of army life. Every Xavier cadet nurses the ambition to sport gold chevrons, and if he is fortunately a commissioned officer already, he never ceases to look for advancement.

For a commission or promotion in the Xavier regiment two things are necessary. First of all, the cadet must apply himself to his class studies. This requisite keeps our noses to the grindstone of Latin and Greek. Secondly, the cadet must be a good "driller." The officer of the future is the cadet who can come to attention with a certain snap in his action, who can hold his position with eyes front, head up, and chin in—even though his captain has not got his eyes on him. He's the lad who conscientiously learns every detail of the various formations, and each day tries to correct some fault in his drilling.

Due, no doubt, to this honorable ambition many Xavier cadets have been found at Madison Barracks and Plattsburg during the two summers just passed. Each time they have given up a whole month of the summer, in order to perfect themselves in military tactics and courtesy. The serious side of camp life I shall leave for another letter. In this one I want to show you how plentiful and varied was our recreation.

The authorities at Madison were certainly keen on preventing Jack from becoming a dull boy. Before coming here I had dreams of protracted drill periods, long, hard hikes under a pack, studying greasy guns for hours at a time, and then closing the day by falling to sleep while on guard duty. It was a pleasant surprise, therefore, when I found many opportunities afforded me for the purpose of recreation.

At half-past one every afternoon the "Red Course," or the first-year men, advanced upon the spacious parade ground, to be joined an hour later by the students in the "White" and "Blue" courses. Everybody was obliged to turn out for the games. Only special duty was sufficient excuse for absence. Fellows found themselves doing things which they had once thought were quite beyond them. And what a spirit of keen rivalry sprang up among the members of the different batteries!

Baseball naturally had the greatest attraction. And it was in this department of sports that many hidden lights were uncovered. Some of our Xavier boys came into great prominence. The "A" Battery team, which held the lead for some time, boasted two Xavier students, the "C" Battery team, uniting excellent playing with remarkable perseverance, finally were acclaimed the champions. No less than six players on the winning team were able to put their heads together and give a rousing "Xavier, rah!" for Battery "C."

Soccor and tennis had their followers, among whom were numbered many converts to the two games. Even the aspirants for track honors have time for a daily work-out. Several days before we broke camp a monster compulsory track-meet was held. The events listed were as follows: bar vault, running high jump, running broad jump, and 100-yard dash. The contestants were garbed, not in the customary light pants and shirt, but in full "olive drab." Can you picture a fellow thus equipped taking the bar at four feet, ten? Each individual was rated according to his performance, and from the individual ratings was computed one general percentage for the camp. Shortly after the above meet, the officials conducted an open competitive meet for prizes. About fifty medals were awarded to the winners.

Lack of space prevents me from giving details of the boxing and wrestling tournament. For the same reason I just mention in passing the grand opportunities for golf. Those indulging in that ancient and honorable game had the use of a near-by links at only a nominal charge.

At three-thirty each day all games suddenly blew up. A race ensued to don bathing suits and cool off. In a few minutes the placid surface of Ontario lost its quiet. Three hundred live American young men were telling the world that they were happy. Shouts and jests sped over the waters and lost themselves in the adjoining woods. Over at the end of the concrete pier a class is getting instruction in life-saving. Captain Skully, of the American Red Cross, demonstrated for us the various holds and grips, and breaking of the "death holds," and the towing and carrying of a victim. This class was supplemented by another on the parade ground in "methods of resuscitation." But the time speeds by only too quickly, for there goes the call to dress for evening parade.

Supper now over, groups in "olive drab" straggled over to the drill field, there to await the musicians. Yes, an honest-to-goodness band concert was our after-supper entertainment. Can that band play? Why, Rob, it seemed to me that Sousa, himself, that grand old leader and composer, was in our very midst. Paul Whiteman with all his glorified jazz and clownish actions and animal squeaking could never reach the depths of emotion sounded by our

soldier band. There they were—the Twenty-eighth Infantry Band from Fort Niagara, the first band of the American Expeditionary Force to cross the seas. What could be more inspiring? What more fitting farewell to parting day?

Now over all the camp a stillness falls, as night descends. A few seek seclusion in their tents. The crowd wends its way to the "Hostess Hut." Various are the attractions. Here a piano rings out with a new rag. Over in the corner a more sedate gathering makes suggestions to the victrola operator. Billiard tables give some a chance to show where they spend their afternoons. Off in the library some few pretend to be engrossed in books. "Bananas" is raising the roof. A number of students are writing letters home. Some even think of their one-time-or-other professors. And some seem to be very particular about their penmanship and spelling. They were never that way in school. Of course, the viewpoint is everything!

Honestly, Rob, when the call to quarters blew I didn't know whether to be glad or sorry. I was "all in," and should have been glad to get into bed. At the same time we had such good sport in the "Hut" that I could have stayed all night. Yet, when the clear notes of taps floated over the post grounds, I was "Johnnie-on-the-spot" for a good night's rest.

And so you see, Rob, that with such a schedule, I could hardly become the proverbial "Dull Jack."

Very sincerely yours,

J. HICHEY, Xavier, '24.

From *The Xavier*.

THE 1923 EASTERN ENDURANCE RIDE

BY LIEUTENANT M. M. CORPENING, 18TH, F.A.

THE Eastern Ride of 1923 goes down in history as the most successful endurance contest that has been staged in America. The performance of the winning horses clearly demonstrated the progress that has been attained in the comparatively short time that has elapsed since the beginning of endurance rides in 1919. These horses made a tremendous stride in the conclusive proof that breeding is the first consideration in horse selection. Conformation, type, movement, etc., are essential factors, but they go for naught without the blood to back them up.

The sponsors were lenient with their entrance eligibility requirements for the first rides in order to promote interest and to cooperate with those horsemen whose experience had not been extensive enough to convince them of the futility of wasting time and expense breeding cold-blooded horses, or even harness or draft horses for saddle purposes. That very leniency shown by the sponsors has been the most powerful proof that blooded horses alone are profitable and pleasurable to raise. Any horseman that sees his favorite type of animal fall by the wayside is more than anxious to transfer his partiality to the winning horse. So having convinced the horse followers that the cold blood has no place in the endurance contest, the requirements were raised. A horse must have a known breeding, same being a grade or better before he is eligible to compete in the ride. One can readily see that no destination could be reached by allowing open entries. Assuming that a freak would occasionally do well in a contest, one would not know how to reproduce him.

The 1923 Eastern Ride was held at Avon, in the beautiful Genessee Valley of western New York. The horses were comfortably stabled at the fair ground on the Wadsworth Estate. Through the untiring efforts of Mrs. Herbert Wadsworth, Colonel Shiverick and the cooperation of the local people, nothing was left undone that could add to the comfort and convenience of those participating in the ride. Colonel Shiverick, the route master, laid out the 300-mile course in five different 60-mile laps, starting and terminating at the fair ground gate. The course was practically all over dirt roads with good footing and a fair amount of hills. The advantages and disadvantages of the terrain were equally and fairly distributed among the different breeds of horses. That is, one day favored the speeder, while the next favored the hill climber. The first and last days were comparatively easy ones, the roads being generally level. The second and fourth days were good examples of roads

GOUYA

Winner of the Eastern Endurance Ride—An Anglo Arab.

PATHFINDER

Second Place, coming in to the stables the fourth evening of the Ride—A thoroughbred.

GOOSE GIRL

A halfbred—Third Place.

CLONMELL

An Irish Hunter—Fourth Place.

MAJOR S
A Grade Morgan—Fifth Place.

TOUTE BELLE
A Grade Anglo Arab—Sixth Place.

one would expect to find in cross-country riding; while the third day was difficult, twenty-five miles of stiff hills involving twelve hundred feet change in altitude and in addition the footing on these hills was bad. The road was pretty well covered with small, loose rocks. These rocks, the writer thinks, were responsible for much of the lameness that eliminated so many of the horses. Three-fourths of the ones ruled out were lame.

Of the twenty-three horses that faced the judges on October 14th, seven came in the ring for their farewell message on October 20th. The twenty-three starters were composed of four thoroughbreds, ten Morgans, three Irish hunters, two halfbreds, two Anglo Arabs, one standard bred and one saddle bred. The seven in the ring awaiting ribbon awards were composed of two Anglo Arabs, one thoroughbred, one halfbred, one Irish hunter, and two Morgans. Mr. W. R. Brown's Gouya and Toute Belle, Anglo Arabs, taking first and sixth places, respectively. Major Scott's Pathfinder, thoroughbred, got second; Remount's entry, Goosegirl, halfbred, third; Mr. H. J. Brown's Clonmell, Irish hunter, fourth; and Morgan Horse Farm entry, Major "S," taking fifth. Of the Morgans mentioned, only two were pure bred, Goldstone and Fairlady, while the Anglo Arabs were mostly thoroughbreds.

All entries were required to be in the Avon stables on the night of October 13th, although they did not pass into the jurisdiction of the judges until 9 A.M., October 14th. Sunday was a very disagreeable day, but the judges made a careful examination of each and every horse. The riders were required to mount, walk, trot, and canter to and away from the judges. The official Veterinarian made a very careful examination of each horse—any defects, blemishes, or abnormalities were recorded, together with weights and measurements of horses, and stripped weights of riders. Requisitions for Monday's feed were turned in to the weigher Sunday afternoon and the amounts recorded.

After the completion of the examination, one judge remained on duty at the stables until the lights went out at 8 P.M. and the guards took possession. The New York state troopers were secured to guard the stables from 8 P.M. to 5 A.M. Their orders were to allow no one in the stables during the night and with these lads on the job, no one cared to do any midnight salting or putting new skin on sore backs. Before this regulation went into effect, a case is known of one horse's leg being massaged all night. It is assumed that in campaign, a rider would be too tired or otherwise engaged to spend the night working on a horse—hence the regulation.

Monday dawned clear and warm, and at 6:30 A.M. the ride was on. Riders had the privilege of starting any time between 6:30 and 7:00 A.M., their time being recorded from checkout. They started

at all times between these hours, each having his reason for starting early or late, as the case happened to be. Some horses travel better following, while others enjoy leading the field, as was the case of Pathfinder. He started ahead, stayed ahead, and came in ahead. Monday was uneventful. The horses were all fresh and travelled well. The day was a little warm but the roads were good. The entire field finished the 60 miles in nine hours flat, and in excellent condition. Their appearance elicited a remark from a spectator as to how the judges were to pick a winner from 23 horses all looking equally well. That spectator was soon enlightened, for Tuesday started the old process of elimination and survival of the fittest. The horses began to drop out but the pace was not slackened.

Each day the field was reduced from various causes, but the nine hours flat seemed to be the goal of every rider. The time element is the reason for the 1923 Eastern being the most successful of all contests. Up to this event the time record was held by Vendetta with a total count of 45 hours, 17 minutes. The Western record is held by Nintu with 45 hours, 44 minutes. Then to have nine horses come in with a total count of 45 hours flat is astounding, and upset the calculations of all endurance ride followers. It must be remembered that condition counts 60 per cent, while speed counts only 40 per cent. Yet the feat has been accomplished and the writer believes that all blue ribbon winners in the future rides will have a flat time score. The competition is becoming so keen that the winning horse will have a score approximating 100 per cent.

In selecting a horse to win an endurance contest, one must constantly bear in mind five essential factors: breeding, soundness, conformation, gaits, and disposition. The first requisite might be compared with a poker hand. Some entrant is standing pat with a thoroughbred, so unless you have a combination that with a little luck in the draw or breaks in the ride will make you a winner, do not stay. Most horsemen know that the only horse is a thoroughbred and those who do not are getting their proof rapidly. Soundness needs no discussion. It is folly and waste of time to train an unsound horse with the expectation of winning a ride.

Conformation is important for generalities. A freak is found occasionally, but they are rare. Also, one will find that freaks possess certain essential qualifications, such as heart girth, or well-sprung ribs, etc. But for the majority of cases the blocky animal will produce the results—not a chunk, for he has not the ability to cover ground. Select a big-boned, short-coupled thoroughbred, with a good heart and lion girth, and a well-sprung barrel. The longer the last rib the better, as it enables a horse to hold his flank and keep his weight. Loss of weight counts heavily with judges. In considering the fourth qualification, bear in mind that the trot is

LINE UP FOR FINAL INSPECTION SATURDAY MORNING
Left to Right: Toute Belle, Norfolk Star, Gouya, Major S, Clonmell, Red Cloud, Goose Girl and Pathfinder.

NORFOLK STAR

Winner of the Colorado Endurance Ride this year, but the strain was too much to win a place in the Eastern too.

NINTU

Second Place in the Colorado Endurance Ride this year, but like Norfolk Star, not placing in the Eastern Ride.

the important gait. Get the animal with the square, straightaway walk and trot, with the least amount of friction and effort in these gaits. Avoid a horse that wings, paddles, overreaches, or has any tendency to interfere. Remember that a tired horse is leg weary and has not the control a fresh horse has. One that trots thirteen or fourteen miles fresh will trot about nine when he tires.

