

29TH YEAR OF PUBLICATION

THE FIELD ARTILLERY JOURNAL

JANUARY-FEBRUARY, 1939

WOUNDED KNEE—A LOOK AT THE RECORD
—Brigadier General E. D. Scott

COMMENCING A MODERN WAR
—Colonel Conrad H. Lanza

THE GERMAN ARTILLERY IN COMBAT
A Translation
—Colonel R. McT. Pennell

And A Story By
PETER B. KYNE



PUBLISHED BIMONTHLY BY
THE UNITED STATES FIELD ARTILLERY ASSOCIATION

January-February, 1939

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29TH YEAR OF PUBLICATION

VOL. 29

NO. 1

JANUARY-FEBRUARY, 1939

THE FIELD ARTILLERY JOURNAL

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FORTY YEARS AGO THIS MONTH

This is a group from a platoon of Battery D, Sixth Field Artillery, commanded by 1st Lieut. E. D. Scott (now Brigadier General Retired), whose article on Wounded Knee appears in this issue. The photo shows the platoon at San Pedro Macate during the Philippine Insurrection. On the gate at right they have inscribed "Camp Scott," unknown to their commander, who was absent on reconnaissance. The photo is published by the courtesy of a member of the Association, Mr. A. A. Hoffman, Arlington, Va., who was a section chief in the battery at the time.

In the official reports, the encounter was described as a "battle." But from the old records recently dug up in Washington, there is no longer any doubt that it was a massacre brought on, as has been explained, by a long series of "regrettable misunderstandings."

to the Great White Father to Pay Their People for the Slaughter That Shocked the Country --and Which They Survived

DAY, MARCH 8, 1938

Rollin' Along

By W. A. S. Douglas

MEMORIES of defeat in battle form one of the chief stock-in-trades of nations in stirring their soldiery to fierce combat. I remember as a bugler boy in South Africa that the great rallying cry was "Remember Majuba." The Boers in the late eighties had such a sound trouncing at the hands of the British forces as was the unit commanded by General Buller which was wiped out by the Boers at the Battle of the Little Boer War. Similarly it was in 1876—which engagement it was that she made a fearful snowfall.

It is a spirit of revenge which one does not expect to see in this country but which, when you come down to fundamentals, seems as deeply rooted as the memory of an insult in an elephant. And the most outstanding example is the massacre by the Seventh United States Cavalry of the Sioux Indians, men, women and children, at Wounded Knee Creek, S. D., December 29, 1890.

A few weeks ago five ancient and battered veterans of that slaughter came to Washington.

NOT LONG ago the first news of the massacre, who presented the tribe's claims.

into a Sioux reservation in Dakota and finally reached the attention of Dewey.

camp at the top of the page, he shows the soldiers whom are most in a circle almost surrounded by cavalrymen.

aging was all company in jackets, hats, and boots.

Indians Tell Story of Massacre by Army

Washington, D. C. (AP)—Five Sioux survivors of the Wounded Knee massacre of 1890 told a congressional committee Monday that soldiers used bayonets and children with tomahawks and knives.

They said they could not remember the names of the men who shot them.

They said they were in a camp at the top of the page, he shows the soldiers whom are most in a circle almost surrounded by cavalrymen.

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Indians Ask Cash For Army Massacre, Sioux Leaders Describe Killings, Termed Custer 'Revenge'

"We sit in big circle with two rows of soldiers surrounding me. Bang! just like that. Bang! it all come at once. I see an old woman at my feet. Bang! a woman dead, but her little boy is still nursing at her breast. James Pipe-on-the-Head, a bold, pecked Sioux leader, was carried back almost a half-century yesterday as he dramatically described the revenge for the slaying of General Custer.

STB INL FOR

Asks \$1,000 Each
Speaking through Pipe-on-the-Head, a messenger, the Indians did the bill heard that a started and concluded, killing thirty of men in the valley as of Indians.

"Wounded Knee Massacre"



The weapons were ready and waiting.

Asks \$1,000 Each

Speaking through Pipe-on-the-Head, a messenger, the Indians did the bill heard that a started and concluded, killing thirty of men in the valley as of Indians.

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Called Revenge

THE FIELD ARTILLERY JOURNAL

VOLUME 29

JANUARY-FEBRUARY, 1939

NUMBER 1

WOUNDED KNEE A Look at the Record

BY BRIGADIER GENERAL E. D. SCOTT, USA-RET.

During the spring and summer of 1938, newspaper headlines, introducing articles on the claims of certain Indians against the United States Government, referred to the Battle of Wounded Knee as a "massacre" by United States troops.

The troops involved were the famous Seventh Cavalry, and the equally famous "Capron's Battery." Light Battery E. First Artillery. Present at the action, commanding a platoon of the latter, was a distinguished field artilleryman, now Colonel Harry LeRoy Hawthorne. USA-Ret., wearer, with seventeen others, of the Congressional Medal of Honor for conduct at the engagement, "above and beyond the call of duty, in action against the armed enemies of the United States." Furthermore, he bears to this day another distinction of that battle—the scar of a severe wound.

THE FIELD ARTILLERY JOURNAL joined with the *Cavalry Journal* in asking one of his later battery-mates, Brigadier General E. D. Scott, to examine the official records of the engagement, and to write an article therefrom, summarizing the events leading up to the action, and dwelling particularly upon such related matters, before and after, as may illustrate the intents and purposes of the participants. THUS—

PRIOR to the Civil War the territory of the great Sioux nation extended from the Platte to the Canadian border, and from the Mississippi on the east to the Rocky Mountains on the west. Settlers poured into the eastern part of this region; a bloody war broke out which ended in the Indians being driven to the west of the Missouri.

The Union Pacific built along the southern border of their lands; gold and silver was found in what is now southern Montana, and the nearest route thereto lay across the Sioux country from the railroad settlements in what is now Wyoming. The miners and settlers took that route, the Indians resented the encroachment, and the '50's and '60's were marked by more than fifty hostile demonstrations and much bloodshed.

In 1868 a new treaty was entered into with the Sioux, replacing that of 1851 which had fixed their limits as above described, and this moved their western

limit to the east of the Big Horn Mountains, thus clearing the routes to Montana. It also guaranteed to the Sioux the country east of the Big Horns as a hunting country in perpetuity. But gold was discovered in the Black Hills and 1874 and 1875 saw another rush of settlers into the heart of the Sioux country that the Government seemed unable to prevent. In 1876 a great part of the Sioux went on the warpath, the trouble culminating in the slaughter of most of the 7th Cavalry in the Battle of the Little Big Horn, in Montana. Another treaty limited the Sioux to what is now South Dakota west of the Missouri, and ceded to the Government the major part of the Black Hills region, which was then formally opened to settlers.

In 1887 another treaty threw open to settlement the whole region between the Big Cheyenne and White Rivers, and north of the Black Hills to the

THE FIELD ARTILLERY JOURNAL

North Dakota line, reducing the Indian country by half. This was more generally resented by the Indians than anything that had gone before. It not only took away their best lands, but split them in two groups separated by sixty miles of white man's land. Moreover, it was never admitted that the Indians who participated in making this treaty had authority to do so from the tribes. The Indians were slow to vacate their lands, the settlers cautious about moving in to occupy them.

The wholesale reductions of the Indians' lands were no doubt an injustice to them and occasioned many hardships. But there is another side to the picture. The day of the buffalo was over; deer, elk, and antelope were few. In other words, meat, the principal diet of the Indians, could no longer be had by hunting. And with the game went the materials for clothing, bedding, tepees. These needs would have to be met by farming and stock raising, and the lands still left were vastly more than necessary for the purpose. The Government had not been slow to recognize that the Indian must be trained to be self-supporting under a new habit of life, and the later treaties had provided for the sustenance of the Indians while they were becoming adjusted. The policy of aid was very

comprehensive; lands were allotted, brood cattle, horses, and sheep supplied, farming machinery, seed grain, and the like. Farmer instructors were scattered about freely. That the policy had in time a measurable success is shown by the fact that in 1910 half the Indians in South

Dakota were taxpayers.

But the transition period was a hard one. The agencies were few and far between and the Indian bands were widely scattered. In a quite eloquent statement of grievances a chief said that ninety miles was too far to go for rations. One must agree with him! Issues of clothing and bedding were quite inadequate for the climate. The Sioux actually had a farmer tradition—vegetables and corn — but that

was in their old home of Minnesota and eastern Dakota, not on the 3,000-foot tableland they now occupied.

But their principal grievance was in connection with rations. Beef was supplied on the hoof; the Indians were wasteful; the days after issue were days of feasting followed by famine before the next issue. Sometimes beeves were issued to carry over for the winter; a 1,000-pound beef in November became a 600-pound beef by February—if he lived that long. The entrails of animals were always a

Awards of the CONGRESSIONAL MEDAL OF HONOR

for acts performed at
Wounded Knee Creek,
December 29, 1890

William G. Austin, sergeant, Cavalry
John E. Clancy, musician, Artillery
Mosheim Feaster, private, Cavalry
Ernest A. Garlington, first lieutenant,
Artillery
John C. Gresham, first lieutenant,
Cavalry
Matthew H. Hamilton, private, Cavalry
Joshua B. Hertzog, private, Artillery
Harry L. Hawthorne, second lieutenant,
Artillery
Marvin C. Hillock, private, Cavalry
George Hobday, private, Cavalry
George Loyd, sergeant, Cavalry
Albert W. McMillan, sergeant, Cavalry
Thomas Sullivan, private, Cavalry
Frederick E. Toy, first sergeant,
Cavalry
Jacob Trautman, first sergeant,
Cavalry
James Ward, sergeant, Cavalry
Paul H. Weinert, corporal, Artillery
Herman Ziegner, private, Cavalry

WOUNDED KNEE

dainty to the Indian palate, but the thought of it was repugnant to some of the authorities in Washington—a formal order was issued forbidding their use as food, and directing that they be destroyed by fire. The agents and their Indian Police did what they could to enforce what must have seemed to their charges the most whimsical of requirements. There was plenty of opportunity for graft among agents, contractors, and traders, and no doubt that it existed, the Indian being the loser. The Government sought to insure justice to the Indians by having an Army officer present to witness issues, in each case to make written report. Some of them are remarkable indictments of conditions; few are indorsements. Some state (1890), that the issue witnessed amounted to about half that of the Army ration. The years 1889 and 1890 were very dry and crops failed in consequence. But late in the fall of the latter year, the Congress had failed to make the allotment of funds for feeding the Indians that should have been available on July 1st. That meant months of semi-starvation, and the Indians could hardly be blamed for eating ponies and farm stock—or even for helping themselves to a few from the settlers herds. That second summer of drought and suffering must have built up in Indian psychology a condition fertile for trouble—just such a condition as found expression in the French Revolution.

