

THE FIELD ARTILLERY JOURNAL

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EDITED BY

WILLIAM C. HOUGHTON

MAJOR, FIELD ARTILLERY, UNITED STATES ARMY
(Nos. 1, 2, and 3)

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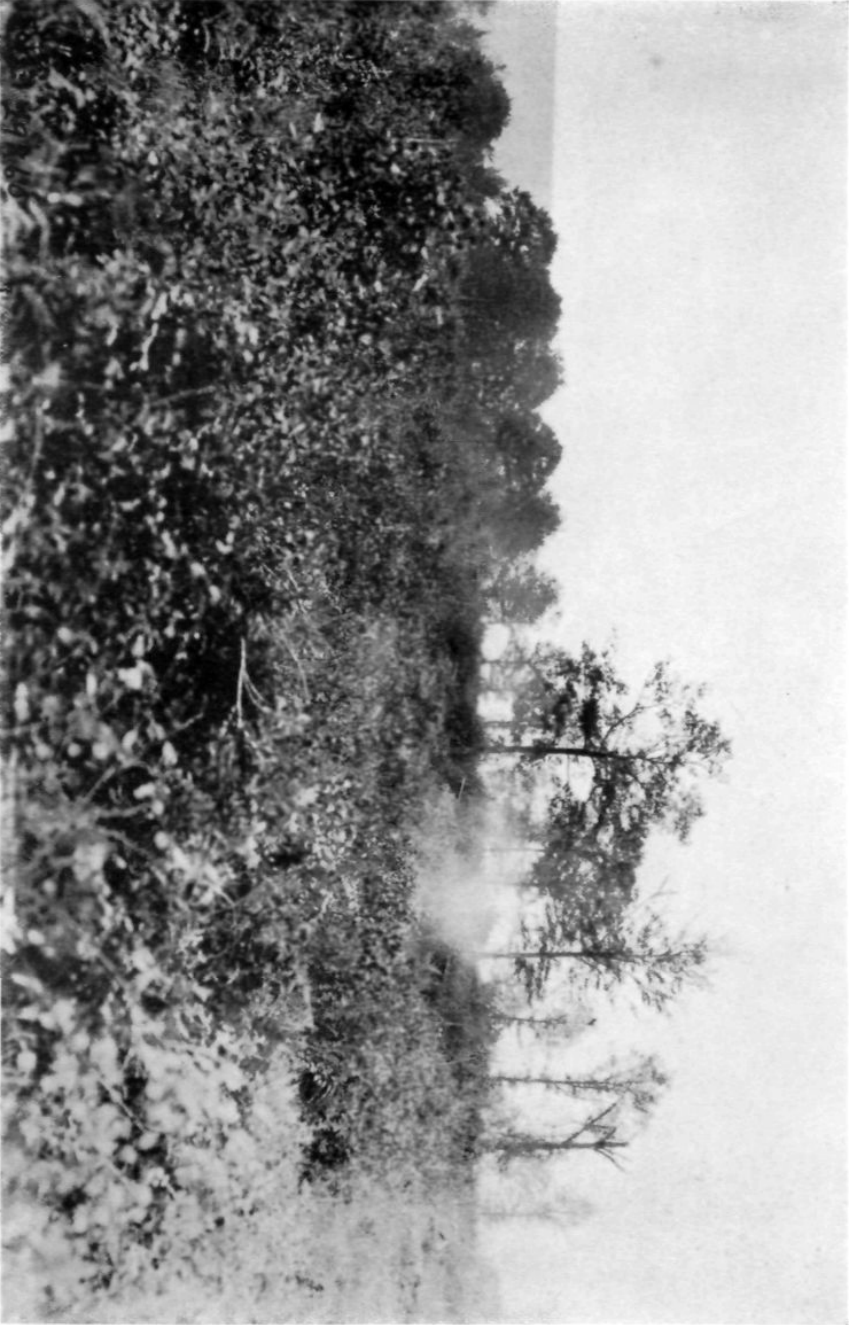
MAJOR, FIELD ARTILLERY, UNITED STATES ARMY
(Nos. 4, 5, and 6)

THE UNITED STATES FIELD ARTILLERY ASSOCIATION
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A STUDY IN CONCEALMENT

THE FIELD ARTILLERY JOURNAL

VOL. XVI

JANUARY-FEBRUARY, 1926

NO. 1

THE NEW ARMORY OF THE 122ND FIELD ARTILLERY IN CHICAGO

BY COLONEL FRANK R. SCHWENGEL, REGIMENTAL COMMANDER

SITUATED in the heart of Chicago's new upper Michigan Avenue development of fine buildings, the armory of the 122nd Field Artillery looms as a mighty sentinel.

Convenient to the main arteries of travel, its location is greatly enhanced by the character of its surroundings. A large athletic field adjoins it to the east and a park to the west. The bridle path of Lincoln Park and the shoreline of Lake Michigan skirt the outer drive. The campus of the Northwestern University lies directly opposite, altogether a pleasing environment, and unique in its commanding position.

The inception and development of the project forms an interesting bit of history. To build a regimental armory for a mounted organization in the face of the opposition encountered, was an undertaking of no mean proportions. To plant it daringly on priceless land in Chicago's front yard, surrounded by magnificent hotel and residential structures, is a notable achievement and worthy of the cause to which it is dedicated.

Back in 1909, the regiment, then the 1st Illinois Cavalry, after long occupancy of a riding academy located at 1330 North Clark Street, determined that its quarters had passed that state of "refined dilapidation" to offer any protection to man or beast. The main building had included a riding hall sixty feet by eighty feet, and stall accommodations for forty horses. The upper floors, barely large enough for one troop, were forced to accommodate five.

The addition of five troops to the regiment in 1914 required more locker and drill space, and an "auxiliary armory" was established in a four-story building diagonally across the street from the main building. Fourteen ramshackle sheds were pressed into service for the stabling of horses. The return of the regiment from Mexican Border service in 1916 required additional stable accommodations, and a large building was rented for the purpose at 831 North Clark Street. Truly, the regiment was spread along North Clark Street a distance of a mile.

Such were the conditions under which "Chicago's Own" mounted regiment labored and, peculiarly enough, prospered in

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strength and training, but the inconveniences and hardships were, nevertheless, a drain on the enthusiasm of those who visualized greater things if the conditions could be improved.

The regiment appealed loudly for help, and the Illinois General Assembly of 1915 appropriated \$495,000.00; which sum, after successive appeals, was increased to a total of \$852,500.00 by the General Assemblies of 1921 and 1923.

Securing an armory site presented another real problem. Storms of protests, injunctions, restraints and wordy battles in the public prints followed each tentative selection of ground. For years the appropriation could not be placed to work for lack of property consents. The first site selected was at the northeast corner of Broadway and Cornelia Streets, but before a spade of earth could be turned the regiment was restrained by injunction. Then, as a feint, the regiment proposed to build its armory in the centre of Lincoln Park, and the question became a live newspaper issue. It had the effect of arousing public sentiment, the substance of which was "the armory should be built, but not in our neighborhood."

In 1915, the present site, then "Streeterville," reclaimed from Lake Michigan and to which ownership by virtue of "squatter sovereignty" was vainly contested by picturesque old Captain Streeter, was deeded by the State for armory purposes. A trade was effected between the site purchased on Broadway and this land. But the storm was not over. Again resourceful antagonists attempted to block the move, but gradually and with much persuasion the regiment won the support of the neighborhood. Said a leading morning newspaper editorially:

"OUR HOMELESS BUT AMBITIOUS REGIMENT

The gallant First Cavalry, having been refused armory space in the residential districts of the north side, and also in Lincoln Park, now modestly suggests that it will be satisfied with a site on the lawn in Chicago Avenue between Lake Shore Drive and the beach. Would the regiment be willing to compromise and occupy the new City Hall?"

The construction of the first unit, or administration section, was begun late in 1916 and was completed in 1919, while the regiment was in service as field artillery overseas. Oddly enough, the building site and the former drill field opposite, was hallowed as the first camp site of the war regiment. The completion of the whole project in January, 1925, therefore, marked the successful conclusion of sixteen years of progressive development, but those who devoted their efforts unselfishly to the work feel well repaid by the magnificence of the structure.

Inspiration for the impressive exterior was found in St. Cecily



ARCHITECTURAL ORNAMENTATION OF THE WEST FACADE

The Central Design Portrays the Eagle Defiant, Grasping the 73-mm. Shell in Its Talons; in the Rear a Background of Cross Cannon and Flags. The Division Insignia and the Numerical Designation of the Regiment and Brigade Are Also Shown. The Tablets on Both Sides List the Villages Captured in France With the Support of the Regiment.



THE LOCATION OF THE ARMORY

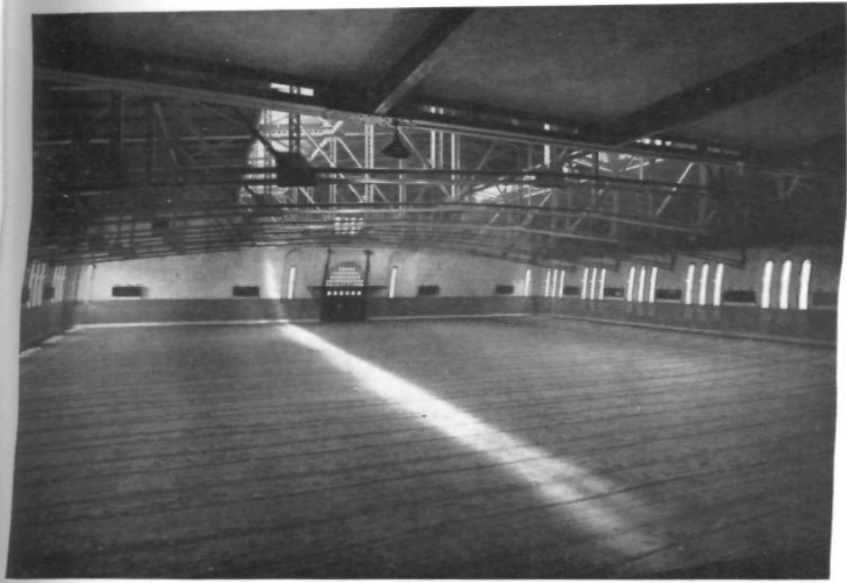
In the Centre of Chicago's New North Side Development of Fine Buildings. In the Foreground Lies the Lieutenant Alexander McKinlock Memorial Campus of Northwestern University. On the Right is the Shore Line of Lake Michigan Bordered by the Bridle Path of Lincoln Park.



VIEW OF THE ARMORY FROM THE EAST
This Shows the First Unit or Administration Section.



VIEW OF THE ARMORY FROM THE WEST
This Shows the New Unit with the Proposed "Memorial Park" in the Foreground.



THE RIDING ARENA

The Footing Consists of Nine Inches of Chipped Shavings and Two Inches of Sand. The Dimensions of the Arena Are 220 Feet by 200 Feet.



THE MAIN LOBBY AND THE STAIRCASE LEADING TO THE OFFICERS' QUARTERS



OFFICE OF THE REGIMENTAL COMMANDER



PARTIAL VIEW OF A TYPICAL LOCKER ROOM

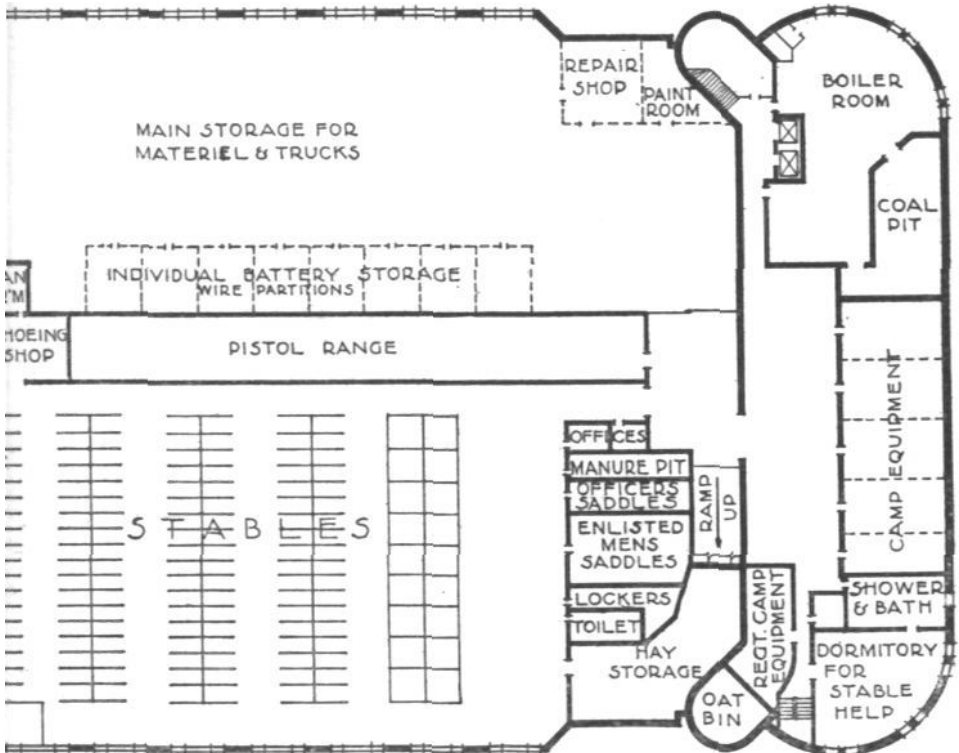
NEW ARMORY OF THE 122ND FIELD ARTILLERY IN CHICAGO

Alby, a fine example of the military type of fortified church in Alby, France. The construction is of steel, stone and concrete block. The interior layout is spacious and practical, affording facilities for housing and training the entire regiment of eleven units, storing of complete regimental equipment and stabling of over two hundred animals under one roof.

Special consideration was given to the utilitarian purpose of the building and character and beauty of interior and exterior. A number of the modern features represent a great deal of study and tests. It is believed to be the model armory of the country for a horsed regiment. The structure represents an outlay of \$900,000.00, exclusive of the land.

ADMINISTRATION UNIT

The administration section of the building consists of a semibasement and five floors. The semi-basement contains the boiler room, coal pit, storage rooms for camp equipage, ammunition magazine and recreation room for armory employees.



GROUND FLOOR PLAN 122ND F.A. ARMORY

Dimensions 274 feet by 220 feet.

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The first floor consists of foyer, class room, medical examining room, model dispensary, recruiting office and two large club rooms.

Headquarters offices and officers' quarters occupy the entire second floor. Each organization commander has his own suite of offices. The third and fourth floors are devoted to organization locker rooms and quarters, clothing issue rooms, steel vaults for small arms and machine guns, and a tailoring shop. Each floor has its own battery of shower baths and toilets.

The locker rooms, separate for each organization, are enclosed with heavy wire screening to permit the free circulation of air, and are equipped with steel clothing and field equipment lockers.

The fifth floor is devoted to a ball room, 180 feet by 45 feet, done in ornate gothic architecture, a smoking room, lounge room, ladies' rest room, kitchen and moving-picture projecting room. In the towers of the building are located the radio room and sleeping quarters for armory employees.

TRAINING AND STORAGE UNIT

The training and storage unit adjoins the administration unit of the armory to the west. This is the portion which has just been completed. It includes the riding arena, stables, gun park, target range, gymnasium, storage rooms for matériel, motor trucks and wagons, and a visitors' balcony.

The stables are located beneath the riding hall and occupy an area of 200 feet by 100 feet with a fifteen-foot ceiling. There are eighteen box stalls and 126 slip stalls, a sick bay, soaking stalls, a tack room for officers and one for enlisted men, a locker room, shower and toilet room for stable employees, manure pit, horseshoeing shop and saddler's shop. Ample forage storage rooms are located beneath the service entrance ramp and all forage is received and distributed by gravity. Space in the stables permits the addition of seventy-five additional stalls.

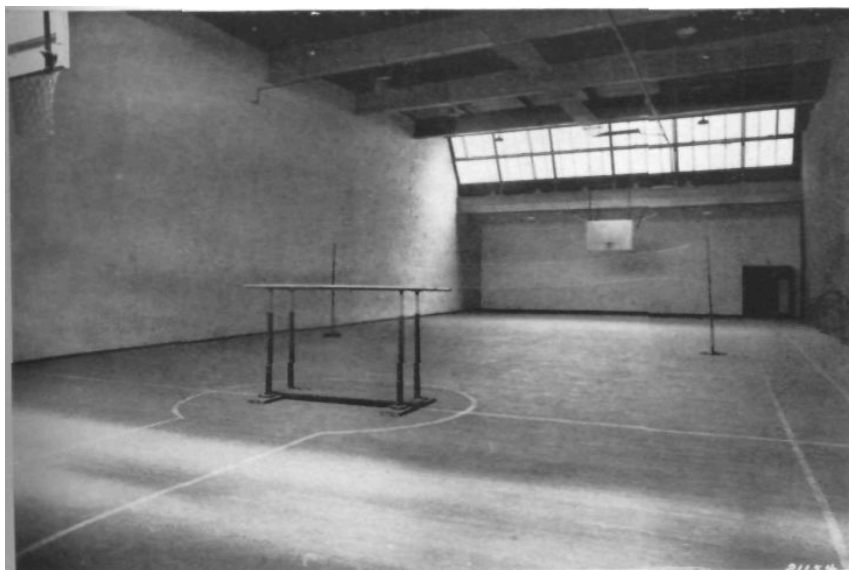
Modern improvements for efficient and economical care of horses have been incorporated in the stable plan. The following important factors were observed: sanitation, ventilation, drainage, ease of supervision, saving of labor and permanence of construction.

The stalls are laid out in series of thirty-six, head to head. The slip stalls measure five feet by nine feet and the box stalls ten feet by eleven feet. The stalls are constructed of No. 1 Select Yellow Pine, hand rubbed with two coats of oil. Two-inch spaces are provided between each board. The hay mangers are of wood, and the feed boxes are of steel. The end posts and guards are of steel. Each stall is equipped with an automatic sanitary drinking cup, which has proven satisfactory and labor-saving after two years' test.

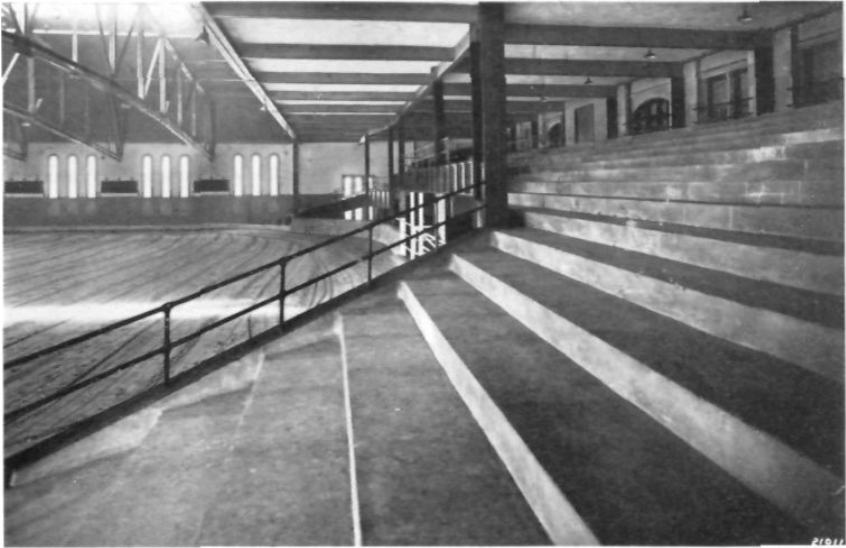
The fact that the stalls are laid out on one floor lends to ready



CLOTHING ISSUE ROOM



GYMNASIUM



THE VISITORS' BALCONY OVERLOOKING THE RIDING ARENA



GUN PARK. BENEATH THE VISITORS' BALCONY

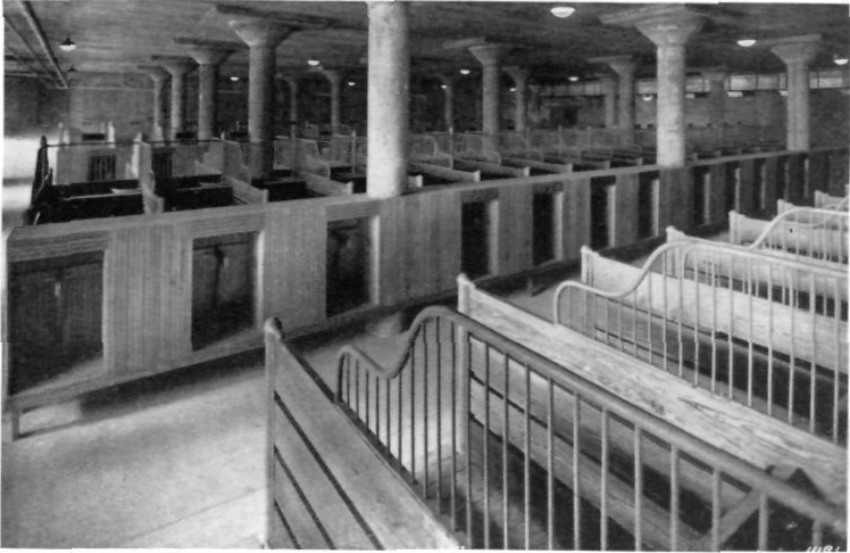


A TIER OF BOX STALLS



THE DETAILS OF A BOX STALL

This Shows the Wood Block Flooring. Steel Grills, Automatic Drinking Cup, and Hay Manger.



GENERAL VIEW OF THE SLIP STALLS

Showing Harness Cabinets in the Foreground and the Ventilating Duct Suspended on the Ceiling to the Right.



DETAIL OF A STALL

Showing Removable Floor Board, Drinking Cup to the Left, Steel Feed Box and Hay Manger.



PARTIAL VIEW OF OFFICERS' TACK ROOM
Note the Suspended Bridle Racks.



PARTIAL VIEW OF ENLISTED MEN'S SADDLE ROOM



HORSESHOEING SHOP

The Forge Was Constructed From a Gasoline Tank. The Blower is Electrically Operated.



THE FIFTY YARD PISTOL RANGE

The Targets Are Marked From a Pit. The Range is Mechanically Ventilated.

NEW ARMORY OF THE 122ND FIELD ARTILLERY IN CHICAGO

supervision on the part of the stable sergeant, who from any point in the stables can observe every stall. Sixteen-foot aisles permit easy passage of teams.

Harness cabinets are provided in the aisles behind the stalls assigned to draft animals. Each draft animal has its own set of fitted harness.

In the east end of the stables are located the stable sergeant's office, tack room for officers, tack room for enlisted men and locker room and shower baths for the stable grooms. Storage facilities for two months' supply of forage are provided.

The location of the armory requires that stable odors be eliminated. This has been accomplished, in part, through an electrical high-frequency apparatus of special design which diffuses ozone and effectively kills odors. In addition, a mechanical ventilating system provides the means of fresh-air circulation.

Animals are groomed by vacuum, though organizations, after using horses, are required to groom by hand for purpose of training.

The floor boards of the stalls are removable. The stable flooring is cement and is drained through eight-inch mains equipped with a special design of floor traps. The stables are practically fly-proof.

TARGET RANGE

On the lower floor is also located the pistol and sub-calibre range, 175 feet in length and twenty feet in width. Targets are marked from a steel-protected pit. The butts are constructed of three rows of twelve-inch logs laid on end at an angle of thirty degrees, which can be easily replaced. The rear wall is further protected by $\frac{1}{4}$ -inch steel plates. The range is mechanically ventilated. Experiments for sound-proofing are now being conducted.

MATÉRIEL STORAGE

The matériel, wagon and truck storage room is also located on the lower floor. This room is 210 feet by 100 feet. In the general storage room is nested the matériel, rolling kitchens, water and ration carts, escort wagons and trucks. A machine shop is provided and a separate storage room, twenty feet by twenty feet, for each organization. The entrance to the general storage room is forty-eight feet wide, permitting ample access with trucks. Steel chutes from the floor above permit gravity moving of heavy equipment.

THE RIDING ARENA

The riding arena measures 220 feet by 200 feet and is sufficiently large to manœuvre a four-section battery fully horsed. The gun park adjoins the riding arena and permits space for standing gun drill of six sections at reduced intervals. A balcony with a seating capacity of 1000 persons overlooks the arena.

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The footing in the arena consists of nine inches of chipped shavings and two inches of fine sand laid upon a concrete floor. This combination has been found better than tanbark in that it is dust-proof when slightly dampened and gives a substantial, resilient footing, non-skid and free of noxious odors.

The arena has a thirty-eight-foot, comparatively flat, ceiling supported by 220-foot steel trusses, said to be the longest spans in the country. It is daylighted from three sides and overhead. The side walls are of straw-colored press brick and stone to a height of twelve feet. Heat is provided by vacuum system. Twenty-seven 500-watt lamps light the arena brilliantly at night. Air circulation in the arena is controlled by electrically operated glass monitors located on the roof.

Sport and recreation form a great attraction to young men who serve in the National Guard, and with that in mind a gymnasium, 220 feet by fifty feet and two stories high, was installed. The gymnasium is also used for dismantled drills. Two dormitories are located on the gymnasium floor.

An athletic field adjoins the front end of the building, with dimensions of 900 feet in length and 220 feet in width. The athletic field is laid out with running tracks and baseball diamond, football field and two tennis courts. A large ice-skating rink is provided for winter sports.

To the west of the building the regiment is constructing the Regimental Memorial Plaza, to be dedicated to the officers and men of the regiment who sacrificed their lives in war.

The entire regiment is quartered in the building, and separate drill nights are assigned to the two battalions, another to the combined Headquarters Battery and two Combat Trains, and the fourth night to the Service Battery and Medical Detachment. Saturday afternoons and Sunday mornings are devoted to equitation classes, music, riding and sports.

The total sweep to the land occupied is 405 feet in length and 220 feet in width. It is bounded by Fairbanks Court, Chicago Avenue, Seneca Street and Pearson Street.

A PROPOSED ORGANIZATION FOR THE HEADQUARTERS OF LIGHT FIELD ARTILLERY BATTALIONS

BY CAPTAIN GEORGE D. WAHL, F.A.

UPON reading the title of this article any thoughtful person might very well ask, "Why change our present organization?" The answer is quite simple. Due to more or less recent developments, our present headquarters functions mainly by means of a series of makeshifts, even under what might be considered normal conditions.

In order to avoid improvising in the future, there are two courses open to us. We can reduce the demands made upon battalion headquarters, until they are commensurate with the limitations of the present organization, or we can increase the total strength and make it equal to fulfilling the requirements. The first course is a matter of training. It is much more difficult of treatment than the latter. As a start must be made somewhere, the easier way has been chosen. The organization problem is discussed below.

In presenting the subject, the headquarters has been subdivided into six more or less logical subdivisions according to activities. These are administration, intelligence, plans and training, supply, reconnaissance and communications. The plan of giving to each activity the personnel necessary to accomplish the task, has been followed throughout. The estimate of the number required in each case has been based on the results of four years of observation and investigation.

In the discussion below the general activities of the six subdivisions are considered. The personnel and matériel allotted for any purpose may be ascertained by reference to Fig. 1 at the end of this article.

ADMINISTRATION

The battalion is not an office of record. The administration required is mostly concerned with the headquarters unit itself. This consists of caring for the physical needs of men and animals and preparing the necessary correspondence and records concerning them. Other functions are largely a matter of consolidation of reports or requests, and their transmission to higher headquarters.

The administrative section must be divided into two parts. One part stays in rear. It takes care of the feeding, clothing, etc., and the local administration. The other part goes forward with the operating personnel. It cares for their needs during action.

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The rear echelon is controlled by the adjutant. It consists of the personnel necessary to care for the routine records, battery correspondence, mail, clothing and cooking for the entire headquarters battery. Only very limited personnel to care for horses is provided, as most of the animals are forward with the operating personnel. The slightly injured or sick stock, however, must be provided for at the rear, because an unwarranted wastage will occur if they are neglected or evacuated out of the unit.

The forward echelon is designed to take care of the led horses and to furnish orderlies to the battalion staff. Nine horses is the absolute maximum any man should be asked to hold. This number may be moved by a horseholder with difficulty. The stable sergeant is provided to coördinate the work of the horseholders and supervise the care of the stock. This is believed necessary. At present the headquarters animals usually suffer from neglect when in action, because no reliable person is provided to watch over them. The average horseholder or bugler is generally a man who cannot be otherwise utilized. This makes the need for supervision doubly pressing.

Four orderlies for officers on the staff are provided. One orderly should be assigned to the executive. One orderly can care for the plans and training and communications officers. One orderly should be sufficient for the intelligence and reconnaissance officers. The remaining orderly is for the adjutant. This assignment of orderlies is designed to prevent the present practice by staff officers of using the horseholders as personal orderlies. This misuse of the horseholders has frequently resulted in confusion and lost time upon entry into action in the past.

It should be noted that the adjutant is given command of the headquarters battery. This is logically one of his functions as an administrative officer.

Attention is invited also to the fact that many men throughout the detail are not mounted. The idea is to reduce the number of single mounts as much as possible. Their care is a large and troublesome problem during any engagement.

INTELLIGENCE

The task of the intelligence section is to procure and disseminate all available information relative to the hostile situation. Certain reports and journals pertaining to the artillery information service must also be prepared and forwarded.

The intelligence officer is in charge of intelligence work. The observer personnel is placed under his direction because he is in the best position to supervise them. Their work is partly intelligence and partly fire direction. The dividing line is really immaterial.

PROPOSED ORGANIZATION FOR HEADQUARTERS

The best method is to allow the intelligence officer to supervise their activities in both subjects.

In discussing observation posts it should be remembered that modern artillery tactics will frequently require the battalion O.P. to move by echelon, one O.P. being always well advanced. Under this condition the observer personnel should be divisible by two.

The presence of instrument corporal No. 2 under "Reconnaissance" should be noted. He is available as an observer when not used for topographic work.

In operating an advanced O.P. wire communication may be difficult to install or maintain. Two radio sets of the S.C.R. 77 type are made available under communications, for use in working with an advanced O.P. (One set remains near the command post and one goes to the advanced observation post.)

PLANS AND TRAINING

In action the plans and training section is possibly the busiest of all. In addition to keeping thoroughly posted on the friendly situation, this section usually writes the messages, orders, etc., and keeps up the journal of operations and war diary. Experience has convincingly demonstrated that a clerk is badly needed. Also a telephone operator should be provided to receive the thousand and one routine calls which come in over the P. and T. O. telephone.

When a mission is assigned to a battery, this section should notify the observation post, which should observe and report on the effect of the fire. This check is essential. When ineffective fire is noted, the plans and training officer should make an investigation.

When the O.P. observes an important enemy target, it reports same to the P. and T. section. The P. and T. section, acting under the battalion commander's announced policy, allots this target to a battery.

The agents are assigned to this section for use in carrying fire control messages. In many situations this will be the quickest means. In action a ten-word message goes equally fast by telephone, runner or mounted messenger, for a distance of about 300 yards. It should be carefully remembered that urgent messages, only, go by the fastest means. Unimportant messages should be sent by the slower means. Care must be taken, therefore, to avoid unnecessary exhaustion of either man or animals "running" unimportant messages. When not being held ready for the use indicated above, the agents should be turned over to the message centre for use as mounted messengers.