The disposition of a horse must be rated in proportion to the rider's ability to handle him. It is readily seen that a high-strung horse with a poor horseman up would soon wear himself out jigging or fretting. The writer realizes that the above qualification describes the perfect type of horse, so before remarking about the impossibility of finding such an animal, bear in mind that we are discussing the blue ribbon winner, without knowledge of ability, and they are not found at every post. The higher per cent. of the above qualification one finds in a horse, the more the chance of winning the ride.

Now having decided upon the horse you are going to ride, and time permits, try him out. Assuming that your horse is in good condition, give him from fifteen to twenty miles per day for three weeks, then shove him over the road sixty miles in nine hours for two days, and watch the results. If he comes in feeling good the second night and is alright the third morning, you have a good prospect for the ride. However, you must have enough time to give him at least six weeks between the tryout and the test. Obviously, training is a very important feature of the contest. Personally, I believe more horses are overtrained than undertrained. One must have his horse feeling better at 6:30 A.M., the first day of the ride than he ever felt in his life. Naturally, this will not be the case if too much is taken out of him before. Have him in good flesh but no superfluous fat. Volumes could be written on the theory of this subject, but this is no place for extensive elaboration.

As to the actual ride itself, suffice it to say, that all preliminary schedules as to how much time to walk, trot, etc., are worthless. One must ride his horse and his road. The weight must be kept well forward and human comforts must be sacrificed in favor of the horse. The rider should stay a little ahead of the horse at all times, having his mount catching up with him instead of dragging him along. Give your horse all spare time on hills but make every minute count. At noon give the animal just enough time to eat a small quantity of oats. It is not possible to give him enough time to rest, so the result of longer than twelve or fifteen minutes merely serves to let his blood stagnate and does more harm than good. Make enough time on the road to let your horse walk a short distance to and from stables and noon stop. Give the horse a chance to cool without extra walking.

The attention the horse demands after completing the test

depends upon his condition. Keep his legs bandaged a few days to extract any fever or injuries that might have occurred. Some daily walking is necessary. The animal has been under such an intensive strain that too sudden relaxation might cause permanent injury. After all, efficiency of a horse varies directly as to the attention given him.

In saying farewell to the Eastern Competition, the writer would like to express, in behalf of the Field Artillery, the thanks and appreciation due the *Rochester Herald* for the presentation of photographs of the ride and its participants. The pictures were furnished by the *Rochester Herald* through the courtesy of Mr. W. D. Manning, Managing Editor, and Captain Case of the Staff.

"WHEN IN DOUBT, SAY 'DOUBTFUL'"

A SIMPLIFIED SMOKE-BOMB RANGE FOR NATIONAL GUARD

BY CAPTAIN GENNAD A. GREAVES, F.A., INSTRUCTOR
VIRGINIA NATIONAL GUARDS

IN the National Guard, as in the Regular Army, one of the hardest things in the world to do is to make an inexperienced officer of field artillery say *"doubtful."* It simply isn't done—in the best circles of the inexperienced, or the worst, for that matter.

It was in an effort to teach the fundamental principle that a doubtful shot is a doubtful shot, that a variation from the conventional smoke-bomb range was devised by the officers of the Virginia National Guard. It seemed for a time impossible to convince the newly appointed and inexperienced officers of Field Artillery that a shot which they sensed unanimously as "doubtful," was really and actually doubtful. A circle neatly drawn above the target on the blackboard was an *"over,"* and blackboard methods be damned, even if you did have to sense it as *"doubtful."*

And so it happened, that in the struggle to impart this basic principle, several attempts were made to construct, without cost, a kind of smoke-bomb range wherein this principle could be taught more effectively than on the blackboard. Finally, a miniature "smoke-bomb" range was devised and put into operation by Captain John D. Thomas, 111th Field Artillery, at Norfolk, Virginia. And although first put into operation out of doors, the scheme is nevertheless well adapted for use within doors, and it is the indoor feature, particularly, that I wish to stress. The Field Artillery Officers' Club (in reality a school) had for some months been very active in experimenting and devising ways and means to make the newly appointed officers appreciate and understand, not only the technical phases of artillery firing, but also the appearance of the quickly vanishing bursts among the targets, and to make him, as far as possible, experience the sensations and emotions of the eternally damned whenever ammunition is wasted or valuable time is lost.

A little experimentation resulted in a very primitive "smoke-bomb" range in the area near the Norfolk Light Artillery Blues Armory. The scheme described below, while having a few refinements, is in substance the same as that originally designed by Captain Thomas. No equipment is needed other than a few boards, a few buckets of sand and a repeating .22-calibre rifle.

A range of convenient length may be taken. Usually 40 or 50 yards will prove enough, and that much may be found within most armories. Assuming a convenient scale, for example, one yard in

the armory equals 100 yards outside on the target range, the observer may be placed at ranges varying from 1800 yards to 4000 yards. The targets are built approximately to scale. This is easily accomplished by using the mil scale of the field glasses from the position of the observer. About one yard immediately in rear of, and also in front of, the target is a zone of black earth or black coal dust, dampened as much as necessary. This black dirt or dust is for the purpose of registering "grazes," both over and short and also "grazes doubtful." These two zones, each of which is about one yard wide, extend across the floor in a direction perpendicular to the direction of fire, the target being at some point near the centre of this double zone. Beyond the zone of black dirt in rear of the target is a zone of white dust or fine white sand extending for about two yards beyond the zone of black. A similar zone of white sand or white dust is placed on the near side of the black zone, between the observer and the target. In each case the white sand is placed in juxtaposition to the black. The white sand is for the purpose of registering "low" bursts, either over, or short or doubtful. The "horizon" is conveniently staked off in 20-mil notations, or smaller, by chalk marks on the brick wall which is used as a backstop. A screen of bricks or other material prevents the observer from seeing the 20-mil marks on the wall, while the operator of the range is so placed that he may see them.

The operator, armed with a 16-shot .22-calibre rifle, obtains an elevated seat in a window or on the top of a caisson or something higher. He can see over the little brick screen which keeps the mil scale hidden from the officer firing. The officer firing is seated on the floor at approximately the same distance from the target as the operator. Data are given and the battery fires—four shots, spaced as desired, are fired by the operator with the repeating rifle at about a two- or three-second interval. According to the altitude of the operator's seat, the bursts will be large or small. This is also controlled by dampening the sand and earth when it becomes too dusty. Almost any size burst may be obtained. A little practice soon indicates what dampness is desired and also what altitude the shots should come from.

With this much equipment excellent results may be obtained, but the complaint soon arises: "What about 'high' bursts and 'very high' bursts?" The shots strike the black earth and make an excellent "graze" burst, and the thin puff of white dust by a slight stretch of the imagination, may be visualized as a "low" shrapnel burst, or possibly even a "normal." What can be done to simulate the "high" and "very high"?

By means of a board about 12 inches wide and ½ inch thick and about 10 or 12 feet long, a shelf may be arranged immediately

above the targets. This shelf is movable, being supported by two short boards about one and one-half feet high. This board is placed perpendicular to the line of fire, flat surface up, so that only the half-inch edge is visible to the officer firing. The top of the board is covered with white sand two inches deep. A shot falling in this sand will appear to the officer firing, from his position on the ground, as a "very high" burst. Similarly, a shelf of very thin material may be arranged at such an altitude as to give "high" bursts. A further refinement, if it is desired, may be made by erecting a screen in the area back of the targets, so that in case the operator should miss the "very high" board, the shot would fall unobserved behind the screen as "lost," so as to avoid having too much irregularity in height of burst. For it may prove advisable with beginners not to have "lows" and "very highs" in the same salvo.

It is needless to remark that the operator should be a good shot, and also an officer well versed in the computation of deflection difference. Such an officer should experience no difficulty in giving the officer firing approximately what he asks for on each salvo. Volley fire, in this scheme is not provided for. The operator should have an assistant with two or more extra tubes kept constantly loaded ahead of time to avoid delay. The officer firing is equipped with field glasses.

CAISSONS AND PIECES

INSPIRED BY A MONTH SPENT IN THE FIELD ARTILLERY AT MADISON BARRACKS, N.Y.

BY ALFRED J. BARRETT, ST. XAVIERS, '24

Give me a team, not a dull, dray team,
But steeds with fire and vim;
A pair of chargers that make life seem
Like ridin' a buzz-saw's rim!
Let me feel my near mount's muscles roll
As I grip the off-reins tight,
And swing the wheels from a deep shell-hole,
And gallop to the fight!

Over stump and rock and shell-torn ground
Lurch lumbering limber wheels,
And the thundering, clattering hoof-beats sound
While the bugle loudly peals.
The caissons wheel, the pieces swerve,
Both come to the rightabout;
And all through the fight as the guns we serve,
Re-echo commands that we shout;

"Slow trot! Double sections left about!"
Rang a voice both loud and clear;
"Right front into line! Caissons left!"
And the men pulled up from the rear;
"Action Right! Unlimber!"
No time for a nerveless fear.
"Prepare for action!"

Give me a gun, not a doughboy's gun,
But a piece with a three-inch bore;
A belchin' monster, a spurtin' one,
With the enemy's lines before;
A loaded case of explosive shell,
An' a grimy, black-lipped crew,
An' the bursts will tell what the fiends from Hell
An' a good gun crew can do!

What's like the thrill as the gun is primed
'Till data comes from the O.P.?
What's like the wait till the fuse is timed
For a target you cannot see?
The sights are trained on the aiming stakes
With the gunner at traverse wheels
When the "ex" in the sand-bagged dugout breaks
The suspense the whole outfit feels:

"Batt'ry tenshun-n! On one open five!"
Again rang the loud command.
"Three-four hundred—corrector, three-zero!"
And the dial is closely scanned.
"Batt'ry, salvo right! One round, shrapnel!"
What foe could the shock withstand!
. . . "Ready . . . FIRE!"

—*From the Xavier*.

THE NATIONAL GUARD AND PUBLIC OPINION

BY CAPTAIN A. H. LEE, F.A.(D.O.L.), INSTRUCTOR 185TH F.A., IOWA NATIONAL GUARD

HAVING taken up the duties of an instructor to the National Guard Artillery in one of the central western states, after an absence from that locality for a period of some four years, it has been a source of considerable interest to the writer to note the transition of public sentiment from one of apathy toward all that savored of the military, to one of genuine interest in the present national defense program.

This awakening interest on the part of the general public has been of such a gradual nature as to be almost imperceptible to the casual observer, but nevertheless has been steadily increasing in volume as the months have progressed. Now definite facts and conditions stand out as positive proof of this growing patriotic concernment.

The gradual welding together of the regular component with the two great civilian branches, the National Guard and the Organized Reserves, has had profound effect upon public opinion. It is now fully realized that no great militaristic coup is under contemplation, but rather that the scheme for national defense as worked out is the product of sane thinking by patriotic people.

The public in general are now awakened to the sinister propaganda of the pacifist and the maledictions of the disgruntled radical whose ultimate objective could be nothing else than a weakened nation with a vacillatory defense policy incompetent to defend if necessary its great public institutions.

These changes in public opinion have been wrought by various means. The sound logic of our military leaders, who have pleaded the cause of preparedness before the bar of the general public and the drafting into the national service of the leaders from the civilian components, who have given both wise and valuable counsel, have both had their effect. In the writer's opinion, however, one of the largest factors in the middle west has been the relationship developed between the public and the federally recognized National Guard.

This revitalized National Guard has served as the rallying point for all patriotic organizations. The American Legion has found in it an instrument for the perpetuation of those very ideals purchased so dearly in the late conflict. The public has found it to be an insurance against lawlessness in times of industrial strife as well as an agency for public service in the face of such calamities as

floods, forest fires or tornadoes, all of which instances have arisen within the past six months.

The dual function of the National Guard, requiring it to be prepared to take the field against an alien enemy as well as to preserve the institutions of democracy at home, makes its adequate training of paramount importance to the nation. The best instruction the Regular Army can give, with every facility for successful training during their limited period in the field annually, should be provided. The personnel, both officer and enlisted, should be of as high calibre as the community can furnish wherein the units are located. The artillery unit to which the writer is assigned is particularly fortunate in its commissioned personnel; the commanding officer, having been on general staff duty during the late war, is well fitted for his position, giving liberally of his time and energy towards the upbuilding of the organization, while the other officers with the exception of three or four, have had war experience in like grades. As a result a high type of enlisted personnel has been attracted to their organizations.

The work as prescribed by the programs of instruction, although arduous at times, seems to attract rather than repel the men in their efforts to maintain efficient batteries. On the last national rating sheet issued by the Militia Bureau, which is based upon the annual attendance at formations, with maintenance strength as a standard, this unit ranked sixth with a percentage of over one hundred, and this attendance in spite of the large rural percentage of men on the rosters who are forced to travel often several miles over bad roads and through inclement weather.

From a little known member of the body politic, the National Militia has become the very heart of the middle western community life. In the city where the writer is stationed, the battery armory is the civic centre of the municipality. The public are welcomed as spectators on drill nights. Retired and discharged soldiers who may have been specialists along certain military lines are invited to give talks to the battery. As a part of the regular instruction to the battery communications detail, a large radio set has been installed. This is equipped to carry throughout the large auditorium, which is kept open to the public who are thereby enabled to receive stock reports, results of athletic contests, lectures and musical entertainment. On other than drill nights, the armory serves to house such events as public lectures, entertainments, debates, political gatherings and only recently five hundred of the leading citizens sat down in the auditorium to a banquet under the auspices of the Father and Son Association.