The missionaries had long been active among the Indians and doubtless the latter had discussed at length the Messiah who came to earth to bring peace and goodwill to all men—friend of the poor and downtrodden. And then, out in the Rockies, there arose a Medicine Man, one of their own race, who proclaimed the coming of an Indian Messiah who would send the white man back whence he came, and restore the buffalo to the range

and the Indians to their ancestral homes and customs. The news spread to the east and the idea took hold on the Indian imagination. Dancing was a form of worship common to all Indians—as to primitive peoples the world over—and a new dance was devised to honor the new Messiah. It was called by the whites, "The Ghost Dance." Its practice spread all over the Sioux country and caused grave apprehension to the authorities. All Indian dances are religious and for a purpose—to bring rain, to cure an epidemic, to insure good crops, to insure successful war, and so on. And every Indian has his mind on the object of the dance—quite obsessed by it, he may dance till he drops. But before that he may develop a spiritual exaltation that renders him dangerous should anyone slip him the idea of a short cut to the objective by sudden and violent action against some person or persons. Herein lay the danger, and the authorities sought to thwart it by forbidding the dance. Of course the order could not be enforced, except in the vicinity of the Agencies, where the Indian Police had some authority. It was ignored by the bands scattered over an immense territory. Some Indian agents and Army officers thought and said that the craze would soon wear itself out, but they were a minority.

On October 29, 1890, Mr. P. P. Palmer, Indian Agent at the Cheyenne River Agency, reported to the Indian Bureau on the activities of two minor chiefs, Big Foot and Hump, and again on November 10. Both reports were to the effect that these Indians were selling their cattle and buying Winchesters and ammunition with the proceeds, were doing much Ghost dancing, and that his police were powerless. Later the agent at Pine Ridge

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Agency, Mr. Royer, made a similar report as to his Indians, saying they "are dancing in the snow," and asked military assistance. About November 2 a petition signed by 102 Sioux Indians, setting forth their grievances, was forwarded to the "Great White Father." And from then on the wires to Washington were hot with alarming reports.

General Nelson A. Miles was then in command of the Division of the Missouri, his headquarters at Chicago. The Division comprised the Department of the Dakotas (General Ruger) at St. Paul, and the Department of the Platte (General Brooke) at Omaha. The latter comprised the Sioux country.

The Pine Ridge Indian Agency was, and is, about 20 miles north of Rushville, Nebraska. It is a few miles north of the southern line of South Dakota. About 90 miles east by northeast is the Rosebud Indian Agency. Each is the administrative seat of a large reservation of the same name, which were the principal scenes of the Indian troubles of 1890. Pine Ridge Reservation has an average elevation of 3,000 feet above sea level. Its main topographical feature is an east-west ridge from 3,000 to 3,500 feet elevation along its center, from which several small streams flow north, northwest, and west into the White River. The latter rises in Nebraska, flows north about 40 miles west of Pine Ridge Agency, and northeast and east to the Missouri. It is a considerable stream with occasional practicable crossings. West of it are the Bad Lands, thirty miles from east to west, more than a hundred from south to north. At their western base is the south fork of the Cheyenne, roughly paralleling the White. Beyond that, less rugged country rises gradually into the Black Hills.

The Bad Lands were the nearest and about the only refuge for disaffected or criminal Indians, and the policy of the

Government was to keep all Indians east of the White River, whose crossings could be easily watched. Pursuit of Indians in the Bad Lands was unlikely to be successful. The country is exceedingly rugged.

The reservation terrain is in general rolling, with many sharp ridges; grassy, with scrub pine on the ridges and brush in the ravines. The streams are generally small, with mud bottoms and soft banks, passable only in places. Roads were merely dirt trails, following the lines of least resistance.

When disaffection began in the fall of 1890 troops were disposed with a view to protecting the agencies and preventing the Indians leaving their reservations. Reinforcements were sent from other Departments; Nebraska and South Dakota placed their militia where they could best protect their own settlements. Among the reinforcements were the 7th Cavalry (less 4 troops), and Light Battery E. 1st Artillery. These arrived by rail at Rushville, and on the night of November 25-26 marched to Pine Ridge Agency, where part of the 9th Cavalry and 2d Infantry had preceded them.

Early in December the battery received six 1.65-inch Hotchkiss guns (2-pounders) with packs, mules, etc., and under the direction of Lt. Harry L. Hawthorne, quickly prepared itself for service with the cavalry.

On December 14 an attempt to arrest Sitting Bull near Standing Rock Agency on the Missouri resulted in a fight in which he was killed with several of his followers and an equal number of Indian Police. One of his followers, the Big Foot referred to above, immediately moved away from there, with his band, bag and baggage. Hump's band joined him. He was located about December 22, and surrendered to General Sumner. But that night he quietly slipped away again.

WOUNDED KNEE

It was believed that he was heading for the Bad Lands. The 9th Cavalry and one platoon Battery E, 1st Artillery (Lieut. John L. Hayden) was sent from Pine Ridge Agency to the mouth of the Wounded Knee Creek to watch the crossings of the White River, and Major Whitside, 7th Cavalry, was sent with Troops A, B, I, and K, one platoon of Battery E, 1st Artillery (Lieut. H. L. Hawthorne), and Troop A, Indian Scouts, to the crossing of Wounded Knee Creek about fourteen miles northeast of Pine Ridge Agency. He established camp with heavy tentage a few hundred yards south of the crossing, and sent Indian scouts to search the country to the north and east.

On December 28 this detachment was sitting about waiting for dinner when an Indian scout, Little Bat, came in with the information that Big Foot's band was on the march west, on the Porcupine Creek, off to the northeast. The command mounted and marched at once. A rapid march of about seven miles brought the band into view. Its wagon and pack train halted at once, the warriors formed line and moved towards the troops as though to attack. Their advance was at a walk, as half the Indians were on foot, alternating in the line with the mounted ones.

Major Whitside dismounted and formed line on a low crest. Lt. Hawthorne wished to place his guns on a knoll nearby whence he could command the cavalry position, the approaching Indians, and their trains, but he was overruled; Major Whitside required him to place them in front of the center of his line of cavalymen.

When the Indians had come within hailing distance. Major Whitside went forward a little with another officer and an interpreter. The Indian line halted and several approached the Major, one of them stating he was Big Foot's

representative. The Major refused to deal with a representative, and insisted on Big Foot appearing. It seems that warrior was sick and in a wagon. He was brought, and in answer to the Major's demand as to whether he meant war or surrender, he said the latter. Meantime a party of mounted Indians started around the flank of the cavalry, and the Major demanded that he recall them, which he did. More talk ensued as to the arrangements for the march back, and Big Foot sent for his trains. While they were coming up some of the Indians left their line and crowded around the guns—something new in their experience, and with which they seemed delighted. Perhaps those guns had something to do with the friendly and reasonable spirit displayed. But the Indians were probably quite willing to be captured—they were without food of any sort, and a fight with superior numbers of soldiers did not promise to secure any.

Indians on the reservations habitually wore ordinary civilian clothing; these Indians were stripped to breech clouts and leggins, were painted, and carried Winchester rifles with plenty of ammunition. Major Whitside would have liked to disarm them on the spot but this might have brought on a fight. He did well to induce the Indians to march back with him to his camp on Wounded Knee.

The march was uneventful. Indian scouts and part of the cavalry led, the Indians with their trains followed, the rest of the cavalry and guns brought up the rear. The Indians seemed in high good humor, talked and laughed, smoked cigarettes. They were assigned an area near the cavalry camp, counted—120 men, 230 women and children—rations were issued to them, and they proceeded to settle down in camp. They had few of the conventional tepees; most of their shelter

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was in the form of wickiups, a few light stakes covered with brush or pieces of old canvas. The area, as shown on the maps made at the time, was kidney-shaped, about 200 yards long and 100 wide. It must have been very crowded. They turned their ponies, about 150 in number, loose to the west, but they were held in a herd by a military guard during the night. The Indians said they did not have enough shelter, and some Sibley tents were given them, but when the camp was searched the following morning there was no indication that they had been used. A wall tent was set up at the end of the line of Scouts' tents for Big Foot, who was really sick with pneumonia. The surgeon, John van R. Hoff, gave him professional services in the night and the following morning.

Major Whitside had sent word from the scene of the surrender to Colonel Forsythe, commanding the 7th Cavalry, at Pine Ridge Agency, and that officer marched with the remainder of his command, Troops C, D, E, and G, and the remainder of Light Battery E, 1st Artillery, to the camp. The approach was made after dark and in such manner as not to advise or alarm the Indians.

Between nine and midnight the operation was completed. Captain Capron had his battery together on a small knoll only 200 yards from the center of the camp area, and overlooking it.

Captain Myles Moylan, Troop A, was charged with the guard of the Indians, Troop I being added to his command. He established a line of sentinel posts, twenty in all, along the east, west, and south sides of the Indian camp area. The posts on the south side were across the ravine that limited the area in that direction. There was constant patrolling of the line during the night, and in the early morning the posts were reinforced by the men of the other reliefs. Security on the north side was provided by the camp and picket-line guards.

There had been no snow that winter; the weather had been still and cold, but clear; the moon was at the full on December 25. The sky may have been overcast, but even then visibility would have been good for some distance, making the guard duty relatively easy.