Under "transportation," a spring wagon is listed for the joint use of the P. and T. O. and the message centre. By arranging large shelves, which are hinged to the wagon body and lowered

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outwards, and a large tarpaulin, which can be stretched over the top of the wagon, covered desk space may be secured for these two activities in inclement weather. Some cover is badly needed unless we intend to operate only in fair weather.

SUPPLY

The battalion is not a link in the supply system unless it is operating by itself. When it does, the commanding officer of the battalion section of the regimental service battery acts as battalion supply officer.

In handling munitions, the battalion combat train is the principal agency. The commanding officer of the combat train should act as munitions officer for the battalion, instead of the supply officer. Extra staff officers for these functions are not needed.

RECONNAISSANCE

A special subhead has been made of reconnaissance because it does not logically belong under anything else. Under this heading will be considered the activities of the reconnaissance and liaison officers and their details.

The reconnaissance officer is the battalion handy man for obtaining information. It is his duty to verify or ascertain those items of information which the commander or staff need to know to fulfill their functions, and which it is not expedient for them to determine for themselves. Included in this information is topographical data for fire control within the battalion.

Under "equipment," the topographical equipment is to be carried in the intelligence spring wagon. Instrument corporal No. 2 has charge of it. He acts as an observer when not otherwise employed.

The scout corporals are the assistants of the reconnaissance officer in the performance of his duties, other than topographical ones. The flag kits for visual signalling, the field glasses, the hatchet and wire cutters are their equipment. The hatchet and wire cutters are supplied them for use in facilitating the movement of reconnaissance parties in fenced country.

Some readers may object to the placing of liaison under reconnaissance. It usually is considered under the head of communications. However, when stripped of mysticism, liaison is nothing but a special reconnaissance for information (Training Regulations 430-155, par. 3). Its communications problems are similar to, but perhaps more severe than, those of any other reconnaissance party a long way from home.

Two liaison details are furnished. These details are intended for use with front-line infantry battalions. Two details are needed

PROPOSED ORGANIZATION FOR HEADQUARTERS

because two front-line battalions of infantry are not infrequently supported by one artillery battalion. Also the extra detail is badly needed in making reliefs, even if only one infantry battalion is supported.

In action the liaison officer accompanies the infantry commander. The corporal acts as observer, looking for such information as is desired by the liaison officer. Two privates go with the liaison officer to act as runners to the infantry command post. The scout sergeant remains near the infantry command post. He prepares and dispatches the regular liaison reports and such messages as are sent him by the liaison officer. Two telephone operators are furnished by the communications section. The one off shift acts as mounted messenger or visual operator and the other as telephone operator.

When properly equipped and trained, this detail should be sufficient to reconnoitre, as well as to handle the transmission of the results of its reconnaissance by messenger or visual or by telephone when the battalion has laid a wire forward to it.

Attention is invited to the projector equipment. At present this equipment is in disfavor because of faulty design. However, using a common automobile spot light and a shutter (NOT a switch), very fair communication can be established on even brilliant days over a distance of 5500 yards or more.

COMMUNICATIONS

The communications section is by far the largest part of the headquarters. In reality it is the factor that binds the various parts of the headquarters together, and enables it to control the rest of the battalion.

An artillery battalion headquarters must be able to operate visual, messenger, radio and telephone agencies simultaneously. To coördinate these agencies, a message centre must also function to insure an equitable distribution of traffic among the available agencies.

Figure 2 shows the distribution of the personnel assigned in Figure 1.

Visual signalling seems to have fallen into disrepute. The main reasons are really quite obvious when analysis is attempted. In the first place it is made the duty of everyone to be visual men in *addition* to their other duties. It is a well-known axiom that what is everyone's business is never done. Consequently no one is really a proficient signaller. The other reason is that the wrong times or the wrong conditions are usually selected for operation. For example. To send a ten-word message by wigway for 300 yards is a waste of time. A runner is quicker. However, to use semaphore to transmit firing data to the battery over a distance of 300 yards,

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Personnel	Transportation	Remarks
Message Centre { <ul style="list-style-type: none"> 1 Sgt. (Msg. Cen. Chief) 2 Pvts. (Clerks) *2 Telephone Operators 1 Driver 	1 Spring Wagon	The Sgt. Maj. is the entire message centre at present.
Visual { <ul style="list-style-type: none"> 1 Cpl. (Chief) (h) 2 Pvts. (h) 		This Section does not exist at present.
Messengers { <ul style="list-style-type: none"> 1 Cpl. 2 Messengers (Mtd.) (h) 1 Messenger (Dismtd.) 4 Agents (When not used by P. & T. O.) 1 Motorcycle 		Sig. Cpl. No. 1, in addition to other duties, is chief messenger. Agents and motorcycle also exist at present, but no other messengers.
Radio and Panel { <ul style="list-style-type: none"> 1 Sgt. (Chief) 1 Cpl. 4 Pvts. (Operators) 2 Pvts. (Panels) 2 Drivers 	2 Spring Wagons	One Cpl. and 2 Pvts., only, are allowed at present.
Wire Section { <ul style="list-style-type: none"> 1 Sgt. (Chief) (h) 2 Cpls. (h) } Operation 10 Pvts. (h) } 2 Cpls. (h) } Maintenance 2 Wireman } 5 Lineguards (4h) } 7 Drivers 	2 Reel Carts	2 Cpls., 8 Operators, 4 Lineguards and 1 reel cart, only, are supplied at present.

The Communications Officer's Personnel
Fig. 2

* Included elsewhere.

PROPOSED ORGANIZATION FOR HEADQUARTERS

while the wire is being installed, works excellently. Another example would be the control of a battery located some 3000 yards from battalion headquarters during a rapid engagement. Semaphore would not work well because of the distance. Either wig-wag or blinker would work excellently, provided the message was short—say about fifteen words.

A visual section is provided for use in receiving or transmitting messages at the battalion command post. The reconnaissance officer, for example, should be able to report by visual from an auxiliary observation post, using his scouts. The liaison details should be able to send a short code message back in an emergency. At least some one is on the job at the battalion command post, looking for a chance to operate visual.

Messengers form the most valuable and reliable means of communication on the battlefield at present, bar none. Three types of messengers are provided. The dismounted messenger is used to carry local messages from the message centre to the addressee or to fetch them to the message centre. The others (motorcycle or mounted) are used to carry outside messages. The chief messenger's duty is to keep the messengers from loafing. He does this by means of the delivery lists, which are in his custody.

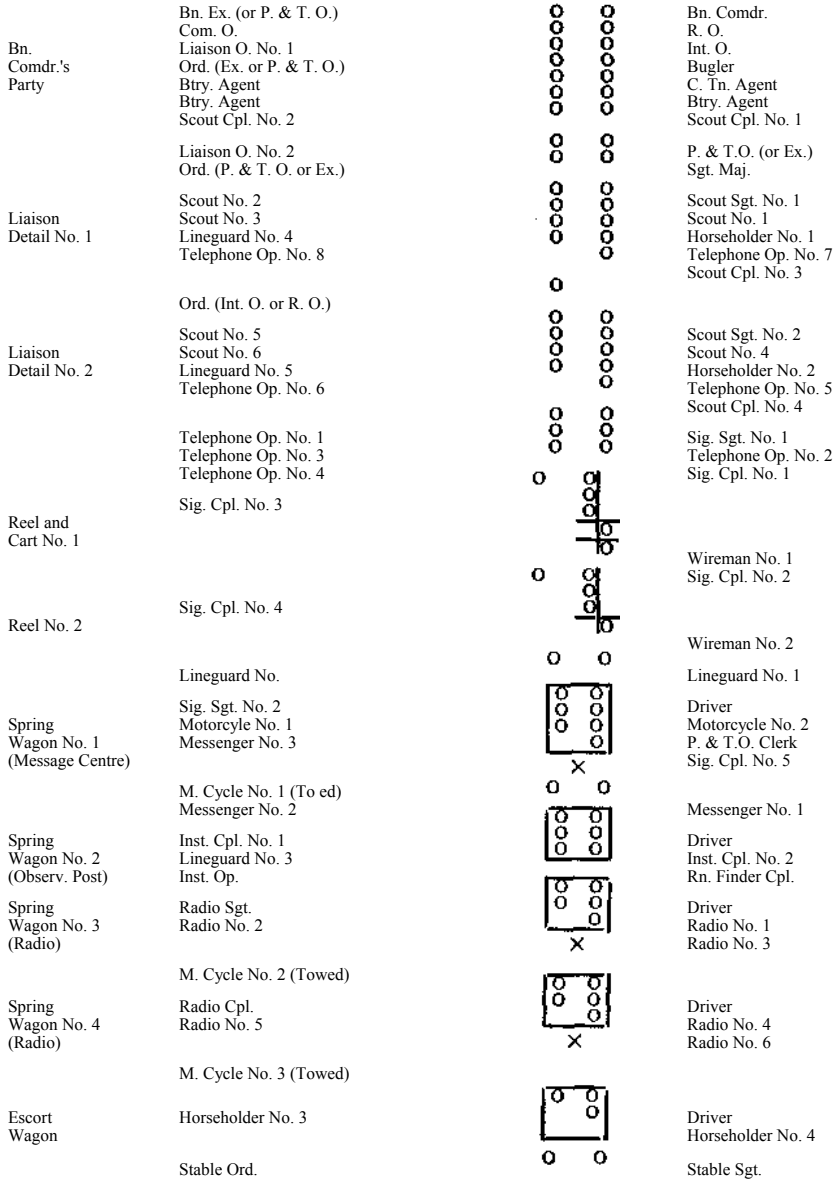
The radio personnel has to operate four sets. All four of these sets may have to be operated simultaneously. The large set (Type S.C.R. 109) is used with the airplanes for fire control or intelligence work. Two operators are best. The panel detail is used to respond to the plane in addition to the radio. One small set (Type 77-A) works with the supported infantry. Two operators are best for this work; one can be used satisfactorily. One small set (Type 77-A) works to the advanced O.P. As this man is working with an operator with whom he is familiar, one operator is sufficient. One small set (Type 77-A) operates at the advanced O.P. Two men are needed to carry this set. One man can set it up and operate. The carrier can be a member of the O.P. detail.

Wire communication is the backbone of the artillery system. The detail handling it, is divided into two parts. One part operates the telephones and switchboards. The other part installs and maintains the lines. It must be remembered that frequently it is advisable for a battalion O.P. to move by echelon. Enough equipment must be provided to commence one echelon while the other is still working.

In the operating part, the corporals are the switchboard operators. Two operators operate the message centre phone by reliefs. Two operate the P. and T. O. phone by reliefs. Four are for liaison duty.

The maintenance part must install wires to three batteries, to

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WORKING FORMATION OF THE PROPOSED BATTALION DETAIL (HORSE-DRAWN)

The road space for the above formation is 228 yards. The present Battalion Headquarters and Headquarters Battery, without field trains, occupy 215 yards road space.

FIG. 3

		Officers	Men
Bn. Bn. Comdr. Exec. (Major)-(Capt.)	Administration	1 Lieut. (Adj.) (C. O. Hq. Btry.)	<p>Forward Echelon</p> 1 Staff Sgt. (Sgt. Maj.) 1 Stable Sgt. (h) 1 Stable Orderly (h) 1 Bugler (h) 3 Officer's Orderlies (h) 4 Horseholders (2h) 1 Driver
			<p>Rear Echelon</p> 1 Sgt. (h) (Acting 1st Sgt.) 1 Pvt. (Stable Helper) (h) 1 Saddler 1 Sgt. (Mess and Supply) (h) 1 Officer's Orderly (h) 4 Drivers
	Intelligence	1 Lieut. (Int. O.)	Inst. Cpl. No. 1 Rn. Finder Cpl. Inst. Operator *2 Tel. Operators (h) *1 Line Guard 1 Driver
	Munitions & Supply	*1 Capt. (Mun. O.) (C. O. Bn. C. Tn.) *1 Lieut. (Sup. O.) (C. O. Bn. Sec. Ser. Btry.)	* None
	Reconnaissance	1 Lieut. (Rec. O.)	2 Scout Cpls. (h) Inst. Cpl. No. 2
		2 Lieuts. (Liaison)	2 Sgts. (Scouts) (h) 2 Cpls. (Scouts) (h) 6 pvts. (Scouts) (h) *4 Tel. Operators (h) *2 Lineguards (h) *2 Horseholders (h) 2 Motorcycles
Communications	1 Lieut. (Com. O.)	3 Sgts. 1 (h) 7 Cpls. 4 (h) 30 Pvts. 18 (h) 9 Drivers 1 Motorcycle	

Total: 9 Officers, 1 Staff Sgt., 9 Sgts., 17 Cpls., 70 Pvts. The pres Staff

*Included elsewhere.

Fig. 1.

Transportation	Special Equipment	Remarks
Escort Wagon		Grain and officers' equipment to be carried in the escort wagon. Sgt. major intended as personal aid of Ex. and P. & T. O. for supervision of C. P. Present organization has no officers' orderlies, only 2 horseholders, and no transportation.
Escort Wagon Rolling Kitchen Water Cart Ration Cart	Tentage and office supplies, horseshoers and mechanics tools	No kitchen supplied in present organization. Present organization consists of 1 officer, 2 sgts., 3 cpls., and 8 pvts. with same duties as assigned herein.
1 Spring Wagon	B. C. Telescope Rn. Finder 3 Field Glasses 1 Sitogoniometer 1 Small Drawing Board * Telephone * Radio Set	No separate transportation supplied in present organization. Instruments now carried behind reel cart, usually to inconvenient destination, or left behind.
* None	* None	No change over present allowance. C. O. of C. Tn. made munitions officer instead of leaving this to the Sup. O.
Topographical Equipment. Carried in Int. Spring Wagon.	Large Plane Table 1 Telescopic Alidade 1 Protractor (Large). 1 Aiming Circle 100 m. Tape 3 Field Glasses 1 Hatchet 1 Wire Cutters 1 Sitogoniometer 2 Flag Kits	No change except in transportation of equipment.
	8 Field Glasses 4 Flag Kits * 2 Projectors * Telephones	No horseholders allowed in present organization and only one liaison detail allowed.
2 Reel Carts (6 horse) 1 Inst. Chest 3 Spring Wagons	12 Miles Wire 2-12 Drop Switchboards 2 Operators Equipment (EE 64) 2 Climbers 9 Telephones EE 5 2 Flag Kits 2 Field Glasses 3 Projectors 1 SCR 109 (Airplane Communication) 1 SCR 77 (Infantry Communication) 2 SCR 77 (Forward Observation) 1 Motorcycle	Changes in personnel shown in Fig. 2. One reel cart and two spring wagons added to transportation 2 EE 64, 2 climbers, 5 telephones and 2 SCR 77 constitute principal changes in equipment.

sent organization consists of 8 Officers, 1
ff Sgt., 4 Sgts., 12 Cpls. and 34 Pvts.

PROPOSED ORGANIZATION FOR HEADQUARTERS

the O.P., to liaison details, and local lines to message centre, P. and T. O. and radio station (when necessary). Two carts are provided. Both are needed, especially when lines must be kept up with advancing infantry.

The message centre keeps a record of all messages sent and received. It also allots the messages sent, to the proper agency for transmission. It dispatches the messages received to the local addressee. Any messages incoming in code (all radio messages are encoded) are decoded before delivery. All messages going by radio are encoded before being turned over to the operators.

The message centre chief determines how messages shall be sent. He is the senior and is responsible for the operation of his station. One clerk keeps the message centre register. One clerk codes and decodes messages. They act as a mutual relief. The chief messenger represents the messenger service and keeps the delivery lists. The runner calls for and delivers the local messages under his direction.

The spring wagon is shared jointly with the P. and T. O. The shelf desks on one side are for the P. and T. O., and those on the other side are for the message centre personnel.

GENERAL

The list of equipment suggested is far from complete. Only the more important items are covered.

Under "Remarks" of Figures 1 and 2, a rough comparison is made between the present and the suggested headquarters.

Figure 3 is a suggested formation for marching the forward echelon of the proposed headquarters. Attention is invited to the fact that the present headquarters differs very little in road space from the proposed one.

In conclusion, it should be pointed out that this article is largely a protest against the apparent present system of increasing little by little the demand made upon limited personnel. Each demand by itself is small. The sum total over several years is rather staggering. It has reached a point now where reorganization is badly needed. Either the organization or the demands must be changed. An omelet can't be made without breaking eggs.

NATIONAL DEFENSE

AN EXTRACT FROM THE SPEECH OF SENATOR JAMES W. WADSWORTH, JR.,
CHAIRMAN OF THE SENATE MILITARY AFFAIRS COMMITTEE, AT THE DEDICATION
OF THE NEW YORK STATE MONUMENT AT GETTYSBURG, SEPTEMBER 9TH, 1925.

If there is one nation on the face of the earth that is innocent of the charge of militarism, it is the United States. We utter no threat of aggression. We covet no territory. We have enough now, and plenty of domestic problems to engage our attention for a long time to come. We hold aloof, and wisely so, from the political complications and intrigues of the older nations. We do not seek to impose our will upon them in any way. Our people abhor war and love peace. And yet, in defense of our institutions and our safety, Americans have taken part in three wars since 1860—the Civil War, the Spanish War and the World War.

Three wars in 65 years! I am confident history will relate that in each case active hostilities were not sought by the American people; that in each case the call to arms came to Americans as a result of a threat to our national safety or, as in the case of the Spanish War, the continued existence of a situation close to our borders which had become utterly intolerable from every human standpoint. In each case we started our preparations after the fight commenced. Our soldiers have received most of their training in actual battle. The Government has enlisted them and thrown them into the campaigns illy equipped, undisciplined and untrained. The resultant cost in lives, needlessly sacrificed, has been staggering.

Up to the time of the World War this method, or lack of method, was traditional with us. Our experience in the World War was a little different. We went into it on April 6, 1917, utterly unprepared. We had gazed upon the strife for two and one-half years and during that threatening period, when most thoughtful people feared that we must be drawn in, we took no important step in preparation. Fortunately we had allies who held back the enemy while we, commencing at the declaration of war, were equipping and training our men. At terrific cost, with tremendous effort, and with much confusion, we got ready behind the lines held by our allies.

It is fortunate we had such an opportunity! We may never have it again.

An indication of the difficulty of putting into motion a great military undertaking with trained soldiers, may be had when we remember that thirteen months and three weeks elapsed before an American division was ready to launch an important attack against the enemy's lines. This occurred at Cantigny on May 28, 1918.

NATIONAL DEFENSE

We had struggled all through the spring, summer and autumn of 1917 and through all of the winter of 1918 before we were in a position to put American troops, fit to encounter a trained enemy, in the field. When our men did arrive (and they arrived only in the nick of time) they quickly showed their mastery, not only because of their courage and native intelligence, but because of the training they had received, officers and men, before they stepped upon the field of battle. True there were some tragic instances in which American boys, sent up as replacements, were thrown into battle without ever having fired a shot from their rifles. These instances, however, were comparatively few. I use the word "tragic" advisedly, for that country which sends its young men upon the modern battle field, undisciplined and untrained, comes perilously near committing murder.

Up to our active participation in the World War, the terrible lessons of the War of the Revolution, the War of 1812, the Civil War and the Spanish War, seemed not to have sunk into the national consciousness at all. It was only when the World War was over, and we woke up to the fact that we had spent \$40,000,000,000 in eighteen months trying to get ready, and that it required months and months to train officers competent to lead and train men—only then did the Congress, representing a mighty public sentiment, make up its mind that this nation must never again be found in that predicament. Hence the revision of the National Defense Act in 1920.

That act set up for the first time in our history a military policy. It provides an establishment, very small in the aggregate, in time of peace, but so constructed that it can be expanded to meet a national emergency. The spirit of the law is in strict conformity with our democratic, non-militaristic traditions. It does not, and cannot, set up a military caste. It contains no element of compulsion. The services performed under its provisions are voluntary. Indeed, it may be said that the new National Defense Act merely puts the Federal Government in a position to invite the young men of America to come forward occasionally and receive that training which will enable them to defend their homes and their country. Nothing could be simpler; nothing more fitting.

In setting up this machinery and putting it in motion the Congress brought together, and in a sense merged some of the aforesaid scattered elements of our establishment. It was admitted on all sides that the country would never tolerate a large professional standing army. The cost of such an establishment is prohibitive. If it were not, its existence would be in conflict with all of our traditions. Furthermore, all military men know that a standing or professional army, maintained in time of peace, must in time of great national emergency be submerged as a military factor in the

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much greater army of citizens called to the colors for the national defense.

And so, faithful to our traditions, the law contemplates a very small regular force. For the last two years its numbers have stood at 118,500 enlisted men and 12,000 officers. That means that we have one regular soldier for every 1000 people living under the American flag. The most extreme pacifist must fail to prove the charge of militarism in such a situation. In proportion to our population and wealth we have the smallest regular army of any member of the Family of Nations. In actual numbers it stands number twelve on the list of standing armies. Furthermore, if we add to the Regulars our National Guard and our Reserve, the civilian components of the army, and compare the aggregate number with the corresponding forces maintained by other nations, we find that ours is the smallest in proportion to population and wealth, and still twelfth in actual numbers.

In the old days our Regulars, largely forgotten or neglected in time of peace, were assigned to garrison duty in our overseas forces, in our coast defenses, at our interior army posts, and to the business of carrying on the overhead of the army generally. They were removed from the people and were deprived of all opportunity to become known and understood. In many quarters they were objects of suspicion. Always faithful, always efficient in their restricted sphere, the talents of our highly educated regular officers and of our experienced regular soldiers, were seldom employed to the advantage of the whole nation. There was no opportunity for such employment under the law. Therefore, the Congress, convinced that the defense of the country must in every great emergency depend upon citizen soldiers, decided to confide to our little Regular Army the new and most important function of teaching or training these citizen soldiers. The scheme has been worked out down to the last detail and has been in operation with extraordinary success since 1921. We now have one army of the United States with its three components—the Regulars, the National Guard, and the Organized Reserves.

In accordance with the provisions of the law, a comprehensive training program has been spread over the country. It reaches not only the National Guard and Organized Reserve, but into the universities, colleges and high schools, and beyond them to boys between seventeen and twenty-five years of age who care to present themselves at a summer camp and take the training for a few weeks. For the first time in all our history we have an army of the people, belonging to the people, a part of the people, organized tactically over the United States (most of it in skeleton form, it is

NATIONAL DEFENSE

true) capable of quick expansion and under the leadership of trained officers.

The annual cost of this entire military effort is \$261,600,000—less than one-tenth the total annual cost of the Federal Government. This expenditure is the result of five years of constant, severe pruning both by the Bureau of the Budget and Congress. In each of these years the appropriations have been cut down. I know from constant and intimate contact with the War Department and its work, that the most rigid economy has been practiced—so rigid that the whole system is subjected to a terrific strain. In other words, the National Defense Act is barely surviving, and that is all. If the support accorded to it by Congress is further diminished, portions of the machinery will stop functioning and all of it will become inefficient. There is nothing in this world as extravagant as an inefficient military establishment. There is no economy in a third-rate army. It should be first class, or we shouldn't attempt a National Defense scheme at all.

Frankly, I cannot see where any substantial cut can be made unless we are content to reduce the National Guard or the Reserve, or both, or discharge some thousands of men from the Regular Army. In contemplation of this last alternative we must remember that the National Guard and the Reserve cannot possibly continue in a reasonable state of efficiency unless the Regulars are able to supervise their training. If the Regular establishment, already stretched to the breaking point, can't perform its function, the whole scheme must fail in a short time. Go to any army post or training camp today and you will find the regular units just hanging together, mere skeletons, so greatly have they been reduced in strength. You will find that the horses of the cavalry and field artillery average fifteen years of age and that hundreds of them are twenty years old or more. You will learn that there are fewer civilian employees under the War Department than there were in 1913—in spite of the fact that the administrative and clerical work of the Department has grown tremendously since that time. You will find also that 40,000 men of the Regular Army are today living in rickety, wooden, war-time cantonments with leaky roofs and sagging floors, because we have made no appropriation for permanent barracks. You will find that there are not anywhere near enough modern gas-masks on hand to equip the Regular Army and that there are none at all for the National Guard or the Reserve. We are fearfully short of modern airplanes. The aircraft inquiry has brought out that tragic fact. Go to Panama or to Hawaii, and any intelligent staff officer can point out to you the need of weapons and facilities vitally necessary for the defense of the Panama Canal and our Naval Base at Honolulu. Many of the surplus supplies left

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over from the war are nearly exhausted. The Army cannot live on its fat much longer. The fact is that the Bureau of the Budget and the Congress itself have been terribly severe in their treatment of the Army. If this severity is increased in the form of further reduction in personnel or the continued denial of supplies and facilities, the whole machine, creaking and groaning as it is today, will break down.

I am not preaching war. I do not fear an attack upon the United States tomorrow. At least there are no signs of such a thing upon the horizon. But no one of us can tell what will happen a generation or two generations hence. No sensible person dare assert that our descendants will never be called upon to defend this nation by force of arms. I am well aware that the pacifist contends that the best way for America to assure peace in this world is by disarming herself. I wish I had sufficient faith in human nature to accept that doctrine. So long as human nature remains as it is and as it has been for thousands of years, there can be no assurance that men and nations will never attack each other again. And I hold to the opinion that the nation best prepared to defend itself is the least liable to attack. That's all we Americans should insist upon in this matter—the opportunity to prepare and maintain our defense as contemplated in the preamble of the Constitution of the United States. Safe behind such a defense, respected by the rest of the world, we shall be free to help others, to encourage the love of peace with honor, to spread our conception of ordered liberty, and to perfect those great institutions which, saved by the citizen soldiers of '61, are sheltering us today and must shelter those who come after us.

LIAISON AND LIAISON DETACHMENTS

BY LIEUTENANT REX E. CHANDLER, 11TH F.A.

"THE principle duty of Artillery is to support the Infantry." To obtain a full measure of success in any combined operation where both arms are represented, the closest harmony and a mutual understanding of coöperation *must* exist. The burden of this responsibility has been placed, by Training Regulations 430-105, upon the supporting branch, the artillery.

Few artillery officers realize the rôle impressed upon them by this definite "principle duty." As the lessons of the World War grow dim, as time increases the perspective, laws of strategy and tactics become more pronounced, more distinct, but the myriads of details of technique, the successful operation of which established the laws, are fast being lost.

Liaison between the supported and supporting arms, between the infantry and artillery, was positively made a law of tactics by the war. It had been advocated and taught by eminent field artillerists prior to the outbreak of the war, but we have no record of its actual performance or the methods by which it was carried out. An extract from the FIELD ARTILLERY JOURNAL of April-June, 1913, shows our attitude on this subject at that time. "During the past three years more attention has been given by the French military press to the matter of communication between the several arms than to any other subject. * * * It is true that in our service we also advocate this liaison, and our drill book prescribes it; but how often do we actually establish it in our small manœuvres; how often do we think about it; in short, how often do we mentally practice it?" The article may have further asked: what have we done in a technical way to make it possible? These same questions may justly be reiterated today. We have the experiences gleaned from the Great War by personnel especially trained for that purpose to guide us, yet the technical application of liaison methods is fast becoming a lost art. We, as field artillerymen, seldom "think liaison"; we are too engrossed in subjects supposedly more intimately related to our own branch.

The best trained battery, the best firing officers, will avail the infantry nothing unless fire can be had upon an objective with the effectiveness and promptness desired by the infantry commander. Let us take a battalion of artillery in support of an infantry regiment. The front-line battalion in the attack is held up; the artillery is the club with which the battalion commander crushes the resistance. If the club of the size and shape desired is not at hand for

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immediate use, the artillery has failed in its "principle duty." "The old idea was that the infantryman did his work in his own way, getting such help as the artillery gunner chose to give him." Today, the lowest ranking doughboy knows that artillery support should be forthcoming when he is stopped; immediate and decisive action on the part of the artillery will have a decided effect upon his morale. The artillery is well trained to give this support, but we should not jeopardize its efficiency by overlooking the most vital and most important detail of its training,—coöperation with the supported infantry.

By reason of the methods of training young officers in the artillery, liaison lieutenants of the type and calibre prescribed by Training Regulation can always be found. But to give the young officer a detail of untrained assistants, to impose upon him the multifarious duties of this office and the duty of maintaining his own communications, ruins his efficiency.

We have well trained batteries capable of delivering the goods when called upon; we have officers qualified to fulfill the requirements of liaison work; neither of which can aid the infantry without sure and rapid means of communication. Herein lies the weakness. At this point our present system fails.

"Neither the war strength nor the peace strength tables of organization for light field artillery specifically provide personnel for liaison detachments. No equipment for such detachments is provided for in the tables of allowances." The regimental and battalion detachments have only sufficient personnel to perform the duties required of them. The battery details are small. As a consequence, in all manœuvres with combined arms, the liaison officer gets the men most easily spared by the organization,—usually men of no ability and poorly trained, upon these he must depend for his communications.

In February of this year, General Paul B. Malone, then in command of the Second Field Artillery Brigade, thoroughly aware of the deficiencies that existed, ordered liaison officers appointed and liaison detachments provided for and their training to commence. Each liaison officer was given every latitude in determining the strength, equipment and training of his own detachment. In March, prior to the brigade training season, these officers were assembled and liaison discussed. The results of their work was consolidated in the form of a brigade training memorandum, in order to make the training uniform. The results were far above expectations, as their efficiency in later manœuvres indicated.

An extract from Training Memorandum No. 5 from the Headquarters of the Second Field Artillery Brigade, follows:

LIAISON AND LIAISON DETACHMENTS

In order that the spirit of training regulations may be fully observed in this brigade, liaison detachments will be immediately organized, trained and equipped as hereinafter prescribed.

Organization.