As a further evidence of the community pride in their battery, the employers agreed to pay the regular salaries of their employee

members of the battery while absent at their summer encampment. A liberal purse was raised by popular subscription to augment the ration allowance, and presented to the battery commander prior to entraining. On national holidays, when parades are in order, the organization commander of the unit in the city concerned is invariably called upon to write the order of the day as well as to participate in the ceremonies. In fact, the community life and the battery organization have become so linked together in a joint pride and common interest that a bond of inseparable union has been created.

Public opinion, which is the keystone of all national policies, is slowly but surely crystallizing so that now a sane, adequate and efficient national defense policy is not only desired but popularly demanded regardless of social or political affiliations.

Maligning the Mule

A MULE'S disposition is "open and notorious." So holds the Oklahoma supreme court. Standing without qualification, this places undue emphasis on a bad trait of an animal that has many good ones to offset it. The mule may be short of temper, but he is long on pull and haul and service. He may be weak when it comes to resisting temptation to indulge in a fling of heels or a snap of teeth, but he is strong of leg and back when it comes to laboring for man. Through the ages he has carried man's burdens. Sure of foot, nimble in action and gifted with uncanny instinct in sensing danger ahead, he has travelled safely on many trails too treacherous for other beasts of burden. With pioneers the mule has helped to break new paths into the unknown, and has always worked his way. Moreover, the mule has a will of his own—a steadfastness, dubbed stubbornness when opposed to man's will, that nothing short of an express train or a battering ram can budge. This gives the mule's service the character of a free-will offering, and therefore deserving of real gratitude. He may not be much to look at and he may not invite petting, but he invites a measure of respect, court decisions to the contrary notwithstanding.—From the *Washington Post*.

FOREIGN MILITARY JOURNALS A CURRENT RÉSUMÉ

ENGLAND

"The Journal of the Royal Artillery," September, 1923

MUTUAL OBLIGATION OF FOOT AND GUNS IN MOVING WARFARE

THIS leading article by Major Duncan discusses the mutual obligations of infantry and artillery in open warfare. The subject is covered by three headings, coöbservation, coöperation, and communication. The infantry and artillery observers should be together from the preliminary reconnaissance to the end of the engagement. The writer gives some valuable hints for observers as to the procedure to be followed in the general open warfare situation. The observer will first locate his position and that of a reference point upon the map. He will find angles and ranges to important points in the foreground to right and left and plot these on the map. Then the information can be transferred to a chart giving the description of the objects, map references, code name, and remarks about the enemy there, arranged in columns for convenience. The importance of field glasses or a more powerful instrument is stressed.

Under coöperation, the author speaks of reconciling the infantry to the probable error and showing them the cause of it. The value of enfilade fire is treated in showing that one gun can do so much more good by enfilade fire and that barrages can be less ragged and permit the infantry to follow more closely. As a development of the late war, the responsibility of the field artillery for defense against tanks is properly stressed. Whenever possible, artillery fire should be observed, and not from the map. Artillery should not be too hasty in engaging targets upon which the infantry, with machine guns, might gain better effect. Above all, the artillery should have forward with the infantry, besides the liaison officer, another man trained to observe fire if necessary. A few guns should be well forward, too, near an observation post. As for the infantry, they should keep the artillery informed as to contemplated movements. Moderation in demanding fire should be remembered on account of the difficulties of ammunition supply and the care of the guns. Wire cutting is not considered a proper function of the field artillery in war of movement, because it takes too much time and there is no surprise.

In speaking of communications, a plea is made for rapid improvement in the wireless to cut out "jamming." The field telephone is the best means at present, but favorable mention is made of flags and shutter discs, daylight signalling lamps and Very pistols.

SOME THOUGHTS ON COÖPERATION (MAJOR YOUNGER)

In this article, Major Younger speaks of the importance of coöperation. The amount of coöperation that will exist between the infantry and the artillery will depend in the first place upon the amount of knowledge that the artillery has, of how to aid the infantry, and in the second place, upon the knowledge that the infantry officers have of how to use the artillery. It is therefore a question of professional knowledge. During training, coöperation should soon become instinctive. Coöperation is increased by the temporary assignment of officers to other branches. Coöperation of the air service with both the infantry and the artillery is of particular importance on account of reconnaissance and the observation of fire. To be effective, coöperation depends upon continuous and good communication.

MOUNTAIN WARFARE (MAJOR WILLIAMSON)

The author has evidently had much active surface in the mountainous border regions of India. He shows that, notwithstanding the necessity for isolation of units, the same fundamental principles apply as in any other type of warfare. This isolation, which the writer calls "transborder loneliness," is overcome to a large extent by the use of the air force, wireless communication, better roads, armored cars, etc. The air force is of particular use in taking air photographs and dropping air bombs.

ORGANIZATION OF DIVISIONAL ARTILLERY (CAPTAIN WILDEY)

Infantry methods have changed as a result of new weapons. With this change of infantry methods there results a change in the type of artillery support required. The infantry units being more decentralized and self-supporting than before, require accompanying guns to support them. With the detaching of accompanying guns, the battery becomes disorganized, for there is always a stringing out of jobs and communications with men changed from their accustomed duties. Since this will be the normal case, the writer proposes an organization which does not change according to the situation and does not involve improvisation to meet certain tactical situations.

The suggested remedy is this organization for the division:

(*a*) Headquarters.

(*b*) 2 Brigades.
- 2 Light Batteries (24 guns).
- 1 Pack Battery (12 guns).
- 2 Light Batteries (24 guns).
- 1 Medium Battery (12 guns).

(*c*) Ammunition column.

The "battery" is a sort of regiment with two battalions. Each battalion is commanded by a captain and has two batteries of three guns each. These batteries are each commanded by a lieutenant and can be controlled in combination as a six-gun battery or else can be left as two three-gun batteries and function perfectly. If it becomes necessary to detach accompanying guns, the captain still has four guns left and sufficient men from the two battery command details to allow some to be sent with the accompanying guns. So things work efficiently because each man performs his accustomed job and there is no improvisation.

THE YUNNAN PACK SADDLE (CAPTAIN DIMMOCK)

The most reliable method of following the infantry with accompanying guns is by the use of the pack mule which can go almost anywhere. And so it is interesting to hear of the writer's experience with this particular native type of pack saddle in use in the mountains of India and China. The saddle consists of a wooden frame padded inside with straw and having a breast strap in front and a breeching and crupper in rear. There is no girth at all. Down the front on each side and down the back on each side are ridges. The essential feature is the "trestle," a small table-like affair. The loads are strapped to the sides of this trestle when it is on the ground and then the whole thing is carried by two men and put on the saddle from the rear in the same manner that we put on the aparejo. It is kept from moving front or rear by the ridges of the saddle. Of course, a top load is impossible without a girth, but the idea of having one saddle for many different trestles is a good one, and we can still use this idea by putting a cincha on the saddle and providing a means of fastening the trestle on securely when a top load is used. The type described by the author was found to be of advantage when a mule fell down, for then the load fell off and the animal could save himself, being unencumbered.

"The Journal of the Royal Artillery," October, 1923

THE MODIFICATIONS IN FIELD ARTILLERY EQUIPMENT AND TACTICS RENDERED NECESSARY BY THE INTRODUCTION OF THE TANK
(LIEUTENANT TRUSCOTT)

This is the leading article and is most interesting and instructive, so that it is covered at some length here. In the author's introduction he shows the importance of the subject when he states, that, whereas we once had rather slow-moving targets, we now have the airplane and the fast-moving tank which, if not destroyed in time, will destroy us. Only the tank problem is discussed in this essay.

The type of tank to be encountered in the next war will weigh

about eight tons and have a maximum speed over good ground of about 30 miles per hour. Its armament will consist of one gun something like the six-pounder mounted in a turret and two or three machine guns. The maximum range will be about 2000 metres, but range over 1000 metres will not be very effective. The armor will be sloping to allow bullets to ricochet and will be from one-half to one inch thick. The cruising radius of the tank will be over four-hundred miles.

The tank will be used to support infantry or to act independently with cavalry. It will endeavor to break through, attack the flanks, or envelope, and thus make it easier for the infantry to consummate the victory. It is aided greatly by its mobility.

The means that are available for defense against tanks are, airplanes, to give warning of their approach; infantry, with machine guns and light guns which are, however, easy to get past; other tanks, not always available; obstacles, often not ready in time; and finally, field artillery, which is the most important weapon in the defense against tanks.

The characteristics that are required for an anti-tank gun are considered. It must be very mobile in order to intercept tanks. It must be capable of being put in action very quickly, even firing from column on the march. It should have all around free traverse with shoulder support for giving directions. It must be inconspicuous. It must be rapid firing, for it may have to engage several tanks and gain the first effect. It should have independent angle of site to facilitate laying. The trajectory should be flat to speed up ranging. The projectile must be not lighter than the 18 pounder, and high explosive with great penetrating power.

The author then views the suitability of the present guns for anti-tank warfare. For the present it will be necessary to modify the guns to fit all uses; it is more economical and convenient. But the present gun is too slow in traversing, nor does it give wide enough traverse. All around traverse should be obtained in some way and this might be done by providing four trails, one at each point of the compass. The present gun is not mobile enough.

Everything is in favor of the self-propelled mount. The total weight should be about four tons and the height about five feet. It should have a traversing gear with a quick release and should have independent angle of site. Perhaps for stability, there should be a system of jacks or spades.

The writer then takes up the gunnery problem. There are three possible methods of attacking tanks: barrage, direct laying or indirect laying. The barrage is not very effective, for it must be remembered that only direct hits will be of value. The barrage will be resorted to only when observation is impossible as when there

is smoke. Indirect laying is desirable because a larger area may be covered and the moral effect on the tank crews is great because there is no method of replying. But to make this fire effective perfect communication is necessary direct from the observation post to the gunner and No. 1, who should both be equipped with head telephone sets. Since the wire may be cut, radio is of value, but should not be used long in one position as the enemy can locate by radio the position. For indirect laying, the data must be computed very rapidly on account of the moving target and so some sort of plotter should be designed. A range finder is needed. The use of a witness point and laddering the ranges will help gain quick effect.

Direct laying will have to be used for the time being, because of the equipment at hand. Communication is not good enough yet for indirect laying. There should be a range finder at the battery. Since the target moves very rapidly, we can dispense with the bracketing under 1000 metres. Also the trajectory will be flat and the estimated range will be effective on account of the target. At longer ranges the writer advises firing through a long bracket, assumed, and basing the effective range on the observation of the rounds. It would seem that our own method is better, that is, to assume long brackets and narrow down by volleys in the manner in which we attack fast-moving cavalry.

The author then takes up the tactical handling of the anti-tank guns. The fire unit must be of at least two guns on account of the need for volume of fire on a fast-moving target where ranging is difficult. The immediate needs of the infantry must not be forgotten. In attacking two tanks at long range, first concentrate on one and then to the other; at short range, split the platoon. Tanks that have penetrated the defensive zone should be fired upon nevertheless, and notwithstanding the losses that our own troops may suffer. This is to be deplored, but the losses to our troops by leaving the tanks alone would be greater.

On the march the tanks will reconnoitre, overcome resistance holding up the column, and defend the column against hostile tanks. The field artillery must assist the tanks in these duties. That field artillery which assists in defending the column should remain on the flanks and "leap frog" or advance in echelon. Tractor artillery is the best for this, because it can get off the road anywhere. In rearguard actions, the last units in position will be the tanks, and these should be well protected by artillery. The field artillery must guard against being outflanked. Smoke shell is useful. Field artillery must be assigned to tanks acting independently to protect them.

As for the tactics of the anti-tank guns when in position, Lieutenant Truscott shows that it is necessary for the guns to be placed on a ragged line because tanks may break through and attack the battery from the flank. The guns of the flanks of the battery should

be thrown back so, that the fire of no guns will be masked. Reciprocal laying will be useful.

The battery must be careful not to have any dead space near the position as tanks may creep up. It may be necessary to detach a gun to cover the approaches. Since the guns will be capable of all-around fire, the ammunition tractor will have to be in a hollow near the guns with ammunition dumped at each gun.

In advancing to repel a tank attack, the guns must be ready to go into action instantly. Some guns will be posted in observation at important points such as bridges and roads.

The field artillery is going to be the most important thing in combating the tank, and it is up to us to make a very mobile self-propelled mount capable of all-around traverse.

FRANCE

"Revue Militaire Générale," September, 1923

In a novel article entitled "The Meeting Engagement," Lieutenant Colonel Allchaut reminds us that an enemy may not always be advancing in column, as we are, but may, on favorable ground, organize a position for our reception. Then, if we develop our forces piece-meal from a column formation, we shall not be able to obtain their maximum potential offensive strength. Superiority of fire is necessary during the entire attack—and especially at its inception. To secure this, we must take up the approach march when we can expect contact within the next twenty-four hours as determined by air observation. Preceded by cavalry, the Infantry advance will be by bounds within zones of advance and action from position to position, some of the artillery always being available to give support. Contact will finally be gained, and we can be more favorably disposed to commence the attack over the entire front than if our advance had been in column.