Wounded Knee Creek, at the scene of the battle, is small, and at the time had ice an inch thick. Its direction



GENERAL VIEW OF THE BATTLEFIELD

WOUNDED KNEE

is northwesterly. The principal trail or road from Pine Ridge Agency to Rosebud comes in from the southwest, crossing it, and then takes a more easterly direction. Near the crossing stood the trader's store, post office, and a few other buildings, and about 300 yards downstream, the church. A road passing the latter continues to the mouth of the stream. About 300 yards south of the crossing "Fast Horse Road" comes into the Agency road from the northwest. The Agency road divides a short distance south of this junction, descends by coulees into a ravine and out again, reuniting on the other side.

Between the Agency road and the stream the terrain is flat and not very high above the level of the latter. West of the road the terrain rises quickly into ridges and spurs from the ridge two to three miles west that is the divide between the Wounded Knee and the White Clay creeks. The ravine above referred to heads about two miles west of the road, runs almost due east, has numerous lateral branches, especially on the north side, and all contained much brush and scrub trees. A characteristic of the prairie coulee or ravines is their sudden beginning by a vertical drop of one or several feet, directly from the prairie. Such places were made-to-order rifle pits, and were so used by the Indians.

The creek itself had a border of fair-sized trees and brush; and hills in general carried a thinly scattered growth of scrub pine and cedar.

The ravine figured so prominently in the events of December 29, in all testimony relating thereto, and in all tales told, that it will be simply referred to in this narrative as "the ravine"—no chance of mistaken identity.

The plan for the disarmament was to assemble the bucks in the open space—

scarcely a hundred yards square—between their camp and that of the cavalry, and there induce them to give up their arms peaceably. To convince them of the futility of any resistance, Troops B and K were formed up dismounted across the north side of the space; Troop G was formed up mounted, east of the space and little more than a hundred yards from it; on the south the sentinel line was in position across the ravine, with Troop A, Indian Scouts, in line, mounted, behind them, and Troops C and D still further back, in line, mounted. West of the Indian camp the sentinel line was still in position, while about two hundred yards to the northwest, on a small knoll, the four guns of Capron's battery were in position, flanked by Troop E, mounted, on the right and one-third of Troops A and I on the left, also mounted.

All of these troops were in full view from the Indian camp, and within three hundred yards. What the Indians thought of it all will never be known; perhaps among them were some bright enough to see that if trouble started a breakthrough was not wholly impossible, fear of killing comrades across the circle might make the fire of the soldiers desultory and ineffective. Certainly the squaws worked hard and persistently up to the time the firing began, to saddle the ponies and load the pack ponies, travois and wagons—they expected to go somewhere, and soon.

The men of the guard were in a very precarious position should any fighting begin, and this was reflected in their losses: Troop A, five killed and five wounded; Troop I, four killed and six wounded.

Paralleling the south side of the cavalry camp was a line of Sibleys, the camp of Troop A. Indian Scouts. At the west end of this was the wall

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tent, erected by the troops for the use of Big Foot.

Just south of this tent Colonel Forsyth, Major Whitside and one or two others gathered, with two interpreters. The Indians, all in sheets or blankets, came from their camp and formed an irregular quarter-circle before them, facing east and north. The bucks so assembled numbered 106. The missing 14 were probably in camp, and would account for the firing there during and after the melee. They could hardly have escaped through the cordon of sentinels during the night. This was about eight o'clock on the morning of December 29, 1890.

Colonel Forsyth talked to the Indians at some length, through an interpreter, explaining to them that they must surrender their arms. They talked this over among themselves but appeared to arrive at no decision. At last twenty were told off to go into the camp and bring their arms. Some went part way but circled back and mingled with the crowd; most of them went to the camp, returning with two broken carbines, and said these were all the arms they had. They could not have been under the impression that only Government arms were meant, for more carbines were found in the camp when it was searched.

Colonel Forsythe and Major Whitside talked the situation over, decided nothing could be accomplished this way, and had Big Foot brought out of his tent to talk to his people. He was supported by an Indian and the hospital steward. Big Foot talked with his bucks and finally stated that they had no arms, that the latter had been destroyed on the Cheyenne, where they had been some days before. This was an astonishing statement in view of the fact that the whole band had marched into camp fully armed the evening before. The Chief

was very sick; his mind may have been wandering; his bucks were obdurate and perhaps thinking of his leadership as being about at an end anyway—any answer was good enough.

Bucks were constantly passing between the council and the camp and seemed to be exciting the squaws, which may have had some connection with their efforts to get the pony herd ready for the road. It was decided to stop this circulation and to search the camp. Troop B deployed from its right on a line facing east and about half-way between the Indians and their camp; Troop K passed to the east of the gathering and deployed on the south in similar position, facing north. The men were at intervals of two yards, and there was a gap of about twenty yards between the troops. Curiously. Surgeon John van R. Hoff gave the only detailed description of this movement, and he noted that in Troop K there was an "involuntary" closing in to the left, but the men on the right maintained the frontage with wider intervals.

Captain Wallace (K) took six or eight men and began at the southeast end to search the camp; Captain Varnum (B) took a similar party and began to search from the north end. The squaws did all they could to hide weapons—in their clothing, under them as they sat on the ground; one was too sick to move, but a new Winchester was taken from under her. One of the parties took only firearms, the other took bows and arrows, knives, hatchets as well. Captain Wallace picked up a stone warclub and carried it during the search. It was found near his body after the fight and was the foundation for the story that he was killed by it. He was killed by a bullet through the stomach. Part of the arms were carried to the battery position by men sent by Captain Moylan from the "One-third

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A & I" shown on the map, part were carried to a wagon near the cavalry camp, placed there for the purpose by Lt. Guy Preston. He had received 29, mostly old—some of them carbines from the Custer fight—when the firing broke out.

All this must have taken up a lot of time; it is curious that no question of time was asked by the Board in its investigation, and no mention made by witnesses except as to the eight o'clock formation, and as to the attack on Troops C and D two miles west of the battlefield, at eleven o'clock. Colonel Forsythe in his formal report written December 31, states that the fighting began at 9:15. "twenty minutes hot fight," and forty minutes "skirmishing." This refers to the fighting about the camp only.

It was now decided to search the bucks, many of whom had by this time settled down on the ground. Major Whitside and Captain Varnum began passing them between them, one at a time. Search of the first three or four yielded one Winchester and many cartridges. The Major directed that the latter be collected; someone handed Captain Varnum an old hat; he and his first sergeant held it while it was filled; the Captain turned his head away and called to one of his men to bring a grain sack. Then, as he stated. " * * they all seemed to rise with a purpose of passing through to be searched, when I saw five or six bucks throw off their blankets and bring up their rifles. I turned to Major Whitside saying, "By God, they have broken," and the Indians faced my troop and began firing." Major Whitside states. "One shot was fired by an Indian, instantly followed by a volley from the others, who had jumped to their feet and thrown off their blankets." On the hillside across the ravine to the south.

Lt. Charles W. Taylor, commanding the Indian Scouts, was watching the scene from a distance of about 200 yards. "A buck threw off his blanket and fired a rifle, apparently at the group where General Forsyth was standing. Other shots were fired and the Indians threw off their blankets. Then there was a lull for a second or two, and the soldiers began firing."

Surgeon John van R. Hoff was near Big Foot. "At this moment a shot was fired while I was walking toward General Forsythe, with my back toward the Indians. I turned instantly and saw these Indians breaking from their center apparently in the direction of the gap between B and K Troops, firing continuous volleys as they advanced."

Lt. James D. Mann, Troop K, assisted Captain Wallace in the search of the camp. The next day he was mortally wounded in a brush with Indians, and on his death bed dictated to his brother his story of the fight. Surely full credence should be given it. The following is an extract:

"In front of me were four bucks—three armed with rifles and one with bow and arrows. I drew my revolver and stepped through the line to my place with my detachment. The Indians raised their weapons over their heads as if in votive offering, then brought them down to bear on us, the one with the bow and arrow aiming directly at me. They seemed to wait an instant. The Medicine Man threw a handful of dust into the air, put on his war bonnet, and then I heard a gun fired near him. This seemed to be the signal they were waiting for, and the fire immediately began. I ordered my men to fire and the reports were almost simultaneous."

Lt. Mann was on the opposite side of the Indian mass from the group about Colonel Forsythe, and when the

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first shot was fired the Indians were already—in part at least—faced toward the troops between them and the camp.

The Medicine Man had been haranguing the Indians for some time and dancing. The interpreters said he was stirring them up, telling them they were proof against the bullets of the white men, that their own bullets would go true to the mark. One close-by witness describes the tenseness that grew up, * * "the dusky faces of the interpreters were ashy gray." There can be no doubt whatever that the firing was begun by the Indians, nor can there be any doubt that it was wholly unexpected by the troops.

One of the party with Colonel Forsythe was Father Francis M. J. Craft, a Catholic missionary priest, who had been ten years with the Indians of the Northwest. He happened to be at Pine Ridge Agency on a tour of visits to Catholic missions and schools, knew Big Foot and his band well, and went over to Wounded Knee in the hope of being helpful. "Malicious whites on and near all Agencies, during the present excitement, have by misrepresenting the intentions of the Army, caused such a state of alarm and suspicion among the Indians as to make it possible for the least excitement or misunderstanding to precipitate serious trouble."

His description of events is pretty much like that of others, and he reasoned with some of the Indians himself, noting among them some of the worst characters in the Sioux reservation. When some Indians raised their rifles he spoke to them, but "no one seemed to listen"; one, said to be a son of Big Foot, fired, and others followed his example.

Father Craft was severely wounded almost immediately—stabbed in the back by an Indian.