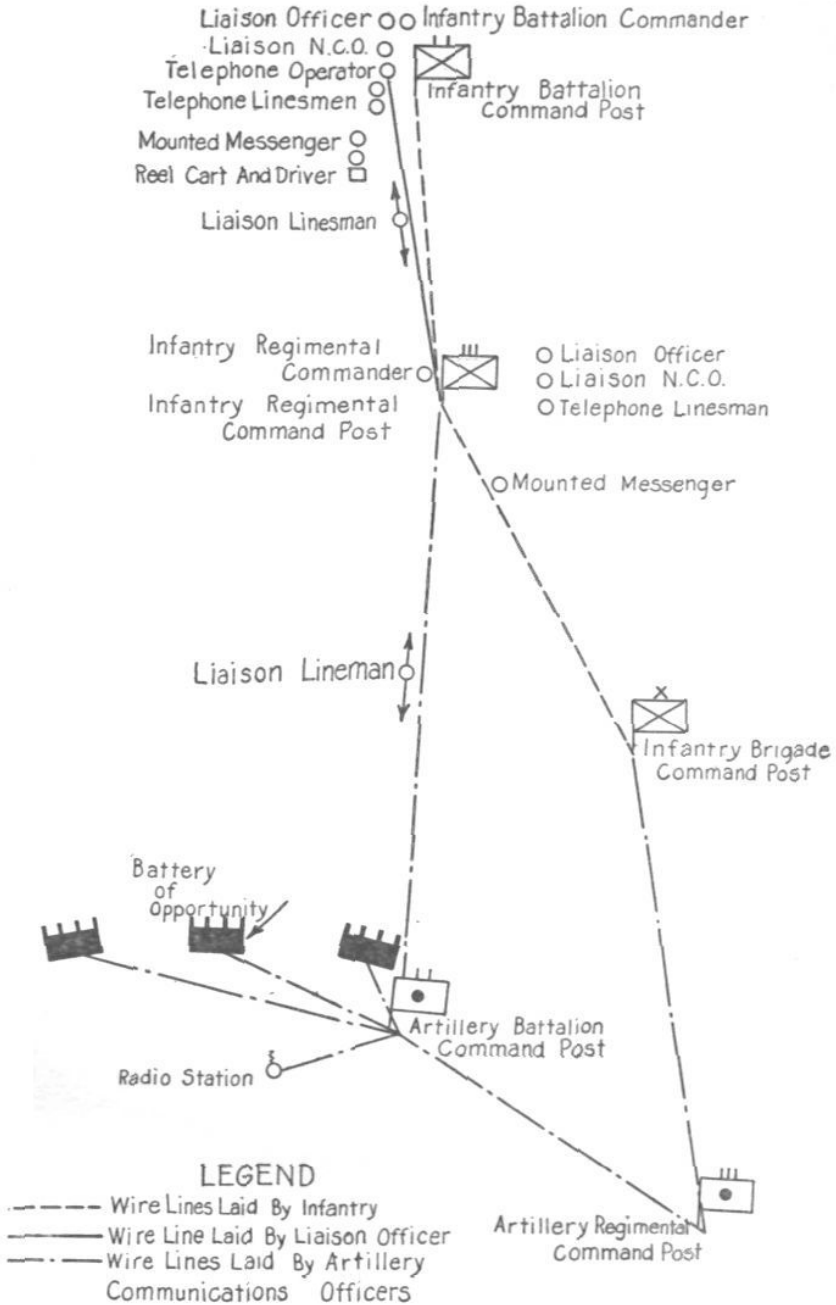
Each battalion of field artillery will furnish to the regiment which it supports in combat, the following liaison detachments:

- (1) To one front-line battalion of infantry:
 - One liaison officer, mounted.
 - One liaison noncommissioned officer, mounted (sergeant schooled in communications).
 - Two mounted messengers (one to the liaison officer with the infantry battalion; one to the liaison officer with the infantry regiment).
 - Five linesmen, mounted (three to the liaison officer with the infantry battalion; two to the liaison officer with the infantry regiment).
 - One driver for improvised reel cart.
 - One telephone operator.
- (2) To infantry regimental headquarters:
 - One liaison officer.
 - One liaison noncommissioned officer (schooled in communications).
 - One telephone operator.

Equipment.

- (1) Equipment carried on person:
 - Each liaison officer.
 - 1 sketching board with compass, protected by neutral colored, rainproof covering.
 - 1 field glass with reticule graduations.
 - 1 alidade.
 - 1 B. C. ruler.
 - 1 map covering sector to which the supporting battalion is allocated.
 - 1 message book.
 - 1 note book.
 - Colored pencils, tracing paper, etc.
 - 1 protractor.
 - Each liaison noncommissioned officer.
 - 1 field glass with reticule graduations.
 - 1 B. C. ruler.
 - 1 message book.
 - 1 note book.
 - Surplus maps, pencils, etc.
- (2) Equipment to accompany liaison officers:
 - 3 telephones (one to the liaison officer with the infantry regiment; one to the liaison officer with the infantry battalion; one spare).
 - 1 pick and shovel (infantry pack type).
 - 2 breast reels (to infantry battalion liaison officer).
 - 1 pike pole.
 - 4 knives.
 - 4 pliers.
 - 1½ lb. friction tape.
 - 2 miles, 7-strand wire.
 - 1 reel cart, improvised, capable of carrying two miles of wire, and a means by which wire can be laid at a trot and taken up automatically by means of a gear or belt arrangement between the reel and the axle. This cart to have a compartment for carrying sketching case, tools, telephones, etc.

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LIAISON AND LIAISON DETACHMENTS

Training.

Liaison officers will begin at once an intensive course of instruction of their details. This course will be conducted by regiment, details combined; each liaison officer will conduct instruction in one phase of the course.

The course will cover:

- a. Receipt and transmission of verbal messages.
- b. Maps and maps reading.
- c. Training all members of the detail in care and maintenance of lines of telephone communication, *i. e.*:
 - Laying wire
 - Protection
 - Splices, etc.
- d. Fire control and fire direction for noncommissioned officers and one private first class from each detachment.
- e. Natural channels of communication, telephone code names of organizations, and code numbers of all officers within, and adjacent to, the the unit to which attached.

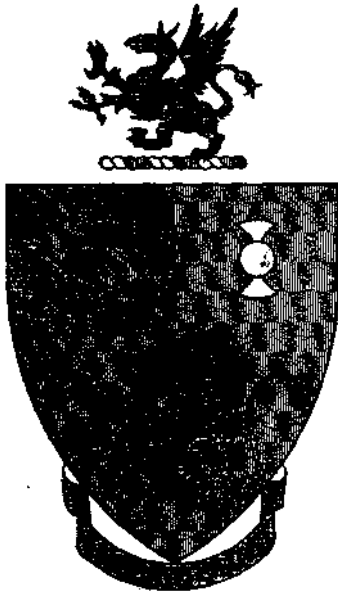
Old machine-gun carts were utilized for the improvised carts, and were built by the battery blacksmiths. As the infantry attack battalion advanced, the liaison wire went forward with it. At no time during any manœuvres was the infantry battalion commander without a direct wire to the supporting artillery. The sketch on the opposite page shows the lines and alternate means of communication provided.

Thus the Second Field Artillery Brigade carried out the spirit of the training regulations. A full measure of success was obtained in every combined operation. The infantry was taught to appreciate the efforts of the artillery commander, and not to "render his task more difficult by indifference and interposing obstacles."

Such coöperation throughout the entire service should be effected, nor should it be confined to one short period of manœuvre. Liaison officers should be appointed, liaison detachments provided for, and a certain period of each year allotted to their training and operation. If this is done, the object of artillery liaison "to insure that support is given at the proper time and that it is effective" will be accomplished. The artillery will have completed its efficiency by assuring the infantry that it will never fail its PRINCIPLE DUTY.

1925 FIELD TRAINING OF THE 119TH FIELD ARTILLERY, MICHIGAN NATIONAL GUARD

BY CAPTAIN JOHN H. FYE, F.A. (D.O.L.).



UPON completion of the 1924 field-training period at Camp Grayling, Michigan, the commanding officer of the 119th Field Artillery, Colonel Joseph H. Lewis, consulted the instructors of the regiment with a view to selecting a form of training for the summer of 1925 which would be new and entirely different and which, at the same time, would be constructive and make for *esprit de corps*.

It was decided that a march of the entire regiment, ending at Camp Grayling, would be very desirable and interesting. The next question to arise was how many days of the field-training period could be devoted to the march, how long should the march be, and from what point should it begin?

During the winter months, plans, ways and means were discussed from time to time. State military authorities were consulted, and the plan was found to be agreeable to them. After a general regimental conference in the late winter, at which all unit commanders expressed a firm desire to make the march, and also assured the regimental commander that their units would go through, it was decided to devote one week of the field-training period to the practice march.

At once plans began to take definite form. It was realized that rented horses and transportation (escort wagons) would be at a premium, which meant that all units and officers would, by necessity, have to travel light. The regimental staff and instructors began the preparation of a twenty-six-page pamphlet which was entitled, "Preparation for Movement of the 119th Field Artillery," and contained: provisional tables of organization for Regimental Headquarters and Headquarters Battery, Service Battery and Band Section, Gun Batteries, Battalion Headquarters Batteries and Combat

TRAINING OF THE 119TH FIELD ARTILLERY

Trains, and Medical Detachment; recapitulation of commissioned and enlisted personnel strength and the number of required horses (government-owned and rented), classified as to riding and draft; matériel to accompany the units; equipage; disposition of personal and horses and horse equipment; kitchens (special instructions covering the consolidated mess and its equipment); instructions for the procurement of rented animals; diagram of the loading necessary to fit the prescribed matériel on flat cars; table of weights (matériel and equipage); duties of organization railroad transportation officers; loading and bill-of-lading regulations; sample bill of lading; sample bills for local purchase incident to movement; and the train inspection report. This booklet was completed, mimeographed and distributed to all units of the regiment in early June, 1925.

In May a reconnaissance party, consisting of the regimental commander, R-3, the U. S. P. and D. O. of Michigan and an instructor, went over the entire route from Sterling, Michigan, to Camp Grayling, in an automobile, and decided upon that route as being the most desirable one for the march. During this reconnaissance, preliminary arrangements were made for camp sites, water supply, the procurement of forage and certain rations. Shortly after this reconnaissance, R-4 got in touch with the local dealers and assured himself that supplies could be procured enroute. On July 20th, about two weeks before the regiment was to move, the regimental supply officer went over the route, verified the camp sites and arrangements for water supply, and definitely closed his orders for supplies with the local dealers enroute.

During the week just prior to camp, the regiment was presented by the Kiwanis Club of Lansing with a beautiful silk regimental standard bearing the new coat of arms. These arms had been approved by the War Department only a short time before. The insignia (regimental shield) to be worn on coats and service hats, also were received and distributed at once to the units. The regimental standard and regimental insignia had a splendid effect on the morale and added to the already fine *esprit de corps*.

The batteries of the 119th Field Artillery are distributed over a large portion of Michigan. The regiment, less Battery "C" and the entire Second Battalion, is located in Lansing. Battery "C" and the Second Battalion Headquarters Battery and Combat Train are stationed at Flint, sixty miles from Lansing. Battery "D" is at Grand Ledge, Battery "E" at St. Johns, and Battery "F" at Charlotte. None of the last three batteries mentioned are more than twenty miles distant from Lansing, but they are on different railroads.

On the night of August 5th, the regiment entrained at its several stations, and at 6:00 A.M., August 6th, the first train arrived

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at Sterling, followed at regular hourly intervals by other trains. This arrival by sections was necessary, as the side track and unloading facilities at Sterling were very limited. Before noon the adjutant wired the Headquarters, 32nd Division, at Grayling: "Detrainment 119th Field Artillery completed. Forty-seven officers, 493 enlisted men, 184 government-owned, 367 rented horses, present for duty."

August 6th was devoted to getting set. Shelter tent camp was established, and the remainder of the day was spent in pairing, teaming, and the preliminary adjustment of harness. The rented horses were an excellent type and gave very little trouble. The camp ground was the centre of attraction for people from miles around, as troops had never been in this particular section of Michigan before.

At officers' call on the evening of the first day, the commanding officer made a number of important announcements. A cash prize of \$100.00 would be presented, on the last day of the training period, to the organization of the regiment whose functioning, conduct of personal, marching, paper work, and the condition of whose horses was the best at the end of the march. Guard duty would be kept at the minimum. Main guard and stable guard would pitch shelter tents together, and all members of both guards would be under the command of the officer of the day and the non-commissioned officers of the guard, to simplify posting and to insure the prompt and proper relief of men on post. There would be no definite hour for the regiment to march each morning, as this was to be a march of instruction and not a forced march to meet an enemy. Reveille would be at 5:00 A.M. Batteries were not to waste time in harnessing and hitching, but they would not report "In order" until they were certain they could properly take the road. From sections to battalions, units were to take their places in column in the order in which they reported "In order." This prevented procrastination.

The first day's march of eight and one-half miles was completed shortly after the noon halt. The regiment arrived at Alger in a pouring rain, which continued throughout the afternoon and night. Naturally, everything and everybody was thoroughly drenched by the next morning. The camp site was a good one, but the clay soil became so sticky that the march of the regiment was delayed while the teams pulled the trucks and motorized rolling kitchens to the highway. If the march had begun without getting the motorized, consolidated kitchens on the road, it is very doubtful if the regiment would have eaten on the remainder of the hike. Once more the horse fans were heard to say: "The old horse triumphs again over the motor." The entire scene reminded one of the muddy days of sunny France.



PART OF THE FIRST DAY'S CAMP



KEEPING THE ROAD CLEAR AT A HALT ON THE MARCH



DRYING OUT AT WEST BRANCH



A BATTALION O.P.



FIRING SHELL



A DIRECT FIRE PROBLEM

TRAINING OF THE 119TH FIELD ARTILLERY

The day's march of twelve miles to West Branch was made in a drizzling rain, but the sky cleared as West Branch was reached. It can honestly be said that the thirty-six-hour rain did not dampen the morale, but rather made the training more realistic and complete. Camp was established in the fair grounds and equipment spread out to dry. The next day being Sunday, August 9th, the regiment remained in camp. The drying-out process was continued under a wonderfully hot sun. Baths were taken and a general spooning up of outfits carried on. The entire regiment was paraded for church at 11:00 A.M., the services being conducted by the division chaplain, who was making the hike with the regiment at his own request. After a real Sunday dinner, a trap-shooting team, hurriedly gotten together, lost by a small margin to the local enthusiasts. This was followed by a ball game between the regimental team and the West Branch team. The regiment won the game. At 5:00 P.M. a formal guard mounting was held inside the race-track. All these events and the encampment were of great interest to the civilian population of the section. The fair authorities stated that there were more cars and people in the fair grounds than had ever visited a fair. After supper the band gave a concert.

Monday, the 10th, dawned clear and warm. The march of fourteen and one-half miles to Lake St. Helen was begun under most favorable conditions. Up to this time the regiment had been marching on state highway No. 76, which is an excellent graveled road. The highway being under construction between West Branch and Lake St. Helen, a detour through the state forest preserve had to be followed. It was a one-way, winding, sand trail through the woods. Many short steep hills and sharp turns were encountered, which required real driving. Greater distances were maintained, and halts were made more frequently. By close supervision on the part of the officers and non-commissioned officers, the regiment reached St. Helen with a very few sore breasts. Most of the injuries were from the see-saw action of the breast collars over the chests of the rented animals. Not a single government-owned animal was injured.

At Lake St. Helen a very novel water-supply system for the horses was found. As the lake shore was soft and marshy, it could not be used for watering. There was no village water system, so the inhabitants realized that they were up against a real proposition to supply water for almost 600 horses. A local merchant was building a gasoline filling station. He rushed the order for the 10,000-gallon tank, which arrived on a flat car a few days before the regiment. The flat car was placed on a siding, a well drilled beside the track, and a gasoline pump installed. Row boats from the lake were placed alongside of the flat car and filled by a hose from the tank.

The march of eighteen miles on Tuesday, the 11th, from St.

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Helen to Roscommon was over a hilly, narrow, sand trail, the latter part of which was bordered by second growth and swamp, making the march somewhat monotonous. Camp at Roscommon was reached by 3:30 P.M. The horses were not fatigued, and there were even fewer sores and injuries, due to the experience of the day before. Being now a comparatively short distance from Camp Grayling, the regiment was visited by numerous officers of the division staff and officers from other units already in camp at Grayling. Officers of the 106th Cavalry were greatly pleased with the hiking idea and began making plans for a similar march of their units next summer. Even the 182nd Field Artillery, of Detroit (tractor-drawn 155-mm. howitzer), expressed a desire to try out their "gasoline horses."

Reveille on the morning of August 12th was at 4:00 o'clock. A long, hard march of twenty-two miles over a sand trail, with a total rise in elevation of 200 feet, to say nothing of many rather steep hills, was before the regiment as its last day of march. A two-hour halt was made at midday, which also happened to be midway of the day's march. The animals were watered in Higgins Lake and given a thorough rest. The triumphant entry into Camp Grayling was begun at 6:00 P.M., by the descent of a long wooded road leading by division headquarters. The regiment was received with a rousing welcome by all troops in camp. It was played through the reservation to its permanent camp site by the bands of other regiments and was reviewed by the commanding general and his staff. By 9:00 P.M. shelter tent camp had been made, animals cared for and fed, mess served, and everyone except the guard had turned in for a much-deserved rest after the completion of a most successful practice march.

August 13th was devoted to the pitching of heavy tentage, and the general establishment of camp. The two battalion headquarters batteries and the regimental headquarters battery, in addition to establishing camp, laid the range telephone lines, put up range flags at the range guard stations and set out fifteen sets of targets. Service practice was conducted on the 14th, 15th, 17th and 18th. A special feature of this year's service practice was the direct-fire problems conducted by the chiefs of section. Much interest in these problems was shown by both officers and enlisted men. Shell fire, from sand-bag employments, concluded the season's practice. A review of all the Michigan troops was held on Sunday afternoon, August 16th, by the camp commander. At this review the practical lessons in draft, learned on the march, showed up very distinctly.

Camp was broken on the 19th and entrainment made. All units of the regiment arrived at their home stations on the 20th.

TRAINING OF THE 119TH FIELD ARTILLERY

COMMENTS

Numerous successful marches of varying distances have been made from time to time by national guard field artillery units, but usually the units marching were batteries or battalions made up of selected officers and enlisted men from several units of the same regiment. It is not the intention of the writer to belittle the efforts and the successes of other units, nor does he desire to leave the impression that the march of the 119th Field Artillery was a perfect one, for such a march has never been made. However, the march just described was made by the entire regiment, with many recruits, and a preponderance of rented animals, which were unaccustomed to artillery harness. Anyone studying the number of men and animals will know that there must have been a shortage of carriages. There was! A gun battery, for instance, consisted of a battery headquarters, a battery commanders detail (including the reel cart), two complete gun sections, each carriage being drawn by six horses, several spare pairs, and a maintenance section less the battery and store wagons. The forge and store limbers were substituted for the two gun limbers, and several boxes of spare parts and tools were carried in the battery escort wagon of the field train. The field train consisted of twelve, four-line, escort wagons.

The excellent condition of the animals at the end of the march was due to the ceaseless and untiring efforts of officers and noncommissioned officers on the march and to the intensive instruction in the care of the horse conducted during the spring armory training. On the march, at halts, collars were wiped out and all the other precautions known to field artilleryman were taken and used. Massaging was done at halts and upon arrival at the day's camp; salt water was used freely on all backs, chests and other places where friction was caused by harness. This hardened unbroken skin and healed all abrasions. Collars and all parts of harness which came in contact with the animals, were cleaned at the end of each day's march.

Road and march discipline was rigidly enforced. A march memorandum issued in 1915 by General Summerall, then a major, found in Lt. Col. Austin's article, "Artillery Harness and Animal Traction" (FIELD ARTILLERY JOURNAL, January-February, 1921), added to, slightly, to fit present conditions, was mimeographed and issued to all officers and non-commissioned officers prior to the march.

Military courtesy and discipline was rigidly enforced throughout the entire march and camp, and greatly aided in the success of the summer's training.

Each day, when the new camp site was reached, each first sergeant

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marked the line of battery tents by a rope marked with colored string at proper intervals for shelter tent poles. This aided in speeding up of the daily tent pitching and alignment.

A major of the Field Artillery Reserve Corps and a lieutenant of the Quartermaster Reserve Corps were attached to the regiment for training. The major was made assistant regimental executive and provost martial; the lieutenant, experienced in messes and a graduate of the Cooks' and Bakers' School, was placed in charge of the consolidated mess. Both officers applied themselves diligently and were very valuable to the regiment.

This very successful march illustrates what a national guard unit can do if there is unity of action, *esprit de corps*, and uniformity of training prior to the undertaking.

The Cycle of the Sword

I am the sword which early man
Fashions from iron—crude artisan.
But by my aid he gives a drubbing
To tribesmen who depend on clubbing.

I am the keen blade of the Greeks,
Which Alexander's vengeance wreaks
On Tyrians and Medes and Persians
And all to whom he has aversions.

I am the stabbing short sword stout
With which Rome carves her empire
out.
Mighty to win for each brave legion,
Whene'er it has a charge or siege on.

I am the scimitar of the East,
And mine is many a bloody feast,
Until Islamic star and crescent
Pass zenith and are evanescent.

I am the sword which knightly ranks
Swing, smiting other human tanks.
Two-handed am I. Strong and deft he
Who mows with anything so hefty.

I am the sabre—bright, curved blade
That now is carried on parade
By officers. And for my wearer
At Guard Mount I'm a holy terror.

FAIRFAX DOWNEY.

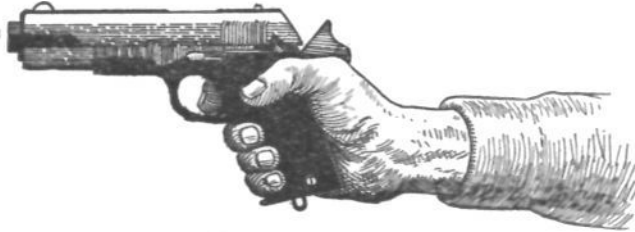
NOTES ON PISTOL FIRING

BY CAPTAIN J. A. WALLACE, 12TH F.A.

STAND facing directly toward the target, feet a little over one foot apart and whole body held naturally.

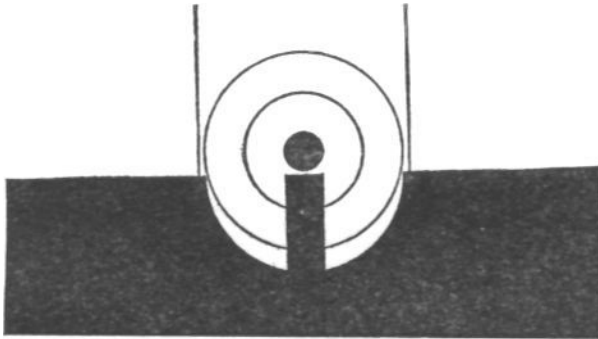
Then do the following *four things* in EXACTLY THE ORDER NAMED:

1. Get the correct position of the pistol in the hand.



Hold the pistol like this.

2. Aim properly.



Align your sights like this and keep them as nearly that way as you can.

3. Get your breath set and hold it properly in spite of everything.
4. SQUEEZE the trigger, using the same pressure you would in choking a snake. That is, by squeezing all around the stock with especially the thumb and first and second fingers.

If these things are not done in the proper order, you will start to FLINCH. That is, you will either PULL the trigger, in which case your shots will go low and to the left; or you will PUSH the pistol, in which case your shots will go high and to the right. You are especially liable to flinch if you start to squeeze too soon. Do not start to squeeze until the LAST THING. If you have the habit of squeezing too hard with your last two fingers, hold your little

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finger out for a few shots and see if that does not make you squeeze harder with your first and second fingers.

Any man can sight better with two eyes than he can with one. In addition to this, a man who sights with both eyes open, does not strain his eye muscles like a man who has to squint one eye to aim. At first, this seems unnatural, but the average man can learn to do it in a few minutes, and any man can learn to do it by trying six or eight times a day for three days.

TO SIGHT WITH BOTH EYES

With the hammer down and without squeezing the trigger, sight as you normally do. Leave both eyes open, but place your left hand over your left eye and align the sights with your right eye. Hold the alignment, and slowly move your left hand toward the left, uncovering your left eye. **HOLD THE ALIGNMENT** as long as you can with both eyes and when you lose it, or your eyes become tired, come back to raise pistol, rest awhile, and try it again. After you think you have learned the trick, try it in combination with the trigger-squeeze exercise.

Be sure to hold your pistol **LEVEL** at all times. That is, do not cant it to the right or left. Watch this especially whenever you are coaching another man.

AND MOST OF ALL

Learn to **CALL** your shots. This must first be learned while practicing trigger squeeze. To do this, every time you do a trigger squeeze, keep looking over your sights for some time after the hammer falls, at the same time watching very closely while you are squeezing, and see if you can tell, **THE INSTANT THE HAMMER FALLS**, where your sights were aligned when the hammer fell. You can learn it best by calling them out loud, such as: too high, a little low, left, low and to the right, etc. After learning this at the trigger squeeze, retain the tendency to look over your sights after the gun goes off, and watch closely, while squeezing, to see if you can call the shot the instant the gun goes off in actual firing.

The only things really unusual about the directions given above are the matter of facing directly toward the target, and, to some extent, the matter of sighting with both eyes. Facing directly toward the target has caused considerable discussion by officers who have seen it done. When the idea has been carefully studied, it is manifestly correct for the automatic pistol, where accuracy is so easily attained and speed is so important.

Here are some results obtained by using this method, combined with variations of other common methods. Last year a lieutenant who hit the ground three times out of seven shots at fifteen yards,

NOTES ON PISTOL FIRING

when he started, made expert with a good margin in record firing. The first sergeant, who during fifteen years' service had fired the course every year except during the time he was in France and had never qualified, made expert with a good margin and beat the battery commander, who was supposed to be pretty good. The mess sergeant with over ten years' service had fired the course every year, except during the time he was in France, and had never qualified. He made 79.9 per cent.

This year, in a different battery, a lieutenant, who had previously been hopeless, made expert and finished as one of the best shots in the battery. He fired fifty-eight at fifty yards and had hit the ground several times at fifteen yards when he started the season. The first sergeant, with over fifteen years' service, had never previously qualified and made 78 per cent. This man was very nervous and had a terrible "wobble." The mess sergeant, with over ten years' service, had never previously qualified and made marksman. He would have done better had he not been limited to time by his duties. These people, though they were officers and high-ranking non-commissioned officers, had no advantage over other men as to time or ammunition. They are cited as examples simply because they are most easily remembered.

In spite of the astounding results enumerated above, a check of the records show that men who had never fired the pistol before required less time and ammunition to teach them to fire accurately than men who had previously fired a great deal.

THE ZONE METHOD OF BI-LATERAL OBSERVATION FOR PERCUSSION- PRECISION ADJUSTMENT

BY CADET LIEUTENANT EVERETT LEWY, UNIVERSITY OF CHICAGO R.O.T.C.

DUE to the difficulty of maintaining communications, bi-lateral observation in the past has not been of nearly the importance that it might be. With the rapid strides that the science of communications has taken in the last few years, especially in the development of radio, it is thought that perhaps this method of observation, with its great savings in ammunition expenditures, may be of greater importance than it has been heretofore.

Two methods of bi-lateral observation are given in the Training Regulations (T. R. 430-85). The plotting method is very good for stabilized warfare, but the need of accurately plotting the guns, observation posts, and target, make it rather unsatisfactory for fast work. Since this paper is considering open warfare methods only, the plotting method will not be further mentioned.

The index method is the method given in the Training Regulations for use when deliberate preparation is impossible. It is, however, rather complicated, more or less inaccurate, and is of use only under certain limited conditions where it is possible to locate the observation posts at equal displacements from the gun-target line.

In order then to fill the need of a simple, accurate and economical method of bi-lateral observation and to offer a really efficient method of "Shooting from the hip," the author presents the Zone Method of Bi-lateral Observation.

The elements of this method are not new,—most of them have been used in other types of observation. So far as the author knows, however, they have never been organized into a definite method.

In order that the zone method can be compared intelligently with those methods we already have, an explanation of how it works, together with a few examples, would seem in point.

If the line right observer-target, extended, is drawn, it will intersect the line left observer-target, extended, at the target, dividing the range into four zones, I, II, III, IV. (See Fig. 1.)

All shots which land to the left of the left observer-target line and to the right of the right observer-target line, are, by construction, in Zone I. Similarly those to the right of the LO-T line and to the

ZONE METHOD OF BI-LATERAL OBSERVATION

right of the RO-T line are in Zone II. Those to the right of the LO-T line and to the left of the RO-T line are in Zone III, and those to the left of the LO-T line and to the left of the RO-T line are in Zone IV.

All bursts in Zone I are range over, deflection doubtful. Zone II is range doubtful, deflection right. Zone III is range short, deflection doubtful; and Zone IV is range doubtful, deflection left. This is all by inspection. (See Fig. 1.) *Since by our sensings of left and right we can tell what zone a burst*



FIG. 1.

is in, we can sense every shot, according to its zone, for either range or deflection as the case may be. (See Table I.)

TABLE I

Left Observer's Sensing	Right Observer's Sensing	Range	Deflection	Zone
Left	Left	?	Left	IV
Left	Right	Over	?	I
Right	Right	?	Right	II
Right	Left	Short	?	III
Line Short	Left	Short	Left	
Line Over	Right	Over	Right	
Right	Line Short	Short	Right	
Left	Line Over	Over	Left	

When a 16-mil or smaller deflection bracket has been split:

Left		Over
Right		Short
	Right	Over
	Left	Short

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We sense line shots, of course, in the same manner as in unilateral observation, getting sensings for both range and deflection on each line burst. After a 16-mil or smaller deflection bracket has been split, we sense all bursts to the left of the LO-T line as overs and all to the right as shorts, again as in unilateral observation. The reports of the right observer are a check on this, of course.

The method of procedure is as follows. If we get a range sensing, we change our range in the indicated direction as in other methods of fire, determining the size of our range jump by applying the elementary rules of gunnery. If we have estimated our data we make jumps of 400 metres until we have a bracket we can split; if we have determined our range more accurately, we may make jumps of only 200 metres without running into the danger of creeping.

If we get a deflection sensing, we proceed in the same manner, bracketing, to find the correct deflection. Usually a jump of 20 mils in the indicated direction will be sufficient. If the data has been very hurriedly calculated, a 40-mil jump will be safer.

For the first few rounds we probably will get only a single sensing from each burst, either range or deflection, as the case may be. We can then change only the one element in our data for which we have a sensing. As the problem progresses, however, and we get nearer to the target, we find that we can usually get both range and deflection sensings from the same burst and so can make changes in both. We proceed thus, firing only one round at a time, bracketing in both range and deflection, until we have a verified one-fork bracket for range, after which we conduct our improvement fire as in unilateral observation.

Experiment has shown that as a general rule we tend to get sensings first in that element, either range or deflection, in which we have the greatest error. Consequently we do not get almost adjusted in the one element without automatically getting sensings in the other. This is caused by the shape of the zones.

It is suggested that the same principles, with minor variations, may be used in firing percussion bracket or shrapnel adjustments. While no experiments have been performed with shrapnel, it is thought that this method may be especially effective, since range sensings may be obtained even with bursts not in line with the target, as in combined observation.