Commandant Charbonneau's second instalment of "A Flank Manœuvre During the War of 1914-1918" with the sub-title "The Operations of the First Colonial Corps During the Spring Offensive of 1917," describes the attack of this command commencing May 5th. This Corps was on the extreme right of the front upon which the Sixth Army was to launch its offensive. The enemy were extremely well organized and holding to the end; and only a slight advance was made by the Corps, although attack followed attack on the 5th and 6th of May.

The author believes that a flanking manœuvre on a stabilized front can only be successful if the element "surprise" is obtained.

In open warfare, a flank operation has two well-defined phases:

1st. A demonstration on one or more parts of the battlefield.

2nd. An attack in force against another point.

The assault in position warfare, which can have only one of two outcomes—to be stopped or to be successful—cannot be a simple manœuvre. Furthermore, if the attack is checked, a flank manœuvre cannot have much effect. If the assault is successful, it is due to its own strength alone; but a flank attack in this case can complete—not bring about—the decision.

Commandant Janet's study of "The Attack of the 27th Division in September, 1915," in the first phase of the 1915 Champagne offensive takes up in detail the disposition and events of this offensive against the part offensive zone located west of a line through Perthes-les-Hurlus and the Butte de Tahure. The German first and intermediate positions were easily passed, but the centre of the divisional assault line was held up on the German second position which the corps artillery had failed to destroy.

A most interesting article contributed by M. Reginald Kann compares the successful action of Kuroki at Liaoyang in withdrawing two divisions from the Japanese right flank—thus causing a gap, and sending them across the Taitseho to make the decisive stroke on the Russian left, to that of von Kluck, September 6th and 7th, 1914. The German withdrew first two and then the remaining two corps of his Army to attack Maunoury's force, which was threatening his flank and rear. The British and French entered this gap, flanking the German Army on von Kluck's former left and causing it to fall back. The difference in the result of the two operations was due primarily to the difference in character between the Russian and Allied Chiefs.

"Revue Militaire Générale," October, 1923

"Ludendorff's Strategy on the Eastern Front" commences the study of the operations in Eastern Prussia and Poland during the last four months of 1914. General Camon outlines Schlieffen's plan which called for crushing France in a few weeks, and, as modified by the second Moltke, holding the Russians in the meantime with a comparatively small force.

But in the latter part of August, 1914, the Russians were rolling back the Austrians south of Warsaw. Forces were marching from this city towards that vast industrial centre—Silesia. Samsonov's Army was pushing on inclining to the north, south of the Masurian Lake region, and threatening the communications of the Eighth German Army further north, and the latter Army north of the lakes was checked and being driven back before the northern Russian Army of Rennenkampf.

Ludendorff reënforced the troops opposing Samsonov, outflanked his right, and drove him back 100 kilometres. Then the

15th, in the battle of the Masurian Lakes, he had driven back Rennenkampf more than 100 kilometres in four days. Leaving small forces to hold the beaten Russians north of Warsaw, the 8th German Army is to constitute most of the 9th Army formed northeast of Cracow to support the left of the fast-retreating Austrians. But the Austrian retreat continued, although the new 9th Army fought on its left, until the Russians turned over the pursuit to the cavalry. This saved the situation for the Central Powers.

"The operations of the First Colonial Corps during the offensive in the spring of 1917," under the main title, "A Flank Operation During the War of 1914-1918," is completed in this number. Commandant Charbonneau points out that the Corps did not have, nor did it seek, the element of surprise.

As to the front of attack of this Corps, this was sufficient if we accept the conclusion drawn from numerous 1918 offensives that the depth of penetration is equal to, or slightly less than, the extent of front attacked. But the divisional front was too great if we take the figure 2500 metres as the average from the experience of other divisions which had part in successful offensives in France. And, too, greater reserves were needed.

Lack of sufficient artillery of all classes had its effect; and it was in just such an action that it is indispensable.

Renault tanks, in numbers would have permitted, not a reduction in the Infantry which wins and occupies the field of battle, but in the amount of trench and light artillery and howitzers some of the missions of which these tanks can handle.

This attack brings home the fact that military leaders must have meteorological information at their disposal.

M. Jean Fleurier contributes some "Sleep-dispelling Thoughts," among which are the following:

The greatest hardship of war is not being exposed to danger, suffering, or even the enemy, but is having to serve under leaders whom one distrusts. I have never understood the leaders who, without faith in the outcome of the attacks ordered by them, do not take part in the assault line.

There will come a day, perhaps, when France will realize that it has made a mistake in training Africans and Indo-Chinese by the tens-of-thousands to the use of artillery and machine guns.

Every officer taken prisoner, every chief of any grade, who surrenders the place or post assigned him, should be brought before a court-martial.

The final instalment of "The Attack of the 27th Division" appears in this number of the *Revue*. It takes up the "whys" and "wherefores" and the lessons that can be drawn from this action.

Captain Salmon's article, "Transylvanian Operations," in September and October, 1916, describes how von Falkenhayn in fifteen days, by the superiority of his manœuvring, drove the invading Rumanians from Transylvania, although the latter were superior in number.

But his strategy, which takes the usual German form of stretching the principle of "economy of force" to the limit and of doing away with all reserves—if his outflanking offensive demands this, is successful, only because of the inexperience of the Rumanians.

"Revue d'Artillerie," September, 1923

"Why We Do Not Want the Decigrade," by Lieutenant Colonel Pagezy, is an argument against the adoption of the decigrade as the unit of measure for all angles in the artillery service. After a discussion of the various units proposed, the author advocates the adoption of the "R mil," one-sixth thousandth part of a circle. This mil does not approximate the true mil quite so closely as does the artillery mil, but is accurate enough for practical purposes. Its advantage rests principally in the fact that the circle may be divided into thirds, as well as by multiples of two and five.

"Employment of the Divisional Artillery in a Defensive Action" is the conclusion of a study by Colonel Berniolle which was commenced in the August issue. It is the artillery annex to the plan of defense of an infantry division having an interior position in a larger force, being an approved solution of a map problem given at the Centre of Artillery Studies. It illustrates distribution in depth, the extensive use of counter-offensive preparations, and systematic firing on the probable lanes of advance of the enemy.

"Astronomical Methods for the Determination of Direction," by Lieutenant Riveau. Two methods are given, with a simplified graphic solution for each. These methods allow accurate orientation, for batteries supplied with adequate instruments in positions lacking other good means of determining direction.

"Indirect Sight on the Sun with the Jobin Theodolite" is a brief description of a method and an appliance which improves upon a service method of determining direction.

"The Concrete Case" is the first part of an interesting study by Colonel E. Cambuzat on the training and development of the military mind and character. This article discusses the effect of specific instances cited from personal narratives and from history. Both influences are useful, the latter more than the former, in developing the faculty of connecting effects with causes, and applying the lessons of the past to problems of the future.

"Molecular Deformation of Metals under Tension" is the conclusion of a report by Major L. Fraichet, on extended tests with magnetized iron and steel bars. His tests indicate that there occurs within the elastic limit, an increase in the amount of magnetism proportional to the tractive effort applied; and also, that the true elastic limit is materially lower than the apparent elastic limit determined in the customary manner. This may explain the failure of many objects when stressed repeatedly within the elastic limit.

"Revue d'Artillerie," October, 1923

"Some Reflections on Mathematics," by General Vouillemin, is a brief survey of the general field of mathematics, made with the object of "initiating the reader into the language, turn of mind, and manner of viewing things, characteristic of men of science." The relations between the various branches of mathematics are shown and a number of general applications are discussed.

"An Essay on Aerial Ballistics" is the first part of a study by Major D. P. Bloch, to examine "the laws governing the movement of an object, such as an airplane bomb, under the influence of gravity and air resistance, when released in space with a certain horizontal velocity." Also to determine the conditions under which such an object will strike a designated point on the earth's surface, considering the conditions existing at the time of the release, and the disturbing elements, particularly wind. The author compares the trajectory of a bomb with the descending branch of that of an artillery projectile, and adopts ballistic formulæ for the solution of his problem.

"Remarks on the Artillery Duel," the first part of an article by Lieutenant Colonel Mayoux, is written to bring the different problems of organization and employment of the corps artillery before the service for comment and discussion. The artillery duel, the principal mission of the corps artillery, is outlined in the light of existing regulations and past experience. A careful examination is made of ammunition consumption, number of batteries employed, and duration of fire, for the various phases of a stabilized situation.

"Calculating the Angle of Transport from a Lateral Observation Point." This article explains simple methods of calculating the deflection shift from one target to another, when both are visible from the observation post; giving abbreviated formulæ and discussing all cases of its application. A diagram and scale are also described, which allow a graphical solution.

"The Concrete Case." Colonel Cambuzat concludes his study by

showing the effect on development of military character, of map problems, tactical walks and rides, and manœuvres. Instruction of this type develops assurance and initiative, and is the most important means of obtaining a well-rounded training.

BELGIUM

"Bulletin Belge des Sciences Militaires," October, 1923

A reading of the October, 1923, number of the *Bulletin Belge des Sciences Militaires*, a private publication, indicates a number of splendid contributions to general military science but not one about the artillery. They are:

"Les Operations de l'Armee Belge, 1914-1918." This is an article of eight pages, with map, unsigned. A résumé of the operations for October 4, 1918.

"Ce fut-il une erreur de replier l'armee Belge sur Anvers au mois d'aout 1914." (Was it an error for the Belgian Army to fall back to Antwerp in 1914?) By Colonel A. E. M. Nuyten, General Staff, Belgian. Twenty-eight pages. This well-written article is a reply to a criticism of the Belgian Army by Captain Kuntz of the French General Staff in his study, "Strategie et operations dans le Nord." As might be expected, Colonel Nuyten fully justifies the decisions of his king.

"Guerre de Secession d'Amerique," by Major d'E. M. Barthelemi—12 pages with sketches. This is a very brief résumé of the operations of our Civil War, written to show the methods and principles employed.

"Le principe de la bataille" (*Continued*), 4 pages, by Major Jobe. A study of the principles of battle as exemplified at the Marne and Ourcq (1914).

"Les chars de combat" (Combat Tanks), 18 pages (*Continued*), by Commandant Lievin. This is the final instalment of an article dealing with the tactical and technical employment of tanks in combat.

"Emploi tactique de l'infanterie" (Tactical Employment of the Infantry), 15 pages, by Commandant Paquot.

"Les principes d'hygiene militaire du Prince de Ligne," by Captain de Block. An interesting article of 14 pages telling of military hygiene in the 18th century and extending over a period of about thirty years. The Prince de Ligne (Charles-Joseph de Ligne) was born at Brussels in 1735. Entering the Army at an early age, he was a captain during the Seven Years' War, promoted on the battlefield to lieutenant colonel at Breslau and Leuthen; major general in 1765, lieutenant general in 1771. His book *Prejuges et Fantaisies Militaires* was written in 1780 while in Bohemia.

ITALY

"Rivista Di Artiglieria E Genio," September, 1923

In the leading article which is continued in the October issue, Colonel Ettore Ascoli, Italian Artillery, discusses quite exhaustively the "Italian Counter-battery Work in the Austro-Italian War of 1915—1918." He gives practically a daily war diary of the work of the artillery in the battles of the Isonzo, treating of course from the point of view of his special subject. One of the most significant paragraphs is freely as follows: "Frequently infantry after many casualties takes positions, which must later be abandoned, owing to heavy 'repression fire' (tiro di repressione) of the enemy's artillery. It does not necessarily follow, however, that incapacity to employ counter-battery fire effectively holds up warfare of movement, more than trenches and wire entanglements."

Major di Caccuri contributes a comprehensive article on "The Industrial Manufacture of Explosives in Italy, during, and Their Utilization. Since, the World War." The article contains many interesting statistics, and is continued in the October number.

Captain d'Evant describes "Calculating a Convergence Table," in which some of our own ballisticians might locate some interesting ideas.

Colonel Guillet has written a letter to the Editor, in which he states that, in the recent war, the artillery regiment came into its own. The fact that it became an integral part of the infantry division, and shared in the dangers and sacrifices of the infantry could but result in establishing a real *esprit de corps* in the artillery regiment. He closes with the prediction that the artillery will always live up to the motto *"Sempre e Dovunque"*—always ready wherever duty calls. This seems particularly timely in these days of badges and high-sounding inscriptions.

Under Miscellanea, one may read an enlightening review of the "New Training Regulations (1922) of the German Artillery" by Lieutenant Colonel Roberto. Though limited by the Treaty of Versailles, it would appear that they were keeping abreast of the times professionally if not in matériel.

"Rivista Di Artiglieria E Genio," October, 1923

In this number the leading article is a masterly review by Major General Ettore Cavalli, "Concerning a Recent Publication on Ballistics." In this he discusses a treatise by Dr. Theodor Vahlen, Professor at Greifswald University, published in Berlin and Leipsig, 1922. He compares the professor's deductions with his hypotheses

in his own writings, and also with those of Siacci and Parodi. This article appears worthy of perusal by our own artillerymen.