One of the interpreters, P. F. Wells, a half-breed, was also attacked by an

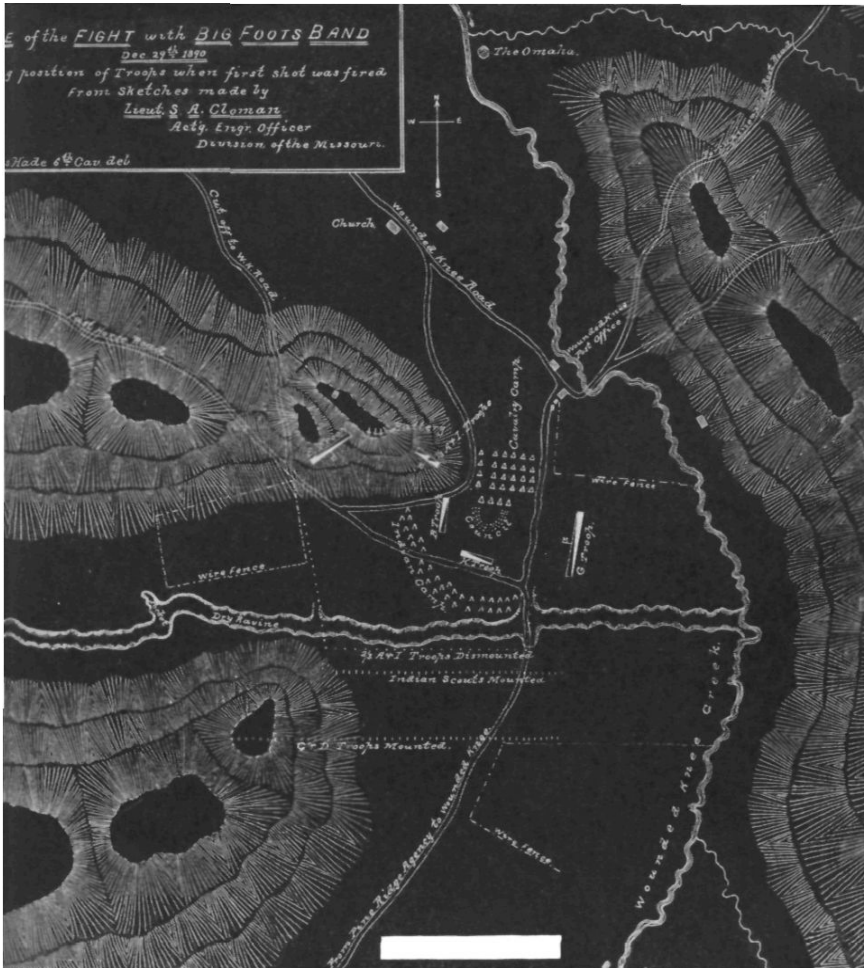
Indian with a knife. He knocked the Indian over with his rifle and then shot him, but not before he had lost the end of his nose by the knife.

The other interpreter, Ward, was also attacked by an Indian with a knife, and was unable to use his gun. They grappled and went down, the Indian on top. A soldier killed the Indian with his revolver.

Wounded Indians who continued firing were, of course, despatched; those who ceased firing were cared for. One such asked an interpreter just after the melee ended, the identity of a body lying near. Being told it was that of the Medicine Man he spoke as though to the corpse—"If I could be taken to you I would stab you." Then to the interpreter, "He is our murderer; only for him inciting our other young men we would all have been alive and happy." His statement was taken later in the hospital and embodied in the proceedings of the Board.

An old squaw said, "The treacherous ones are of Big Foot's band; we of Hump's band honestly wanted peace."

Apparently the Indians made the mistake of trying to shoot it out with the soldiers—they could have dashed through that thin line and reached their camp before the soldiers could have gotten in a second shot. It was less than fifty yards. Had there been no firing and the Indians simply made a dash for their camp and the shelter of the ravine beyond, probably not a soldier would have fired a shot—there would have been no time for orders and they had none. In the space of a minute the Indians could have been in some sort of cover, ready to fight. Perhaps they were too sure of their repeating rifles; perhaps they were firmly imbued with what their medicine man had been telling them for an hour or more—that the white soldiers' bullets



SCALE: One inch equals 137.5 yards, approximately

NOTES: The line of tents closest to the "Council" was that of the Indian Scouts. Between it and the Cavalry Camp proper was the initial position of Troops B and K, respectively from left to right, and in line abreast. The line of dots indicating "2/3 A and I Troops Dismounted" actually did not extend as far to the west as shown, during the engagement, although it may have done so when posted the night before. Lt. Garlington's report shows this line was close to the west side of the camp. His troopers made an effort to prevent the Indian women from preparing for the road by throwing off the saddles and packs they had made up.

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could not harm them. Whatever it was they paid dearly; their heaviest losses were right there.

This first phase of the fight was unique for modern times; soldiers and Indians stood on their feet and shot it out face to face. The soldiers had the advantage of position, being at intervals of two or more yards on a quarter-circle. The Indians were within that curve and closely crowded. The soldiers had the disadvantage of the single-shot carbine, the Indians the advantage of the seven-shot repeating rifle. But the latter advantage ends with the emptying of the magazine; it is difficult to use the rifle as a single-loader and a soldier handy with the carbine could get in several shots in the time necessary to fill the magazine.

There is much uncertainty as to how long this first phase lasted, estimates varying from "a few minutes" to "eight or ten minutes." It would seem that the repeating rifle furnishes a fair yard-stick. The Indians were in a crowd and could not all fire at once; they expected their bullets to kill the soldiers, but most of them stayed on their feet and continued firing; they believed themselves immune to the soldiers' bullets, but found themselves being killed fast; attempts to reload their new Winchesters must have been fumbling at best; one may reasonably conclude that fighting was over for the Indians when they had emptied their magazines, perhaps in two or three minutes. Bewildered, disillusioned, the remaining Indians—more than half—rushed through the line of soldiers toward the only refuge in sight, the brushy ravine beyond their own camp. Some few wounded continued to fire from the ground until killed; one kept up a hot fire from a tepee, a soldier ran across to it with the remark that he would bring him out, slashed an opening in the tepee with a knife, and was promptly shot

and killed. The battery then disposed of the Indian by two or three shells fired into the tepee. A number of Indians fired from concealment elsewhere in camp but were soon killed.

Things happened fast when this melee began. On the north, Lt. Nicholson, a staff officer, "made a break and went around in rear of E Troop, and watched the fight from the battery." Colonel Forsythe also made his way to the battery. On the east, Troop G broke in the center; the right platoon led by Lt. T. Q. Donaldson went to the rear and "around the wire fence," dismounted, and returned to the field to fight on foot. The rest of the troop went to the left rear into the ravine and also dismounted to fight on foot. This troop was the only one in the line of fire of Troops B and K during the melee, and it did not have a single casualty. On the south, flying bullets caused the sentinel line to run forward down the slopes of the ravine, the nearest shelter. The Indian Scouts scattered, part following the sentinel line into the ravine, part going further to the right where Troop G was preparing to fight on foot, part going to the rear and left seeking shelter in the small ravines. When bullets reached the line of Troops C and D they began a rearward movement which was accelerated when a 1.65-inch shell fell close. Captain Godfrey said. "I ordered the troop to rally behind a hill to our left rear." Troop C conformed and the two formed a dismounted line on the crest of the hill. Squaws and children rushed out of camp to the west, southwest and south, seeking shelter in the ravines. Quite a number of squaws, and some bucks, managed to start the pony herd off to the northwest along the Fast Horse Road. They passed Troop E in a cloud of dust, into which that troop, now dismounted, fired in an

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effort to stop them. Some Indians fired back, one of them a squaw—and Lt. Sedgwick Rice prevented his men from shooting her. The battery fired a few shots ahead of the herd and it came to a halt less than a mile from where it started.

Some of the Indians who fled to the ravines hid at once, but many kept on up the big ravine and many crossed it and continued their flight up the slopes to the south through the sentinel line. Some of these groups were fired on by the battery and by Troops C and D—bucks being hardly distinguishable, and there were some of the latter.

Captain H. J. Nowlan, Troop I, had command of what was left of the sentinel line on the south side of the ravine, and his testimony gives a clear picture: "Indians rushed down in the ravine, up and down it; not a shot was fired at them but they were allowed to escape. But right behind them came the bucks and the cry went up from officers and men. 'Here come the bucks, let them have it,' and our fire was returned by the bucks." Which goes far to establish what is said above about the Indians trying to shoot it out and *then* making their dash for shelter; the women and children had got clear of the camp before they did. And certainly most of these found dead or wounded in camp must have been the victims of Indian bullets, since the Indian fire directed against the men of Troops B and K—which was practically all of it—necessarily passed through the Indian camp, directly behind the soldiers.

Major Whitside had gone to the south side of the ravine, to the second position of Troops C and D. There he directed Captain Jackson (C) to take his troop up the hills "and round up anything I found there," and bring in the Indians' pony herd, which he pointed out, then "a couple of miles to the northwest." Jackson started due

west "up the bluffs" with his troop and had to go two miles to reach the head of the ravine. There he found some Indians well protected in the sharp breaks of the ravine's edge. He dismounted and attacked on foot. The fire fight lasted some time and one soldier was killed. Lt. Taylor came up with two of his Indian Scouts, and these crept near enough to open conversation with the Sioux. "It took a half hour's talk and I had to withdraw my men before they would come out." There were eight bucks, of whom five were wounded, and seventeen women and children, about half of them wounded. Jackson at once sent a request to Colonel Forsyth for an ambulance and a wagon for the wounded. Meantime first aid was given to all.

Before the arrival of Major Whitside on the position, Captain Godfrey had sent Lt. S. R. H. Tompkins with 12 men toward his left front to prevent Indians making their way up the ravine into the hills. Before he got in position the party Jackson found at the head of the ravine must have gotten by, and also a larger party that took up a position in one of the lateral ravines and had to be dislodged by artillery fire. But there were still armed Indians coming up and Lt. Tompkins' party had some skirmishing which resulted in three bucks being killed.