Perhaps an example of a problem fired, will clear up the rather technical explanation which has just been given. (See Fig. 2 and Table II). The first shot was fired at base deflection, right 20: range 4000. The left observer reported a right and the right

ZONE METHOD OF BI-LATERAL OBSERVATION

TABLE II

Commands	Range	L.O.	R.O.	Range	Deflection
B. D., R20	4000	R	L	Short	?
	4400	L	R	Over	?
	4200	L	L	?	Left
R20	4200	R	R	?	Right
L10	4200	L	R	Over	?
	4100	L	R	Over	?
2 rds.	4100	R	R	?	Right
		L	R	Over	?
L5, 1rd.	4100	L	R	Over	?
	4000	Li-	L	Short	Left
R3, 3 rds.	4050	RRL	LLR	--Over	
	4050	LRR	RLL		
	4050	LTT	RTT	Over Target	Target
	4050	RRR	LLL	---	

Adjusted elevation: 4075; base deflection, right 28.

observer reported a left. The burst (1) was therefore in Zone III, the range short and deflection doubtful. (In the following observations the left observer's report will be given first, followed by the right observer's.) We jumped four forks in range. At 4400 with the same deflection, the reports were left and right, meaning Zone I, range over, deflection doubtful (2). On splitting our range bracket and firing at 4200, we got observations of left, left,—range doubtful, deflection left (3). Since we had estimated our data fairly accurately as regards deflection, we went right 20, keeping the same range. Our observations of right, right, showed us to be in Zone II,—range doubtful, deflection right (4). We split our deflection bracket and went left 10; 4200. The observations, left, right, meant Zone I,—range over, deflection doubtful (5). We again split our range bracket and fired two rounds at 4100 with the same deflection. Our observations were left, right,—rang over, deflection doubtful (6) and right, right—range doubtful, deflection right (7). The difference was of course due to dispersion. We again split our deflection bracket and went left 5, firing one more round at 4100 in order to have two sensings at what we knew was one limit of our one fork bracket. Our observation of left, right, gave us an over sensing in range but told us nothing of the deflection (8). We then fired one round at 4000 to verify the short limit

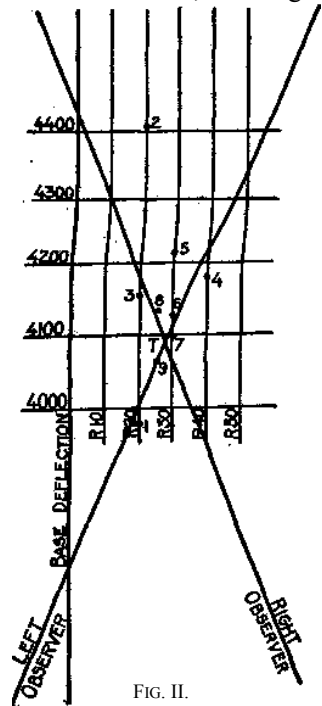


FIG. II.

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of the bracket. Our sensing was range short, deflection left, from an observation of line short—left (9). We now had a verified one-fork bracket after having fired nine rounds. We went right 3 and fired the first three rounds of our improvement fire at 4050. A couple of "targets" in our improvement fire showed our deflection to be correct. By proportioning our overs and shorts we found our adjusted elevation to be 4075. Our final deflection was base deflection, right 28. Throughout the problem we assumed the probable error to be 25 yards.

It will be observed that the locations of the guns, target and observation posts are immaterial, provided only that the two observation posts are on opposite sides of the gun-target line. The Zone Method works best, however, if the sum of the displacements of the two observers is less than 1600 mils, which it almost always is. If the displacements are too great, a few more shots are needed to obtain a verified bracket; the work is just as accurate.

The distances OP-G, G-T and OP-T need not be measured or estimated, *nor need any angles be measured, either before or during adjustment.* These points, of course, immensely simplify the Zone Method and are the basis of many of its advantages over the Index Method and others.

A great many problems were fired on the terrain board by the Unilateral, Index and Zone Methods in order to compare them. A problem fired by each of these methods was picked at random and is given in Tables III, IV and V, in order to show specifically the relative merits from the point of view of ammunition expenditure. In the particular problem given, it took seven, nine and eighteen rounds with the Zone, Index and Unilateral Methods, respectively, to obtain a verified one-for bracket.

Our general results were about the same as in the examples given. With the Zone Method we gave a few more commands per problem than by the Index Method, but the ammunition expenditure was appreciably smaller. This was due to the necessity of firing two rounds and averaging the displacements in order to obtain one sensing by the Index Method. Since no angles are measured, one round per sensing suffices by the Zone Method. Dispersion is taken care of by verifying our bracket as in axial observation. The Unilateral Method, of course, was out of the question in regard to ammunition expenditure.

In addition to the advantages the Zone Method has in its economy, several other points in its favor were demonstrated by experiment. *It was much more rapid than any other types of lateral observation, taking from one-third to one-half the time, only, to*

ZONE METHOD OF BI-LATERAL OBSERVATION

obtain an adjustment. This was due to its simplicity and to the fact that no calculating was necessary between rounds. It was far more consistent and accurate than either the Index or Unilateral methods; there was no place for even a novice to make errors or mistakes. Observation was extremely simple and could be done by a man with almost no training at all. In actual field service this is sometimes of great importance. And, as has been mentioned before, the Zone Method works equally well under almost any conditions and with the observation posts almost anywhere within sight of the target.

It is, of course, subject to the one fault of all methods of bilateral observation,—the difficulty of maintaining communication. This difficulty, it is hoped, will soon be overcome.

TABLE III
Zone Method—Sample Problem

Commands	Range	L. O.	R. O.	Range	Deflection
B. D., L20; 1Rd.....	4000	R	L	—	?
	4400	L	R	Over	?
	4200	L over	R	Over	Right
L 10; 2 Rds.....	4100	L	R	Over	?
		L	L	?	Left
R 5; 1 Rd.....	4100	L	R	Over	?
	4000	L—	L	—	Left
R 3; 3 Rds.....	4050	LTR	RTL	Over Target —	
	4050	LTR	RTR	Over Target Over	
	4050	LLR	RRL	Over Over —	
	4050	LLR	RRL	Over Over —	

Adj. El. 4025.

Seven rounds to verified 1 fork bracket.

TABLE IV
Index Methods—Sample Problem

Commands	L. O.	R. O.	Index	Range	Deflection
B. D., L20; 2 Rds.; 4000.....	4R	2R	-3	—	3R
	6R	Lost			
L 3; 4200.....	3L	5R	12	Over	
	7L	10R			
4100.....	3L	2R	7	Over	
	5L	4R			
1 Rd.; 4000.....	4L	1R	3	Over	
2 Rds.; 4000.....	4R	3L	-7	—	
	5R	4L		—	
3 Rds.; 4050.....	LRT	Over — Target			
	LTR	Over Target —			
	4050.....	Over Over Over			
	4050.....	Over — Over			

Adj. El. 4025.

Nine rounds to verified 1 fork bracket.

(With the exception of the lost shot and the contradiction, this particular problem worked out almost perfectly. Most of the problems took half again as many rounds as this one did.)

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TABLE V
Unilateral Observation—Sample Problem
 Observer Displacement 250 mls.

Commands	Obs.	Average	Range	Defl.
B. D., L 20; 2 Rds.; 4000.....	12R 8R	10R	?	?
L 10; 4000.....	4L 7L	5L	?	?
R 3; 4000.....	Line 2R	—	—	—
L 30; 4400.....	15L 25L	20L	?	?
R 12; 4400.....	4R 2R	3R	?	?
L 2; 4400.....	Line Over Line Over		Over	Over
R 10; 4200.....	2R 2R	2R	?	?
4200.....	Line Over 2 Left		Over	Over
R 5; 4100.....	Line Over Line Over		Over	Over
R 3; 4050.....	Over Over —			
3 Rds.; 4050.....	Over Target Over Adj. El.			
4050.....	Over Over Over 4025			
4050.....	Over Target —			

Eighteen rounds to verified 1 fork bracket.
 (We were rather unfortunate in our results with the unilateral method as regards ammunition expenditure. We usually are.)

INDUSTRIAL PREPAREDNESS

BY MAJOR GENERAL JAMES G. HARBORD, RETIRED,
PRESIDENT OF THE RADIO CORPORATION OF AMERICA

An address in response for "Industry" to speeches made by Secretary of War, Dwight F. Davis, and Assistant Secretary of War, Hanford McNider, on the occasion of the "Meeting on Industrial Coöperation with the War Department" in New York City, December 4, 1925.

MY position here this evening is a little unusual,—thirty-four years in the regular army and thirty-four months in business—the military subordinate of these War Secretaries as a retired officer of the army; in a small way, one of the civilian taxpayers who helps to support their military establishment. As an old soldier, behind whom the shadows are lengthening, I am interested in the success of the military side of their work—as a young business man, I am equally interested in the industrial phase of it.

It is a very great pleasure, Mr. Secretary Davis, to be one to welcome you here to an industrial gathering pledged to help you. You have a difficult task in your great office in following such a man as John W. Weeks. You will probably have to be a little better Secretary of War than he was, in order to be as good as the country believes him to have been. That you have started well is shown in your choice of your Assistant. Colonel McNider and I served in the same division overseas, the good old Second Division,—of which we who belonged to it, believe the world will never see a better,—and if he is half as good a secretary as he was a soldier, the business men trying to assist in his task of preparing for industrial mobilization in event of war, need have no fears for its success. I invite your attention, gentlemen, to the fact that these two modest young men, heading our great War Department, are each entitled to wear the Distinguished Service Cross granted only for "most extraordinary heroism in action." I doubt if there is another important governmental department in the world headed by two men with such a record.

The significant thing about this gathering this evening is that it should be held. No war cloud threatens our country. This meeting is not inspired by war feeling. What we are practicing is the kind of peace patriotism which, if carried to its logical conclusion, is the best guarantee against war. We are here because we are unable to subscribe to the belief that a mere desire for peace will ever alone bring it. Nor has unpreparedness ever kept us out of war. We spent twenty billions of dollars and lost nearly a hundred thousand lives for living out that theory during the years preceding 1917.

Our problem of industrial preparedness cannot be divorced,

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Mr. Secretary, from the remainder of the National Defense. You will need a balanced defense,—for trained men without munitions, and munitions without trained men, are equally helpless. Five years ago our Congress approached the problem of National Defense with great patriotism and intelligence, and worked out the best scheme for it that our country has ever had. It included provision for both man-power, and the machinery for enlisting our great industrialists in the mobilization of business. Five years have gone and our people are fast forgetting their interest in the last war and the possibility of the next one.

You, sir, have great patriotic as well as great political responsibility in your high office. The tendency is growing stronger to economize at the expense of legitimate functions of the Federal Government in order to enter activities that are properly beyond its jurisdiction. Public pressure seems to be in that direction, and Congress, as a rule, follows the line of least resistance. You will have great difficulty to maintain a balanced National Defense. For example, no particular effort is being made to secure appropriations for an air service on its merits. What they strive for is to divide the present appropriations for the forces of land and sea. The appropriations for the Organized Reserve and National Guard contingents of the National Defense have been increased, but at the expense of the regular army, though that was far from their patriotic intention when they asked Congress for enough money to maintain their existence. The measure in all cases is popularity rather than requirements. Aside from our particular field of industrial preparedness, I feel that it is the duty of business men to uphold you in your efforts to get suitable appropriations for the military establishment, for unless industry interests itself in the whole problem of National Defense, all the excellent work it may do on its own particular phase of industrial mobilization will be to a large extent wasted effort.

One serious indication of the Air agitation, as reflected in the Press, is that there seems so little hope of the general public ever being sound on the subject of national preparedness, or of even being interested in it unless some kind of a fight is going on. The best outlook for National Defense is action on the part of that class which, by the courtesy of Judge Gary, I happen for a moment to represent tonight. There has been much comment on vigilant minorities who further their own interests through political action at the expense of the unheeding majority. What our country really needs is a vigilant minority that will take action in the interest of that sleeping majority. In numbers, this group which has heard you tonight is a minority; in enterprise and intelligence it is far from being that. So far as I may speak for it, I hope that it will,

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as a group, interest itself in the National Defense as a whole, and that its interest will concern itself with definite and concrete assistance to you in securing from the Congress appropriations you must have if our work on the industrial side is not to be largely in vain.

If your efforts with ours, Mr. Secretary, can maintain the man-power part of the National Defense, I believe you need have no uneasiness as to the industrial side. The organized industry of the country, particularly of this metropolitan region, comprehends that our man-power and our tremendous natural resources avail us nothing unless our raw materials can be converted into finished munitions against the unhappy day when our streets may again be filled with marching columns on their way to war. That link in our armor is being strengthened by the efforts of leaders like Judge Gary, and the men he has brought together to meet you tonight. Some of them, like our Chairman himself, are giving their time and great executive ability to this problem. Others, in their factories, are working out the details of plans which will enable them to begin promptly the production of such munitions as may be allocated to them in the event of emergency.

These men are glad, I take it, that they have the opportunity to perform this task and to coöperate with you. It is a great patriotic privilege. It has, also, another argument. If it were not being done our country would have to maintain huge reserves of war matériel, and industry would be taxed to provide for greater appropriations than are now necessary. War reserves of matériel are designed to bridge the gap between the outbreak of war, and the day that full war production starts. The sooner production can be depended upon to start, the less the amount of war reserves necessary. Smaller reserves mean smaller appropriations. The fighting man goes to war, and bets his life on the sufficiency of his munition supply. That he should be short in that day of danger, is a thing that American industry will never permit. If what is now being done in the way of preliminary allocation and negotiations, had been done prior to the outbreak of the World War, our participation in it would have been appreciably shortened; our losses in killed and wounded would have been diminished; and our expenditures, now being paid for in taxes, would have been decreased by one million dollars for every hour by which we shortened the duration of that conflict.

We may safely rest our case on the ascertained facts from our last war experience,—on logic free from sentimental distortion, and a firm determination to take all proper precautions which can be taken in peace to insure its lasting permanence, and with it a continuance of the blessings which we now enjoy. I believe you may depend upon the best efforts of industry in this region.

WHAT IS CAMOUFLAGE?

BY COLONEL JENNINGS C. WISE, FA—RES.

A BATTERY seen is a battery lost! Just as the power of an enemy to destroy has increased, so has his power to see. Today he sees not alone by the human eye, aided betimes by a powerful lens, but is able to visualize almost the exact position of hostile guns by their flash and sound, and by placing them on maps of the most accurate character, calculate their range with a certainty unknown to the bare eyes. Nor is the maxim applicable to guns alone. It is not too much to say that anything that can be seen may be destroyed, despite parapets and the armor with which it may be clothed. Added to the direct, curved and high-angle fire of guns, howitzers and mortars, we now have the basal fire of mines developed to a high efficiency, the principle including marine mines and torpedoes, and direct fire from the air. A fort, a battleship, then, is but a trap, a known or visible trench but an inviting target, in many instances more dangerous than otherwise to those they are designed to shield, unless rendered invisible.

This brings us to camouflage.

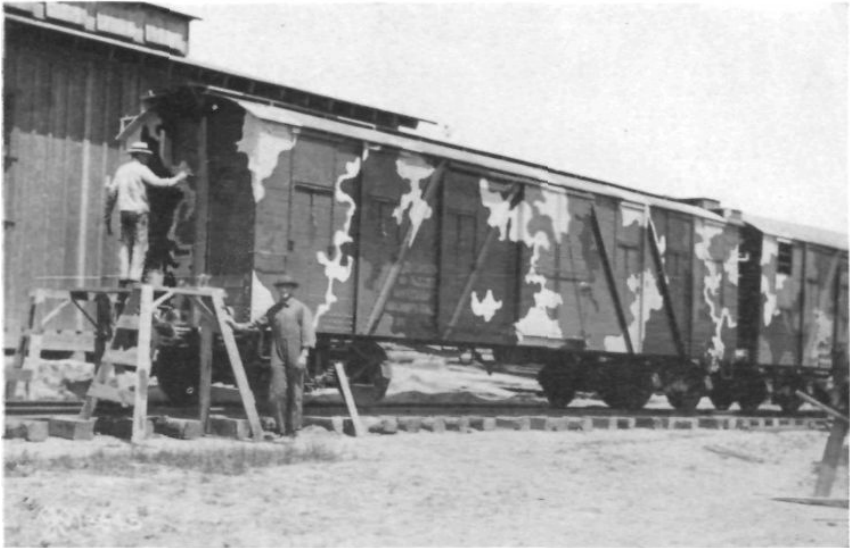
What is camouflage?

Not what many seem to think. Camouflage is a stratagem which has for its purpose deception, but deception may be accomplished by ruses that in no sense constitute camouflage.

The distinction between ruses that constitute and that do not constitute, camouflage, is of far more than academic importance.

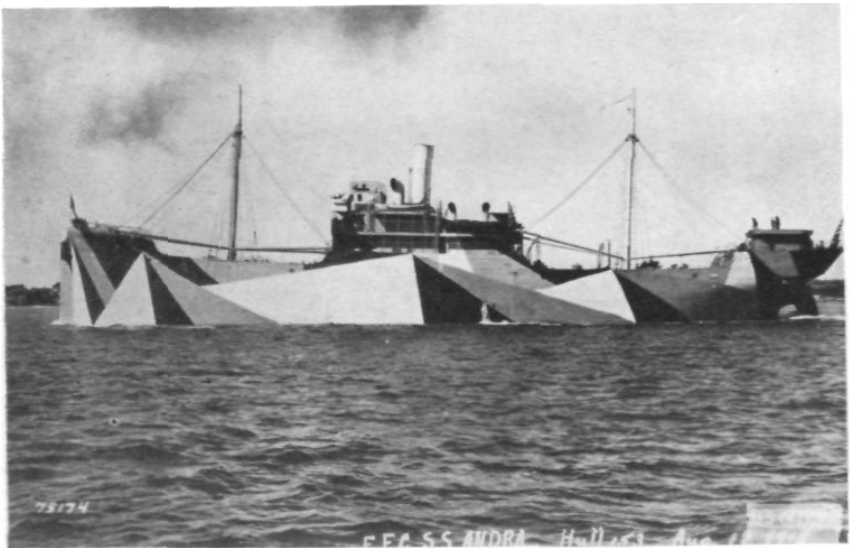
The word stratagem is derived from the Latin strategema, meaning the artifice or trick of a general by the use of which an advantage is intended to be obtained. Different stratagems operate in different ways with respect to their effect upon the enemy's mind. It is apparent at the outset, therefore, that unless their respective effects are thoroughly understood by those required to execute them, the object, which the general has in mind in any particular resort to stratagem, may be defeated, rather than advanced, by creating an effect on the enemy's mind which it is not, in that particular instance, desire to create.

Camouflage is a newly coined word and, like most technical military terms, has crept into our language, if not yet into our dictionaries, through the French. In French the word is said to imply the act of the snuffing out of a candle. Therefore, it was coined to designate the stratagemical art of obscuring, or throwing the one whom it is designed to deceive, mentally into the dark. In other words, to camouflage implies that the observer shall not perceive



AN AMMUNITION CAR

Being Prepared at Aberdeen Proving Grounds in 1918, for Use at the Front. Most of the Vehicles at the Front Were Painted Like This.



STEAMSHIP "ANDRA"

The Andra's Coat Has Many Straight Lines. The Wartime Ships Exhibited Various Colors, Painted Not Only in Straight Lines, But in Every Conceivable Curve and Shape.



NOT AS GRUESOME AS IT APPEARS

But Careful Scrutiny Does Not Divulge the Practical Purpose of This Dead Horse Until One Sees the Reverse Side of the "Corpse" in the Picture Below.



THE REVERSE SIDE

The Horse is a Handmade Replica of a Real One. Somewhere in No-Man's-Land, Where it Will Serve as a Listening Post After the Substitution is Made.

WHAT IS CAMOUFLAGE

what is within the sphere of his vision, either because it is rendered invisible, or because it is made to appear to be a part of something else and, therefore, not distinguishable in its true physical character. At once, therefore, we see that many things which are called camouflage are not camouflage at all, but, properly speaking, are ruses of some other kind.

Ruse, on the other hand, coming from the French word *ruse*, meaning a trick, artifice, or stratagem, may imply more than the stratagem by which the mind of the person deceived is thrown in the dark simply through the failure of the eye to discern the thing obscured by the trick or artifice. The advantage which the stratagem of ruse may have as its object, may be obtained not merely by the blinding of the eye and mind, but by a positive deception of the mind through what the eye is allowed to see. The eye, or the mind's eye, sees, and for the very reason that it does see the thing disclosed to it, the ruse employed causes the mind to be deceived.

Inasmuch, therefore, as camouflage involves the element of invisibility, it may be said that to the extent the visibility of a thing is diminished, camouflage is employed.

The art of camouflage was first employed by nature, and has often been employed by nature with the result of affording protection to living things upon the earth. Thus, wild animals and birds are, more often than not, the color of their natural environment or native cover, and not only are they tinted, striped and mottled to match their surroundings, but they are shaded to compensate for shadows, ordinarily being lighter along the breast and belly than on the back, so that their outline is practically indistinguishable at a short distance. In the striping of the zebra, the tiger, the cat, and certain reptiles, the mottling of the leopard and the quail, the bold variegated coloring of many animals and birds, nature has but resorted to camouflage, making the objects of her protection less visible to their enemies.

Nature is constantly at work camouflaging her creatures. For example, elephants inhabit partially wooded plains. Their dark shaded bodies are invisible in the brush, but in the open they are highly visible at great distances. Therefore, when they wallow in the mud, nature camouflages them with the paint of her soil, which the sun dries to the color of the background of the open spaces and which the leaves and brush wipe off when they return to the woods.

Man early learned from nature the art of camouflage. Savages in all ages and all climes, copying the shading, striping and mottling of animals and birds, have painted and befeathered themselves when they were in danger from enemies, whether animals or men. The uniforms of civilized warriors are but the adaptation of the principle of camouflage which was employed first by nature for the protection

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of animals, and then by man in his savage state. Thus, the British Army long retained a red tunic and dark trousers for use even in their desert campaigns, because that combination is low in visibility; while the French, whose blue coats and red trousers were highly visible, early adopted a different combination of color for a field uniform. Most armies today wear the olive drab of nature, while shining buttons and all relics of burnished armor have been abandoned by civilized armies, since the visibility of the soldier is more dangerous to him in this era of long-range weapons than bodily vulnerability.

In a landscape there is great confusion of the detail of natural objects. All natural objects are irregular in shape and complex in outline. Any symmetrical object tends to catch the eye at once. In nature there are no straight lines (except the surfaces of water), no circles, no squares, and although there are bold variations, there are no sharp contrasts in the color and tone of natural objects. Consequently, form, no less than color, may contribute to the visibility of a thing, so that a symmetrical object, or objects symmetrically arranged, such as gun carriages arranged in regular order, tend to catch the eye at once. Having learned this, not only do well trained soldiers camouflage their bodies with uniforms and avoid the skyline, which is invariably the most conspicuous feature of the landscape, but they mottle the shields of their guns with paint, hang buckets, prolonges and blankets upon them to break the regularity of their form, and otherwise camouflage them by arranging them, when in position, in irregular order. Ships, too, are given drab lines with dark stripings and mottlings. The faces of night raiders and patrolling parties are darkened, and when raids are made in the snow the raiders are dressed in white. White mounts and draft animals, for obvious reasons, are no longer preferred, and trenches and highways are screened by netting and artificial plantings.

Such then is camouflage, in each example mentioned the object being less visible than if the stratagem or artifice of camouflage were not used. Thus, nature and men resort to camouflage when they obliterate or prevent the perception of a thing by making it less visible.

When, however, by exhibiting to the eye a form that is, in fact, what it appears to the eye to be, but from the perception of which an erroneous mental conclusion is drawn, we resort to a ruse that is not camouflage. Thus, it may be said a mirage is not camouflage but a ruse of nature, which causes the mind to conclude from what the eye beholds, that something is present which, in fact, is not present.

The use of false uniforms, corps badges, flags, trenches, quaker or wooden guns, the kindling of excessive camp fires, mystery ships,



BATTERY F. SEVENTH FIELD ARTILLERY

Near Menil la Tour, France, July 5, 1918. From the Sky, No Guns Are Seen and the Continuity of the Road Seems Unbroken.



CONCEALING A BATTERY DURING A HALT

Menil la Tour, France, June 24, 1918.



FRANK CONCEALMENT

The Side Curtains Simply Conceal Traffic From Direct Observation. It is in Plain View of the Enemy. The Overhead Strips Conceal the Road from Enemy Observers on the Hills Straight Ahead. No Effort is Made to Hide the Curtains Themselves.



A VILLAGE STREET

Showing Treatment Similar to That Above. 500 Soldiers Are Billeted Here, Subject to Bombardment if Suspicion is Aroused by Unusual Activity. Sommedieu, France, September 3, 1918.

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the disguising of civilians as soldiers, soldiers as civilians, of merchant vessels as war ships, and the reverse, permitting captures of men with false corps badges in order to create the belief that a relief has or has not been effected, that artillery or other units are present where they are not—these ruses are not camouflage, because these stratagems would be fruitless of advantage if the hostile eye did not observe that which was designed to deceive the mind of the observer.

Some highly effective ruses result from the instinct of cunning alone. Camouflage, however, is an art that requires to be studied, if it is to be effectively applied, and, generally speaking, will not develop out of the mere instinct of cunning alone. The point is not difficult to illustrate. It was not unusual to find among green troops in France, a soldier hard at work wiring himself in at some forward post. Yet the peril, against which his instinct of self-preservation led him to seek to guard, was only increased by his own acts. The coils of wire that he wound about himself did not protect him against anything but being snaffled without a fight. On the other hand, it actually contributed to an exact knowledge of his whereabouts. He did not consider that the wiring-in, which he was permitted, and often called upon to do, while a good thing for the collective good in that it insured an alarm, might turn out to be fatal for himself. Willingly he lugged the wire to his post. Yet the same man could have been made only with difficulty to carry forward sufficient camouflage material to conceal his whereabouts, for the reason that, in his ignorance of woodcraft and nature, "such stuff," as he called it, gave him no sense of security. His attitude of mind was identical with that which caused armies, long after gunpowder had been discovered, to occupy stone fortresses. The enemy would at least have trouble in storming the stronghold or starving out its defenders!

After troops have had a little experience in the field, it is difficult to make them remain in the alarm posts that first they constructed so willingly. Then, if permitted to do so, they will leave a wired-in post and conceal themselves nearby in preference to remaining in it.

"Why don't you stay where you were ordered to stay? You will be snaffled here without giving the alarm."

"I want to be where they don't know I am," was the common reply of the old soldier. Instinctively he was resorting to ruse, but he had not resorted instinctively to camouflage.

There are some very interesting historical examples of stratagem. While we now know that the wooden horse which the Greeks are supposed to have used to gain entrance into Troy, was no more than a tower rolled up against the walls from which the besiegers could surmount the battlements without breaching the wall, yet the

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use of the horse as commonly conceived is a mythical example of ruse. The Trojans were intended to see it and fall victim to their curiosity by dragging it, with its concealed garrison, into the town.

La Tour D'Auvergue, the famous First Grenadier of France, who perished at the head of Napoleon's Infernal Column, placed the dead bodies and muskets of his fallen comrades against the battlements of the town which he alone survived to defend. Believing that a considerable force of defenders remained, the besiegers agreed that the defenders should have their liberty upon the surrender of the town. La Tour alone marched out. This was not camouflage, because the besiegers were deceived by what actually they saw and were intended to see.

At the battle of the Yalu, the Japanese artillery went into action behind a screen of trees lining a sunken highway, which enabled the Russian artillery to range in it with great precision. During the night the Japanese sappers transplanted the trees with great accuracy in the same arrangement as before but at a considerable distance forward, while the Japanese guns remained in the sunken highway. When the great assault was made, the Russian artillery continued to fire at the trees and was, therefore, wholly ineffective as against the opposing guns. This was in no sense camouflage, for it was through the intended perception of the trees that the Russians were misled.

In France, the British Royal Engineers were very clever in the use of disappearing silhouettes, which, during the night, they attached by hinges to great beams in No-Man's-Land. At daybreak, by means of ropes and pulleys, the men in the trenches caused the silhouettes to rise and fall, thus creating, on the part of the enemy, the illusion of troops advancing to the attack. To repel the imagined attack, the German guns would open furiously, thus disclosing their numbers and positions to the flash and sound-rangers and other observers and enabling the British artillery to counter-battery them with a destructive fire before they could be shifted. While this was a clever ruse it was not camouflage, for the Germans were deceived, not by what they could not see, but what it was intended they should see.

The use of submarines, smoke screens, breastworks, trenches, feint attacks, the suppression of camp fires and lights, the enforcement of silence, night marching, and the avoidance of visible movements are, however, through stratagems, neither camouflage nor any other kind of ruse, but simply means of concealment of the presence of an adversary, resulting not from any trick designed to deceive, but merely from the intelligent use of concealment.

In France, on more than one occasion, it was found possible to carry an entire battalion of infantry in single file across the skyline,



A FIFTEENTH FIELD ARTILLERY POSITION

A General View of Trenches, Barbed Wire Entanglements, and Batteries. In the Foreground are Some Japanese Officers on an Inspection Trip with the Americans, August 10, 1918.



A FAKE TANK

Made of Wicker and Tar Paper, it was the Target for Many Shells and Bombs, but was Never Directly Hit. Woinville, France, November 9, 1918.



ONLY A STUMP

Made of Sheet Iron and Steel, Assumed to Have Been Used by the Germans as an Observation Post. Taken Near Regnieville, France, Oct. 16, 1918.



THE SAME STUMP

With the Camouflage Partly Removed to Show the $\frac{1}{4}$ Inch Iron Structure. The Entrance is at the Bottom.



A CAMOUFLAGE STUDY IN BLACK AND WHITE

This Uniform Was Designed for Special Work Where Observation From Tree Tops Was Necessary. The Colors Are Assimilative, Therefore Protective, and While Presenting Rather a Comic Effect, Does Not Advertise the Observer to the Enemy.

WHAT IS CAMOUFLAGE

without bringing down hostile artillery fire, since this method of movement created the illusion to the hostile eye of a single man on the horizon—a target which hostile guns seldom concerned themselves with. Yet even a small group of men on the skyline would invariably bring down hostile fire. The passing of many men across the skyline in single file is not ruse, however, while to place a group of silhouettes on the skyline to attract fire would be ruse.

Sometimes the effect of a stratagem may be that of the combination of camouflage and some other form of ruse. Thus, in France, the camouflage engineers frequently substituted, during the night, a hollow metal replica for a tree trunk, in which an observer could be posted. With respect to the observation post, the artifice was camouflage, because it was not apparent; but with respect to the use of the hollow metal tree as an observation post, it was another form of ruse, because that which was represented as a tree was, in fact, an observation post.

It was not long after the discovery of this practice that the Germans fired on all standing trees, thus showing that they were aware of the ruse employed by the enemy. Thereupon, the ruse of setting out a new tree in the landscape was resorted to, in order to make the hostile guns fire and disclose their positions.

During the late war, sometimes, the form of a small craft was painted in a dark and highly visible color on the side of a large vessel, the remainder of which was camouflaged, in order to deceive hostile submarines into believing that the smoke, sound, lights, wake, or what not of the vessel, was but that of an insignificant craft, the form of which had been made apparent. This was an example of a ruse, like that of the metal tree, in which ruse that was, and ruse that was not, camouflage were combined.

When the Germans were preparing for the first spring offensive in 1918, they constructed with the utmost secrecy a complete and intricate system of field works in front of Lille and on the Somme, co-incidentally, for the use of assaulting armies, which it was proposed to bring forward when all was ready for the jump-off. It was clearly not intended that the enemy should be deceived by the disclosure of the works, for to prevent their being seen they were most carefully camouflaged. For the attack on the Lys, a huge army was then assembled over a long period of time, without increasing the normal railway traffic in and out of Lille,—the regular southbound trains bringing in reinforcements from the north, and the regular northbound trains bringing in others from the south.