Colonel Ascoli continues his article on "Counter-battery," this time discussing the artillery work on the Gorizia Front.

Major di Caccuri continues his article on Explosives.

A particularly timely and profitable article is one by Lieutenant Colonel Luigi Sacco, in which he discusses the organization of liaison and communication upon the battlefield, profiting by the experience of the World War.

Brigadier General Tito Montefinale contributes a highly technical article on "The Conduct of Artillery Fire," giving an excellent exposition of the methods employed by the descendants of those who served the accompanying catapults and ballistæ of Cæsar's legions.

THE BIRTH OF THE CIGARETTE

BY FAIRFAX DOWNEY

AIMED straight at old Acre, a heavy gun flashed—
With a rumble and roar off a cannon ball dashed.
A squad of the Turks, which it wasn't aimed at,
Were struck, toppled over, completely knocked flat.
"Good!" cried the Egyptians. "If that powder train
Did not take so long, we would soak 'em again."
For in eighteen-hundred-and-thirty-two,
Artillery fired slowly, the best they could do.

The gunner was clever and likewise most apt;
The powder in paper he carefully wrapped.
He rolled little spills which were trains readymade.
The squad became speedy with their cannonade.
So fast was their shooting, they quite saved the day,
Confounding the Turks and old Suleiman Bey.
So Ibrahim sent them tobacco and said,
"Smoke up this Egyptian. You sure knocked 'em dead!'"

And each man was pleased, as he fragrant whiffs drew,
But one at a time, for in all that gun crew
There was only one pipe, and each must take his turn,
Before he tobacco's sweet incense might burn.
Then one day that crew as they sat in their pit
Were shelled by reprisal fire. It was a hit.
Nobody was killed by the cannon ball's swipe.
But, worst of ill luck, it had shattered the pipe.

Then seized the Egyptians a deep, gloomy mood;
They'd nothing to smoke with and none of 'em chewed.
But the gunner's eye fell on a new paper spill,
Which with some tobacco he managed to fill.
The cannoneers copied the trick he had shown,
And lit up and smoked—they had all rolled their own.
So to the artillery is owed a great debt
By all who are smokers—the first cigarette.

CURRENT FIELD ARTILLERY NOTES

Attendance at the Battery Officers' Course at Fort Sill

A NUMBER of our present battery officers of the Regular Army attended the so-called Basic Course at the Field Artillery School at Camp Knox, in 1919, 1920 and 1921. A number of these officers have been inquiring as to attendance at the Battery Officers' Course at Fort Sill. As a result a study has been made in the office of the Chief of Field Artillery. It is found that there are over 100 captains and about 150 first lieutenants who have attended no school whatever since the war. With the present permissible allotment for schools, it will take three or four years to get these through the Battery Officers' Course. The resultant policy for the present is to consider the Basic Course graduates at Knox as having had the equivalent of the Battery Officers' Course, and to give precedence in assignment to school to those who have had no schooling at all.

National Guard Hospitality

Early in November, Colonel Marshall, on behalf of the 105th Field Artillery, sent out invitations to all Field Artillery Officers of the Regular Army, National Guard, and Organized Reserves to make the regimental armory their headquarters during their visit in New York for the Army and Navy Game, November 24th. Sleeping accommodations were provided and breakfast was served Saturday and Sunday morning. The fine spirit of kindness and Field Artillery *esprit de corps* was highly appreciated by the visiting officers.

Changes in Equipment

Changes in the tables of basic allowances and in equipment tables are being studied. Field Artillerymen can greatly assist in this study and their suggestions will be welcome in the Office of the Chief of Field Artillery. Practically the whole field is being considered. Any officer who thinks the escort wagon should have detachable singletrees, that the battalion should have more telephones, or who has any ideas as to change of equipment as issued, or as to change in amounts of equipment issued, or who thinks some article should be added or eliminated should send in his ideas with his reasons. As to the formality of the communication, an officer concerned with this work is quoted as saying, "that the Chief's Office would rather have a pencil note now than a typewritten copy in August."

R.O.T.C. Enrolment

The following table gives the enrolment of students in the Field Artillery units of the Reserve Officers' Training Corps this year. The total enrolment in each unit for last year is also shown, for comparative purposes.

	1922 - 1923	1923-1924				
		Basic		Advanced		Total
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	
Agricultural and Mechanical College of Texas	301	132	95	*52	40	319
Alabama Polytechnic Institute	431	227	169	79	29	504
Colorado Agricultural College	346	157	122	42	18	339
Cornell University	580	348	279	35	20	682
Culver Military Academy	106	53	39	15	1	108
Harvard University	270	200	91	49	30	370
Iowa State College	375	216	128	23	19	386
Leland Stanford, Jr., University	134	45	37	41	11	134
Ohio State University	518	293	198	43	15	549
Oregon Agricultural College	226	135	55	27	16	233
Princeton University	330	157	133	41	37	368
Purdue University	1250	608	463	128	66	1265
University of Chicago	230	142	30	58	17	247
University of Illinois	804	445	216	49	41	751
University of Missouri	340	323	130	45	11	509
University of Oklahoma	429	251	141	39	10	441
University of Utah	103	157	39	21	12	229
University of Wisconsin	455	144	98	35	21	298
Virginia Military Institute	163	54	38	34	31	157
Yale University	247	101	29	23	26	179
Total	7638	...	...	...	..	8068

These figures indicate a satisfactory condition as to interest in the units. Reports from corps areas and local units bear this out. The figures will not yet satisfy the needs for replacements in the Reserve Corps as contemplated by the National Defense Act however. The remedy for this is to increase the number of Field Artillery units and to increase the capacity of units already established.

The increase in Field Artillery units seems at present improbable. The original plants for these units are expensive in this time of public economy. But the present units can be expanded at a comparatively small cost. The Chief of Field Artillery is recommending this expansion and the subject is being studied by the War Department. The recommended program contemplates an increase in instructors and the removal of the limit placed on enrolment of students in some Field Artillery units. The mistake of this latter policy is self-evident in the present condition as shown by the following table. The first column below gives the percentage in each arm,

of the total number of officers of all arms in our army as contemplated by our defense plans. The second column shows the percentage of R.O.T.C. students at present enrolled in the different arms.

Arm of service	Required percentage of all officers	Distribution of present enrolment	Present percentage of proper requirements
	Per cent.	Per cent.	Per cent.
Infantry	31.6	64.9	205
Field Artillery	25.0	11.6	45
Coast Artillery	5.6	7.1	127
Cavalry	3.8	4.3	113
Engineers	8.5	5.6	66
Air Service	12.9	1.4	11
Signal Corps	1.5	2.8	193
Ordnance	2.2	1.0	45
Quartermaster	8.9	1.3	15
	100	100	

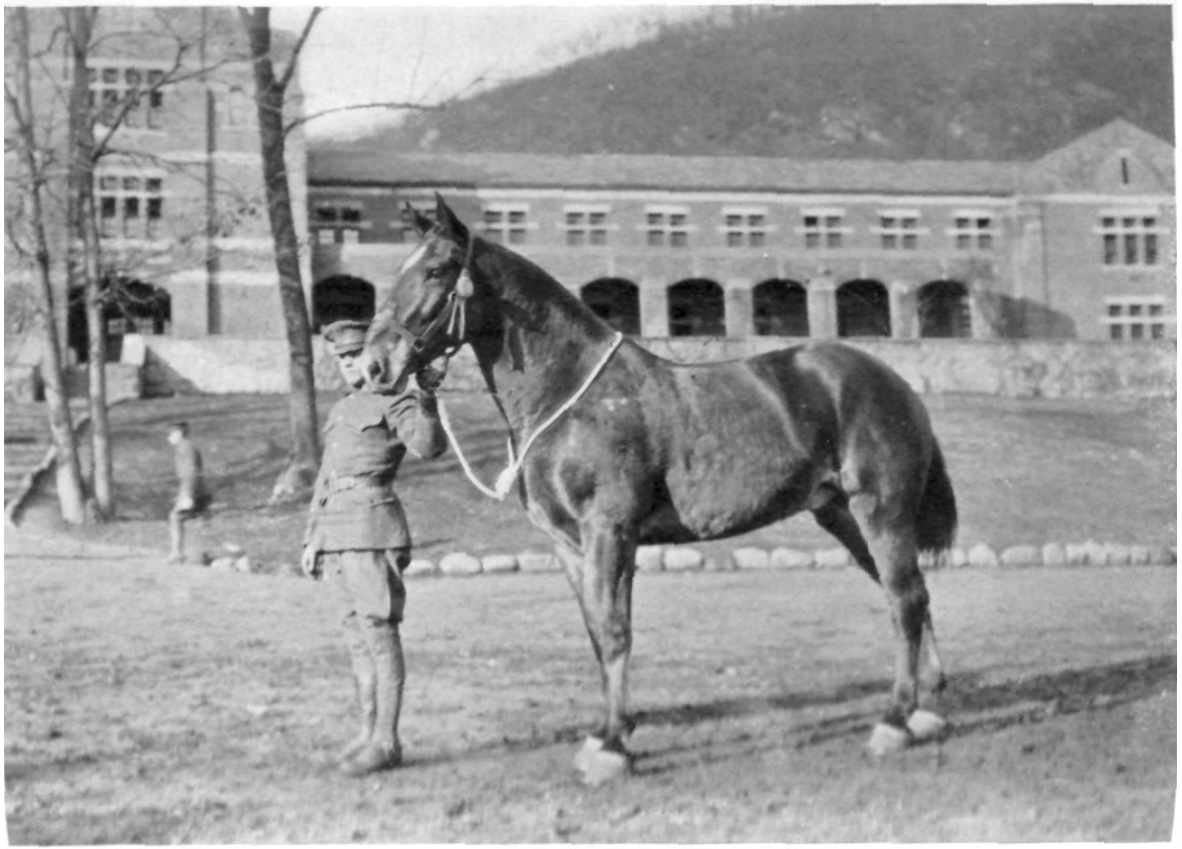
This table does not show that the fact that our present defense plan calls for more than four artillery officers to each five for the Infantry is being provided for. The best that can be done with the present shortage of funds and officers will not solve the problem. But the recommendations of the Chief of Field Artillery indicate that the detail of a sufficient number of field artillery officers to maintain our present units efficiently at their capacity will give the best solution now possible.

Regimental Coats of Arms

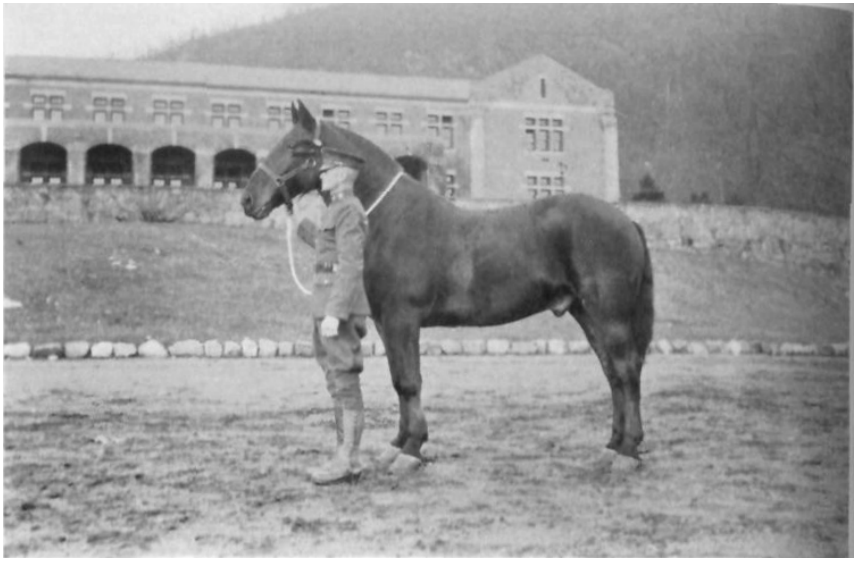
The Coat of Arms of the First Field Artillery appearing as the frontispiece of this JOURNAL is a good example of these new devices adopted since the war. Each regiment or color-bearing unit, such as independent battalions, ammunition trains, etc., is entitled to have one. Before acceptance, they must, however, be approved by the Secretary of War.

Each regiment in the Regular Army has its own individual crest as illustrated in the case of the First Field Artillery, by the castle and maple leaf. All the regiments of the National Guard from one state have the same crest, as, for example, the crest of the Wisconsin regiments is a badger, Louisiana regiments have a pelican, those from Maine have a pine tree, etc. The crest for all the regiments of the Organized Reserves is the minute man, the statute of Captain John Parker in Lexington, Massachusetts. Every regiment has, of course, its own motto, and designs its own shield, which is based in some way on incidents related to the regimental history.

Present regimental colors or standards involve the regimental coat of arms. In the centre is an eagle on whose breast is the shield



SHERMAN
First Prize for an Artillery Horse at the National Horse Show.
From The Military Academy Detachment.



ADAMS
Second Prize for an Artillery Horse at the National Horse Show.
From The Military Academy Detachment.