Major Whitside directed Captain Godfrey to pursue, with the remainder of his troop, some Indians seen going up the hills to their rear. He did so but saw only one Indian, far off. He continued on to the Divide—a couple of miles from his starting point—and down the opposite slopes for some distance. It was on this scout that an incident occurred that was the cause of a special investigation. Godfrey started on foot with two or three men to search



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a brushy ravine head, and suddenly glimpsed blankets quite close, and opened fire. No reply coming, they went in and found a squaw, a boy, and two small children, dead. Captain Godfrey and his men were exonerated of the charge of wanton killing.

Returning toward camp he saw Captain Jackson's troop off to the north and joined him. Jackson was waiting for the transportation for his wounded prisoners. Jackson was the senior, and he suggested that Godfrey return to camp, scouting the big ravine as he went. Godfrey detailed a few men to follow the bottom of the ravine, he, with the others, to follow them on the high ground. They were just starting off when four or five mounted Indians approached from the direction of the Agency (west), and waited to see what this might portend. These Indians were armed and one wore the badge of the Indian Police. They rode up with words of friendly greeting and shook hands with the two officers. One

gave Captain Godfrey's hand such a pull as nearly unhorsed him. He asked the policeman what the man meant by it, and received the peculiar reply, "I don't know; he is my father." Then they rode off in the direction from which they came, turned at about a hundred yards and fired—except the policeman, who was waving his arms and appeared to be trying to stop them. These Indians then galloped off and disappeared but presently some fifty or sixty came in sight from that direction, deployed in line and at the gallop. Others appeared approaching on either flank. The Indians began firing; one of the soldiers was wounded; Captain Jackson mounted quickly, abandoned his prisoners, and retired to a better defensive position about a quarter of a mile to the rear and north of the ravine, where he again dismounted to fight on foot. He had thirty-four men, Godfrey fourteen—allowing for the minimum of horse-holders, about forty soldiers awaited the attack of

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mounted Indians whose numbers had now increased to about one hundred and fifty. But the attack was not made; Troops E and G were in sight, "coming up on the jump" and most of Troop A. Indian Scouts, and the hostile lines faced to the rear and galloped off.

It was learned later that these were Brule Sioux from Pine Ridge Agency. Of course all Indians thereabout must have known of Big Foot's surrender, and been greatly stirred up about it. The news of the fighting might have reached them, but that seems scarcely probable in the time available. It was thought, and with good reason, that no particular band was involved; that this was a gathering of hotheads who started off with some idea of a relief expedition. There is a possibility that some contact was made with Big Foot's band during the night and that the latter expected some such relief party, which might explain the long delay about the surrender of arms and the frantic efforts of the squaws to get the train packed and ready to move.

Immediately after the melee Edgerly (G) and Taylor (Indian Scouts) had assembled their commands and proceeded to the vicinity of the battery. There Colonel Forsyth directed Edgerly to proceed with these two troops and Troop E to the west, to round up the Indian herd and look for hostile Indians. He quickly did the former, left some soldiers and scouts in charge and went on, arriving in time to save Jackson and Godfrey from their precarious situation, as described above.

One batch of Indians had established themselves in the head of a small ravine, about half a mile up the big ravine, and a lively fight went on for some time. Finally Colonel Forsyth sent one gun under Harry L. Hawthorne to dislodge them. He went into action at 500 yards and the Indians were soon finished off.

Hawthorne was severely wounded early in this action.

Besides the small engagements above described there were many smaller exchanges of shots on or in the vicinity of the battlefield. It must be remembered that smokeless powder had not been heard of at that time. When an Indian fired from concealment a large puff of smoke betrayed his position, and brought shots from all who saw it. Should the soldiers have waited and tried to learn if any women and children were in the vicinity of that smoke? The idea is absurd. There was an armed buck at that smoke, trying to kill one of them and he might succeed if there was any delay in despatching him.

During this mopping-up officers gave repeated warnings to their men against shooting women and children, and it is highly improbable that a single one was intentionally shot. There was one case of intentional shooting of a wounded buck by a very young soldier. His troop commander gave him a savage rating on the spot. The boy burst into tears and said he understood a wounded Indian was as dangerous as any.

From the testimony of several witnesses it is possible to give a fair picture of what happened at the camp after the melee. The mass of the Indians rushed through Troop K, through the Indian camp, to the ravine, but some hid in the camp and continued firing from concealment there. Troop K fell back on the cavalry camp, thus clearing the way for the artillery to end the activities of an Indian in a tepee, as related above. The men of Troop K were now, of course, facing south and southwest and their fire against these Indians was for the *first time* in the direction of other troops—the sentinel line from A and I—the Indian Scouts, and Troops C and D. Lt. Garlington was in charge of

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the sentinel line on the west and with the men near him, dropped into a sunken road. He was wounded by an Indian firing from the ravine after the rush through, and the hospital steward was killed near him. The action by the sentinel line on the south is described elsewhere. Just when or how the heavy losses by the sentinel line occurred cannot be determined, but when the Indians opened fire those men were standing in groups of three, along the arc of a circle over which the fire swept, and from 100 to 150 yards from the rifles. It is much more likely that their losses were greater than during the subsequent intermittent firing.

Troop B suffered heavily in the melee, but the rush of the Indians through Troop K freed them of pressure, and Captain Varnum led them to their picket line, mounted up, and reported to Colonel Forsythe, who directed him to "cover the hospital," and some hours later, to clear up a portion of the ravine.

He found many dead and wounded Indians and brought out nineteen unwounded women and children.

The losses suffered by these two troops—nearly one half the total—and those inflicted by them on the Indians, were almost wholly during the progress of the melee.

Two-thirds of Troops A and I, in groups of three or four, formed the sentinel line behind the Indian camp, wholly in the field of fire of the Indians during the melee. Their casualties nearly equalled those of B and K.

After the melee, in the mopping up of the camp, the fire of these lines into it endangered both, but it was not heavy and was soon ended. *None* of the other troops fired into the camp area.

Captain Capron "opened fire with all four guns as soon as the field was sufficiently cleared as to allow us to

shoot without injury to our own men." His first target—"for my own two guns"—was at a "bunch of Indians firing on our troops," about 300 or 400 yards away. He fired at groups here and there over the field, but could not distinguish squaws from bucks. After the fight he saw a group of two bucks and one squaw, that had been killed by artillery fire, "2,000 or 2,500 yards from the battery."

The fire from scattered Indians finally ceased, with one notable exception; a lone buck in the head of a coulee kept up the fight until the troops had marched for Pine Ridge Agency! Colonel Forsythe stated this in his formal report of December 31; fire had failed to get or dislodge the buck and the Colonel considered him not worth the casualties that might follow an attempt to rush him.

Charges of inhumanity by the troops were refuted by every witness. Surgeon John Van R. Hoff was emphatic. "I saw none. All the field which was the center of active operations came under my observation * * * a considerable number of wounded bucks and squaws brought in had had their wounds dressed by company bearers." As to whether any soldiers were victims of the fire of the troops, "I have not the slightest reason to know or think so; it was possible, but I have no reason to believe it." And in his capacity of surgeon of the command he must have known the nature of all the gunshot wounds.

The fighting at an end, the troops gathered up the wounded Indians and their own dead and wounded, and marched to Pine Ridge Agency. They had one officer and twenty-six men and an Indian Scout dead; four officers and thirty enlisted men wounded. Sixty-two women and children and eighty-three bucks were buried in a common

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grave a few days later. Some of the wounded died later.

Some writers have chosen to animadvert on this abandonment of the Indian dead. But the troops had suffered a heavy loss, collecting the wounded and getting them ready for the march required some time; the march would require four hours, it was necessary that the command return to the Agency as soon as possible, not only to get proper medical attention for the wounded but to escape possible attack by the thousands of Indians within a few hours' march. There was only a short winter afternoon available—they made the best possible use of it. And actually, several thousand Indians decamped that night and were only returned to the reservation after several skirmishes.

On the following day, December 30, six of these troops of the 7th Cavalry were ordered out and before evening had scored another victory in a skirmish at White Clay Creek. Each had one or more casualties, the total being one killed and seven wounded, Lt. James D. Mann being among the latter.

There is nothing to conceal or apologize for in the Wounded Knee battle—beyond the killing of a wounded buck by an hysterical recruit. The firing was begun by the Indians and continued until they stopped it—with the one exception noted above. That women and children were casualties was unfortunate but unavoidable, and most must have been from Indian bullets.

Looking back from this distance in time, it seems curious that so little apprehension of danger was felt by the troops. Most of Whitside's officers spent the evening of December 28 in a Sibley tent, listening to Lt. Garlington's narrative of the Arctic Relief Expedition of which he had been a member. Had there been

any thought of danger, each would have been with his men.

Assistant Surgeon Charles B. Ewing, from Pine Ridge Agency, was with the group near Colonel Forsythe, and had got in his wagon to return when the first shot was fired.

The hospital steward and the regimental sergeant major, certain to be men of intelligence and common sense, had wandered into the camp during the search and were both killed.

The troops were at a strength of about 50 men. For the formation the cooks and a few others would normally have been left in camp, but it would seem that some, at least, of the troop commanders did not consider it necessary to turn out all available men. Captain Jackson had 34 and Captain Godfrey 14 men in their fight with the Brulé; each troop had had one casualty and Godfrey had detached Lt. Tompkins with 12 men. So the actual numbers of men present in ranks were 35 and 27. Definite figures cannot be had, but apparently A and I, the two guard troops, were the only ones in near full strength.

Father Craft, with ten years' experience among these Indians and well acquainted with this particular band, did not believe a break would come until it actually did.

The formation was one well designed to impress the Indians, but not at all suited for fighting them—would an old and experienced soldier like Colonel Forsythe have ordered it, had he even dreamed of armed resistance?

Not since the Battle of the Little Big Horn in 1876 had anything comparable happened. Then, most of the 7th Cavalry was killed, including its Colonel; at Wounded Knee most of a band of Indians was killed including its Chief—and by the 7th Cavalry.