Was all this ruse?

That which the enemy may have seen, whether the trenches that were erected, or the railway trains coming in and going out of Lille, were, in fact, just what they appeared to be. Plainly, if the enemy

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was kept in ignorance of the intention of the Germans, it was not because the Germans had misrepresented anything. They had merely intelligently concealed what were their intentions, and cannot be said to have employed ruse.

The case of the metal tree is illustrative of the fact that what is first designed to serve as camouflage, may ultimately have the effect of ruse—that is, to attract attention of the enemy rather than to merely keep him in ignorance, or in the dark. Another very good example of this may be cited.

In Scene IV of Act V, Shakespeare makes Malcolm, who is besieging Macbeth in the castle of Dunsinane, command that every soldier hew down a bough in the wood of Birnam with which to screen himself.

"Thereby," says Malcolm, "shall we shadow the numbers of our host and make discovery err in report of us."

The stratagem resorted to by Malcolm was, in the first instance, a clear case of intended camouflage, for the artifice had no other purpose than to cause Malcolm's troops to be invisible to the eye of Macbeth.

When, however, Malcolm's men finally advanced out of the wood of Birnam upon Dunsinane, each screened by the bough he bore, the moving boughs were seen, creating the illusion on the part of Macbeth that the wood of Birnam was on the move against him. Thereupon, having made a solemn vow that not until Birnam wood moved, would he yield up Dunsinane, he gave up the ghost!

In this case the camouflage, to which resort was had, was beneficial to Malcolm. But suppose Macbeth had not been a superstitious savage, and the embrasures of Dunsinane had bristled with guns! The mere screening of the bodies of the assailants with boughs would not have camouflaged their movements, since the movements of the boughs would have attracted the attention of the defenders. Nor would such a stratagem have proved effective as a ruse, because the defenders would have known that troops were behind the moving boughs, and that an assault was underway.

The use of clouds of baneful gas, followed by the use of a cloud of harmless gas under cover of which the assailants might advance unmasked with impunity, would be a clear case of ruse, but the gas cloud would be no more camouflage than Malcolm's moving boughs.

So, too, a smoke screen might conceal vessels, as Malcolm's boughs concealed the forms of his men, and thereby prevent the enemy from counting them, or protect them from an accurate hostile fire, but it would not deceive the enemy as to the whereabouts of his adversary, or fail to arouse his sense of danger.

On the other hand, to shroud with smoke a town or particular piece of terrain, so that to the hostile eye the smoke screen, appearing



A GROTESQUE FIGURE

This Suit is Not so Visible When the Soldier is

Lying Prone, as in the Lower Picture.



A BURLAP DISGUISE

This Suit, too, is Designed for Observing from a
Grassy, Neutral, Terrain.



SNIPERS IN CAMOUFLAGE SUITS

Soldiers of the 168th Infantry (3rd Regiment, Iowa National Guard) Badonvillers, France, May 18, 1918.



INGENUITY NOT CRUELTY
Poor Old Dobbin Was Not Killed in Action, as the Picture Would Suggest.



BACK VIEW OF THE PICTURE ABOVE
This is Another Built-up Model, to Replace a Real Casualty on the Battlefield. A Close Look Will Reveal
the Soldier in this Observation Post.

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as mere haze or fog, did not indicate the exact whereabouts of the thing it concealed, would be camouflage, since knowledge of the presence of the thing concealed by this stratagem is prevented by its obliteration. Here the mind is deceived through an impression contrary to the facts, because the perception of the mind through the eye is rendered impossible.

The illustration taken from Shakespeare brings up down to a consideration of the practical necessity of understanding the very great difference between camouflage, ruse, and what is neither.

Suppose the stratagem of the commander required that the enemy in a particular quarter of the sea, be lulled into an unalert attitude. Plainly, it would not be a compliance with his desires, if the ruse of painting a small craft on the side of a large vessel were employed, instead of camouflage, for the form that would be visible would attract the enemy's attention no less than the vessel would if the same were not camouflaged even in part.

On the other hand, if it were desired to make the enemy believe that a flotilla of small craft, instead of a fleet of large vessels, was in movement, the ruse of altering the appearance of the latter properly would be employed, and not pure camouflage.

Again, if it were desired to decrease the garrison of a sector without attracting notice, it would not be sufficient to conceal by camouflage the movement of the outgoing troops. The ruse of using all the corps badges of the old garrison also must needs be employed, and camp fires, lights, traffic and activities in general maintained at the old normal.

It is also true that to resort to more than the normal concealment in an attempt to screen the increase or decrease of a garrison, whether by camouflage or ruse, may, through the altered aspect of things, only serve to arouse the enemy.

Thus, it is seen, that, since the object to be attained by the use of stratagem may be one thing or another, in order to employ camouflage intelligently as a stratagem, the fundamental distinction between their effects, and the objects to which it and other ruses are adapted, alone and in combination, must be thoroughly understood, lest the general be deprived of the advantage which stratagem may be made to yield to him.

DUTY

BY MARTIN GALE

"WHY that recruit sticks with Moggan is more than I can see," said Sergeant Maroney. He and Corporal Tuerney were watching two men out of barracks on the way to town.

"Nor me, neither," replied Tuerney. "If Ladne was a bum like Moggan, I could understand it. But he ain't. He wants to soldier, but you'd think that him an' Moggan was brothers. He's going to be spoiled."

"Yes. Unless Moggan goes back into the guard-house."

The association of the two was a source of wonder to the battery. Moggan was a guard-house lawyer and a drunkard, Ladne an earnest recruit who strove to become a good soldier. In spite of their characteristics, they were as thick as thieves. It was easy to understand Moggan's attitude. He spent the boy's money, he had a loyal aide in all that he was forced to do, while Ladne, looking upon the older man as a protector, gladly gave up his meager pay, and could not be persuaded to abandon the other.

"Lay off that," he returned to those who warned him. "Moggan's alright. He can have all I've got. He's had a raw deal, that's all."

Moggan, when away from Ladne, openly boasted of his ascendancy. "That kid's eatin' out o' my hand. When I whistle, he comes. Polished all my buttons yesterday. Pretty soft, hey?"

In spite of Moggan, the recruit was a good soldier. He had been born to answer the bugles; he enjoyed the matter-of-fact drills; the least ceremony thrilled him. When he fired the recruit course with the pistol, he felt that this was soldiering in earnest and pictured himself putting the bullets into an enemy.

On pay-day Moggan, whose pay was forfeit, feeling the need of a good drunk, took Ladne with him to a bootlegger off the reservation, where he drank his fill. Ladne would not drink, but liberally supplied money for Moggan and his friends. When his last dollar passed over the bar, Moggan drunkenly reproached him and finally drove him off, while he finished the carouse. Ladne returned to barracks full of pity for his friend. Moggan returned, too—and the non-commissioned officer in charge of quarters caught him walking out with a stack of blankets to trade for more drink, and Moggan returned to the guard-house. A court-martial gave him a year and a bust, and every man in Battery A—except one—was relieved to be finally rid of him. Ladne still refused to believe ill of his hero and loudly maintained his innocence to all who would listen.

DUTY

A week after Moggan's sentence was approved, Battery A went on guard and with them Ladne. He was excited over his first tour and swelled with pride as he watched over his portion of the sleeping camp. This was a soldier's ward. In the morning, he was picked as a prisoner-chaser to guard a working party. With the other guards he was lined up for instructions; told that he must not let a prisoner escape; to call "halt" three times, then shoot, if one broke away. Ladne felt his gun on his hip and assured himself that no one would evade him.

When Ladne marched forward to receive his two charges, Moggan stepped out and imperceptibly nodded. Ladne flinched at the thought of guarding his friend, but the other took no further notice and plodded along to the dump. There the prisoners were scattered into small groups, each at some separate task, watched by their particular sentries, all under the eye of a fat and fussy provost sergeant. Ladne, with his two men, was put at the edge of the dump, bordered by a wood through which ran the road to town. For the first hour Moggan paid no attention to anything but his task. When the sergeant had drifted to the far side of the field and the other prisoner was busy at a wagon, he sauntered near to Ladne and leaned on his shovel, ostensibly resting.

"Say, kid," he muttered. "C'mere."

Ladne drew closer. "What is it, Bill? Something you want?"

"Listen, kid. I'm sick o' this place. I'm goin' to make a break. There's a guy in shanty-town 'll gimme the clothes,—then I'm gone, see?"

"Ah, Bill, I'm on guard. You can't go now."

"Aw, you're a fine pal. You shoot yer gun in the air, see, an' I'll be in the woods before anyone comes up. You kin say you had to stay with the other guy."

"No, Bill, don't. I gotta stop you. Please, Bill."

"Aw, can that stuff. It don't go. Now's a good time. I'm off." He started running for the edge of the woods.

Ladne hesitated for an instant, while who knows what memories passed through his head. Then he drew his pistol and shouted in staccato tones: "Halt! Halt! Halt!" The fleeting man made no attempt to stop. Then Ladne raised his pistol and, as he had been taught, squeezed the trigger twice.

The shooting brought the provost sergeant galloping and panting to the spot. "What's a matter here?" he demanded. "One of 'em get away?"

"No. I got him. He's over in the bushes." Ladne slowly returned his pistol to its holster. He was shaking all over. "I done my duty, but I shot my bunkie."

THE ANNUAL REPORT OF THE CHIEF OF FIELD ARTILLERY FOR 1924–1925

INTRODUCTION

IN THE report of the Chief of Field Artillery for the fiscal year 1924, submitted just prior to the Defense Day Mobilization of September, 1924, an endeavor was made to show, by comparison, the relative condition of the Field Artillery in April, 1917, upon the outbreak of the World War, and in June, 1924, just prior to our first great test mobilization, six years after the conclusion of the war. While the report showed that great strides had been made in preparing this arm for an immediate emergency, it further showed that the Field Artillery, as a whole, had not attained to the degree of efficiency considered practicable under the present National Defense Act, and policies enunciated in pursuance thereof by the War Department.

Certain of the deficiencies noted were the result of limitations resulting from the law itself, and others were due to National policies. Deficiencies resulting from such causes, it is recognized, cannot be corrected immediately. But, other deficiencies which could and should have been corrected, were noted, and it is as regards the steps which have been taken during the last fiscal year to correct these latter deficiencies, and the results obtained, that this report will deal.

PERSONNEL

REGULAR ARMY

Commissioned Personnel

On June 30, 1925, the number of officers in the Field Artillery, including those commissioned in the arm and those detailed for duty with it from other arms, was as follows:

	Colonels	Lieutenant Colonels	Majors	Captains	First Lieutenants	Second Lieutenants	Total
Commissioned in Field Artillery ...	24	57	215	422	354	286	1358
Detailed from other arms	14	10	0	0	0	6	30
Totals	38	67	215	422	354	292	1388

Of the 1388 officers noted above, 12 were detailed for duty in

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other branches, leaving a total of 1376 officers for duty with the Field Artillery.

During the year the gains and loss in this arm were as follows:

Four Colonels	Lost
Three Lieut. Colonels	Gained
Zero Majors	Gained or Lost
Seven Captains	Gained
Seventeen 1st Lieuts.	Gained
Fifty-eight 2nd Lieuts.	Gained

The present distribution of the commissioned personnel of this arm is on the following page.

The significant fact to be noted in this table is that only about 50 per cent. of the commissioned strength of the Field Artillery is on duty with troops (*branch* duty), and even this apparent percentage is actually much reduced, as is shown later on in this report.

During the past year special effort was made to fill the field artillery quota of regular commissioned officers, with the Organized Reserves and the R.O.T.C. The progress made in this regard has been noted in the above table, where it may be seen that the number of regular field artillery officers assigned to organized reserve duty was increased by thirty; the number assigned to R.O.T.C. duty was increased by twenty-seven; and the number assigned to national guard duty was increased by thirteen.

It is recommended again that duty performed by regular field artillery commissioned personnel with the National Guard, Organized Reserves, and R.O.T.C., be considered as duty with branch. This recommendation is based on the fundamental proposition that agencies which will be charged with a certain responsibility in the event of war, should be charged with the responsibility in question in time of peace. That the Chief of Field Artillery will be charged with the responsibility of supplying adequate training personnel for the activities under discussion, in the event of an emergency, is believed to be beyond question of doubt.

It is an accepted fact that the exercise of actual command is the basic applied training for all commissioned personnel. Duties other than those in actual command of troops, such as duty with the Organized Reserves, National Guard and General Staff, are recognized as being of the greatest importance to the service, but it is in actual command of troops that an officer receives his basic applied training.

The recognition of this fact is important, in view of the limited time which an officer has to serve in each grade with troops.

The following is an approximation of the time which an officer

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DUTIES	Colonels	Lieutenant Colonels	Majors	Captains	First Lieutenants	Second Lieutenants	Total
Duty with Branch (Regular Army).....	13	20	53	210	219	270	785
Special Service Schs	1	4	29	57	49	5	145
Duty with Gen. Staff (War Department).....		8	5				13
General Staff (Troops).....	4	4	9				17
General Staff (Attachés).....		2					2
War College Staff.....	3	1	2				6
War College Students.....	1	2	5				8
C. & G. S. Sch.—Staff.....			9				9
C. & G. S. Sch.—Students.....		1	32				33
Inspector Gen's. Dept.....	2	2	2				6
U. S. Military Academy.....			5	4	31	1	41
Organized Reserves.....	11	18	15	38	2		84
National Guard.....		2	24	56	3		85
R.O.T.C.....		2	19	50	36	1	108
Miscellaneous Duties:							
Aides.....					6	5	11
Recruiting.....	1		1	3	5		10
Disciplinary Barracks.....			1	1	1		3
Foreign Languages.....			1	1			2
Battle Monuments Comm.....					1		1
Bureau of the Budget.....			1				1
Office, Secy. of War.....	1						1
Signal Corps School.....				1			1
Corps Area Headquarters.....	1	1			1		3
École de Guerre.....			1				1
Detailed with Air Service.....			1			10	11
Detailed with Ordnance.....				1			1
Totals.....	38	67	215	422	354	292	1388

NOTE.—Student officers will not, as a rule, report at schools prior to September 1, 1925. Officers under orders to report to the various service schools are carried in the above table as students, and not as performing any of the other duties enumerated.

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of field artillery spends in each grade with troops, under present conditions:

- Colonels —4 years out of 10 years.
- Lt. Cols. —4 years out of 19 years.
- Majors —4 years out of 20 years.
- Captains —4 years out of 15 years, with a firing battery,—
4 years out of 8½ years, with regular field artillery troops.
- 1st Lieuts.—4 years out of 12 years, with a firing battery,—
4 years out of 6½ years, with regular field artillery troops.
- 2nd Lieuts.—4 years out of 10 years, with a firing battery,—
4 years out of 4 years, with regular field artillery troops.

The Chief of Field Artillery endeavors to make an equitable distribution in the assignment of officers to duty with troops, to the end that all officers may have equal opportunities for practical training. Again, every effort is made to keep the maximum authorized number of officers on duty with troops. However, a study of assignments given to officers after they report for duty, and pass beyond the control of the Chief of Field Artillery, shows, in many cases, that regimental and station commanders do not appreciate the urgent necessity for permitting officers to receive actual training with troops while on such assignments. For example, in one of the regular field artillery regiments which has nine captains assigned to it for duty, only two of the six firing batteries of the regiment are commanded by captains.

It is believed that duty with a firing battery is the only practical basic applied training for junior officers. Therefore every effort should be made to keep firing batteries up to their full authorized strength in officers, in order that full advantage may be taken of the opportunity for this valuable training, and a distinction should be made between duty with a firing battery and other duty with troops,—the latter term being used to include artillery staff duty, duty with headquarters and service batteries, and duty with ammunition and combat trains.

The importance of special details is not lost sight of in recommending that captains be given assignments commensurate with their rank in command of batteries, and that lieutenants be not kept continuously on a special detail by reason of their aptitude for the position, but be rotated with other lieutenants serving with troops.

The importance of actually doing duty with troops during the periods when officers are supposedly on duty with troops, should be stressed. Assignments on special duty should be, when possible, in addition to troop duty, and the number of officers detailed exclusively on special duties should be reduced to a minimum.

Frequently, recommendations are received in this office, that an officer be not moved by reason of his special aptitude for athletics, post-gardening, or other special knowledge foreign to field artillery

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training as such. Making such assignments for brief periods during the inauguration of an important new activity, making for the comfort and improved morale of the command as a whole, is frequently advisable; but the retaining of an officer on such duty during the major portion of his tour of duty with troops is doing him an injustice from which he must suffer in his future years of service. This question is considered of such importance, it is recommended that corps area commanders and commanding officers of stations, within their jurisdiction, make this matter a special subject of investigation during their routine inspections.

The simplification and reduction in number of policies, particularly as regards personnel matters, should be given serious study and consideration. The present tendency seems to be to issue too many policies and to regard the policies, which have issued, as regulations rather than what they really are,—that is, policies.

Consider the policy which authorizes a corps area commander to express his disapproval, without reason, of a regular commissioned officer selected by the Chief of Field Artillery for national guard or organized reserve duty. If a corps area commander refuses to accept an officer with an excellent record, what is to be inferred? Is the officer unsuitable for such duty? His record shows otherwise. Is he personally unacceptable to corps area headquarters? No one knows. Is his efficiency report incorrect in substance? The inference is, that it is. Frequently an officer refused by one corps area is offered to another corps area and accepted. A double refusal, however, without expressed reasons, quite frequently results in the officer being assigned to duty with regular troops. The result is far-reaching. Officers are kept on duty with regular troops over and beyond their proportional time at the expense of other officers; officers' records are indirectly injured; morale is lowered by reason of the necessity for sending officers as replacements to duty and station where they have no desire to go, and, quite frequently, unwarranted mileage charges result. In all cases the cumbersome task of rearranging assignments must be taken up; orders are rescinded by the War Department; new orders issue. The policy is obviously unjustifiable, and leads to unnecessary expenditures. The disapproval by the corps area commander of the assignment of an officer for duty with the National Guard, Organized Reserves, Reserve Officers' Training Corps, etc., should be accompanied by a full and complete statement of the reason, or reasons, for the disapproval, not only in justice to the officer concerned, but for the information of the War Department as well, to the end that the latter may act intelligently in the future assignment of the officer concerned.

It is believed essential that irrevocable rules or regulations should

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not be enunciated in handling personnel matters. In other words, policies should not be interpreted as orders. Consider the rigid interpretation given the policy relative to the non-attendance of graduates of the General Service Schools at special service schools. Under present conditions an officer may be commissioned in an arm and serve for ten or more years, without doing actual troop duty with his arm. The chief of the arm, as well as the officer himself, may recognize a need for his training at a special service school, in order that the command to which he may be assigned will not suffer. As policies are now being interpreted, it is questionable if such an officer could be sent for the training which he desires and which he unquestionably needs.

The policy of allowing a division commander to assign the officers of his division to station, when the division is so widely scattered as the Third Division is in the Ninth Corps Area, or the First Division is in the First, Second and Third Corps Area, is not economical and little can be said in its defense.

The policy prohibiting the informing of officers as to what station it is considered sending them to, places an unnecessary hardship on officers; frequently results in avoidable changes of orders, to the discomfort of many officers, and is, in many instances, uneconomical. It results in transferring personnel questions from an office where they belong, to an office where they do not belong.

I repeat that in personnel matters each case must be handled separately, on its merits, giving consideration to the attendant circumstances, and the policy or policies involved. An endeavor to handle personnel matters by a rigid code of regulations must inevitably result in inefficiency and lowered morale. A complete restudy of the policies now in effect, looking to the elimination of many, and the simplification of others to the end that personnel matters may be handled in a more business-like manner, is recommended.

REGULAR ARMY ENLISTED PERSONNEL

No one thing has contributed more to the efficiency of the Field Artillery service during the past year than the recruiting of this arm up to its authorized peace strength.

During the period from the summer of 1919, until the close of the fiscal year 1924, this arm at no time received its proportionate share of recruits, and as a result never attained the degree of efficiency which should have been expected in time of peace.

In January, 1924, this arm had but 71 per cent. of its authorized enlisted strength, while other arms were over-strength. During the fiscal year 1924, one regiment of field artillery had at one time one man for duty while other arms were over-strength. This condition seriously affected the Field Artillery and mitigated against its

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improvement. This office repeatedly sought, unsuccessfully, to have remedies applied. During the past fiscal year, the Adjutant General's Department has given this matter careful consideration. Under the business-like management of Major Irving J. Phillipson, Adjutant General's Department, the distribution of recruits to the various services has been equalized and immediate and marked improvement in efficiency in this arm of the service has resulted.

The regular army, in attempting to carry out the National Defense Act with the reduced personnel now authorized, is overloaded and overworked. This, coupled with uncomfortable living conditions, results in an annual turnover of over 50 per cent. of the enlisted strength. This results not only in increased cost of maintenance, but in decreased efficiency. No organization is ever in a finished condition, but is always in the making.

NATIONAL GUARD PERSONNEL

The National Guard, as at present constituted, consists of twelve brigades of division artillery and fourteen regiments of corps artillery, with a total authorized strength of 2390 officers and 30,800 enlisted. Prior to the World War, the National Guard Field Artillery was organized into twelve brigades with a total strength of approximately 541 officers and 13,000 enlisted men.

Since the war, the growth of the National Guard has been rapid, and its improvement marked.

Appreciating the necessity for a state of efficiency in the Guard which would permit of its mobilization and concentration, reasonably prepared, for immediate service, every effort is made to provide that regular field artillery instructors with the Guard be graduates of the Field Artillery School. This in itself is not sufficient to assure the desideratum noted above. Of even greater importance is the essential that the commissioned personnel of the Guard, selected in time of peace, have the physical and mental qualifications which will permit of their functioning efficiently in time of war, and that they have the ability and sufficient time to qualifying themselves, during the period of peace, for the offices which they must fill in war. The great expansion of the Guard since the World War, necessitating a rapid induction into the service of a great many untried officers, and the fact that officers with war experience will be replaced constantly in the next few years by officers without war experience, makes this still more imperative.

OFFICERS' RESERVE CORPS PERSONNEL

The status of the Field Artillery Section of the Officers' Reserve Corps is as follows:

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LOSSES	
Died	22
Transferred	8
Discharged	161
Dropped	2
Resigned	37
Declined Reappointment	328
Total Losses	638
GAINS	
Regular Acceptances	1153
R.O.T.C. Acceptances	421
Transferred	74
Total Gains	1648
Surplus of Gain over Losses	1010

The total number of field artillery reserve officers as of June 30, 1924, was 7889.

The total number of field artillery reserve officers on June 30, 1925, was 8899.

The total number of reserve field artillery officers considered necessary in the event of a major emergency, is estimated at 20,000. Briefly, then, the Field Artillery is short, in the event of a major emergency, approximately 11,000 reserve officers.

The filling of these vacancies, in time of peace, would prove, in time of war, of material advantage to this service, provided the vacancies were filled by officers mentally and physically capable of functioning in time of war, and provided they had the capacity for command. To fill these vacancies with officers lacking in capacity for command, would prove a serious disadvantage in the event of a mobilization for war. Under such circumstances, there would be added to the labor involved in training our reserve officers, the even more difficult task of eliminating those unfit for command.

The following table shows the distribution of field artillery reserve officers:

	Colonels	Lieutenant Colonels	Majors	Captains	First Lieutenants	Second Lieutenants	Total
Assignment, (Jurisdiction Chief of Branch)	5	13	52	138	103	19	330
Assignment, (Jurisdiction Corps Area Commander)	105	151	492	1396	1815	4610	8569
Total.....	8899

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Every effort is made in selecting regular officers for duty with the National Guard and Organized Reserves to determine that those selected have the personality and adaptability essential for service with the civilian components of our army; sufficient training with regular units to constitute a suitable back-ground and be graduates, either of the Field Artillery School, or the Command and General Staff School, according to the nature of the positions to be filled.

The following table shows the distribution of regular field artillery officers on this duty, in the various corps areas, for the fiscal years 1924 and 1925:

	National Guard		Organized Reserves	
	1924	1925	1924	1925
Militia Bureau	3	3		
1st Corps Area	9	8	6	9
2nd Corps Area	6	10	7	9
3rd Corps Area	7	11	5	10
4th Corps Area	9	10	5	9
5th Corps Area	6	7	4	9
6th Corps Area	9	10	7	10
7th Corps Area	8	11	6	10
8th Corps Area	9	8	8	10
9th Corps Area	6	7	6	8
Totals	72	85	54	84

TRAINING REGULAR ARMY

Inspections conducted by the Chief of Field Artillery during the past fiscal year have shown that the regular field artillery units have made marked advances in efficiency. The outstanding reasons for this improved condition are,—this arm, for the first time since the summer of 1919, has been recruited up to its authorized peace strength, inadequate as this authorized strength may be; that quite a number of officers who have graduated from the Field Artillery School have been assigned to duty with organizations; and, that the major portion of Field Artillery Training Regulations have been completed and distributed to organizations and officers.

However, the standard desired is far from having been reached. There are several factors militating against reaching this standard, the two most outstanding of which are: lack of suitable living conditions at many stations, necessitating large fatigue details in maintaining

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rapidly deteriorating quarters and maintenance plants. This interferes with training, and is destructive of morale. The second factor is the overloading and overworking of the Regular Army while carrying out its part in the National Defense Plan, with wholly inadequate strength. To the best of my knowledge, the utmost that has been accomplished toward assisting and relieving the regular batteries, is to allow them to have their full strength for one month a year, unhampered by calls for men for this, that, and the other duty. Even this one month has been a great help toward efficiency.

A matter of much concern to the Chief of Field Artillery, previously referred to in the section of this report devoted to personnel matters, is the practice at certain stations and posts of assigning officers to special duties, not related to command, and keeping these officers on such duty during practically their entire stay at the station. These duties cover a wide range, such as—adjutant, supply officer, post exchange officer, provo, education and recreation officer, plans and training officer, athletic officer, librarian, in charge of enlisted men's club, broadcasting officer, etc., etc. This practice may operate temporarily for the benefit of the command as a whole, but it is unfair to the individual, and in years to come will be felt in decreased efficiency in our commissioned personnel.

The rotating of officers in the various duties appropriate to their grade, during the period of their assignment to regular troop duty, will, in the future, under the new policy of less frequent changes of station, be even more necessary than in the past. This fact should be impressed upon all commanding officers. Few, apparently, realize what a small portion of an officer's active career will be spent with regular organizations. The figures given on a preceding page of this report, are of interest in this regard.

Instruction given in the general and special service schools has assisted officers materially in the technic of drawing up training programs and schedules, but this ability is far from being an unmixed blessing. There is a veritable flood of these things in the army to-day, emanating from all sources. There are training regulations, training programs, training bulletins, training memoranda, training guides, training announcements, training schedules, and there may be others that do not occur to me at the present time—and at the same time, almost no men to train. And, in order "that coherence may prevail," authors of these documents are informed that "while shunning undue prolixity, lucidity is what is striven for, rather than pronounced brevity. Proper themes may be elaborated into any degree of detail deemed appropriate. Yet, tautological interpretation of what has clear definition in War

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Department sources must be avoided. The mode of expression to be cultivated is that of succinctness." A smile may be pardoned.

This mass of literature concentrates on the head of the hapless battery, troop, or company commander. Frequently, there is an overemphasis of the schedule itself—a tendency to regard the schedule itself as of importance, rather than as a means to an end. And, again, in this multiplicity of instructions, there must occur overlapping and conflict. For instance, a battalion of field artillery this year received uncoordinated training instructions from its regimental headquarters located at a post 1200 or 1500 miles away; from its brigade headquarters at still another post, even further away; from post headquarters; and at times direct from corps area headquarters at still another place.

This suggests another subject to which I especially invite attention. It does not concern the Field Artillery alone, but affects this branch in common with all others. I refer to the mad deluge of papers and paper work. If the matter were confined to the War Department and army activities in the city of Washington only, while it would still be useless and expensive, I would refrain from comment. But, it does not stop there—this is merely the point of origin of the evil. The concentration point is on the poor, helpless, organization commander. This man already has a difficult task, discouraging in the extreme, in attempting to make a well-trained, disciplined and effective unit, with an inadequate number of men, calls for excessive fatigue and continuous special duty, constant interruptions to pursuing any consistent and continuous program, uncomfortable living conditions, inadequate appropriations, and many other annoying conditions incident to present-day service with troops. When, in addition, he is harassed, as he is, by this senseless flow of paper work, leading nowhere, he must indeed be a wonderful man not to get discouraged. If the battery commander is earnestly and sincerely striving to bring his battery up to the standard it should reach as a regular army unit, he has not the time to even read all the literature dumped on him, much less to comply with all that is called for or suggested therein.

But it is easy to generalize on complaints, and lest this subject be so regarded and passed over without the consideration I believe it merits, I may enumerate the following specific and time-wasting procedures:

1. Courts-martial of enlisted men. Under the present Manual (the worst ever gotten out in my time), a general courts-martial case has to be investigated several times by several officers, and practically all the evidence written up twice (usually in long-hand) before the case ever comes to trial.

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A witness either gives, or has his testimony read to him, six times before the trial. At least three-quarters of this unnecessary work can be omitted with no injustice to the accused. The situation is so bad that not infrequently organization commanders will let a man go, though discipline requires the contrary action, rather than go through all the rigmarole prescribed.

2. Clothing allowances and settlements are too complicated for me to describe. I may merely say that the statement is frequently made that, due to complexity, changes, and conflicting decisions, it is not at all unusual for officers to disagree as to whether any specific account is or is not correctly settled.

3. When a soldier is discharged, seven papers are made out, one alone of which requires twelve signatures of the personnel adjutant.

4. Routine and special reports are frequent and voluminous.

5. An enlisted man's service record consists of seven or eight different files, some of which overlap—and even so the record is not complete.

6. Due to the fact that no property can be dropped on certificate, there is a steady, uninterrupted stream of surveys, requiring time to make out.

The above are merely samples of a paper work system that is submerging the army, at the expense of real training.

Of importance, in the training of officers assigned to duty with troops, is the need for developing initiative and self-reliance in junior officers. The importance of this element of training is not now recognized. It is a primary responsibility of senior officers, and should be fully appreciated if the best results are to be obtained. It cannot be emphasized too strongly that the development of initiative and self-reliance in the personnel of a command, is of far greater importance and more enduring value to the service than uniform perfection of training of the unit during any one year. It has been observed that failure to develop initiative results primarily from two causes: first, the unfortunate tendency of certain senior officers to concern themselves with details of training appropriate to juniors, and—second, the tendency of a few higher commanders to issue their plans for training in such detail that no initiative is left to the junior unit commanders.