BABE
Battery "A", 16th Field Artillery, Third Prize for an Artillery Horse at the National Horse Show.

from the regimental coat of arms. In the eagle's beak is the regimental motto replacing the usual *"E Pluribus Unum."* Above the eagle's head is the crest of the regimental coat of arms replacing the usual thirteen stars and glory. The name of the regiment appears on a large scroll below the eagle.

Each regiment is entitled to adopt a distinctive insignia for wear as part of their uniform. Many have made a metal badge from their coat of arms or parts thereof, as has the First Field Artillery. But some adopt various pipings or appliances distinctive of some past service of the regiment.

Those interested in this subject will find more complete information as to design and approval of the coats of arms in *War Department Circulars 444* and *527, 1919*. Distinctive regimental insignia is covered in *War Department Circular 244, 1921*. Regimental tabards for buglers are similarly treated in *War Department Circular 181, 1921*.

Report of the Chief of Field Artillery

The first instalment of the Chief of Field Artillery's report covering "personnel" and "training" appears in this issue. This report has inspired considerable comment, especially the part advocating promotion by arms of the service. Opposition to this centres, so far, on the difficulty of individual adjustments under the proposed system. No public effort has yet been made to refute the argument for the welfare of the military service. In that the recommendations of this part of the Report, are based on this latter consideration, comment thereon will be looked for with interest.

The second, and concluding instalment appearing in our next issue, will deal with "war plans" and "matériel." Besides the comments and recommendations looking to future development, the Report contains as concise a statement as can be found of the present development of Field Artillery.

Citizens' Military Training Camps

The study and preparation of plans for these camps for next summer has been under way for some time. The courses pursued are popularly known as the Red, White and Blue courses, with the students of no military knowledge entering the Red course and, having passed through that course and the White course, qualifying for a reserve officer's commission upon satisfactory completion of the Blue course. At no time throughout the course does the student assume any obligation to continue beyond his current camp until he accepts a reserve commission, which of course carries the usual obligations.

The course, as it was worked out in practice last summer, consisted of four periods of instruction in camp of thirty days each. These were known as the Basic Red, the Advanced Red, the White and the Blue. The Basic Red course was the same for all arms. Beginning with the Advanced Red course the students entered upon different courses dependent upon the arm they were to qualify in.

The Basic Red course as pursued last summer included forty-two hours, out of the total of one hundred and sixteen hours, devoted to rifle marksmanship besides more time devoted to manual of arms with the rifle, and care and nomenclature of the rifle. This was unsuccessfully recommended against by the Field Artillery last year and is opposed again this year. The contention is that four camps of one month each is very short to prepare a raw candidate for a reserve commission even without sacrificing so much valuable time to a subject of no immediate value to a field artilleryman. The alternative course recommended is to have the field artillery quota for the Basic Red course report directly to the Field Artillery C.M.T. Camp Commander, who will be charged with conducting both the Basic Red course and the Advanced Red course for his arm.

The advantage of the course recommended above will be to permit training at once in equitation and artillery, both of which require much time to develop skill, and to increase the amount of field artillery instruction of students who complete the four camps by nearly one-fourth, thereby much better preparing them for their reserve commissions. As to the disciplinary value of the rifle drill, the field artillery system of instruction is provided for in this respect quite as well as any other arm. The supporters of the course as pursued last year maintain that those students who do not return after the Basic Red course, get the greatest general benefit from rifle marksmanship. The field artillery contention in this respect is that the young man who goes back with the ability to ride a horse and serve a field piece is every bit as useful to himself and to his country as though he had spent his time in learning to shoot a rifle.

Field Artillery experience in past camps has led to some specific recommendations as to details of the courses, which will be of interest to those concerned with this phase of artillery training. It has been recommended that four hours devoted to "citizenship" and four hours devoted to "hygiene, disease prevention, sanitation and first aid" in the field artillery Advanced Red course last summer be incorporated henceforth in the Basic Red course where it is already provided for and for which it is fitted. This would release four more hours each for "equitation and horsemanship" and "driving and draft," respectively. It is also recommended to omit the "gunners' examination" from "gunners' instruction" in the White

course. The sixteen hours released by this change would be divided equally between "equitation and horsemanship" and "the battery mounted."

National Guard Association Meeting

The annual convention of the National Guard Association was held in Denver, Colorado, October 24th. About one hundred and twenty-five officers from all over the United States were present. Brigadier General Milton A. Reckord, of Maryland, was elected president. Resolutions of the following nature were passed:

Requesting the Militia Bureau of the War Department, in its plans for training camps in 1924, to provide for visits of unit commanders whose commands are made up of troops of two or more states to each camp where troops of their commands may be.

Amending the National Defense Act by authorizing appropriations for National Guard clothing, rations, etc., equal to those of enlisted men of the Regular Army, and to provide a dropping allowance for property of enlisted men to be fixed by the Secretary of War, and to be not less than one-fourth of that provided for enlisted men of the Regular Army.

Amending Federal Treasury regulations so as to give National Guard entertainments the same tax exemption as that received by the Regular Army.

Amending the National Defense Act to permit an immediate emergency appropriation for horses and other supplies for the National Guard.

Expressing a spirit of coöperation and brotherhood in a message to be sent to the annual convention of the Reserve Officers' Association of the United States at Detroit, Michigan.

Providing for an amendment to the National Defense Act authorizing a caretaker of equipment for each unit of the National Guard to relieve officers from constantly growing burdens.

Making the pay of National Guard officers at training schools the same as that of students from the Regular Army.

Making the allowance of regimental adjutants and battalion adjutants the same as other officers in command of units.

Reaffirming resolutions adopted at New Orleans in 1921 and at Indianapolis last year to effect an amendment of the National Defense Act governing major problems of the National Guard.

Memorializing the Secretary of War to name a committee of Regular Army and National Guard Officers, under the provisions of Section 5b of the National Defense Act, to consider the question of federal commissions and regulations affecting General Officers of the National Guard who are commissioned in the Officers' Reserve Corps.

Annual Meeting of the Reserve Officers' Association

The second annual meeting was held October 27th, in Detroit. The meeting was addressed by Major General John L. Hines, Assistant Chief of Staff of the United States Army, by Colonel Dwight F. Davis, Assistant Secretary of War and others. This organization has grown in two years to over 10,000 members. Their mission in support of national defense is being carried forward in an enthusiastic and business-like way. Brigadier General J. Ross Delafield, of New York, was elected to succeed Brigadier General Henry J. Reilly as president.

Summer Training for Reserve Officers

The past summer training season is closed and the results are being reported and examined in the various corps area headquarters and the War Department. Perhaps the best general statement of the season's aims in respect to the training of reserve officers was the War Department's statement of last January, a year ago: "Training will be conducted by conferences, by tactical exercises and by demonstrations preferably illustrating features of the tactical exercises * * *." The lack of regular units for demonstration purposes, and the lack of appropriations to pay the expenses incident to bringing reserves to camp caused curtailments and hardships in the effort to carry on efficient instruction. However, the work has shown promise of the feasability of the project and furnished valuable, practical information to both the instructors and the instructed, in ways and means.

The programs for the coming season are now being considered. The sentiment in the Field Artillery seems to favor some changes in instruction for reserve officers. The plans of last summer resulted in training almost exclusively in tactics. It is contended that this is basically wrong. Fifty-seven per cent. of the field artillery reserve officers are in the grade of second lieutenant alone. Ninety-three per cent. are in the grade of captain and lieutenant. These officers are not seriously interested in tactical work, nor should they be, as their grades call less for tactical knowledge than for high proficiency in technical work.

The experience of the past summer was that the plans provided a purely theoretical course of instruction, in which map problems and lectures, with an occasional opportunity to see a demonstration by regular troops, formed the principal and practically the only means of imparting information. Some camp commanders went further and gave the reserve officers the opportunity to witness the firing of batteries and take part in mounted drills, but general opinion does not seem to deem this nearly enough to supply these officers the

training needed to keep them prepared for active service, or to maintain an interest in the essential requirements of their grades.

The adoption of a new program looking to more practical instruction in summer camps raises a question of the possibility of imposing too much of the instruction for the junior officer on the senior officer just as in the past the junior seems to have received instruction more appropriate for the senior. In this connection it is noted that in the correspondence courses and winter conferences, the work must of necessity be largely theoretical. These will give all officers a reasonable amount of tactical and staff instruction. Greater practical familiarity with the duties of their subordinates is a real need of the senior officers as well as of all officers. The best opinion seems to agree that our object should be to instruct our reserve officers to the point where they can themselves instruct their subordinates. No one seems to fear any error in this direction and it has been recommended that all field artillery reserve officers be given practical battery work.

The carrying out of this policy does not seem impossible. In some corps areas, by careful selection of training camp dates, it will be possible to have one or even more regular batteries for the sole use of reserve officers. Where this is impracticable owing to the presence in camp at the same time of other activities, R.O.T.C., C.M.T.C., etc., a careful adjustment of schedules will usually provide for the reserve officers one or more firing batteries during some part of each day, usually in the afternoon, as R.O.T.C. and C.M.T.C. ordinarily fire in the morning. Where neither of the above methods is possible but a range is available, surplus batteries can be parked at a suitable firing position and left there for the firing of the reserve officers. Where the guns are available, but there is no range, firing with 37-mm. subcalibre tubes is usually possible and is a fair substitute for service practice.

Those who favor this policy maintain that every captain and as many first lieutenants as possible should fire a problem with service ammunition at next summer's camps. Officers would, if conditions favor, man the guns and fill all the positions of enlisted men and officers. They would get instruction in equitation and driving, adjustment of harness, care of animals and matériel. Such instruction will enable officers to learn the duties of their grades by actually performing them. In the same way, they would learn the duties of their subordinates.

Such a policy contemplates smoke bomb practice for an hour or two each morning throughout the camp. Instruction in lateral and advanced observation would be given by means of terrain boards. At the start blackboard firing should also be given in camp, but in a short time the instruction of reserve officers in blackboard firing

and lateral observation would be carried on by regimental and battalion commanders of reserve units at their periodical meetings before coming to camp.

The above seems to be the concensus of field artillery opinion based on experience to date. The carrying out of these ideas will again be influenced by the shortage of regular troops and money, no doubt. Where every effort to meet the requirements pointed out above, have failed through field artillery reserve officers being ordered to camps where no Regular artillery is present, and no range is available, instruction can still take the form of blackboard firing and smoke bomb practice (which can be given almost anywhere and which is immensely valuable), the practical solution of firing and topographical problems, instruction pertaining to equipment, supply, administration, messing, etc.

New York National Horse Show

The National Horse Show Association of America held their thirty-eighth annual show in New York, November 10th to 17th. Two classes for artillery teams were shown. Each called for a six-horse section and a chief of section with a 75-mm. or similar type gun. The first of these two classes was judged at the rate of 50 per cent. for conformation, type and suitability of horses; 25 per cent. for condition of equipment and 25 per cent. for performance. Full field equipment was carried for this class. The entry from Battery "A," 16th Field Artillery, won first; United States Military Academy Detachment won second; Battery "E," 7th Field Artillery, third, and Battery "E," 105th Field Artillery, fourth.

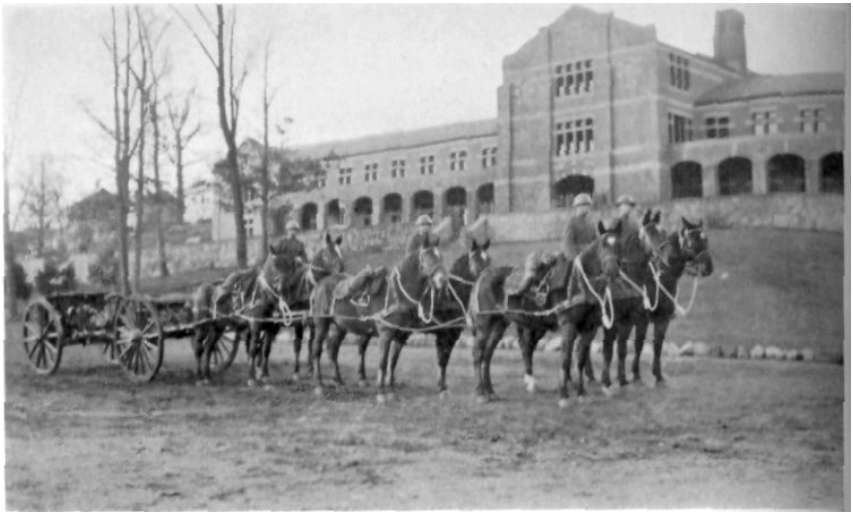
The second class for artillery teams was similar to the first except that performance only counted; field equipment was not necessary, but it was required that the chief of section's horse be suitable for substitution in the team. The prizes for this class were awarded to the same entries that placed in the first class, except that fourth place went to Battery "F," 105th Field Artillery.

Sherman, from the Military Academy Detachment, won first in the class for artillery horses shown in hand. Adams, from the same organization, won second; third place went to Babe, from Battery "A," 16th Field Artillery, and fourth to Dick, from Battery "E," 7th Field Artillery.