No newspaper men witnessed the fight but they soon began arriving,

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and photographers as well. In their accounts the drama of the affair overshadowed the cold and simple facts that made up the true story. Hastily collected stories and "color" could not present a true picture. The writers could not be blamed; any reporter who sat down to analyze and weigh the "evidence" he collected would have been hopelessly late in getting the "story" to his paper, and soon be seeking a job elsewhere.

It is highly improbable that any of these young men were motivated by a desire to do an injury to the Army in general or the troops in this fight in particular, but the idea did creep into the press that the 7th Cavalry had at last got its revenge for the "Custer Massacre" of fourteen years before.

Many writers toyed with this idea in the years following, and many military men made indignant denials and defended the honor of the Army in the public press. Sometimes official records were drawn upon but more often only personal recollections.

Four days after the fight at Wounded Knee, President Harrison, shocked by the reports, directed "* * * immediate inquiry into the killing of women and children." A Board of Investigation began its work on January 7, on the spot. Its records are on file in the War Department, and it is from them that this article is written. No tale compiled in the excitement of the days following the fight could possibly be as accurate as one compiled from the sworn evidence of eye-witnesses, obtained on the spot by a tribunal following the cool and impartial procedure prescribed by law and regulation.

Wounded Knee and controversies arising therefrom long ago lost all news value, but there was something of a flurry in 1931 when a book entitled, "Massacre," by Robert Gessner, appeared.

It is a general attack on the Government's policies toward the Indians throughout our history. The part relating to Wounded Knee is a sob story containing more misinformation, misrepresentation, ignorance, and falsehood, than probably any story ever written. In proof of this let us analyze it a bit:

To begin with, he "drove very hard" and arrived at the scene "very tired." One gets the idea he is talking of December, 1890, and the idea persists until far on in the narrative; "As I sat in the Wounded Knee store an old soldier came in who was present * * *. During the past forty years he had never returned to the scene, but he had come on that day." So the reader at last learns that his visit was forty years after the battle. He gives the man's name as D. E. Babb—but the rolls of the troops at Wounded Knee, on file in the War Department, bear no such name.

He "sat by the fire and recalled the events of that day." But he knew the average reader is not critical, so he did not trouble to look up a map, inform himself as to the military dispositions prior to the battle, or the organization and equipment of the troops.

Big Foot led his band down through the Bad Lands, with the *four* battalions of the 7th Cavalry "in full pursuit."

No cavalry regiment had four battalions; two of the 7th were at Pine Ridge Agency from November 27 until about December 26, when one of them was sent to Wounded Knee; Big Foot was somewhere far to the east of the Bad Lands, and it was a mission of the military to prevent his reaching them.

But he gets a bit mixed and has the four battalions of the 7th in camp at Wounded Knee. And speaking of the Indians, "* * * they managed to worm themselves through a pass, leaving the desolate, barren Bad Lands, and came

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to camp at Wounded Knee."

Again he gets mixed up, as witness, "In the meantime General Forsythe and Major White (sic), with all of the battalions of the 7th Cavalry, surrounded Big Foot's camp, * * * the old chief willingly surrendered. He was not seeking a battle; he was only trying to find some forgotten corner of the earth where his band might worship unmolested."

Big Foot surrendered to Major Whitside nine miles northeast of Wounded Knee and was taken there by him.

"The troops got drunk at Christmas," and were still in that condition December 29.

That would have required a lot of whiskey, and it was many miles to any source of supply! And it hardly seems consistent with the "full pursuit" through the Bad Lands that terminated with the "surrounding" of Big Foot's camp on December 28.

"On the morning of the 29th a dozen drunken soldiers dragged Big Foot from his tent and killed him." This is perhaps the most atrocious of the many lies in the narrative. The proof is absolute as to the events preceding the fighting, and described herein.

He gives a thrilling picture of the fight, the troops firing indiscriminately at Indians of any age or sex, "Gatling guns poured in their fire," etc.

There were no Gatling guns with the troops. General Miles had declined the offer of some in a telegram to the War Department on November 23, in which he stated Gatlings were useless in fighting Indians.

"Two officers were wounded, twenty-five privates were killed and thirty-three wounded."

Actually, one officer and twenty-six enlisted men and one Indian Scout were killed, four officers and thirty enlisted men wounded.

But inaccuracy is nothing to Mr. Gessner. After giving the officer casualties as two wounded, he later describes Captain Wallace as being dead "with a tomahawk sprouting from his forehead." He also assigns him to the 9th Cavalry—no mistake in the figure; he spells it out, "Ninth."

Actually, Wallace was shot twice and had a bruise on the head which might have been inflicted by a stone warclub that lay near.

"Only one soldier was killed at the hands of an Indian."

But why continue? Not a statement of Gessner's that cannot be refuted by sworn testimony given forty years before "Massacre" was written. The pity is that such a foul libel on the Army of our country should be permitted in circulation.

Seven years after the appearance of "Massacre," Wounded Knee again made the front pages. Two Indians, alleged survivors of that battle, appeared before a Committee of the Congress and under the guidance of a Washington lawyer, told their stories. This was in support of a bill to reimburse the survivors and the descendants of Indians in that fight, in the sum of \$1,000.00 each, the estimated total being \$280,000.00.

The Indians at Wounded Knee brought on their own destruction as surely as any people ever did. Their attack on the troops was as treacherous as any in the history of Indian warfare, and that they were under a strange religious hallucination is only an explanation, not an excuse. They do not come into court with clean hands, though they may believe their recollections of what happened forty-seven years ago are accurate.

An officer and twenty-six enlisted men and one Indian Scout died on the field doing their duty. Three more enlisted men died next day. Four officers and thirty enlisted men were

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wounded on the field. Has anyone thought of compensation for twenty-nine bereaved white families and an Ogallala one? Or for the families of the wounded soldiers? Or for those killed and wounded next day on White Clay Creek, the direct aftermath of Wounded Knee? Or for the descendants of all these and the four hundred-odd soldiers and the hundred loyal Indians who risked their lives on that field?

Not that anyone has heard!

The "Survivors of Wounded Knee" are not entitled to one penny as "compensation." But an audit of the account "United States vs the Sioux Nation" would show a balance due the latter that would make the "compensation" claimed look like so much chickenfeed.

REFERENCES, BATTLE OF WOUNDED KNEE

1. Major S. M. Whitside, 7th Cav. Testimony before Board. Jan. 7, 1891.
2. Capt. Miles Moylan. Tr. A. 7th Cav. Testimony before Board.
3. Capt. Chas. A. Varnum. Tr. B. 7th Cav. Testimony before Board.
4. Letter to Chief Historical Section, GS. April 11, 1931.
5. Lt. W. J. Nicholson, Tr. I. 7th Cav. Testimony before Board.
6. Asst. Surg. John Van R. Hoff. Med. Dept. Testimony before Board.
7. Capt. Edwin S. Godfrey, Tr. D. 7th Cav. Testimony before Board.
8. Colonel Edwin S. Godfrey, correspondence.

9. Same letter to Historical Section GS. 1931.
10. Lt. Sedgwick Rice. Tr. E, 7th Cav. Testimony before Board.
11. Lt. Chas. W. Taylor, Tr. A, Indian Scouts. Testimony before Board.
12. Capt. W. S. Edgerly, Tr. G, 7th Cav. Testimony before Board.
13. Capt. Henry Jackson, Tr. C, 7th Cav. Testimony before Board.
14. Lt. T. Q. Donaldson, Tr. G, 7th Cav. Testimony before Board.
15. Lt. S. R. H. Tompkins, Tr. D, 7th Cav. Testimony before Board.
16. Capt. Allyn Capron, Battery E, 1st Artillery. Testimony before Board.
17. Captain H. J. Nowlan, Tr. I, 7th Cav. Testimony before Board.
18. 18. Gen. Garlington (Tr. I, 7th Cav.), Letter His, Sec. GS, April, 1931.
19. Gen. Guy H. Preston (Lt. Tr. A, Indian Scouts), Testimony before Board.
20. Robert Gessner, "Massacre," pub. 1931.
21. General Order 2, Hq. Div. of the Missouri, in the Field, Pine Ridge Agency, SD, Jan. 18, 1891.
22. Father Francis J. Craft. Testimony before Board.
23. P. F. Wells, Indian Interpreter, Testimony before Board.
24. "Frog," wounded Indian. Testimony before Board.
25. Lt. James D. Mann, 7th Cav. Narrative, as quoted in *Cavalry Journal*, May-June, 1934.
25. U. S. Weather Bureau for Moon Phase at time of battle.
26. Lt. Henry L. Hawthorne, report and correspondence.

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The Order of Saint Barbara, restricted to National Guard officers who are also graduates of the NG-Res course of The Field Artillery School, was formed December 3, 1938, when 15 of the 18 eligibles of the 119th Field Artillery (Michigan) met at the Charlotte Armory, adopted a Constitution, and elected the following officers; Commander, Lt. C. P. Ismon; Adjutant and Treasurer, Captain Ross E. Hammond; Steward, Captain W. H. Briggs.

Sound-Flash Survey

BY CAPTAIN MILLARD PIERSON, FA

THE observation post was the forward dugout at Fort Riley built about two years ago.

The battery was being adjusted on a base point to the left front, using compass data. While this problem was being fired. I was given a target to the right front, depth 50 yards, front 10 yards. I was directed to obtain my data by plot (measuring the distance from the dugout to the base point by the rate of travel of sound), and a shift from base point. Using a stopwatch, I timed the travel of sound from the moment I saw the burst until its detonation reached my ears. I took the average time of the six rounds fired for effect, and, multiplying 1083 (estimated rate of travel of sound per second for the estimated temperature) by the average time, I obtained the distance from the dugout to the base point. I then measured the compass from the dugout to the base point and also the angle from the base point to my target.

After the battery had been adjusted on the base point I obtained the adjusted compass and the adjusted elevation. I drew a line on a piece of tracing paper and laid off on this line the range corresponding to the adjusted elevation on a scale of 1:20,000, and assumed this line to be laid off according to the adjusted compass of the battery.