As previously mentioned, no one thing, since the summer of 1919, has done more to advance the standard of efficiency of the

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Field Artillery than the filling of the commands to their authorized peace strength. At the same time, it should be recognized that the authorized peace strength for field artillery units is but 88 per cent. of the minimum necessary to permit these units to function efficiently, and any loss in strength means generally a readjustment of the commands with the breaking up of the skeleton war organization. Demands from division and brigade headquarters for fatigue details, or for personnel to organize improvised units, are frequently the cause of further reduced strength. When this occurs the particular division or brigade concerned should assume full responsibility for the condition of training of the subordinate unit. That is, the programme of training of the division or brigade concerned, should recognize the reduced strength condition of the subordinate unit by naming a training objective commensurate with the reduced strength and, at the same time, assume appropriate responsibility for the condition of the matériel. While recognizing that in certain of our larger posts, training is seriously hampered by constant calls for fatigue details, the fact must not be lost sight of that a tremendous amount of fatigue work is necessary and will increase with time wherever units are quartered in war cantonment buildings.

Post commanders, in calling for fatigue details, should give serious consideration to the availability of the troops in the command for such work. This is not generally done, and an injustice to the field artillery results. Mounted organizations must, in addition to whatever other work may be necessary, take care of their mounts. Field artillery, in addition, has an immense amount of matériel to care for. Hence, these units cannot, and should not, be considered in proportion to their full strength, as available for fatigue and special details as dismounted and motorized units. A fatigue roster which calls for details from the units of a command in proportion to the strength of the units and without regard to the service to which the units belong, is not equitable in distributing the fatigue of the command. It is particularly insidious toward the field artillery.

This report has touched briefly on the importance of maintaining the strength of field artillery units if the desired results in training are to be expected. In this connection, it is pertinent to draw attention to the fact that the strength of the commissioned personnel serving with troops should be conserved at the same time. The practice, which has grown up at certain corps areas, of distributing correspondence course papers to certain regular units and R.O.T.C. units to be marked, is but an instance of the wasting of the efficiency of regular units. This and similar practices should not be permitted.

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THE KNOX TROPHY

Ever since the War, the Chief of Field Artillery has realized the necessity for a standard toward which batteries should strive, and with which they could compare themselves. He assumes that every captain takes pride in his organization, wants to make it the best in the service, and frequently thinks he has achieved this goal. But, the captain is mistaken—and this honest mistake is generally due to the fact that he has no absolute standard which to compare his battery.

Accordingly, for several years the Chief of Field Artillery has been preparing what might be called "standard specifications." His main difficulty in this work has been in devising some method by which these "specifications," constituting a standard battery, could be promulgated to the service in such a manner as to make them interesting, and create a special incentive on the part of all battery commanders to bring their units up to the standard set. The Chief of Field Artillery finally decided to utilize the Knox Trophy award to accomplish the desired object.

The Knox Trophy is donated by the Sons of the Revolution of the Commonwealth of Massachusetts. Up until last year the Trophy has been awarded to that battery of regular field artillery excelling in firing efficiency. The Chief of Field Artillery became convinced that, under present conditions, the basis of award was too narrow in its scope, and unfair in its application, since necessarily the award would go to one of the Field Artillery School batteries, firing practically every day the year round. He, therefore, requested the donors to change the terms of the award so as to make it applicable to the best all around battery. This they kindly consented to do; leaving the terms of the competition to be drawn up by the Chief of Field Artillery. He changed them so that the award is now made on excellence in firing efficiency, mobility, communications and interior economy.

The past year was the first in which this competition was general throughout the Field Artillery. The requirements as prescribed by the Chief of Field Artillery, accomplish three purposes: First, the placing in the hands of all inspectors, specifications as to what constitutes a standard battery, with which they can compare the particular one being inspected. Second, the placing in the hands of all battery commanders a standard to which they may strive to bring their batteries. Third, to enable every battery commander to determine, by examining the ratings of his unit, just where his weakest spots are, so that he may correct them.

Incidentally, the use of the standard should tend to eliminate

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hobbies of inspectors, and secure concentration on real field artillery efficiency factors.

It was a matter of great disappointment to the Chief of Field Artillery that several stations, where field artillery units are stationed, failed to enter batteries in the competition last year. Cogent reasons for such failure existed in instances. In other instances the neglect was inexplicable and indicated a lack of proper *esprit* on the part of the senior field artillery officers concerned.

The competition was won by Battery "D," 7th Field Artillery, stationed at Madison Barracks, New York, commanded by Captain James A. Crane, Field Artillery.

The rules governing the test for the calendar year, 1925, were mailed in the early part of the year. The requirements follow, in general, those of last year, the major changes which were made being largely the result of suggestions received from the service upon the completion of the last test. This competition is now regarded by the Chief of Field Artillery as the most important annual event in the Field Artillery. He also takes satisfaction in the fact that, up to the present time, no other arm has yet put into effect such a comprehensive and practical plan for determining the real efficiency of its units.

NATIONAL GUARD TRAINING

Uniform progress has been made in the development and training of the Field Artillery National Guard during the past year.

No one thing tends to handicap the Guard more seriously than the constant and rapid turnover of its enlisted personnel. Admittedly, the amount of training which an enlisted man in the Guard gets during the armory season, is limited. Much of his training is likely to be as an individual in contradistinction to training in a unit. This is especially apt to be true in view of the pay allowance for drill being authorized for individual attendance as well as for unit attendance. It should be recognized, then, that the combined unit training of a national guard command is best secured at a summer training camp, and it should be appreciated how important it is that the personnel attending these camps be previously perfected in the individual drill in order that the short time spent in camp be not wasted in giving recruit instruction, that is individual instruction. Unfortunately, a great portion of the personnel taken to camp is practically untrained, which necessitates the spending of a considerable portion of the camp instruction period in recruit drill. This delays or eliminates entirely the combined unit training, with the result that the unit does not progress in efficiency from year to year as might and should be expected. In order that the full benefit of summer training might be obtained by units of the guard,

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it would seem advisable to make payments for attendance at drills during the armory year, contingent on the requirement that 75 per cent., or more, of the enlisted personnel of the National Guard attending camps, attended 75 per cent. or more of the drills during the armory year next preceding the camp in question.

The commissioned personnel of the Guard has at best but a comparatively limited opportunity for instruction and training. In the larger centres there is to be found, generally, an inspector-instructor who can and does assist materially in the training of the commissioned personnel of the Guard. Theoretically, this inspector-instructor is supposed to visit nearby units of the Guard, and assist such units in their training. Practically, this is not done, by reason of the shortage of mileage funds. As this condition will probably continue to exist for some time to come, it is recommended that the number of students for the National Guard Commissioned Classes at the Field Artillery School be increased, and that special care be exercised in the selection of students to obtain, if possible, such as will make good instructors for the localities remote from the stations of the regular army inspector-instructors.

A proper system of rating of national guard units at inspections is desirable for use in the event of an emergency. Those heretofore in use have proven valueless, for the reason that they amounted to little more than individual opinions, which opinions, of course, varied with the individual who formed them. The type and class of commissioned officers and their fitness for field service; the class of enlisted personnel; the condition of training of the unit and the time necessary after mobilization to complete its training; and the time required to enlist a unit locally to its authorized strength, would constitute important data if the rating were entirely impersonal and uniform for the entire Guard.

OFFICERS' RESERVE CORPS TRAINING

Every effort is being made by the War Department to improve the strength, morale and efficiency of this component of the army.

For Field Artillery Reserve Officers, it is felt that the desired ends can be accomplished best by devoting the summer training for field artillery officers, to practical field artillery instruction, including service practice.

Training during the winter should be of a nature to best prepare officers for their practical summer training. In urging practical training for these officers, the value of terrain exercises and tactical walks is not lost sight of, nor is the value of the correspondence courses undervalued. The correspondence courses are of recognized value to reserve officers and all reserve officers should be encouraged and urged to take them; however, practical training and preparation

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for practical summer training is of far more importance to field artillery officers.

Greater uniformity in the training of reserve officers, than now prevails, is highly desirable. As training is conducted at the present time, it would be impossible in the event of an emergency to estimate the relative abilities of the many reserve officers who would be called to the colors, or what training they may have received. It would seem to be important that officers belonging to a unit should report to camp as a unit, and the estimates of the officers' abilities should be determined during these camps, and made a matter of record. Reports on correspondence courses completed, camps attended, and practical training received, together with estimates from instructors during summer training camps, would afford sufficient information for the proper placing of an officer in the event of an emergency. Lacking this information, time will be lost in endeavoring to weed out the inefficient. The reserve corps constitutes a powerful element in the defense scheme of this country, and every effort should be made to so shape it that it may be used promptly and efficiently in the event of an emergency.

The Chief of Field Artillery during the past fiscal year established a policy relative to the rotating of the camps for the training of the Field Artillery Branch Assignment Group Officers, to provide, with the funds available, that a greater number of these reserve officers would be enabled to receive summer training. Under this policy training camps will be held along the Atlantic seaboard one year, in the Mississippi valley region the second year, and along the Pacific coast the third year. This rotating of the camps obviates long hauls for officers attending, as only those officers living in the general vicinity of the camp being held are authorized to attend. The saving in mileage permits of a larger attendance and the saving in time, heretofore taken up in travel, permits of a more thorough course of instruction. The camps held during the fiscal year 1925, at Camp Meade, were eminently successful; the attendance being the maximum for which funds were provided. The camp this year (fiscal year 1926) is being held at Fort Sill, Oklahoma, the number authorized to attend being the maximum which can be sent under the funds appropriated. It is contemplated that the camp for the fiscal year 1927 will be held at Camp Lewis, Washington, or the Presidio of Monterey, California.

RESERVE OFFICERS' TRAINING CORPS

The twenty Field Artillery Reserve Officers' Training Corps units were visited, during the past year, by the Chief of Field Artillery or one of his representatives.

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Generally speaking, these units were found to be in excellent condition, and as a direct result of the loyal support of the students and faculties, all units, with the exception of one or two, are growing steadily.

The field artillery enrollments at the beginning of the School Years 1923 and 1924, were as follows:

	1923	1924	Gain
1st Year Basic	4,155	5,673	1,518
2nd Year Basic	2,540	3,074	534
1st Year Advance	872	930	58
2nd Year Advance	476	685	209
Totals	8,043	10,362	2,319

Inspections made this year substantiate the views of the Chief of Field Artillery, expressed in previous years, that a fixed, uniform course of instruction for all of our units is impracticable. The problems confronting the various units are separate and distinct and must be solved on the ground by the various Professors of Military Science and Tactics, and their assistants, by adapting the courses to meet the conditions as found.

While recognizing the undesirability of a fixed course to be followed by all units, the Chief of Field Artillery appreciates that there exists at the present time a lack of coördination, particularly as regards the definition of objectives, which condition it is hoped to correct, at an early date, by the issuing of an improved training directive.

It is recognized that the popularity of our courses in the future, as in the past, will depend on good instruction.

Experience has shown that the respect of a student body and sympathetic approval and support of a faculty are to be gained only when the credits given for courses are in every respect earned credits. The application of the terms "easy credits" or "snap course" to a field artillery course would be as significant of poor instruction as the rating of the majority of an earnest and industrious class as deficient.

The following table shows the yearly credits, in terms of percentage credits, required for graduation, by each of the twenty field artillery units:

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Institution	1st Year Basic %	2nd Year Basic %	1st Year Advance %	2nd Year Advance %	Total %
* Harvard.....	6.25	6.25	6.25	6.25	25.0
* Yale	1.66	5.0	6.66	6.66	20.0
* Princeton	5.56	5.56	5.56	5.56	22.2
Cornell.....	0	0	3.2	3.2	6.4
V. M. I.....	1.9	1.9	1.9	2.6	8.5
Alabama	2.5	2.5	4.17	4.17	13.3
Culver.....	0	0	0	6.25	6.25
Ohio State.....	1.57	1.57	4.73	4.73	12.6
Purdue	2.08	2.08	4.58	4.58	13.3
* Chicago	2.8	5.55	7.4	7.4	23.2
Illinois	1.54	1.54	2.3	2.3	7.7
Wisconsin.....	1.95	1.95	4.66	4.66	13.2
Iowa State.....	1.5	1.5	4.5	4.5	12.0
Missouri.....	3.07	3.07	3.07	3.07	12.3
Colorado.....	3.75	3.75	6.25	6.25	20.0
Texas A. & M.....	2.34	2.34	4.68	4.68	14.0
Oklahoma.....	1.56	1.56	4.68	4.68	12.5
Oregon.....	2.9	2.9	4.34	4.34	14.5
* Stanford.....	1.1	3.3	6.6	6.6	17.7
* Utah.....	3.0	3.0	4.5	4.5	15.0
Average					
(Compulsory).....	1.9	1.9	3.8	4.3	11.9
(Elective).....	3.4	4.8	6.2	6.2	20.6

An analysis of college requirements for graduation would indicate that the field artillery courses should normally be allowed the following credits:

	1st Yr. Basic %	2nd Yr. Basic %	1st Yr. Advance %	2nd Yr. Advance %	Total %
Compulsory.....	0 to 3.3	0 to 3.3	6.6	6.6	13.3 to 20
Elective.....	3.3	3.3	6.6	6.6	20

This suggested credit value assumes that time is so arranged that the Basic Course includes two attendances per week, one of

* Military Instruction elective. At Stanford a fixed number of hours of physical or military is required during the first two years.

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which is for a one-hour period requiring outside preparation, and one a two-hour period requiring no outside preparation. It also assumes that the Advance Course includes four attendances per week, three of which are for one-hour periods requiring outside preparation, and the other a two-hour period requiring no outside preparation. Such a time schedule would seem to be the most practicable for, and adaptable to, the greatest number of units. The two-hour period each week would be for drills, or lectures, or such practical work as gunners' instruction. In the suggested value table the two-hour period is given the same credit as is ordinarily allowed "laboratory."

Complaint is general that the enlisted detachments allotted to the various R.O.T.C. units are too small to do the work expected of them. Experience has shown that the field artillery units should have the following enlisted strength for efficient service:

- Five, Grade 4 or higher
- Seven, Grade 6
- One, Grade 7, for every four horses.

The maintenance of these units at full strength with enlisted personnel of the highest type is considered of the first importance. Accordingly, it should be recognized that any effort to effect an economy in government expenditures by depriving this personnel of commutation privileges must of necessity react to defeat these ends. It is felt that the saving to the government is in no sense commensurate with the resulting loss of efficiency to these units.

With the decreased appropriations year by year, it is getting more and more difficult to maintain the different activities prescribed by the National Defense Act. Among these there is absolutely no more important activity than the R.O.T.C. In any war, officers are needed by the thousands. These should come from the Reserve Corps—they get into the Reserve Corps principally through the R.O.T.C. Its importance is therefore apparent and I urgently recommend adequate appropriations for its adequate maintenance.

The Chief of Field Artillery has recommended previously, and now takes occasion to repeat his recommendation, that the R.O.T.C. units be placed directly under the War Department. The following reasons are advanced in support of this recommendation:

- a.* The R.O.T.C. units do not continue to function in time of war. The placing of these units under corps area commanders in time of peace therefore serves no purpose looking to their war-time development. On the other hand, the regular personnel serving at these R.O.T.C. units, in the event of an emergency, will be assigned by the War Department, as will the matériel. Probably both will be used for instructional

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purposes under the various chiefs of services. In brief, an emergency calls for War Department control direct.

b. R.O.T.C. units do not serve exclusively the corps area in which they are located. In other words, the field artillery has twenty units, three of which are in the Fifth Corps, one in the Third Corps, etc., etc. The distribution is not uniform in the various corps areas nor would it be practicable to make it so. Accordingly, the matriculation of students in the various service courses should be a War Department function. The War Department alone knows the proportionate strength of the various reserve corps units in the United States, and their needs for reserve officers. The present distribution of R.O.T.C. units is such that it would be impossible for a corps area commander to control the allotment of students to the various service R.O.T.C. units, in his corps area, to meet the needs of the army as a whole. The War Department alone can make an equitable assignment of students, and should act accordingly. Where charged with making allotments of students, corps area commanders have naturally considered their own corps area needs with most unsatisfactory results to the army as a whole.

c. Inspections of these activities are now held by the War Department, and duplicated by the corps areas to no material purpose.

d. Such uniformity as exists in the courses of the various units is a result of War Department control, rather than of corps area control. That there should be further coördination of courses and further coördination of the number of graduates representing the various services, there is no question of doubt. In brief, efficiency and economy both call for a centralized control resting in the War Department.

(Continued in Next Issue)

REGIMENTAL NOTES

ELEVENTH FIELD ARTILLERY

SCHOFIELD BARRACKS, HAWAII

Colonel Otho W. B. Farr, *Commanding*

Roster of Officers

Lieutenant-Colonel James P. Barney
Major Harold E. Miner
Major Edward C. Hanford
Major Francis T. Colby

CAPTAINS

H. Crampton Jones
Stacy Knopf
Sidney F. Dunn
John M. Fray
William A. Campbell
William E. Lewis
Theodore E. T. Haley
Guy O. Kurtz
Malcolm R. Cox
John A. Chase
Keith K. Jones
Frank G. Rogers
Charles M. Thirkeld
Meville S. Creusere
Charles C. Knight, Jr.

FIRST LIEUTENANTS

Emil F. Kollmer
Leonard S. Arnold
Clyde M. Hallam
Franklin H. Canlett
Charles F. Fletter
Boyce M. James
Charles W. Hensey
Robert G. Gard
Anthony C. McAuliffe

Charles N. McFarland
Charles A. Pyle
Foster J. Tate
Clarence J. Kanaga
Thomas McGregor
Murice K. Kurtz
Urban Niblo
John M. Works
Richard C. Partridge
Auguste R. Taylor
George DeGraaf
William W. Ford
William S. Wood
John G. Howard
Francis H. Lanahan, Jr.
Richard C. Singer
Richard M. Costigan
Wilbur S. Nye
Charles H. Swartz

SECOND LIEUTENANTS

Earl A. Hutchings
Selby F. Little
Fay W. Lee
Robert D. Waring
Russell G. Duff
Walter J. Klepinger
Rex E. Chandler
Paul R. Covey
Sheffield Edwards
George W. Hartnell

TWELFTH FIELD ARTILLERY

FORT SAM HOUSTON, TEXAS

Colonel Oliver L. Spaulding, Jr., *Commanding*

Roster of Officers

Major William H. Henry
Major Francis A. Doniat
Frank H. Ross

CAPTAINS

Orva E. Beezley
Albion Smith
Joseph Kennedy

Robert Van K. Harris
Josiah A. Wallace
George R. Hayman
William H. Quarterman, Jr.
Audley M. Post
Lewis F. Kosch
Philip T. Quinn
Stanley Richardson

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Roster of Officers—Continued.

FIRST LIEUTENANTS

Lawrence B. Bixby
James V. Carroll
Burdette M. Fitch
John J. Burns
Godfrey D. Adamson

SECOND LIEUTENANTS

Thomas E. Lewis
Walter H. DeLange
Dan Chandler
John J. Binns
Emory C. Cushing
Peter O. Sather
George D. Crosby
Thomas E. Binford

Eugene B. Ely
William J. Eyerly
John G. Moore
Joseph R. Burrill
Nathaniel C. Cureton, Jr.
William J. Cleary
Louis G. Friedersdorff
John P. Maher
Robert C. Cameron
Kenneth M. Decker
Joseph Massaro
Malin Craig, Jr.
John T. Bird
Charles F. Cabell
William L. Ritchie

The training undergone by the Twelfth Field Artillery during the year 1925, has been extremely varied and interesting. A large draft of recruits received from the Second Corps Area brought the regiment up to full strength to begin the year. Garrison duty during January and February consisted of intensive instruction to train the new personnel in draft and service of the piece for the annual manœuvres at Camp Stanley. Just how well this training was accomplished is reflected in the report of the tactical inspection of the regiment made by Brigadier-General Paul B. Malone, in which he rated the regiment as well prepared for active field service. The period of March and April was spent at Camp Stanley and devoted to technical and tactical firing. At this time the regiment was under the command of Lieutenant-Colonel Clifton R. Norton, with the battalions commanded by Major F. A. Doniat and Captain J. Kennedy. The outstanding feature of the training on the range was the eight-day regimental problem, in which was incorporated all possible conditions of war-fare, involving meeting engagements, advance against prepared positions, retreat, withdrawal from action, and accompanying gun and battery problems. Two night situations were included in the manœuvres. This manœuvre was followed by the annual brigade problem.

On May fourth the regiment accompanied the Second Division on its famous march and manœuvre to Fredericksburg, Texas, covering a distance of 170 miles. During this very successful jaunt the Twelfth evacuated only two men and three animals. The conduct of the march was excellent and proved to be an invaluable experience for all ranks. The difficulties of marching with large bodies of troops was forcibly brought to the attention of all arms and the team work of the brigades was of the highest order.

REGIMENTAL NOTES

Upon the return of the regiment from the division march, work was begun on the summer training camp work, with its immense overhead and special duty. Battery B, under the command of Captain R. V. K. Harris, was detailed as the artillery training unit for the summer camp. During the course of the summer this battery made three trips to Camp Stanley, firing with the C.M.T.C. and R.O.T.C. The work performed by the battery while on this duty was highly commended by the camp commander, Colonel John L. DeWitt, 1st Infantry. The regimental band spent the summer furnishing the music for the summer training camp at Fort Logan, Colorado. Battery C, under the command of Second Lieutenant J. R. Burrill, was attached to the Fifteenth Field Artillery for work with the 61st F. A. Brigade, Texas National Guard.

On June sixteenth Lieutenant-Colonel Norton was ordered to duty with the Organized Reserves. Colonel Norton's departure was regretted by every officer and man in the regiment. During the period of his command, the regiment had become what to the Navy is known as a "happy ship." Major F. A. Doniat and Major George W. DeArmond commanded, in turn, until arrival of the present commander, Colonel Oliver L. Spaulding, Jr.

Battery B was selected as the brigade representative for the Knox Trophy Contest. Battery F, under the command of Captain J. Kennedy, presented the artillery exhibition drill during the Wild West Rodeo conducted by the Second Division, and proved to be the chief attraction of the show.

The regiment recently was awarded the two large cups presented annually by the brigade commander for excellence in gunner qualification and pistol qualification in the brigade. At the same time the trophy for the best chief of section in the brigade was presented to Sergeant George T. Lemons, Battery E. The presentations were made by the brigade commander, General Paul B. Malone, after which Colonel Spaulding and Sergeant Lemons assisted the brigade commander in taking the review of the brigade.

The regiment has been particularly active in athletics and sports. The baseball team finished second in the division league, after a hard fought season. The football team, although not of championship calibre, was the best that has represented the regiment in many a year. In polo, although poorly mounted, the regimental team is carrying on, and is preparing for the annual winter tournaments.

A series of smokers has been arranged for the winter months, at which selected battles and campaigns will be discussed. The purpose is to establish a basis for the study of military history and military literature in general, by bringing out the continuity of development of the science and art of war. In this manner the collateral reading prescribed for all officers of the division, will be

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varied and cover a larger field than would be possible for one officer studying alone.

Master Sergeant Robert R. Campbell, Headquarters and Headquarters Battery, retired after thirty years' service on August 12, 1925.

THIRTEENTH FIELD ARTILLERY SCHOFIELD BARRACKS, HAWAII

Colonel Andrew Moses, *Commanding*

Roster of Officers

Lieutenant-Colonel William S. Wood
Major Ralph Hospital
Major Harleigh Parkhurst

CAPTAINS

Wesley J. White
David S. Doggett
Arthur O. Walsh
Charles R. Doran
Joseph S. Robinson
Everett Busch
Robert H. Crosby
James M. DeWeese
Elmer R. Block
Albert C. Gale
Leon E. Savage
Henry E. Tisdale
Irvin B. Warner

FIRST LIEUTENANTS

Henry L. Kersh
Albert J. Hastings
William R. Schaefer
Emmett A. Niblack
Lawrence E. Heyduck
Raynor Garey
Albert Brill
Shirley R. Hurt

Alexander S. Bennet
Edwin V. Kerr
Edward L. Strohhenn
Marion P. Echols
Henry E. Sanderson, Jr.
Frederick B. Porter
Frank A. Henning, Jr.
James M. Lewis
James A. Samouce
Russell O. Smith
Homer W. Kiefer
Maurice W. Daniel
Park B. Herrick

SECOND LIEUTENANTS

Harold A. Doherty
Edward T. Williams
Leon V. Chaplin
Karl W. Hisgen
Allan E. Smith
Creswell G. Blakeney
William E. Waters
William L. Carr
Clayton H. Studebaker
George E. Burritt
Robert L. Taylor
William R. Grove, Jr.

FOURTEENTH FIELD ARTILLERY

FORT SHERIDAN, ILLINOIS

Major Casey H. Hayes, *Commanding*

Roster of Officers

CAPTAINS

Orville M. Moore
George R. Middleton
Arthur B. Wade
Peter P. Rodes

FIRST LIEUTENANTS

William J. Epes
Ernest C. Norman
Richard H. Slider

John H. Lewis
Donald F. Carroll
Herbert E. Baker
James E. Bush
Robert M. Montague

SECOND LIEUTENANTS

Stephen Y. McGiffert
Willard F. Millice
Richard S. Marr

REGIMENTAL NOTES

Since the publication of our "Regimental Notes" in the FIELD ARTILLERY JOURNAL of the January-February, 1925, issue, many changes in personnel and interesting events in the life of the battalion have occurred.

Foremost in the changes of the officer personnel was that in commanding officers. Major Robert F. Hyatt, F.A. (DOL), who joined and assumed command of the battalion on January 10, 1924, having been ordered to attend the Command and General Staff School, Fort Leavenworth, Kansas, 1925-26 course, was relieved from command of the battalion on August 12, 1925, by Major Casey Hayes, 14th F.A., who came to the battalion from the Command and General Staff School. Major Hyatt left us with our best wishes that he have a most successful year at school.

Other changes in officer personnel were Second Lieutenant Lauren B. Hitchcock, who was detailed to pursue a course of instruction at Massachusetts Institute of Technology, Boston, Massachusetts; Second Lieutenant Clayton H. Studebaker, who was ordered to Hawaii in April, 1925; Second Lieutenant Everett L. Young, who resigned; First Lieutenant Robert M. Montague, F.A., has been assigned to the battalion from Hawaii and will join on January 11, 1926.

For the summer training period, 1925, the organizations of the battalion were separated. The battalion (less Battery B) went to Camp Sparta. Battery C joined there from Jefferson Barracks, Missouri. Battery B went to Camp Custer, Michigan, where it successfully trained 185 C.M.T.C. students who were superimposed upon it.

The organizations of the battalion at Camp Sparta, together with the First Battalion, Ninth Field Artillery from Fort Des Moines, put over a successful training period there. In addition to our own training, we furnished personnel, matériel and animals for the Field Artillery R.O.T.C. of the Sixth Corps Area during their encampment. The battalion also assisted in the training of the following field artillery regiments of the Reserve Corps: 329th, 332nd, 377th, 403rd, 486th and the 531st Coast Artillery. Considering the fact that it was the first camp held at Sparta since the War, the results obtained were considered excellent. With an excellent range on which there is a good trout stream, and surrounded by most hospitable civilians and with a good golf course available, we forgot all about the sand of Camp Sparta and are looking forward to our work there again next summer.

All organizations participated in the Fort Sheridan Annual Fall Horse Show. Battery A won the "Best Turned Out Artillery Gun Section Class," which was open to all artillery organizations in this

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section of the country. In all the other events our battalion secured more than our share of places.

We are now in the midst of our gunner's examination. We have qualified the following: experts, 22; first class, 16; second class, 16.

Our enlisted strength today is 338 men, which is 45 under our authorized strength. When we complete our gunner's examination, we are going to begin a recruiting drive which we expect will fill us up before the first of the year.

We had hoped that the winner of the Knox Trophy Test for this year would be announced in sufficient time to enable us to eulogize Battery B in these notes.

FIFTEENTH FIELD ARTILLERY

FORT SAM HOUSTON, TEXAS

Colonel Harry G. Bishop, *Commanding*

Roster of Officers

Lieutenant-Colonel Robert Davis

Major Louis R. Dougherty

Major Alexander C. Sullivan

Major Clifford B. King

CAPTAINS

Arthur S. Harrington

Samuel D. Bedinger

Edwin A. Henn

John G. White

George E. Cook

William J. Egan

Warren H. McNaught

Edmund H. Brown

FIRST LIEUTENANTS

Charles H. Brammell

Michael C. Shea

John Hinton

Tyree R. Horn

Eugene McGinley

SECOND LIEUTENANTS

Robert F. Hallock

Joseph A. Cella

Francis A. Garrecht, Jr.

Frank Dorn

David S. Babcock

Ernest O. Lee

Francis M. Day

Charles D. Daniel

James G. Anding

Howard E. Kessinger

Walton G. Proctor

Thomas G. McCulloch

Daniel F. Healy, Jr.

Frank S. Kirkpatrick

William H. Bertsch, Jr.

William L. Coughlin

George E. Wrockloff, Jr.

Thomas A. Jennings

James B. Kraft

Frank F. Carpenter, Jr.

Thomas A. Doxey, Jr.

Wilmer G. Bennett

John M. Willems

In completing the year 1925, the members of the Fifteenth Field Artillery look back with a feeling of satisfaction on a period of accomplishment.

Colonel Clarence R. Day was transferred to the D.O.L. for duty with the Organized Reserves of the Eighth Corps Area on April sixteenth and Colonel Harry G. Bishop was assigned and assumed command on that date. Lieutenant-Colonel Laurin L.

REGIMENTAL NOTES

Lawson has left the regiment to attend the Field Artillery School and Lieutenant-Colonel Robert Davis is now executive officer.

The regiment spent the month of March and half of April on the artillery range at Camp Stanley, Texas, firing technical and tactical firing. Returning to Fort Sam Houston on April fifteenth, the period until May fourth was used in preparing for, and participating in, the annual inspection by the corps area commander.

On May fourth, the regiment (less Battery F), left Fort Sam Houston with the Second Division for a practice march to Fredericksburg, Texas, and return, completing the 166 miles on May sixteenth.

Battery F departed from Fort Sam Houston on May fifth, marching to Fort Sill, Oklahoma, where it participated in the summer training camps at that station as demonstration troops, and returned October second in excellent condition, notwithstanding the 979 miles of difficult marching. The remainder of the regiment used the summer for individual training, except the period August fifth to August twenty-second, when it was at Camp Stanley as demonstration troops for the 61st Field Artillery Brigade, Texas National Guard.

The individual training resulted in the qualification of 383 men with the pistol and 430 as gunners, also the winning of the Second Division Horse Show. Battery F (Captain William J. Egan) qualified the largest percentage of pistol shots, 87 per cent., and Battery C (Captain George E. Cook) obtained the largest number of gunners, 82 per cent., while Battery D (Captain Edwin A. Henn) won the most points in the horse show.

Battery F represented the regiment in the competition held by the brigade commander to select the best battery in the Second Field Artillery Brigade for the year 1924, and was awarded the cup by Brigadier-General Paul B. Malone.

The athletic teams have been successful. The baseball team won the post championship and formed the nucleus for the post team. The football team was fourth in the post league, winning its objective game with the Twelfth Field Artillery and supplying four members for the division team. Basket ball is just getting under way and prospects for a winning team are excellent with a turnout of twenty-five men.