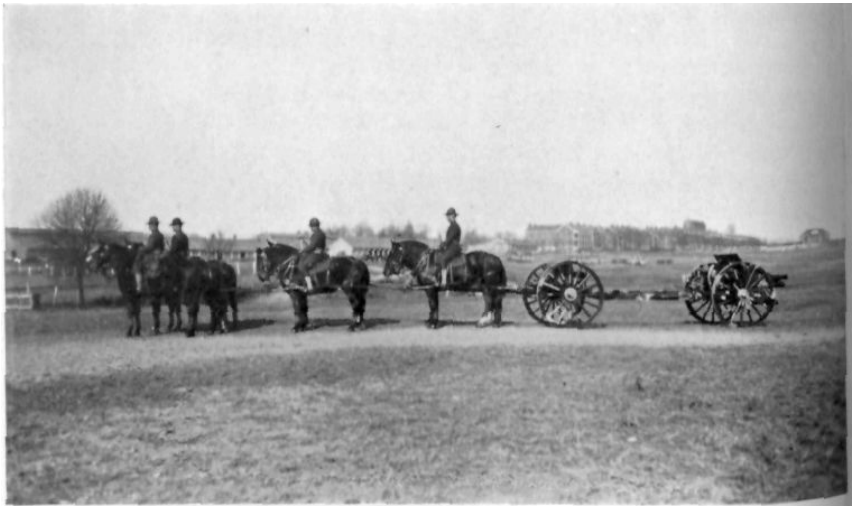
R.O.T.C. Camps

The plans for the conduct of next summer's camps for the Reserve Officers' Training Corps is under consideration along with the other training activities for the summer. The proposition to hold the summer camps separately for each unit on the grounds of

FIRST PRIZE SECTION
Off Side View, Battery "A," 16th Field Artillery, National Horse Show.



SECTION FROM WEST POINT
Second Prize in the Artillery Section Classes.



FIRST PRIZE SECTION
"A" Battery, 16th Field Artillery; Near Side View; National Horse Show.

the respective universities has been advanced, but is not approved by most Field Artillerymen. The latter are recommending, on the contrary, that the number of camps be reduced to a minimum. There are a number of advantages cited for this latter contention. It reduces the overhead. It impresses the student with the fact that the R.O.T.C. movement is not local but nation wide. It promotes a healthy rivalry between units. It renders superior officers among the instructor personnel available for the training of the students of many units in their specialties, instead of confining their influence to those of a single unit. The travel involved will increase interest in the camp and have a broadening influence upon the student. More suitable terrain can be secured. Less equipment will be required and transportation cost for equipment and supply will be lessened.

The proposal to reduce the length of R.O.T.C. camps or to reduce the length for any particular class of students has not been favored by the Chief of Field Artillery. It is held six weeks is really too little field work to qualify a student for a second lieutenancy. As to particular classes, no one of these students could possibly obtain enough practical field instruction to render a little more either unnecessary or undesirable. Field training will always result in increased knowledge of the military profession, regardless of the experience which may have preceded it. Any differentiation as to length of camp attendance will also add greatly to camp administration.

The recommendation has also been made in some quarters to discontinue the basic camp. This and the proposal to shorten courses as discussed above, are prompted by motives of economy and shortage of funds. The discontinuance of the basic camp will not be favored by the Field Artillery. The presence of basic students in camp releases many advanced students for more important positions and at the same time the basic student is afforded the opportunity of learning much of value in the subordinate positions in the battery.

Effort is being made to prevent the attendance of students at the advanced camp until they have completed the first year of the advanced course at their university. This is based on the belief that until the field artillery student has completed this first year, his theoretical instruction has not advanced sufficiently to permit him to derive any real benefit from the camp instruction in firing.

Recommendation has been made that commissioned and enlisted personnel should so far as possible attend the same camp with their units but that they should not be required for other camps. This latter recommendation aims to release a period after camp usually from July 31st on, for leaves, furloughs and preparation for the

next academic year. Unless this period is so provided, the personnel on R.O.T.C. duty have no time for these things. The continuance of the commutation status while at camp for enlisted men on R.O.T.C. duty has also been recommended, with a view to relieving them of the burden of maintaining their families at their stations while away at camp.

No change in the courses at camp as heretofore pursued are being recommended by the Field Artillery. The usual stress is being placed on practical work at camp, leaving the theoretical work for the academic year. The criticisms received of the program as followed in the past has been favorable in the main. Where changes have been recommended, it has been found that the desired results could have been accomplished under the program as written. For example, one suggestion was to the effect that instruction in driving and draft should be included in the advanced course. Thirty hours have already been allotted to "the battery mounted" and fifty-six hours to "field work" in this course. Instruction in driving and draft is a necessary part of both of these.

It has been the continuing policy of the Chief of Field Artillery in all R.O.T.C. matters to avoid too detailed instructions. In line with this only approximate hours are being given for the subjects assigned for camp work and no schedules are prescribed. This it is understood is being done intentionally in order that officers on the ground may feel free to adjust the courses of training to the actual condition met and to prepare their schedules in accordance with their intimate knowledge of local conditions. With the broad program as now issued, and a clear understanding of the mission, the Chief of Field Artillery feels that the results attained will be limited only by the ability of those in whose hands the conduct of the instruction is placed, provided of course that adequate equipment and suitable terrain are available.

The Eastern Endurance Ride

This Ride is reported in Lieutenant Corpening's article in this copy of the JOURNAL. A few statistics are quoted here.

Twenty-three started the Ride Monday morning, October 15th. Of these, four were thoroughbreds, eight grade Morgans, two purebred Morgans, three Irish hunters, one saddle bred, three half thoroughbreds and two grade Anglo Arabs. Ten of these entries came in Friday night, the fifth day, completing the ride. Of these later, two were thoroughbreds, two half-bred Morgans, two grade Anglo Arabs, one Morgan, two Irish hunters and one half thoroughbred.

The following table gives data relative to the first six place winners:

Name of horse	Breeding	Age	Time of measurement	Height	Girth	Loin	Pront cannon	Hind cannon	Weight	Loss in weight	Time score	Condition score	Total
			See Note										
1. Gouya	Grade Anglo Arab	7	A	15-3¼	72	72	8	9	983				
			B		70	73			942				
			C						958				
										25	40	58	98
2. Pathfinder	Thoroughbred	7	A	15-2	72	74	8½	9½	978				
			B		72	75			947				
			C						964				
										14	40	52½	92
3. Goose Girl	Half-bred	7	A	15-1¼	72	77	8½	9½	1025				
			B		72	74			964				
			C						980				
										45	40	50½	90½
4. Clonmell	Irish Hunter	9	A	16	71	71	8½	9¼	1022				
			B		70	74			970				
			C						990				
										32	40	49	89½
5. Major S	Grade Morgan	7	A	16	74	78	8½	9¼	1103				
			B		73	76			1054				
			C						1071				
										32	40	41	81
6. Toute Belle	Grade Anglo Arab	12	A		72	74	8	9	981				
			B		70	73			927				
			C						927				
										54	40	40	80

NOTE:—Letter A in this column indicates measurements at initial judging; letter B indicates measurements at end of ride fifth day, and letter C indicates measurements at final judging.

Authorship of "The Mountain Battery Song"

It has been brought to the attention of the JOURNAL that Colonel Griffin, the author of "The Red Guidon," was also author of "The Mountain Battery Song." Credit was not given for this authorship in our last issue and mention is here made of the fact in an effort to correct the omission. The song has been handed down by Artillerymen serving with all calibres. Evidently this song in the lapse of time has become separated from its correct source. The omission was not intentional on our part.

New National Guard Units

Among the National Guard units recently extended Federal recognition are Batteries "D" and "F" and "Headquarters Battery," 116th F. A. (Florida), and Battery "F," 145th F. A. (Utah).

The Coming Field Artillerymen

In this issue are two contributions by a student from St. Xavier's College in New York City. The poem "Caissons and Pieces" on page 72 and "Gossip from Madison Barracks" on page 61 were written after putting in the summer in the Field Artillery Citizens' Military Training Camp at Madison Barracks. The spirit of these contributions speaks well for their author and for the training effort at Madison Barracks.

Strength of National Guard Regiments

The following shows the strength of the respective National Guard Field Artillery regiments as of October thirty-first:

75-MM. REGIMENTS

101st	F.A., Massachusetts	853
102nd	F.A., Massachusetts	842
104th	F.A., New York	841
147th	F.A., South Dakota	817
141st	F.A., Alabama and Louisiana	799
146th	F.A., Washington	766
105th	F.A., New York	757
130th	F.A., Kansas	755
161st	F.A., Kansas	741
139th	F.A., Indiana	740
134th	F.A., Ohio	737
160th	F.A., Oklahoma	733
135th	F.A., Ohio	725
122nd	F.A., Illinois	719
120th	F.A., Wisconsin	713
131st	F.A., Texas	709
151st	F.A., Minnesota	707
132nd	F.A., Texas	705
107th	F.A., Pennsylvania	700
119th	F.A., Michigan	691
118th	F.A., Georgia	683
158th	F.A., Colorado, New Mexico, and Oklahoma	660
128th	F.A., Missouri	631
109th	F.A., Pennsylvania	627
124th	F.A., Illinois	626
138th	F.A., Kentucky	625
111th	F.A., Virginia	600

Below a Maintenance Strength of 600 for a Field Artillery Regiment of 75 mm.

*116th	F.A., Florida	508
*145th	F.A., Utah	465
*112th	F.A., New Jersey	391
*103rd	F.A., Rhode Island and Vermont	369
*143rd	F.A., California	360
*110th	F.A., Maryland	336
*152nd	F.A., Maine	286
*148th	F.A., Idaho, Oregon, and Washington	227
*115th	F.A., Tennessee and South Carolina	213
*125th	F.A., Minnesota	76

155-MM. REGIMENTS

192nd	F.A., 155-mm. Guns, Connecticut	102 3
150th	F.A., 155-mm. How., Indiana	821
258th	F.A., 155-mm. Guns, New York	783
189th	F.A., 155-mm. How., Oklahoma	780
108th	F.A., 155-mm. How., Pennsylvania	734
176th	F.A., 155-mm. How., Pennsylvania	727
106th	F.A., 155-mm. How., New York	706
117th	F.A., 155-mm. How., North Carolina	697

Below a Maintenance Strength of 647 for a Field Artillery Regiment of 155 mm.

*182nd	F.A., 155-mm. How., Michigan	487
*172nd	F.A., 155-mm. How., New Hampshire	271
*185th	F.A., 155-mm. How., Iowa	270
*121st	F.A., 155-mm. How., Wisconsin	219
*123rd	F.A., 155-mm. How., Illinois	212
*196th	F.A., 155-mm. Guns, Washington	77
*173rd	F.A., 155-mm. How., Connecticut	72

* All units of the Regiment not completed.

Reserve Unit Instruction

If reserve units are to mean anything, it would seem that some interest or activity must be maintained within them. What form this may take in the general case is hard to forecast. Varying forms are being reported now. The following General Order of the 313th F. A. will be interesting to those concerned with this problem:

HEADQUARTERS 313TH FIELD ARTILLERY
Graham Building, 14th and E Sts. N.W.
Washington, D. C.

November 8, 1923.

General Orders
No. I.

PROGRAM 313TH F. A., 1923–1924.

1. The 313th Field Artillery (less First Battalion) will assemble at this Headquarters on the 3rd Thursday of each month at 8:15 P.M.

2. The next meeting will be on Thursday, November 15th.

Conferences: "Artillery horses, their care and training, including the principles of draft." Captain Steel Wotkins, 16th F. A., Fort Meyer, Va., will conduct this conference.

References: FIELD ARTILLERY JOURNAL of January-February, 1921 (Article by Lieutenant Colonel Austin); T.R. 430-75, W.D., 1922, Sections IV, V, VIII and IX.

3. The program for the remainder of season will be as follows:

December 20th: Battery Commander and Battalion details, including duties of each member thereof.

References: T.R. 430-155, W.D., 1923, Sections III, IV, V, VI, and VII.

January 17th: Reconnaissance, occupation of position, targets and ammunition.

References: T.R. 430-155, W.D., 1923, Sections I, II, and VIII; T.R. 430-85, W.D., 1922, Sections VIII.

February 21st: Firing data and the preparation of fire.

References: T.R. 430-85, W.D., 1922, Section V; T.R. 430-70 "Topography for F.A." (Fort Sill).

March 20th: Field Gunnery, including dispersion.

References: T.R. 430-85, W.D., 1922, Sections II, VI, and VII.

April 17th: Communications and liaison.

References: "Signal Communications for All Arms" (Leavenworth—50 cents); "Tactical Employment of F.A." (Fort Sill).

May 15th: Blackboard firing.

June 19th: Map problem.

By order of Colonel Herron:

JOHN SCOTT,
Lieutenant Colonel, Infantry,
Executive Officer.

Our Philippine Artillery

The 24th Field Artillery (Philippine Scouts), stationed at Camp Stotsenburg, seem to be reaping their share of laurels. In a post field meet September 14th they accumulated 107 points to their nearest competitor's (the 26th Cavalry) 63, and in the Post Horse Show, attended by Governor Wood, Brigadier General Hagood and others, they again carried off first place with 65½ points to 15½ points for the Cavalry.