The difference between the adjusted compass of the battery and the compass of the base point from the dugout gave me T for the base point. I laid off the angle T for the base point and drew a line to the dugout, measuring on this

line (Scale: 1:20,000) the distance dugout—base point obtained as above.

From the plotted position of the dugout I laid off the angle to my target and estimating the distance dugout—target I laid that distance off on this line to the same scale, which gave me the plotted position of the target.

By drawing the line Gun-Target, I obtained my shift from base point and my range.

Surprising to say, the first-round error was less than one-s deflection shift, and less than 50 yards in range.

(9-mil error in deflection; site error 5 mils; $T = 430$.)

Just another fanatical way of obtaining initial data.

Summary

1. A line was drawn on the tracing paper to represent the Gun—Base Point line and the adjusted range corresponding to the adjusted elevation was laid off on 1:20,000 scale.

2. Dugout—Base point compass was measured. The difference between this line and the adjusted compass on the base point gave angle T . The line Dugout—Base point was then drawn.

3. The range, Dugout—Base point, was obtained by sound as indicated above.

4. The angle, Base point—target, from the dugout, was measured and the distance, Dugout—target, estimated and laid off on this line.

5. The line G.T was drawn on, and the shift and the range measured.

Ballade

Hail and farewell, old horse, to you,
Our comrade of the Russian Ride,
Night march, maneuver and review,
And of the polo field beside.
Our pet, our pest, and yet our pride,
Much of our heart goes with you still
As with the Eighteenth Field astride
You take the last long road to Sill.

From Rhine to Rio Grande, we two
Have taken battle in our stride.
The prairie sun, the ocean blue,
Have tanned and toughened up our hide,
Hunger and fear and wounds have tried
All of our courage and our will.
We lose a comrade from our side—
You take the last long road to Sill.

At Fort Sam Houston you're all through—
Motors don't wait for time or tide;
And as you slowly pass from view
We crank 'em up and let 'em slide.
But with this thought we're satisfied—
Elysian fields lie o'er the hill.
To horse and buggy days it's tied.
So take the last long road to Sill.

ENVOY.

Old Horse—the Gods can still provide
Polo, and hunts, and mounted drill.
You'll be as welcome as a bride;
So take the last long road to Sill.

—J. N. G.



Twelfth Field Artillery Loses Horses

The occasion of the motorization of the Twelfth Field Artillery at Fort Sam Houston, Texas, in December, was one attended by mingled feelings: Interest and

247 of the animals back to that station. The *ballade* thus inspired, and reproduced on an accompanying page, is the work of a former editor of this JOURNAL.

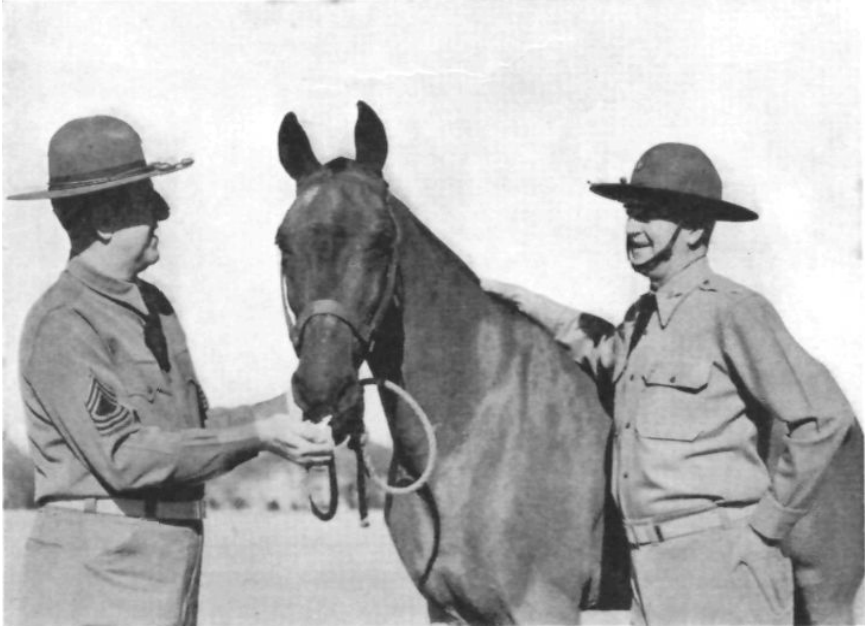


Photo by Ekmark

PAT. AGED 31, THE REGIMENTAL VETERAN, STANDS BETWEEN THE COMMANDING OFFICER, COL. B. M. BAILEY, RIGHT, AND MASTER SERGEANT H. W. ROBERSON, LEFT.

anticipation in employment of the trucks and rubber-tired guns—sorrow at the departure of so many old equine friends, that had, through many years, kept the caissons rolling in that historic regiment.

The occasion was marked by solemn farewell ceremonies to the horses. The 18th Field Artillery, from Fort Sill, 450 miles distant, sent a detachment to march

The officers and men of the regiment lined the route of march to pay their last respects. In a letter to Major General Danford, Chief of Field Artillery, the regimental commander, Col. Benjamin Mort Bailey, describes the events in a letter, extracts from which follow:

"It is needless to say that many officers



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Photo by Ekmark

BETWEEN RANKS OF THE HONOR GUARD, OFFICERS AND MEN OF THE TWELFTH FIELD, THEIR OLD COMRADES MARCH AWAY.

and men in line swallowed lumps in their throats as the detachment marched by. Bands of the Ninth and Twenty-third Infantry Regiments played the Caisson Song. As the last element cleared the Post the bands played Auld Lang Syne and one of the new motordrawn batteries fired a salute of four salvos.

"As a horseman you will appreciate how our old men, including myself, felt. . .

"A total of 495 horses will be transferred to the three stations as follows: Sill, 247; Bragg, 106, and

Warren, 142. About 50 were destroyed. None of our officers or men were willing to witness the destruction of these old friends. . . .

"No less than 135 drivers and riders had pictures taken of themselves with their mounts. The men have presented me with a large framed picture of heads of all the old horses, for my office. In future, at social gatherings, the Regimental toast will be, 'Stand to Heel, Men!' Thus we will hand to posterity a command to indicate our origin."

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258th FA (New York) did a job of work in September with 97.78% attendance to lead the Empire State. Regimental and all battalion headquarters, and their combat trains, with Battery C, attained 100%. Of the 35 units reported the 106th FA was third, the 156th FA, 105th FA, and 104th FA, were 9th, 10th, and 11th, respectively.

The German Artillery in Combat

Translation of an Article in Le Revue d'Artillerie for August, 1938

BY CAPT. A. P. GARNIER, FRENCH ARMY

This translation was made for my own convenience to study more thoroughly the interesting discussion it contains. Since it is in part a translation of a translation, it is subject to some of the same distortions as Mark Twain's story of "The Jumping Frog," as well as the errors of the inapt second translator.

The most important points for thought are:

The great effort to build up energetic initiative in the battalion and battery.

The insistence on prompt entry into action without delay for coordination by centralized higher control.

The avoidance of making sacred cows of standard procedure, by assisting on adapting the employment of the artillery to the problem in hand without regard for fixed forms and methods.

The manner in which the artillery is employed in support of tanks.

RALPH MCT. PENNELL.

Colonel, Field Artillery.

IN approving, January 26, 1937, the new German regulation on the "Conduct of the Artillery," General von Fritsch, in a short foreword, again emphasized the spirit which ought to activate the employment of German Artillery.

"Tactical exigencies cannot be cast in a mold. Not interminable messages, but clear orders, at the right moment and at the right place, and dispositions suited to the situation are the characteristics of sure and strong artillery leadership."

In the light of this preface, it is possible to deduce the evolution and the tendencies in the employment of German artillery, its points in common with and its differences from French ideas.

Object of the new Regulation.

The new regulation has for its object to bring out the guiding principles in the exercise of the command of artillery in the problems of "troop leading." It corresponds generally to the relation that

"L'artillerie au combat" has to "L'instruction sur l'emploi tactique des grandes unités." But it differs on first reading by its general nature and even indefiniteness. Contrary to our regulation, the German regulations are almost silent on the technical operations used in the employment of the artillery, on their qualitative and quantitative distribution between the units, on their organization, and on the principles governing entry into action. This silence seems inspired not only by discretion but also by the intention of creating above all a state of mind, thanks to which the commander will of his own initiative, make the decision best suited to the situation at the time. Not some cut and dried plan of maneuver but a clear understanding of the situation, a fighting spirit, a prompt decision: such are the qualities for the chief of artillery to cultivate. As for the details of execution, the means to use, they will be fully covered under the most varied situations on the map and on the ground, by special regulations

and in appropriate publications like the *Artilleristische Rundschau*.

The present regulation is not, then, so to speak, of age. It sets forth some principles on which accord is nearly unanimous beyond the Rhine. At a time when the technical progress advances at a great pace and influences unceasingly the tactics, it offers a measure of the progress which has been made. (Footnote: By reference to the preceding regulations of 1917 and 1922, which contained numbers of rules on the methods of fire and their organization; this advance is very clear.) It is evident that the French regulations, brought out at a time when techniques and tactics seemed crystalized for a long time, did not have the same reasons to pass in silence instructions for the employment of artillery adapted to materials in current use, tested by long experience and still capable of a prolonged service.

Plan of the German regulation

The German regulation comprises two parts:

The first treats of the general principles for the employment of artillery. It studies successively:

1st. The mission, the effectiveness, the possibilities of artillery;

2nd. Artillery fire (mechanism, rate of fire, kinds of fire);

3rd. Organization and distribution of command duties;

4th. Principles of command (orders, place of the commander, conduct of fire, maps, positions of batteries, liaison and communications);

5th. Reconnaissance, observation, information service.

6th. Basis of cooperation with the infantry and with the tanks.

It is interesting to examine, among these different subjects, those which, being in accord with French conceptions, are explained in a different manner and those which, to the contrary, show

unmistakable differences between the two French and German schools.

This will be the object of this first article.