The regimental polo team is at present entered in both the low goal and high goal tournaments being held in San Antonio. The team, however, does not represent the polo ability of the regiment, as three members of the regiment, Major C. B. King, First Lieutenant Eugene G. McGinley, and Second Lieutenant Francis A. Garrecht, are members of the post team. First Lieutenants John A. Smith and Eugene G. McGinley were members of the U. S. Army

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Team, which successfully competed with the British Army Team in England the past summer.

No members of the regiment have been retired during the year, but five of the senior non-commissioned officers will complete thirty years of active service in 1926. The 15th Field Artillery Band, conducted by Warrant Officer Carl Mueller, has, during the past year, furnished some of the most popular radio concerts from Station WOAI.

SIXTEENTH FIELD ARTILLERY

FORT MYER, VIRGINIA

Major R. E. D. Hoyle, *Commanding*

Roster of Officers

CAPTAINS

J. S. Tate
Steele Wotkyns
Edward R. Roberts
James L. McIlhenny
John Nash

Louis B. Ely
Walter T. O'Reilly

SECOND LIEUTENANTS

Douglas V. Johnson
Lester J. Tacy
Charles D. Palmer
Samuel V. Krauthoff
Harry Van Wyk
William H. Barksdale, Jr.
George D. Pence

FIRST LIEUTENANTS

Robert W. Hasbrouck
Frederick D. Sharp
Guy C. Benson

The Sixteenth Field Artillery is stationed at Fort Myer, Virginia, and normally engages in the duties incident to that station.

There have been many officer changes during the past year, which are as follows: First Lieutenant Guy C. Benson, joined from the 2nd Division; Captain John Nash, from the 83rd Field Artillery, Fort Benning, Georgia; First Lieutenant Frederick D. Sharp, from the Field Artillery School; First Lieutenants I. S. Kitts, Robert B. Hood, Stuart M. Bevans and Captain W. H. E. Holmes, were ordered to the Field Artillery School; First Lieutenant Edward M. Taylor, to the First Field Artillery, Fort Sill; and First Lieutenant Joseph H. Landrum, resigned. Master Sergeant Walter Lawson was retired on March 5, 1925, as was Master Sergeant Paul E. McClintock, on July 25, 1925.

The regiment was ordered to Camp Meade, August fifteenth, for annual service practice and to assist in the field firing of the Tenth Regiment of Field Artillery, U. S. Marine Corps. The Tenth Regiment was at Camp Meade for about two weeks and the Sixteenth enjoyed for the first time, close personal and official relation with the Marine Corps.

During the month at Camp Meade the Knox Trophy competition was held. Battery C, 16th Field Artillery, Captain J. S. Tate, commanding, was picked as the competing organization.

Polo in the regiment has flourished under the direction of

REGIMENTAL NOTES

Major R. E. D. Hoyle, and the following tournaments were played in:

1. Richmond Polo Tournament, Richmond, Virginia, April 1925. Teams entered: War Department Blues, Charlotte Country Club, Fauquier County Country Club, V.M.I., 111th F.A., Fort Bragg, V.M.I. Club of Richmond, and the Sixteenth Field Artillery. Won by the Sixteenth Field Artillery.
2. Morrel Fund Cup Tournament, Philadelphia, Pennsylvania, June, 1925. Teams entered: Philadelphia Country Club, Rumson, War Department Blues, Bryn Mawr, Bryn Mawr Ramblers, and the Sixteenth Field Artillery. Won by the Sixteenth Field Artillery.
3. Southeastern Circuit 12 Goal Tournament, Philadelphia, Pennsylvania, June, 1925. Teams entered: Philadelphia Country Club, Rumson, War Department Blues, Bryn Mawr, Bryn Mawr Ramblers, and Sixteenth Field Artillery. Won by Bryn Mawr from the Sixteenth Field Artillery (extra period game 9-8) in the finals.
4. Teams were entered in the low and high goal Fall Tournament, Washington, D. C., winning neither tournament. The Sixteenth Field Artillery team carried the highest handicap in this tournament.

The first regimental day since the reconstitution of the regiment was held on August 6, 1925. The regiment was paraded and a regimental salute fired, after which the regimental history was read and a short talk given by the commanding officer. Following this formation a field day was held with sack races, tugs of war, three-legged races, etc. A special holiday menu was prepared and at mess the battery commanders gave a short talk on the individual battery history. In the afternoon a baseball game between the Sixteenth Field Artillery and Third Cavalry was played and in the evening, a hop with light refreshments was given for the enlisted men of the regiment.

On October twenty-fourth the stables of Battery A were completely destroyed by fire, fortunately without the loss of a single animal. The saving of the animals was due to the excellent efforts of First Sergeant Jess W. Snyder, Battery A (Second Lieutenant F.A., O.R.C.), Stable Sergeant Louis Levesque, and Stable Sergeant Carl Morgan, Battery B. All of the harness and equipment, less wheeled matériel of the battery, was completely destroyed. The fire was caused by defective electric wiring.

On October thirtieth a preliminary competition between Battery A and Battery C was held in the riding hall for the purpose of selecting a gun team to compete from the regiment at the National

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Horse Show in New York City. The new show team of Battery C (gray) was selected. The judges were, Lieutenant-Colonel D. W. Hand, Office of the Chief of Field Artillery, Major Robert M. Danford, Office of the Chief of Field Artillery, and Major Cortland Parker, F.A. (G.S.C.).

During the winter months the regiment will be occupied in preparation and participation in the riding hall exhibitions held weekly at this station, the preparation for requalification of gunners, and the usual unit schools. Within the regiment for the present year, 131 men were qualified as Expert First-class Gunners, 69 as First-class Gunners and 21 as Second-class Gunners, making a total of 221 men qualified out of a present and absent strength of 447. Headquarters Battery and Combat Train qualified 36 pistol shots and 11 gunners.

SEVENTEENTH FIELD ARTILLERY

FORT BRAGG, NORTH CAROLINA

Lieutenant-Colonel Raymond W. Briggs, *Commanding*

Roster of Officers

Lieutenant-Colonel Creed F. Cox
Major Thomas D. Sloan
Major Bernard R. Peyton

Charles R. Mize
Richard T. Benson
Ellis V. Williamson

CAPTAINS

Charles W. Gallaher
George R. Rede
Dale M. Hoagland
Sidney J. Cutler
Dover Bell
Ben C. McComas
James C. Patterson
Erle D. Ferguson

SECOND LIEUTENANTS

Clifford C. Duell
Frederick W. Watrous
William J. D'Espinosa
Ulysses J. L. Peoples, Jr.
Bernard A. Tormey
Valentine R. Smith
Paschal H. Ringsdorf
Briscoe A. Trousdale, Jr.
James L. McKinnon
Ernest T. Owen
Martin H. Burckes
George W. Vaughn
James Regan, Jr.

FIRST LIEUTENANTS

Severn T. Wallis
Daniel B. Floyd
Henry E. Sowell
William A. Enos

The training of this regiment for the past year has been marked by more than the usual amount of real field work, having included numerous problems where the camps and firing positions were over twenty miles from the barracks. On several of these problems, all movements were made at night and without lights. One of these, in particular, brought up recollections of France. After two days of steady rain, the regiment commenced its movement at 7:00 P.M., in a heavy downpour which continued all night and most of the next day. One man fell under a loaded water cart, and though the wheels passed over his chest, he was not hurt in the slightest

REGIMENTAL NOTES

degree, for he was but pushed down into the soft road. This incident illustrates the weather and road conditions. The regiment marched twenty miles that night, built bridges and made reconnaissances the next day, marched fourteen miles and into a firing position the next night, and fired the next morning. After this six-day "war," our recruits felt themselves to be real veterans.

The assistance given the Field Artillery Board in their experiments was very interesting, instructive, and sometimes a source of amusement. The trick reel carts, fancy instrument carriers, smokeless powder, and various type tractors, helped to produce the "variety spice." D Battery, travelling ten miles as a daily duty with five or six different kinds of tractors, is known as the "Travelling Circus."

During the summer we furnished numerous officers and men as instructors for the R.O.T.C., C.M.T.C. and national guard camps. The officers of the 452nd F.A., lived and trained with us, and for a few days we veritably became the 452nd F.A., and thoroughly enjoyed it. Five of our own reserve officers joined us during the year for their active duty training; we were glad to have had them with us.

Quite proud we are of our record of gunner's instructions. B Battery qualified 95 out of a highest total strength of 102.

B Battery won out in the regiment and over all batteries in the Fifth and Second Regiments, as the post representative for the Knox Trophy competition. Hope is entertained that B Battery will be pronounced the winner of the Trophy for 1925. Firing the axial problem under lateral observation conditions, should be to its credit.

As usual we won the Fourth of July Field and Track Meet, getting more points than all other regiments and organizations of the post combined. Our baseball team was going strong at the time it was disbanded to form a post team, having lost but one scheduled game. Our football team got away to a late start, but is going strong at the time of this writing.

The regiment suffered a great loss in the transfer of its commanding officer, Colonel Lanza, who was sent to duty at the War College. Other losses during the year have been Major Frank B. Jordan, Major Raymond Marsh, Captains John H. Ball, and Robert G. Mangum, and Lieutenants O. C. McIntyre, Charles R. Forrest, Samuel R. Deanes, Robert O. Montgomery, William L. Kay, Crowell E. Pease, Joseph P. Wardlaw, Donald F. Fritch and Patrick W. Timberlake.

During the year we lost by retirement a real thorough-going soldier—a man proud of his uniform and always a credit to it. Master Sergeant Alfred Olson was given a royal send off, and we hope he understands how close to our hearts he was and is.

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EIGHTEENTH FIELD ARTILLERY

FORT SILL, OKLAHOMA

Major Fred C. Wallace, *Commanding*

Roster of Officers

CAPTAINS

Henry D. Jay
Howard F. Long
Samuel Marshall
William C. Dunckel
William M. Wiener
Edgar A. O'Hair
Richard J. Sothern

Stuart M. Bevans
M. Milton Potter
Walter L. Kluss
William C. Huggins

SECOND LIEUTENANTS

FIRST LIEUTENANTS
Frank C. Jedlicka
Henry C. Demuth

Paul A. Berkey
Charles P. Holweger
Blackshear M. Bryan
Donald Q. Harris
John P. Kennedy
William A. Wedemeyer

The First Battalion of the Eighteenth Field Artillery will complete three years of active association with the Field Artillery School on January 1, 1926. The principal function of this battalion during the academic year is to furnish details for various problems and demonstrations as required for the different classes at the School.

After completing a three-day tactical problem in the field, which terminated the Academic Division requirements for the last year, the battalion left on the ninth of June for Fort Reno, Oklahoma, a distance of 97 miles, and arrived on the fifth day. The march was trying on both men and animals, due to the heat and difficulty experienced in procuring an adequate supply of water.

At the end of a ten-day visit at Fort Reno, during which time the battalion took part in the horse show and polo tournament, the march home began. Experiences gained going up were of great benefit on the return trip, with the result that men and animals came through in excellent condition. The remainder of the summer was spent in preparation for the coming academic year, preliminary and record pistol firing, and preparation for gunners' examination.

Many coveted prizes have been won at the Annual Fort Sill Horse Show and also the Comanche County Fair.

The battalion is always well represented on the athletic field. The baseball team made a creditable showing in the post league during the past year. First call for football practice was responded to by thirty odd men, and as a result the season has been a satisfactory one.

Organization day was observed on the fifteenth of July. A formal meeting in the morning, at which the history of the regiment was read and a number of speeches made, was followed by a field meet in the afternoon and a dance in the evening.

The annual inspection and review by the commanding officer of school troops, took place on September twenty-second and on

REGIMENTAL NOTES

September twenty-fifth there was a review for the commandant of the Field Artillery School.

A number of changes in the officer personnel have taken place during the past year. Several officers have gone to the School as students and a number of last year's class are now getting a view of the School from a new angle.

The battalion has its full quota of enlisted men. Many are reënlisting, and others returning with the realization that this is one place where they have an exceptional opportunity to familiarize themselves with their duties in their chosen profession.

TWENTY-FOURTH FIELD ARTILLERY (P.S.)

CAMP STOTSENBURG, PHILIPPINE ISLANDS

Lieutenant-Colonel J. P. Robinson, *Commanding*

Roster of Officers

Major John O. Lackey
Major Raymond E. Lee
Major John B. Anderson

CAPTAINS

Stanley Bacon
Wallace W. Crawford
Kenneth Rowntree
Edward T. Eneboe
Channing R. Toy
Ernest T. Barco
Howard W. Turner
Louis J. Fortier
Ralph J. Canine
Lloyd S. Partridge
Leslie M. Skerry
Leonard H. Frasier
Richardson L. Greene
Charles C. Brown
Charles R. Hall
Russell G. Barkalow
Joseph W. Loef

FIRST LIEUTENANTS

Salvador F. Reyes
Robert L. Allen, Jr.
Julius T. Berry
Harry L. Watts, Jr.

Raymond T. J. Higgins
Thomas F. Keefe
John C. Grable
Alfred M. Gruenther
Robert R. Raymond, Jr.
Francis O. Wood
Edward Freeman
Francis H. Morse
Edward M. Edmonson
William I. Brady
William H. Bartlett

SECOND LIEUTENANTS

Mariano S. Sulit
Millard Pierson
Escalus E. Elliott
Wray B. Avera
Louis M. Alba
Louis L. Lesser
Edward M. Quigley
William D. Williams
Henry L. Love
Roy P. Huff
Amado Martelino
Victor Z. Gomez
Nemesio Catalan
Alejandro D. Garcia

During the past year this regiment has had several breaks in the ordinary routine, that have proved to be entirely successful, and one occurrence that took the regiment back to the days of 1900, when guerilla warfare was in its height.

Battery A, Captain L. M. Skerry commanding, represented the regiment at the Annual Military Tournament at Fort William

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McKinley in December, 1924, and brought great credit and several prizes back to the regiment for its excellent demonstrations of mountain artillery. The entire regiment then marched to Manila, January thirtieth, 1925, to participate in the Manila Carnival. Camped opposite the Manila Hotel, it gave daily parades and demonstrations, and in keeping with the previous successes of Battery A, again walked off with commendatory letters and several cups.

The participation in the Carnival was followed by division manœuvres at Fort William McKinley and vicinity, being the first time the entire division had been together since 1923. The manœuvres of 1924 were called off on account of the anthrax epidemic, which prevented the transfer of animals from one part of the island to another, but this year the division, working as a whole, executed two phases of attack, the first consisting of a meeting engagement, and the second, an attack of a previously fortified position. These were very interesting and were carried out to the satisfaction of every one concerned.

Upon returning to Camp Stotsenburg, the first part of March, the regiment settled down to the usual camp routine and as March and April are the hot months, they were devoted to pistol practice. As fast as the men completed their record firing, small detachments were sent out on the Artillery Trail to the China Sea and combined business with pleasure by doing repair work on the trail while enjoying camp life in the mountains.

The Soldiers' Regimental Pistol Championship was held on April tenth and was won by Sergeant Ceferino Chaves of Headquarters Battery, who was presented with the silvery shield donated in 1924 by Major R. E. Lee. This shield is competed for annually and becomes the permanent possession of any man winning it two years in succession.

The first part of May, the batteries were spending a few days each on the Artillery Trail and, as deer and wild pigs are plentiful throughout the mountains, parties of men would go on foraging expeditions to supply the mess with venison and pork. On the afternoon of May fourth, Sergeant Damian Sanchez and Private Julian S. Rono and Alejandro Pagaduan of Battery D, started from Camp 7 to hunt in the vicinity of Mount Abu. When they failed to return the following day, some anxiety was felt, but as Sergeant Sanchez was a trustworthy and reliable man, it was presumed that they had lost their bearings and were working around into Camp Stotsenburg. When no word was received the next day, searching parties started to trail them. The country in that vicinity is practically impassable and progress through the dense vegetation and across deep ravines can be accomplished only by cutting paths with bolos.

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Several tribes of Negritoes live in the mountains and more and more searching parties were sent out using Negritoes as guides. Finally information was gathered by questioning friendly Negritoes, that Sergeant Sanchez and the two privates had been murdered by a party of seven outlaw Negritoes, presumably to gain possession of the shot gun and bolos carried by the soldiers. These seven brigands were located and finally surrounded on Mount Abu by a detachment of Philippine Constabulary. After many days of difficult fighting, they captured one Negrito and killed or fatally wounded the other six. The one Negrito captured, confessed that they ambushed and killed Sergeant Sanchez with arrows and then attacked and killed the two privates with bolos, stripped them of their clothing and equipment and buried them in a ravine. The bodies of the three soldiers were found and were disinterred, brought to Camp Stotsenburg, and given a full military burial.

The disappearance of the three soldiers reminded the old Scout soldiers of many Filipino superstitions and many tales were told, one of which formed a plausible explanation of the men's absence.

Evil Spirits known as the "Mangliligao" are supposed to inhabit the mountains and build beautiful trails in front of anyone wandering through the jungles, thereby leading persons off into unknown regions where escape is impossible, and leaving the victims to starve. However, anyone familiar with the habits of these evil spirits, can outwit them by undressing and putting their clothes on backwards and making the sign of the cross, providing this is done before the "Mangliligao" lead them too far into the wilderness.

But as one old sergeant said, "Oh, Sir, maybe Sergeant Sanchez does not know that!"

SEVENTY-SIXTH FIELD ARTILLERY

FORT D. A. RUSSELL, WYOMING

Colonel Joseph S. Herron, *Commanding*

Roster of Officers

Lieutenant-Colonel William K. Moore
Major John K. Boles

Elmer C. Ringer
Newton W. Jones

CAPTAINS

Ray S. Perrin
Moore A. Stuart
Frank L. Thompson
George H. Duff

SECOND LIEUTENANTS

Warren C. Stout
Harvey K. Palmer
Charles C. Blakeney
Conrad L. Boyle
Robert M. Cannon
Archer F. Freund
Harry J. Harper
Frank J. Hierholzer

FIRST LIEUTENANTS

Frank E. Kauffman
Polk J. Atkinson
Norman J. Eckert

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When Fort D. A. Russell is mentioned, one's mind immediately turns to wind, snow, ice, forty below, and other reminiscences of the Yukon Gold Rush of '96, an unenviable reputation to be sure. Despite all scientific atmospheric research and weather statistics, to the contrary and notwithstanding, the Headquarters and First Battalion of the Seventy-sixth Field Artillery has carried on with its training and conducted service practice practically every week throughout the year.

We have been very busy up here in the hills, mingling our training with the mountain air which comes to us in great gusts, and our progressive schedule has shown great results in the development of the Seventy-sixth Field Artillery, the National Guard, Reserve Officers, C.M.T.C., and the R.O.T.C., allocated to us.

The regiment was commended in orders as a result of its inspections by the corps area, division and brigade commanders, and by the representative of the Chief of Field Artillery.

During the summer the regiment trained the 145th and 222nd Regiments of Field Artillery of the Utah National Guard, the 385th Field Artillery Organized Reserves, C.M.T.C., and the R.O.T.C. of the Colorado Agricultural College, all of whom proclaimed themselves highly pleased with the instruction, unqualified coöperation, friendly spirit, and courtesy shown them.

In the Defense Day Test we enrolled six hundred and thirty-nine volunteers, and participated in patriotic demonstrations at Frontier Park, completing the day with a great barbecue enjoyed by all.

Cognizant of the great importance of aerial observation in modern artillery firing, the enthusiasm of Colonel Herron was radiated to the officers, who enjoyed a highly interesting and instructive course in aerial adjustment. Through the courtesy of the Air Service, an army plane from Salt Lake City was placed at our disposal, and an interesting course ensued in which we qualified eleven officers as aerial observers.

Due to our ability to concentrate more time on the preliminary instruction this year, we qualified many more gunners than in the preceding year. Some organizations more than doubled their qualifications of last year.

One of the features of the year's work was the interesting and instructive course in machine guns and demonstrations. It included an attack on a battery by infiltration, indirect firing, firing on a lake at different ranges to illustrate the beaten zone, and anti-aircraft work.

Our band, of which we are justly proud, gave regular program concerts once a week, which were well attended and enjoyed, both by the garrison and the citizens of Cheyenne, Wyoming, who looked forward to them with great pleasure.

REGIMENTAL NOTES

Battery B represented us in the Knox Trophy Competition which was held on November 5th, 6th and 7th. The battery acquitted itself very well, and while at this writing we have not heard the result of the contest, we feel that we are well up in the running.

During Frontier Week, which incidentally is to Cheyenne what Derby Day is to Louisville, Kentucky, Battery C conducted highly commendable exhibition drills at increased gaits, which were enthusiastically received by the broncho busters and cattlemen, as well as the more reserved of our western populace.

The personnel of the regiment has not lost sight of this great game country where elk, deer, bear, mountain sheep, sage hen, grouse, prairie chicken, game fish, and other lures of the sportsmen and big game hunter abound, as well as the opportunities for camping trips to our National Parks not far removed from us.

Some very successful athletic teams represented the regiment during the last year. Our basketball team played twenty games without a single defeat, a remarkable record considering the brand of basketball played in this section. Many of the teams played competed with the Boulder Colorado Team, which has a national reputation. Our baseball team won the post championship and played many outside games with professional bush league teams. Our football team, which was unbeaten by a service team, also won the post championship.

We feel as though we are justly proud of the activities of our regiment during the last year, and every man is ready to carry on, ever mindful of our dignified regimental motto: DUTY—THE SPIRIT OF '76.

SECOND BATTALION, SEVENTY-SIXTH FIELD ARTILLERY

PRESIDIO OF MONTEREY, CALIFORNIA

Major John R. Starkey, *Commanding*

Roster of Officers

CAPTAINS

John O. Hoskins
William E. Kneass
Russell H. Dixon
Charles F. Boyle
Russell C. Snyder

Edgar T. Anderson
Albert R. S. Barden

SECOND LIEUTENANTS

Henry L. Ingham
John B. Horton
Phillip H. Enslow
Bruce H. King

FIRST LIEUTENANTS

Le Count H. Slocum

Writing these notes in early December, the following highlights of the past year can be readily used as means of giving a picture of life at the Presidio of Monterey, "In the Circle of Enchantment" (as the local Chamber of Commerce describes the area immediately surrounding Monterey).

THE FIELD ARTILLERY JOURNAL

Starting with the annual corps area tactical inspection and Inspector General's visit about this time last year, the battalion has successfully survived ten tactical inspections. A report last year which contained high praise and no "skins," left us with quite a reputation to uphold, but the officers and men of the battalion have always responded and now we feel we are inspection proof.

In January we began a battery beautification program which has resulted in beautiful lawns and flower gardens in each battery area and Battery F's dahlia gardens won high praise.

In February came the Cross-word Puzzle paper chase with a hunt breakfast in Del Monte Forest, the post track meet (won by Battery E with F and Headquarters third and fourth), and the battalion Barn Dance, in the new forage warehouse, for the entire garrison.

Then came the spring polo and the horse show, pistol firing and gunners' examination, preparation for summer camps and the battalion commander's tactical inspection. Salmon were running in the Bay, steel head at the Salinas River, and trout down the coast at the Big Sur River and streams in between.

In early June came the brigade commander and we left the post for what was to be five days of march and manœuvre. We went into the prepared emplacements at Gigling, fired and displaced forward, fired and displaced rearward, and marched to Camp Richardson on the other side of the reservation, made camp, broke camp, went into new positions, fired, made camp and had a show down inspection. Twenty-seven miles the first day and nine miles the second, before inspection of equipment! Then we started home *via* Salinas, but ended up at Santa Cruz, across the Monterey Bay, where we participated in the festivities surrounding the state beauty contest. Here Miss California, who became Miss America, was chosen. Parades, guards of honor, leading the grand march with Miss California—the Field Artillery was always on the job.

Then the hard grind of preparing Camp Del Monte and the training of C.M.T.C., National Guard, and Reserves. Battery D had the C.M.T.C. and the balance of the battalion gave two reserve camps a course of intensive work on the Post.

In coöperation with the Eleventh Cavalry we cleaned up Camp Del Monte after its occupation by over 6000 troops and started the new polo field in the back pastures, and in opposition we won the post championship in baseball, bowling, and the fall track meet.

Battery F was to the fore in all events and D and E second and third in the track meet. Deer season opened and Gigling Reservation caught fire twice. All hands fought fire night and day.

What? Here it is November first again and all the post and troop schools are under way. Battery F competes for the Knox

REGIMENTAL NOTES

Trophy, the artillery wins the post bridge tournament again, ducks are flying, the quail season opens. Gunners' examination again and supplementary pistol season, more inspections and we breathe a sigh! That's all of them for this year. Boyle, Barden and King won many cups and ribbons at the Thirtieth Infantry Horse Show.

Work hard and play hard! Plenty of both in this post and all the year round! Tennis and golf, service practice and inspections every month in the year. Come to the Circle of Enchantment!!

EIGHTY-SECOND FIELD ARTILLERY BATTALION (HORSE)

FORT BLISS, TEXAS

Major William H. Rucker, *Commanding*

Roster of Officers

CAPTAINS

John M. Jenkins, Jr.
Jay W. MacKelvie
Patrick E. Shea
Wilbur B. Sumner
John C. Cook
John M. Reynolds

FIRST LIEUTENANTS

Albert P. Barnes
Charles R. Carlson
Thomas O. Foreman
Auston M. Wilson, Jr.

SECOND LIEUTENANTS

Charles J. Barrett, Jr.
James V. Collier
Clint L. Taylor
Perry W. Brown
Bjarne Furuholmen
Frederick C. Pyne
Gerald J. Reid
John H. Sampson, Jr.
George R. Helmick
Burgo D. Gill

In October, 1924, the training year was brought to a close with the tactical inspection of the Corps Area Commander, Major-General Hinds. Shortly afterwards Major-General Summerall, taking command of the corps area, made a visit of inspection to Fort Bliss, during which he was especially pleased with the battalion area, declaring it to be the best in the post.

November saw the completion of the pistol firing, and the opening meet on our new athletic field, which was laid out and constructed by prison labor. A cinder track was laid, jumping pits dug, and jumps of a permanent nature built. Live hedges are used as wings for all obstacles. The field meet proved very interesting, and included pushball, both mounted and dismounted, introduced by Major Rucker and enjoyed by everyone.

With the first part of the spring came pistol practice. Service practice began in January, and continued on one day of each week until April. Firing at Lee's Wells, eight miles north of the post, was attended by all officers, and all had opportunity to fire.

The division horse show, late in April, found the battalion well represented. The most popular blue ribbon winner was an Eighty Second entry, Miss Sally on "Tug." "Tug," the commanding officer's bulldog, equipped with a miniature saddle and ridden

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by a doll over the jumps in the ladies' class, turned in a perfect score. Shortly before the show two fires in the stables of Battery C destroyed twenty-one horses, including the show teams, but in spite of this handicap Battery C took first place in the section contest.

General Snow's visit over Memorial Day was enjoyed by everyone. At a dinner given in his honor there were present General Howze, General Castner, and all officers on duty with the Eighty Second.

From June to September the battalion was engaged in the instruction of Reserve Officers, National Guard, R.O.T.C., and C.M.T.C., which resulted in the establishment of cordial relations with widely scattered members of our civil population. In addition the battalion participated in reviews for the Adjutant General, and the Chief of Cavalry.

The fall period was devoted to division manœuvres, and to inspections by the division and corps area commanders. The latter, after a very thorough inspection, rated the battalion "excellent" in everything but firing, which was given "very good," a showing in which we all take pride. A feature of the inspection was a problem involving a night attack by the cavalry and artillery in the sand dunes of the border country in New Mexico.

Battery B took the Knox Trophy test for this battalion, and we believe it will stand very high. They scored ninety-four per cent. in firing, had a perfect score in mobility, a very creditable showing in interior economy, and high ratings in the other subjects. Sergeant Clark surprised the board by figuring two problems in firing data, involving different targets, in a total time of seventy seconds, with a total error of five mils for two deflections. We have also heard unofficially that Corporal Burden of Battery C has been awarded the Knox Individual Medal.

During the year considerable lumber has been salvaged, with which a jumping pen has been built, a basketball floor laid in our service club, and other repairs effected. The basketball floor is excellent for dancing, and regular dances are held every Thursday evening for the enlisted men.

All members of the command are enthusiastic about polo, and several good ponies have been developed. Good prospects are being received from time to time, and we expect to have a well-balanced string by the end of the winter. The arrival of Captain Bridges, V. C., gave an impetus to horse training. Under Captain Jenkins the younger officers have been formed into a polo class, and are rapidly becoming proficient in the game. The battalion first team will enter the Junior Polo Tournament to be held here in December.

A sad blow was dealt the funds of the battalion when its exchange was disbanded, on account of the establishment of a

REGIMENTAL NOTES

central post exchange. For the last three years we have received average dividends of four hundred and fifty dollars a month from our exchange; under the consolidation we expect much less.

In accordance with his custom of interviewing all recruits, the commanding officer ordered three new arrivals in the battalion to report, with their parents, for assignment to duties. Since the issue of recruit kits was considered a bit premature, an issue of silver spoons was substituted.

Though service on the border is sometimes arduous, and the quarters not all they might be, the morale of the Eighty Second Field Artillery is of the best, and a thorough training schedule keeps the battalion in a high state of efficiency.

EIGHTY-THIRD FIELD ARTILLERY

FORT BENNING, GEORGIA

Major Robert S. Donaldson, *Commanding*

Roster of Officers

CAPTAINS

George A. Pollin
Charles E. Hurdis
Basil H. Perry
Charles A. Wickliffe
George P. Winton
William B. Weston

Paul A. Reichle
Harry M. Schwarze
William C. Price, Jr.

SECOND LIEUTENANTS

LeRoy J. Stewart
John F. Uncles
Giles R. Carpenter
David J. Crawford
Stuart A. Beckley
Herbert B. Enderton

FIRST LIEUTENANTS

William H. Barlow
Boniface Campbell

Fort Benning, the home of the Infantry School, is preëminently an infantry post. At no other station has the artillery such a favorable opportunity to coördinate and coöperate with its "raison d'etre"—the infantry. Combined manœuvres and demonstrations involving all types of fire, are staged throughout the school year for the purpose of acquainting the students with the limitations and capabilities of the Field Artillery. They serve, also, to acquaint the field artillery officers with the methods and requirements of the doughboys.

The preparations for, and the firing of, these demonstrations occupy practically our entire time from October to June; to enable us to carry on our training, we are left free to follow our own devices during the summer months. Previously, we had spent this time at gun drills, draft, care of matériel, etc., but last summer saw an innovation in the form of a march from Fort Benning to Port St. Joe, Florida, and return, covering a total distance of something over five hundred miles.

The object of the march was two-fold: to perfect the battalion as a marching unit, and to obtain data to be used as a basis for new

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training regulations for light, motorized artillery. That the first objective was attained was evidenced by the fact that the men, who were raw recruits at the beginning, conducted themselves like veterans at the end; the lessons learned in the course of the march should prove invaluable in the writing of the new regulations.

The routine of the march was enlivened by the hospitality of the people near whose cities we camped; several communities made gala occasions of our visit with dances, barbecues, baseball games and watermelon cuttings. At Port St. Joe the battalion spent ten restful days bathing, fishing and cheering the baseball team, which during our stay earned an enviable reputation among the teams in and about Port St. Joe.