Polo

Hawaiian Polo

The Army polo team in Hawaii, which is composed of players from the Hawaiian Division whose exploits in the mid-western states and the Pacific coast attracted wide attention early this year, is preparing for another invasion of the mainland should authority be granted by the War Department. By carrying their polo colors to several triumphs they have given an impetus to the game and formed a foundation upon which polo in Hawaii will be developed to international standards.

The present successful period of Army polo in Hawaii began in the summer of 1921, shortly after the regiments which make up the Hawaiian Division had arrived at Schofield Barracks. On the Leilehua plains the Army horsemen kicked up the turf in chasing the polo ball, and in the spring of 1922 an inter-regimental tournament was organized. The ensuing polo contests revealed hard riding horsemen who possessed a polo ability of no mean consequence, and resulted in securing flashy polo mounts from the Parker Ranch on the island of Hawaii.

During the summer of 1922, Lieutenant Colonel Beverly Browne organized the Hawaiian Division polo team, which was sent to California later in the year to represent the Hawaiian Department in the polo tournaments there. They acquitted themselves creditably and returned with flying colors, after having defeated every team they played against and only lost five games during the entire tour. In addition to Colonel Browne, the team was made up of Major Carlos Brewer, 8th Field Artillery, Captain J. M. Swing, 11th Field Artillery, Major John Milliken, Cavalry, and First Lieutenant F. D. Sharpe, 11th Field Artillery. They took with them twenty-two mounts, nineteen of which were horses bred at the famous Parker Ranch. They returned to Hawaii in May, 1923, enthusiastic over the results and their association with mainland polo teams. They earned for themselves the sobriquet, the "Hula Polo Four," and were thus referred to by the sports writers on the coast.

During the absence of the Army team on the mainland, polo did not lie dormant at Schofield Barracks. An inter-regimental

tournament was between teams representing the 11th Medical Regiment, 19th Infantry, 11th Field Artillery, 8th Field Artillery, 13th Field Artillery and the 35th Infantry. The 11th Medical Regiment's team, composed of Lieutenants Wolfe, McCallum, Smock and Calwell, won the tournament by defeating the 19th Infantry in the final game.

After the return of the Army team from the coast, preparations were begun to enter it in the Inter-Island polo tournament which was held in Honolulu in September. A short rest was taken by players and ponies, after which a polo squad of 14 men was selected from the Hawaiian Division polo talent. Each player was given a string of mounts some of which were trained while others were merely prospects. Three men were assigned to each string for the purpose of instruction. This system gave the home players the benefits gained by the members of the Army team on the mainland, and proved to be a successful way for developing of new mounts and improving the old ones. Various combinations of players were tried out until about a month before the tournament when the first and second teams were selected. They played practice games against each other under certain handicap conditions, for the purpose of training the first team.

The first team was made up by Lieutenant Colonel Beverly Browne, Major Carlos Brewer, Major John Milliken and Captain Joseph Swing. Their first game in the Hawaiian polo tournament was against the Oahu Club. It was played at Kapiolani Park before a record crowd and, after a hard fought contest, the Army won 11 to 7 and earned the right to meet Maui in the final game for the championship. It was the first time in the history of polo in Hawaii that an army team was seriously considered as a contender. The Maui team won the championship game after a terrific struggle, which was not decided until the last few moments of the final chukker, and the score was 5 to 3. Although the Army did not come out victorious, it demonstrated its mettle, and the loss of the trophy, when it was almost within grasp, has given incentive to greater efforts next year. In the junior tournament, the Army defeated Oahu 11 to 7. The Army juniors were composed of First Lieutenant S. A. Reynolds, First Lieutenant W. R. Wolfe, First Lieutenant F. D. Sharpe, Captain H. R. Hanson, and Captain R. G. Hunter.

During the month of October two polo tournaments, an open championship and a handicap event, were held at Schofield Barracks. Three Army teams, the Gold Oaks, Cardinals and Shamrocks, a team from Honolulu, and a team from Kaui were entered. In these games the players who had participated in the Hawaiian polo tournament were barred. Two Schofield teams, the Gold Oaks and Cardinals,

contested in the finals, the former winning 4 to 2. The handicap event was won by the Kaui team, which defeated the Gold Oaks 8 to 6.

During Armistice week two teams from Schofield Barracks toured the island of Kaui and participated in a tournament staged by the Kaui polo club. The Army teams won all games.

Meanwhile another inter-regimental polo tournament was in progress at Schofield Barracks, besides a four-team round robin between teams piloted by members of the Army team which toured the mainland. These tournaments serve as means for the training of players and mounts with a view to selection of an Army team to be sent to the coast, should another mainland tour be authorized by the War Department.

Captain J. M. Swing, the Army polo representative, is highly elated by the results achieved and the enthusiasm which has been developed in Army polo circles. The unqualified support given by Major General C. P. Summerall, commanding the Hawaiian Department, and Major General C. T. Menoher, commanding the Hawaiian Division, has resulted in great strides in the development of polo in the United States Army stationed in Hawaii.

National Guard Polo

The 103rd Field Artillery, Rhode Island National Guard, numbers indoor polo among the events in their instruction and recreation. Battery "A" recently won the Carlton Davis Trophy, a cup presented by Congressman Richard S. Aldrich, from Batteries "B" and "C." The significance of the names of the teams can not be given as the JOURNAL goes to press. One team in the tournament was called "The Summeralls" and one "The Glassfords."

Wonderful Bus

O car you are a wonderful thing,
No hurdles to rush, no sweat to cling,
You start yourself with no girth to slip,
No meals to miss, you fear no trip.
No height inspection every year
With shoes to loosen on front and rear.
No oats bills climbing up each day,
Rivets are put in you to stay,
No crown-piece slipping past your ear,
Rider shaking, full of fear.
From spavin you are safe O. K.
And thank the Lord, you eat no hay.

Your joints if injured form no pus,
Your stable stays quite free from muss;
Your frame will dull a well-tempered file,
Your health does not depend on bile,
New parts are cheap and easily set,
For horse-sense you're the safest bet.

MAJOR SAMUEL FRANKENDERGER (F.A., Ret.)

THE UNITED STATES FIELD ARTILLERY ASSOCIATION

Annual Meeting

PURSUANT to the call of the Executive Council, the annual meeting of the Association was held at the Army and Navy Club in Washington, December 10, 1923. Major General Wm. J. Snow, President of the Association, occupied the chair. A quorum for the transaction of business was present, in person or by written proxy.

The minutes of the last meeting, as published in THE FIELD ARTILLERY JOURNAL, were approved.

The Secretary-Treasurer read his annual report and presented his financial statements. A committee, composed of Major J. A. Crane and Captain J. A. Lester, appointed by the President to audit the Treasurer's financial statements, reported that the audit had been completed and the statements found to be correct.

Upon motion the report of the Secretary was accepted and the report of the auditing committee was approved by the Association.

The Chair announced that there were eight vacancies on the Executive Council, four in the representation from the Regular Army, two in the representation from the National Guard, and two in the representation from the Field Artillery section of the Officers' Reserve Corps. He called for nominations, which were made, and upon motion the following-named officers were unanimously elected members of the Executive Council:

Major General Wm. J. Snow, U. S. Army.
Colonel Oliver L. Spaulding, Jr., U. S. Army.
Colonel Leroy W. Herron, Officers' Reserve Corps.
Lieutenant Colonel Everitte St. J. Chaffee, National Guard of Rhode Island.
Lieutenant Colonel Augustine McIntyre, U. S. Army.
Lieutenant Colonel J. Craig McLanahan, National Guard of Maryland.
Lieutenant Colonel Robert L. Bacon, Officers' Reserve Corps.
Major Richard C. Burleson, U. S. Army.

Several brief addresses were made, followed by an informal discussion of the affairs of the Association, after which the meeting adjourned.

ANNUAL REPORT OF THE SECRETARY-TREASURER AS RENDERED AT THE ANNUAL MEETING

The business of the U. S. Field Artillery Association during the fiscal year just closed has shown some improvement over the preceding fiscal year, and present indications are that these conditions

will continue during the year upon which we are just entering. The management has again succeeded in keeping the expense of the Association within its income, but as the cost of manufacturing and delivering THE FIELD ARTILLERY JOURNAL is considerably more than the amount at which it is sold at the subscription rate of $3 per annum, it has been possible to make the profit shown by the books only through the most careful supervision and foresight on the part of the present management and my predecessors.

During the year the cash income of the Association from all sources was $10,909.04. This, with $904.58 earned but not yet collected when the books were closed on November 30th, makes the amount of business for the year $11,813.62, or $2003.01 more than the earnings of the preceding year. The expenditures amounted to $10,739.43, or $1412.69 more than the expenditures of the preceding year. Thus, the expenses of the Association were $1,074.19 less than the earnings, and this amount therefore is the profit for the year, which is $797.80 more than the profits of the preceding year. It would be entirely proper, however, to give consideration to the extraordinary expenditure of $1291.67 for the extra edition of THE FIELD ARTILLERY JOURNAL published and paid for during the year. This extra edition was caused by the advance of the issue date of the JOURNAL from the end of its issue period to the beginning. As a result of this change seven JOURNALS have been issued and paid for during our fiscal year instead of the usual six. If this amount be added to the profit shown by the books, the profit will be $2365.86 for the year.

A tabulated statement of the receipts and expenditures follows:

Receipts

Balance on hand December 1, 1922	$2,825.00		
Securities	15,000.00		
		$17,825.00	
Subscriptions to THE FIELD ARTILLERY JOURNAL	$5,731.21		
Advertisements	3,766.71		
Interest on securities and deposits	1,192.74		
Sales of books	197.63		
Miscellaneous receipts	20.75		
		$10,909.04	
			$28,734.04

Expenditures

Publishing THE FIELD ARTILLERY JOURNAL	$8,142.51		
Miscellaneous printing	105.91		
Postage	157.86		
Personal Services	1,025.33		
Office supplies, stationery, and copyrights	58.81		
Books	141.75		
Telephone	78.03		
Essay prizes and recruiting prize	270.00		
Articles and translations	358.00		
Office rent	300.00		
Miscellaneous expense	101.23		
		$10,739.43	
Securities		15,000.00	
Balance on hand December 1, 1923		2,994.61	
			$28,734.04

The question of membership in the Association affects both our financial safety and our mission. From a financial point of view, the circulation of the JOURNAL, which is our most expensive undertaking, is at a point where the cost per JOURNAL decreases rapidly with every increase in the number printed. In other words, our growth is at a stage where the reduction in overhead due to increased circulation is appreciably felt. From the point of view of the mission of the Association, it is of course self-evident that we should serve as nearly as possible, every Field Artilleryman—Regular, National Guard and Reserve.

Our membership has grown during the past year in all three components of the Field Artillery. We counted fifty per cent. of the Regular Field Artillery officers in our membership last year. At present almost exactly two-thirds of the Regulars are members. Several National Guard regiments have counted one hundred per cent. of their officers members during the past year. This is a matter worthy of note and praise in each case. The percentage growth in the whole National Guard and Reserve Corps during the past year does not of course compare to the percentage growth in the Regulars, pointed out above. Of about 13,000 officers in all three components of the Field Artillery only approximately one-sixth are members. The membership should be greater in each of the three components of our army.

There are various reasons which account for a commissioned officer in the Field Artillery being a non-member. This report is too short to estimate the importance of lack of money, personal prejudice, lack of interest, etc., in this connection, or to deal with their validity or cure. But there is a reason, which is believed greater than all of these, which I wish to point out. This reason is lack of knowledge on the part of non-members as to what the Association is and what it stands for.

An examination of our membership list reveals the fact that above the grade of captain, especially from the older majors on up, the Regular Field Artillery Officer who is a non-member is so rare as to be regarded as an exception. The same is true, in a somewhat lesser degree, among the "old" National Guardsmen. The Reserves are of course in this respect "new." Those men on our list were recruited by the members of the Association itself, as it grew from foundation. We must depend for our growth on the work of our present members now. That has always been the policy of the Association. I believe it is the correct one. I regard the growth of the past year as the result largely of the traditional attitude of our members in this matter, and I have sufficient faith in the Field Artillery spirit to believe it will solve the present problem in the correct way. Any effort of the Council can, I believe, be best directed toward bringing the fact of the need to the attention of our older members.

The objects of the Association as to maintaining the best traditions, disseminating professional knowledge, etc., seem well understood by members. I believe more emphasis could be put on the supply of information to them by informal correspondence. This service will at some time prove valuable to every member of the Association, but it proves of most frequent use to inexperienced officers in the National Guard and Reserves. All should feel free to write, or come, to the Secretary for information. Our location in Washington, enables us to give the answer to almost any question that has an answer. If this service should by growth require additional clerical help, the additional expense should be provided for in our program. I believe its value will warrant any effort on our part.

Respectfully submitted,

WILLIAM C. HOUGHTON,
Major, F. A., U. S. Army,
Secretary-Treasurer.