Such a break in garrison life has a wonderful tonic effect, and we all hope that next year we shall again "hit the dusty trail."

Baseball, football, basketball and polo flourish at Benning in well-organized leagues, and the Eighty-third makes up in enthusiasm what it lacks in numbers.

Though motorized, we have a stable of twenty-five horses, which serve as mounts for equitation and polo. Several of them are consistent prize winners in the horse shows held at Fort Benning, Columbus and Augusta.

In August last, Major E. P. King, Jr., was assigned to the office of the Chief of Field Artillery, and the command of the battalion was assumed by Major Robert S. Donaldson.

FOREIGN MILITARY JOURNALS A CURRENT RÉSUMÉ

FRANCE

La Revue Militaire Francaise, September and October, 1925

LIEUTENANT-COLONEL PAQUET concludes "The Attrition of German Strength in 1918." At the beginning of August, 1918, the Germans had in their depots 493,000 replacements, and in addition 300,000 men of the class of 1920. From this date, the attrition depended no longer on the will of the German command, but rather upon the conduct of the allied offensive. During August and September several divisions were dissolved and the front was shortened to gain time and replacements. The attrition increased rapidly during the general offensive late in September. The number of prisoners captured by the Allies was enormous. In spite of the desire of the German command to economize its strength, it had to use up the replacements in order to hold the Allies. It was necessary again to dissolve divisions, and, late in October, 29 divisions disappeared. From 200,000 per month in June and July, the losses jumped to 300,000 in September and October. The monthly resources were diminishing. From 300,000 in September and October the losses rose to 375,000 on November first. Little by little the reservoir of men was being drained. The only available replacements from the depots were men returning from the hospitals. Soon only the class of 1920, eighteen-year-old boys, would be left. But it was useless to throw them into the breach, for the German Army was beaten and its morale was destroyed. It had fallen back 100 kilometres and abandoned a large part of its matériel; 385,000 prisoners and 6615 guns of all calibres had been taken by the enemy.

The article by Colonel J. Langlois deals with "Communications in Large Units." In the manœuvres of 1924 by the 20th Army Corps, the signal service had to solve the exact problems it would have to meet in an approach march followed by contact in actual combat. These manœuvres proved once more, that, of all arms, the communication service requires the most time to get into action; that it, of all arms, must exercise foresight. In order that communication be organized at the proper hour for all phases of an operation, it is indispensable that the chief signal officer be present at the planning of the manœuvre; that he know, minute by minute,

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the thoughts of his chief; that he be told in advance any change in the position of the command posts; and that he be consulted in locating them.

On the other hand, the signal officer must be able instantly to estimate a tactical situation, to know the tactics of the different arms, and to know how they support each other.

Commandant Larcher describes "The Campaign of General de Falkenhayn in Palestine (1917–1918)." The author has found it necessary to look to Turkish documents for his data, since General de Falkenhayn, as well as Hindenburg and Ludendorff, has written very little about this unfortunate campaign. The errors committed by the Germans, their discord with the Turks, and their defeats, explain why they wish to ignore this phase of the war.

Until 1917 Germany had been content to exploit Turkey as an ally without giving her any of the troops or matériel previously promised. Early in 1917, the evident exhaustion of Turkey made Germany fear that her ally would seek a separate peace; so Germany reluctantly sent 6500 men, the so-called Asian Corps, as a reinforcement and as an example of German power. General Ludendorff writes on the subject: "We could perhaps with a small number of German battalions, lead back to the fight a large force of Turks and oblige the English to deploy a larger number of troops in the Orient."

These battalions, made up of all arms, provided with all the various types of matériel possessed by a division, and well supplied with motor transportation, were supposedly capable of rapid manœuvre in front of, or on the flank of, an army. However, the transportation of these battalions encumbered the railways more than did a Turkish corps; each man was equipped with both a summer and winter uniform, a cot, a tent and a mosquito bar. They required warm food, while the Turks were content with cold. The morale was low, the discipline poor; the chauffeurs deliberately put their cars out of order. These shock battalions did not compare at all favorably with the Turkish troops, ragged, starved, and decimated by cholera, but still fighters.

General de Falkenhayn arrived in Constantinople May 7th and organized his staff. The Turkish minister of war had assigned several Turkish officers to this staff to cooperate with the Germans. The German minister of war, however, had planned for an entirely German staff and therefore eliminated most of the Turks from it. Only nine were retained, and these had posts of minor importance as aides, liaison officers, or translators. Though the German staff officers were capable men, they had little knowledge of Turkey. This inexperience later led to many difficulties.

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In his article "The Staff Officer," Captain Damedaux discusses the necessary qualifications for that position. The staff officers should possess a combination of moral, intellectual, and physical qualities in addition to an extensive general education. He must have the character to present and defend a solution which does not always respond to the wishes of his chief. He must also be loyal enough, in case his solution is not accepted, to forget his own pet ideas and do everything in his power to carry out the wishes of the chief. The author sums up the necessary moral qualities in quoting the German Chief of Staff, von Seckt: "Complete forget-fulness of one's self, absolute devotion to the work undertaken, always placing the cause above the individual; such virtues have made the general staff what it was and what it should be today. Two other qualities that I admire very highly are reasonable self-confidence, and love of responsibility."

As intellectual qualities the staff officer must have first of all, judgment. The man who has judgment sees and reports upon things as they are and not as he would like them to be. Memory was a quality considered by Napoleon as indispensable to a staff officer, who must be capable of furnishing accurate information without having to refer continually to notes or manuals. An extensive knowledge of fundamental principles affecting the life of the country, assists the staff officer in strengthening the relations and understanding between the army and the civil population.

Obliged at times to work night and day, the staff officer must have great physical resistance. He should be a good horseman. In future wars, he will frequently observe from the air and should receive appropriate instruction.

In his article "Ardant du Picq," Captain L. Nachin writes of the life and philosophy of an officer of the Second Empire. The army of that period worked very little. Even when the war with Prussia seemed inevitable, most of the officers were but little concerned with preparation for the coming struggle. Ardant du Picq was one of the few who realized the huge task to be accomplished to create a well-organized and well-disciplined army. For some years he had been making a psychological study of the soldier in combat. In his book, "Ancient Combat," a study of the battles of Cannes and Pharsale, he concludes that the defeat of the Romans by Hannibal, and of Pompey by Cæsar, were due only to the difference in morale of the opposing troops.

Ardant du Picq then decided to send out a detailed questionnaire to many officers who had led troops in battle, to gain their impressions of the reaction of the French soldier in combat. In his last chapter of "Ancient Combat" he explained the object of this

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questionnaire: "When we know the psychology of the soldier in past wars, sincerely and without illusion, we will be very close to knowing how he will conduct himself in the future. . . . Then, instructed and forewarned, we will not be disconcerted; for we will be able in advance to prescribe such a method of combat as will conserve as long as possible for the chief, the control of the combatant, which control escapes at the first onset when the instinct of the combatant is absolutely incompatible with any prescribed method of combat."

In his article, "The Covering Army," General Camon describes the mission of such an army and gives various historical examples of armies which fulfilled this mission. This mission is a double one: first, to cover the frontier during the mobilization and the original strategical disposition of the armies; second, to facilitate the subsequent offensive. To facilitate its mission a covering army usually uses a natural barrier, if possible a large river.

Napoleon's method was to mass his covering forces (which he called observation groups) in front of the obstacle, at a point where he could best check the enemy. If the enemy ignored the observation group, and tried to cross a river at a particular point, the observation troops would fall on his rear.

In considering the strategical manoeuvre, two factors differentiated 1914 from the Napoleonic period: The enormous masses of troops involved, and the railroads. In August, 1914, the strategic deployment of the opponents extended along the entire boundary. The covering of the territory was assured by elements of army corps along the frontier, and corps held in readiness for transportation. In this war there was no natural obstacle, having decided to carry out their plan of an advance through Belgium, the Germans formed a covering army, or an advance guard, with the mission of taking Liège, by force. The railroads being indispensable to the manoeuvre, the covering force was to gain possession of them as far into the enemy territory as possible. The natural mission of the French covering force, in this or a similar case, was, of course, to destroy the railroads as far into the enemy territory as possible, to give more time for the mobilization.

Other articles are "The French Command in Western Thrace," "A Second Lesson of the War of Secession," "The Battle of Courcelles-méry," and "Powder and Explosives."

Revue d'Artillerie, June, 1925

"The Siege of Besançon by Louis XIV in 1674." Many officers who trained at Valdahon in 1917-18, will remember Besançon as their recreation centre for pleasant week ends. In the 17th century

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this city was part of a Spanish province, and this article gives an account of the efforts made by Louis XIV to restore it to France. The writer is much interested in questions of administration and gives a description of the leaders, organization, equipment, and armament of the troops engaged, embroidered with intimate touches on the military life of the times.

In the organization of the artillery, neither teams or drivers belonged to the army, but were supplied by civilian contractors who moved the guns from place to place as directed by the commander. When active operations ceased for the winter, the contractor would loan his animals to the neighboring farmers in return for their maintenance until spring.

"Development of the Manufacture of Munitions in Germany, 1914-18 (Part II—Ammunition)." The rates of manufacture of all kinds of ammunition, including rifle cartridges, grenades, and artillery projectiles, during different periods of the war, is the subject matter of this article. Statistics are given on the various components, such as powder, fuses, bursting charges, and cartridge cases, with an account of the various substitutes developed for needed raw materials during the latter stages of the war, such as wood cellulose in place of cotton, steel for cartridge cases, and a shortened projectile for the 77-mm. to reduce the amount of copper used in the rotating band.

It is noteworthy that the Germans in 1913 did not foresee the enormous expenditure of artillery ammunition that would be required, whereas their pre-war estimates of expenditure of small arms ammunition, were never reached during operations.

"The Concentration of Fire." General Auglade believes that prior to the infantry attack the chief mission of the artillery is counter-battery. The enemy batteries are to be so overwhelmed by the counter-battery fire that they will be reduced to absolute silence from the beginning of the attack until the infantry overrun the artillery position. To accomplish this task the writer desires an artillery ratio on the battlefield of six to one in favor of the attack. The enemy batteries having been carefully plotted, he plans to divide his fire into several periods,—concentrating a large number of guns on a group of enemy batteries for a violent bombardment, then shifting his concentration to another group. This theory presupposes that this concentrated fire will be so destructive and demoralizing that even after it has shifted to another group, the enemy will be unable to re-open fire before the arrival of the assaulting infantry. It can readily be seen that this diametrically opposes the idea of neutralization whereby each enemy battery is subjected to the fire of a comparatively few guns throughout the attack.

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The writer assumes that the firing will be done by map, corrected for the conditions of the moment, which he asserts can now be carried on with sufficient accuracy for his purpose.

"The Use of a Directing Piece." This article treats of the employment of a single piece for registration on various targets, followed by a calculation of data for the other guns of the battery or battalion, based on the adjusted range and deflection of the directing piece. This latter piece would usually be one detached from a battalion and sent to a position some distance from the other guns. After an accurate adjustment has been made by this piece, the stripped range and azimuth are transmitted to the other pieces, which make the necessary substitutions in a number of formulæ given in the text and thus arrive at their respective ranges and azimuths.

The method permits the use of one gun for the adjustment of the entire battalion without any disclosure of the battery positions or the number of guns in the area. However, the formulæ seem rather involved and it would appear to be much simpler to do the work by ordinary graphic methods on a plotting board.

Revue d'Artilleirie, July, 1925

"The Siege of Besançon, by Louis XIV in 1674," is a continuation of an historical article begun in the June issue. A minute account is given of the employment of the artillery, the individual battery positions, and the mechanics of moving the heavy guns across the very broken country. The question of supply was a difficult one and the artillerymen were called upon to build bakeries for their own use, which is not without analogy in our own time.

"Combined use of the Range Finder and Aiming Circle," by Lieutenant Guillemain, outlines a rapid method of preparing a firing chart in an unmapped region. After a reconnaissance has been made, two observation posts are established, with a declinated aiming circle and range finder at each. On a grid sheet the position of O_1 is established arbitrarily at any convenient intersection. The position of O_2 is determined with the range finder and aiming circle from O_1 . To locate a base point, the range and azimuth are determined with the range finder and aiming circle from one of the observation posts. These are laid off on the chart. The coördinates of the base point are then sent to the other observation post to enable a check to be made with its instruments. This method is very similar to the one tried out at our own Field Artillery School.

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"Liaison," an article by Colonel LeRoy. Before 1914, those of us who enjoyed French fiction knew the word, but to our military vocabulary it was a stranger; yet in the last eight years, how many times we have heard it and almost always with the querulous thought, "What the devil does that mean?" At last comes a Frenchman, Colonel LeRoy, who is frank enough to admit that, even among his own compatriots, there are many who still are vague in their comprehension of that much abused word. Apparently the English language cannot provide an exact translation, but a perusal of Colonel LeRoy's essay leads one to believe that when a French general cries "il nous faut de la liaison," he means we must have loyalty and team work. The writer, who is an infantry officer, traces the disasters due to lack of liaison, from Horatius at the Tiber Bridge, to Bazaine at Forbach in 1870. Successively, prematurely, divergently, and separately, are all adverbs which indicate a lack of liaison in various incidents of military history.

Liaison in the chain of command, implies actual acquaintance between the chief and his subordinates. Where he does not know them, and where they have never seen him at work, the liaison is fictitious; but where there is confidence in a commander, knowledge that his efforts are bent on helping the troops, and the feeling that losses will not be incurred in vain, there we find a true moral liaison based upon reciprocal faith.

This moral liaison applies equally between the infantry and artillery. Frequently, a superior but strange regiment of 75's is of less use than one of lesser excellence which has habitually supported a given infantry regiment over a long period and gained its confidence. At this point we must differentiate clearly between liaison and the liaisons (French expression for signal communications), and it would be well that the word "liaison" disappear from our vocabulary, to be replaced by some other to express the technical means of communication.

In the field of military doctrine good liaison requires that we develop a clear, simple doctrine based on the lessons of the past and knowledge of the character of man. Doctrine should be limited to principles which are true in all periods of history, regardless of the tools employed. When we turn to methods and means we find a continual change. It is the purpose of our military schools to assure unity of thought in the methods followed in employing the weapons and tactics, which invention and experience change.

One of the best examples of the varying degrees of liaison existing in large commands, is the relationship between field orders of various units. Between two divisions in the same army corps, it is probable that the coördination between their respective orders

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will be a degree closer than the orders sent out by two adjacent divisions, but belonging to different corps. As we go into the higher echelons the degree of liaison in orders becomes less, a fact which is recognized in choosing the junction point between two armies as the point of attack.

To the chief of artillery of the corps falls the task of assuring a liaison between the corps and division artillery, to insure covering of all targets and the duplication of fire. More essential is the task of the division commander, who must assure the coördination of his infantry and his division artillery.

The two methods of infantry support generally followed, are the rolling barrage, and successive concentrations. The first named, though wasteful in ammunition and presenting many difficulties in the preparation of the firing data, gives a visible line of fire easy to follow, and impresses the infantry that they are being supported. The concentration method is more economical and brings heavy destructive fire on sensitive points in the enemy lines, but at the same time greatly complicates the matter of liaison. It is innately intermittent and presents no visible line to the individual infantryman. How is he to tell whether his artillery is to fire on such a wood at such a time, if at all? In short, the concentration method leads to hesitancy.

In a case of a war of movement, the above situations are greatly complicated. The artillery is often in the dark as to the position of our infantry, to say nothing of the enemy; the orders originally given have to be interpreted by the executants in the light of the new situation. The ties of liaison between units and arms become looser and looser, until eventually the commander of the operation must intervene to consolidate and reestablish coördination between the elements of his forces.

CURRENT FIELD ARTILLERY NOTES

Battery A, Eighth Field Artillery Wins Knox Trophy

THE Knox Trophy for the year 1925 has been won by Battery A of the Eighth Field Artillery, commanded by First Lieutenant Ernest A. Bixby. The Eighth Field Artillery is stationed at Schofield Barracks, Hawaii, and this winning battery represented the Eleventh Field Artillery Brigade, which includes the Eighth, Eleventh, and Thirteenth Field Artillery Regiments.

Under the terms of the contest, one locally chosen battery from each station, where there was regular army field artillery, was eligible to compete. However, no battalion was allowed more than one entry. There were sixteen contestants this year. They were:

Battery A, 1st F.A., Fort Sill, Oklahoma.
Battery A, 3rd F.A., Fort Benjamin Harrison, Indiana.
Battery C, 4th F.A., Gatun, Canal Zone.
Battery F, 4th F.A., Fort McIntosh, Texas.
Battery A, 6th F.A., Fort Hoyle, Maryland.
Battery B, 7th F.A., Fort Ethan Allen, Vermont.
Battery D, 7th F.A., Madison Barracks, New York.
Battery A, 8th F.A., Schofield Barracks, Hawaii.
Battery B, 12th F.A., Fort Sam Houston, Texas.
Battery B, 14th F.A., Fort Sheridan, Illinois.
Battery C, 16th F.A., Fort Myer, Virginia.
Battery B, 17th F.A., Fort Bragg, North Carolina.
Battery B, 76th F.A., Fort D.A. Russell, Wyoming.
Battery F, 76th F.A., Presidio of Monterey, California.
Battery B, 82nd F.A., Fort Bliss, Texas.
Battery B, 83rd F.A., Fort Benning, Georgia.

The winner this year made 98 out of a possible 100 in firing; 97 out of a possible 100 in communications; and a perfect score in both mobility and interior economy, giving a total score of 395 out of a possible 400. The second best score made was 390, and two batteries tied for third place with scores of 376.

The average score of all the batteries entered, was 86.6 in mobility, 86 in firing, and 71.6 in communications. The scores in interior economy were all high, only a few losing any points in this phase of the test.

Corporal Harold Burden Wins the Knox Medal

Corporal Harold Burden of Battery C, Eighty-second Field Artillery, has been awarded the Knox Medal for 1925. Corporal Burden stood one in his class in the Communications Course for enlisted men at the Field Artillery School.

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The Knox Trophy and the Knox Medal

The Knox Trophy and the Knox Medal are both awards offered by the Sons of the Revolution in the Commonwealth of Massachusetts. Up to two years ago the award of the Trophy was made annually to that battery of the regular army field artillery which excelled in firing. For the last two years, however, a more elaborate system of scoring batteries has been evolved, based on firing, mobility, communications and interior economy, so that now the award goes annually to the best all-around battery. The Knox Medal is awarded each year to the noncommissioned officer who has attained the highest proficiency at the Field Artillery School.

In instituting these awards, the Sons of the Revolution in the Commonwealth of Massachusetts have expressed their purpose, "to perpetuate in enduring bronze the name and fame of Major-General Henry Knox, 'Father of the American Artillery'; Chief of Artillery of the Revolutionary Army; and, after Washington, the first commander of the United States Army; the first Secretary of War; founder of West Point and the Springfield Armory, and intimate friend, confidant, and counsellor of General Washington.

"The Knox Medal is of bronze, the obverse bearing a profile portrait of General Knox—the reverse bearing the crossed cannon of the light artillery, surmounted by the American Eagle, and suitably inscribed . . .

"The Knox Trophy consists of two plaques, framed in mahogany; the one on the left bearing a three-quarter bas-relief portrait of General Knox, modeled from the portrait by Gilbert Stuart—the plaque on the right represents the General and a staff officer, mounted, watching the progress of a yoke of oxen dragging a snow sledge through the forest, upon which are packed a cannon and gun carriage, illustrating the method of transporting the artillery from Fort Ticonderoga to the Siege of Boston during the winter of 1775–76, thus compelling the British to evacuate, March 17, 1776 . . .

"The medal and trophies are presented to the winners at the annual meeting and banquet of the Society, held on Franklin's Birthday, the 17th of January, each year."

Field Artillery Board Notes

Following is a brief description of the status of some of the subjects which have occupied the attention of the Board during the past four months.

Guns and Ammunition

Test of 75-mm. Gun and Carriage, Model 1923-E (Split-trail).—This test has been completed. The test of this matériel did not include a comparative test with the latest type of experimental

CURRENT FIELD ARTILLERY NOTES

box-trail carriage. The carriage permits a maximum elevation of 45 degrees with a range of 14,880 yards, and a total traverse of 45 degrees. The stability of the carriage in firing is excellent, and it is sufficiently mobile for a divisional gun. In general, the matériel is satisfactory as a divisional weapon.

Test of 155-mm. Howitzer and Carriage, Model 1920-E.—This test has been completed and a report was forwarded in September, 1925. The carriage is of the split-trail type with a maximum elevation of 65 degrees, a maximum range of 16,300 yards, and a total traverse of 40 degrees. The matériel is designed to be carried in two loads, the howitzer being carried on a transport wagon. The accuracy of the howitzer is excellent. The design is not entirely satisfactory in several mechanical details, but it made a very good impression as an improved corps howitzer. The diameter of wheels on this matériel is too small for satisfactory mobility and a wheel approximately 60 inches in diameter is believed to be necessary.

Test of 4.7" Gun and Carriage, Model 1921-E.—This test is now in progress. The carriage is of the split-trail type, designed for the gun and carriage to be transported as one load. The gun has a maximum elevation of 45 degrees with a range of 20,200 yards, and a total traverse of 60 degrees. The functioning of this matériel so far has been excellent, so far as the gun and carriage are concerned.

Test of 155-mm. Gun—8" Howitzer Matériel, Model 1920-E.—This test is progressing. This matériel is of the split-trail type designed to be transported in two loads, the gun or howitzer being carried on a transport wagon. The carriage permits a maximum elevation of 65 degrees, and a total traverse of 60 degrees. The maximum range of the gun is 25,000 yards, and of the howitzer 18,700 yards. This matériel, with the gun or howitzer, weighs slightly less than the 155-mm. G. P. F. gun and carriage. The functioning of this matériel has been very good, except for some minor mechanical troubles. Its stability is excellent. The wheels are the same as the G. P. F. wheel and it is believed that larger wheels will increase its mobility very appreciably.

Test of Two Lots of Flashless Powder for the 75-mm. Gun.—This test has been carried on in the last two months. It is concluded that both lots are suitable for service use. The flash has been reduced to such a small amount that the slightest defilade will hide the flash.

Test of Two Lots of Flashless Powder for the 155-mm. Howitzer.—This test is being made. The powder is issued in the present service container. The sections are 1/10 and 1/5 of the total charge, so that any charge may be made up by using the necessary number of 1/5ths and 1/10ths. This method permits the

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use of all the powder, and avoids the waste of excess sections, which are now taken out to make up any one zone less than the full charge. The disc form of powder, used in one of the lots without bags, is not so easy to handle as the bag form of section. The flash has been reduced very considerably as compared with service powder.

Equipment

Raincoats.—After a year's test of several types of raincoats, the Board came to the conclusion that the "Alligator" type coat was much superior for use by field artillery troops. It not only retains its waterproofing characteristics for a longer time, but is of light weight and easily carried in the soldier's roll.

Field Desks.—Recommendations for changes in the regimental field desk were submitted by the Board. These consisted of a rearrangement of the drawers and partitions of the desk, and a provision for carrying a portable typewriter. A list of desirable and necessary equipment, including records and stationery, was also recommended.

Saddler's Chest and Tool Roll.—The Board, in its report, recommended (a) that the tool brackets and packing pieces be removed from the present saddler's chest; (b) that all tools except those for emergency repairs on the march, be carried in the canvas tool roll; (c) those necessary for emergency repairs on the march be carried in the canvas kit now issued; (d) that both roll and kit be carried in the chest.

Anti-aircraft Machine-gun Mount.—Adoption of the mount now under test, with certain modifications, was recommended in the report of test. This mount was originally designed by the Ordnance for use on limbre and caisson.

It was further recommended that in each battery one mount be carried on the right side of one caisson, and the second, on the left side of another caisson in order to overcome dead space.

Rolling Kitchens.—In its recommendations on rolling kitchens for horse-drawn batteries, the Board advocated a limbred rolling kitchen mounted on 75-mm. gun caisson and limbre running gear; this kitchen to be drawn by four horses with artillery harness and drivers. Exception to the above recommendations was made in the case of service batteries and the transport battery of the field artillery brigade ammunition train.

The Board has under test a water cart as a companion vehicle, mounted on a 75-mm. gun limbre chassis, the tank axis parallel to the axle, and contemplates limbring a ration cart to this water cart, both vehicles to be drawn like the kitchen.

Switchboards.—A four-line board, with operators set, is now under test.

CURRENT FIELD ARTILLERY NOTES

Grease Guns.—Recommendation was made that a "Rose" (plunger type) grease gun with simple conical nose be issued each tractor driver and one pressure gun be issued to each motorized battery.

Tool Box, 5- and 10-ton Tractors.—A study is being made to determine what the tractor driver needs in his tool box, using the present box as a working basis.

Tractors

Commercial Tractors.—The Board now has under test seven commercial tractors, to determine their suitability for adoption, either as standard or emergency tractors for field artillery use.

Two of these tractors, the "Best 60" and the "Monarch 60," approximate 10 tons in weight and are being loaded during their different runs with the 155-mm. G. P. F. Guns, the 8" Howitzer and the 240-mm. Howitzer loads.

The Best 60 is of rugged conventional tracklayer design.

Among the novel features of the Monarch design are chain drive, differential steering, and large truck wheels mounted on plain bearings and lubricated by journal boxes.

The five remaining tractors, *viz.*, two Holt T-29's, two Best 30's and a Monarch 4-40, are being tested for their ability to handle the Schneider Howitzer, Model 1918. These tractors all approximate in power and performance the 5-ton Ordnance tractor. The Holt T-29's are the new Holt 5-ton tractor, very similar in appearance to the T-35.

The parts of the Monarch 4-40 are 80 per cent. interchangeable with the heavy Monarch described above.

The Best 30 is very similar to the 60 in general appearance. Both models are equipped with track shoes carrying a small grouser, cast integral with the shoe.

Test of Horses as a Means for Column Supervision in Tractor Batteries.—As no mechanical means has appeared to date, which offers a satisfactory solution of this problem under all conditions, one 10-ton tractor-drawn battery has been equipped with horses for this purpose. In day and night marches, during the month of November, the horses proved very satisfactory. To obtain further information on the objectionable feature of the test, the mixing of horse and motor equipment, the horses are actually cared for within the battery. Extended marches with the 5- and 10-ton tractors are to be carried out during the next few months.

Motorcycles.—A light, single-cylinder, solo machine—the Indian Prince—is under test to determine its value in messenger service between the different artillery headquarters.

THE UNITED STATES FIELD ARTILLERY ASSOCIATION

ANNUAL MEETING

THE fifteenth annual meeting of the U. S. Field Artillery Association was held at the Army and Navy Club in Washington, D. C., December 10, 1925, pursuant to the call of the Executive Council. The meeting was called to order at 6 o'clock P.M. by the Vice-president of the Association, Brigadier-General George LeR. Irwin, U. S. Army.

The Secretary read the call for the meeting, which he stated had been given by mail to all active members as required by the constitution. He reported that he held the written proxies of more than fifty per cent. of the active members on duty within the continental limits of the United States, and that there was present a quorum for the transaction of business.

On motion the reading of the minutes of the last meeting was dispensed with and the minutes were approved as published in THE FIELD ARTILLERY JOURNAL.

The Secretary-Treasurer read his annual report and presented his financial statements, appended hereto and made a part of these minutes. The Chair announced that the President of the Association had appointed a committee composed of Major J. A. Crane and Captain E. C. W. Davis to audit the Treasurer's financial statements. The committee reported that it had performed the duty and had found the financial statements to be correct. A motion by Major-General Fox Conner was adopted, approving the report and tendering the thanks of the Association to the Secretary-Treasurer for the efficient manner in which he had conducted the affairs of the Association during the year.

The Chair announced that the next order of business would be the election of eight members of the Executive Council. Nominations were made of Major-General William J. Snow, Lieutenant-Colonel Daniel W. Hand, Lieutenant-Colonel George P. Tyner, and Major George R. Allin, from the Regular Army; of Brigadier-General Churchill Mehard and Lieutenant-Colonel J. Craig McLanahan from the National Guard; and of Colonel Leroy W. Herron and Colonel Robert L. Bacon, from the Reserve Corps. The election was by *vive voce* vote, after which the Chair declared the election of the officers named as members of the Executive Council.

The business meeting then adjourned, and it was followed by a dinner at which 65 members were present. Major Hoyle acted

UNITED STATES FIELD ARTILLERY ASSOCIATION

as toastmaster, and speeches were made by Major-General Snow, President of the Association, Major-General Conner, Colonel Herron, Lieutenant-Colonel McLanahan, and Major Burlison. The speeches were interspersed with songs, and the dinner was followed by an interesting exhibition of motion pictures.

ANNUAL REPORT OF THE SECRETARY-TREASURER

The financial affairs of the Association for the past year have been conducted at a profit as shown by the following:

Assets December 1, 1924:

Cash on hand	\$2,463.12	
Securities on hand	16,500.00	\$18,963.12

Assets November 30, 1925:

Cash on hand	\$3,166.17	
Securities on hand	17,600.00	\$20,766.17

Net gain \$1,803.05

A detailed statement of the receipts and expenditures for our past fiscal year follows:

Receipts

Cash on hand December 1, 1924	\$2,463.12	
Membership dues	6,917.63	
Advertising	3,077.30	
Interest on securities	949.45	
Sale of books	242.40	
Matured securities	1,000.00	
Miscellaneous receipts	115.44	\$14,765.34

Expenditures

Publishing THE FIELD ARTILLERY JOURNAL	\$7,311.86	
Miscellaneous printing	30.00	
Postage	226.92	
Personal services	435.00	
Office supplies	107.97	
Books	157.17	
Telephone and telegrams	54.82	
Authors, translators, draftsman and photographers	526.77	
Rent	277.20	
Miscellaneous expenses	471.46	
Securities purchased	2,000.00	
Cash on hand November 30, 1925	3,166.17	\$14,765.34

The capacity of the Association to serve is limited in some respects by funds available; so that our financial statement reflects to a considerable degree, not only our solvency, but also our general success. While the net gain shown above is not presented as any goal in itself, it does give an indication of the satisfactory progress we have made.

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I may repeat, the net gain shown above has not been made as any end in itself. Beyond a prudent factor of safety in current business, and a judicious care for the future, such income as we have enjoyed has been expended in the Association's work. There is no doubt that members wish no expense to be spared in this direction, and the management has been guided by that thought.

We have enjoyed a steady increase in the number of Association members in the Regular Army, National Guard, and Reserve. This has been largely fostered through the interest of our older members throughout the country. We owe these older members our thanks and I wish to point out, as I did last year, the importance of increase in membership. I do not forget that the Association seeks to be a worthwhile service to members,—new and old. But while it serves its members, the members, themselves, by their presence, enable a more efficient service. The Association must, in the nature of things, maintain its machinery,—its overhead. Every new member reduces the pro rata share of this overhead and releases effort for useful work. I bespeak the continued favor of our present members in this matter.

W. C. HOUGHTON,
Major, F. A.,
Secretary-Treasurer.