The second part, which will be studied ultimately, is devoted to the application of general principles in the different phases of war: the approach march, safety, making of contact, attack, the rencontre engagement, exploitation of success, the defensive, withdrawals, retreat, combat at night and in fog. (Footnote: Particular cases of combat: combat of localities, mountain warfare, crossing streams, combat in defiles, should be the subject of further regulations. For the resupply of ammunition refer to the regulation on the conduct of troops of all arms.)

Mission of Artillery

"The mission of artillery is, thanks to the power of its fire, to annihilate at the propitious moment, the adversary forces and, by this means to contribute to the victory of the infantry arm."

"The flexibility, the range, the mobility of its fire permit it to adapt itself rapidly to all tactical situations. The destructive power and the moral effect of its projectiles, give full expression to its action."

"The effect of surprise, the concentration in time and space, as also the rapidity of its fire, augment its effectiveness.

"To attain its full development, this powerful force ought above all to be in the hands of an artillery chief imbued with the will to wrest from the enemy the superiority of the fire and to maintain it at all costs by every means and in all circumstances, in order to smash in the enemy all capacity of decision and all force of resistance."

The first expressions of the regulations emphasize that violence and rapidity govern all that follows. At every

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turn, the words "rechtzeitig" and "schnell" accent the imperious necessity of being always ready to intervene, to act quickly, to seize on the wing all opportunities. This abstractness has a profound effect upon organization and the distribution of duties to the various echelons of command as well as on the conduct of fire. With the same object, they do not hesitate when the situation appears to demand it, to employ any of the following: decentralization, temporary subordination to the infantry, pushing the artillery to the front, the sacrifice of maximum efficiency to rapidity of entry into action.

Means Available to the Artillery

In the beginning the regulation recalls very briefly the means in material, projectiles and fire at the disposal of the artillery to fulfill its mission.

Materiel—The "field gun" is well suited for fire against personnel not under cover, capable of fire against tanks and of engaging in counter-battery, if it has good observation; it is particularly suited for cooperation with the infantry.

The "light field howitzer" is suited to the same missions as the field gun, but its larger caliber and the steeper angle of fall of its projectiles makes possible better effect against light defenses and enemy artillery. Its possibilities of entry into action are particularly good. (Footnote: Thanks to its mobility and to its curved trajectory. It is well to recall here the German tendency to make the light howitzer the principal materiel of the divisional artillery and to remark that its projectile is particularly suited to the use of special ammunition.)

The mountain gun, the medium and heavy guns (10 and 15 c.m.), the heavy field howitzers (15 c.m.), the mortars,

have capabilities analogous to those of the corresponding French materiels.

The regulation makes no further mention of infantry cannon.

Projectiles.—The principal projectile is the high explosive shell. Artillery uses both armor-piercing and smoke shell against armored targets at ranges of 1,000 m. or more. They no longer mention shrapnel. As to time fire it is only envisaged for the destruction of balloons and for high burst adjustments.

Fire—There are three principal forms of fire: harassing fire (Storungsfeuer), destructive fire (Zerstorungsfeuer), and fire of urgency (notfeuer), corresponding seemingly with our "tir d'arret."

These different forms are shadings according to the following tactical conceptions utilized in the orders: to neutralize (niederhalten), to destroy (niederkampfen), (either the materiel—verstorem—or the personnel—vernichten), to arrest (blenden).

Organization of Artillery Units

The different units of artillery include:

1st. Division artilleries which embrace organic light and heavy field artillery, an observation battalion, and reinforcing artillery.

2nd. Corps artillery of the army composed of organic artillery and of reinforcing artillery.

3rd. Army artillery composed solely of artillery not organic.

4th. G.H.Q. reserve artillery.

This organization seems to differ, at first sight, from the French system only by the addition of an observation battalion to the division echelon. But it should be noted that the German manual is silent on that fundamental element of comparison which constitutes the distribution of the calibers between the different artilleries. Another

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thing, the organization of the command reveals some important differences in comparison with our conceptions.

Organization and attributes of command

The organization and the assignment of duties of artillery commanders differs according to the echelons which they command.

1st. In the army and the corps artillery, no commanders are provided, properly speaking. It is the commander of the higher unit who personally assumes this responsibility. (Footnotes: There exists in the German army a particularly strong proportion of commanders in the higher organizations having organic artillery).

If he is the commander of an army, he confines his control over the conduct of the artillery in battle to the directives which he gives to his corps commanders, in this manner then he specifies the mutual support of the different large units placed under his command and to which he allots the reinforcing materiel and ammunition. He sets up, in principle, an artillery staff which acts as assistant to the general staff of the army for all the questions of employment and of replenishing of supplies.

If he is a corps commander, he uses, as technical adviser, the commander of the organic corps artillery, assisted in some cases by an artillery staff. His role consists of arranging the mutual support fires of the divisions as well as the resupply of the ammunition. He rarely intervenes in the details of use of divisional artillery. He decides, according to the circumstances, if the organic corps artillery and the reinforcing artillery ought to be allotted to the divisions or if it would be better to constitute all or part of it as a special groupment under the orders of the army corps. This groupment is then charged normally with missions of

counter-battery, of interdiction and of harassing.

2nd. The commander of the division artillery is the only true chief of artillery. He not only organizes, as in the French division, the cooperation with the infantry (assignment of battalions, missions, zones of action and of observation, entry into action); he has also as his principal duties the coordination of the work of the reconnaissance units, the set up of the SRA, the organization of counter-battery, harassing and interdiction fires as well as arranging for the observation and the entry into action of the long range artillery.

To fulfill these multiple tasks, he has at his disposal in general the whole of the reinforcement artillery.

His command duties are then extremely heavy and although the German regulation is nearly silent on the system of organization of artillery groupments (footnotes: It is no longer a question of the titles, consecrated by the war of Aka, Ika, Feka, groupments, etc.) it is probable that the commander of the division artillery can perform all his duties only by giving considerable liberty to certain units and delegating a part of his authority.

This organization tends then towards a forced decentralization which is also desired for the purpose of placing as many artillerymen as possible in the combat atmosphere and of cutting out of the links of command—and so the delay in time—with the higher echelons.

In addition, the allocation of an observation battalion and the organization of counter-battery and long-range fire in the division echelon permits rapid and effective intervention, especially on non-stabilized fronts. On the other hand the long range weapons are not used to their maximum zones of action in the narrow frame of a division and

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the heavy concentrations of a higher echelon must be more or less improvised, in the absence of a permanent commander of the artillery of the corps.

Finally, the artillery is generally allotted entirely to the division echelon so that the superior commanders are able only with difficulty to influence the battle by the intervention of a reserve of fire.

3rd. The artillery is placed under the direct orders of the Infantry.

The worry of securing a support as close as possible with the Infantry led to allowing in certain cases (to tell the truth considered as exceptional) the complete subordination of artillery units (battalion or batteries) to the Infantry commander.

The artilleryman must then direct the deployment, the fire, and the resupply of his pieces as ordered by the Infantry commander. He at all times remains in communication with his regular superior to whose control he should be returned as soon as the situation permits.

The employment of such artillery will be made clear further on.

Some Principles of Command

Fundamental principles.—"The essential mission of the artillery being to assure the victory of the friendly infantry, the controlling desire of every artillery commander should be to furnish the most rapid and effective support. This preoccupation demands a ceaseless spirit of alertness and a constant care to foresee the events of the combat." The notion of opportunity imposes itself imperatively: "Support of the infantry ought never to be delayed by a too methodical entry into action of the artillery. Medium but opportune effects, are preferable to better but tardy effects."

The surest means of obtaining an effective action is by concentration. "It

ought always to be sought where it is desired to secure the decision. It is possible that the center of gravity of the effort will be determined during the course of the engagement, or that it may be necessary to change it. The artillery commander ought not to fear, then, to regroup his forces."

The initial organization of the artillery is fixed by the commander of the troops according to his mission, after having taken counsel with his chief of artillery.

"As it is rarely possible to give assignments for a long time ahead, at the beginning of the combat, it is indispensable that the artillery commander be forewarned of the intentions of his chief and that the latter be constantly aware of the capabilities of the artillery. (Footnote: Regarding the location of the chief, the German and French regulations express themselves in identical ways.) In this way alone is it rendered possible to make in time the dispositions necessary in the different phases of the combat."

So the search for flexibility and for rapidity of action lead to avoiding too methodical processes, and too many detailed orders too far in advance.

The orders.—Artillery orders ought never to be too voluminous. The orders for the occupation of position are urgent in the majority of cases. They contain only: information of the enemy, the general dispositions of the infantry and the artillery, the combat mission, the zone of march, the plans for the opening of fire, the most urgent liaisons to establish first. The more detailed instructions on fire control are the subject of a later supplementary order, as well as the instructions on the continuation of combat, on the combined action with the other arms, on the assignment of objectives, on the

consumption and the resupply of ammunition.

Written general orders are sent only when it appears necessary to give to the subordinate units of all arms a complete picture of the situation. Even in that case, essential parts of orders ought to be given previously to each unit.

The Conduct of Fire

"The maximum effectiveness of the artillery is obtained by fires observed and concentrated in time and space." Every effort should tend to realize these conditions of fire.

The object of all artillery disposition is the power to concentrate, as quickly as possible, on the order of the artillery commander, the largest possible number of cannon on an important point. The artillery commander ought, consequently, to provide for the assignment of the zones of surveillance and the zones of action to the different units, the designation of the important objectives, the check points for registering the topographical determination of the battery positions, observation posts, and of certain points situated in the enemy territory. It is the duty, on the other hand, of the subordinate units to make an urgent minute examination of the possibilities of observation and of fire and of reporting this information without delay.

In the different echelons, the fire of the artillery should be conducted in conformity with the combat missions and according to the needs of the friendly troops. It is a fallacy to let our own fire depend on that of the enemy.

The opening of fire results from the situation and the intention of the general commanding the division. But every artillery commander, including battery commanders, has the right to fire on any important objective which presents itself in an unforeseen way.

The commander has, generally, the possibility of changing the center of gravity of his effort, thanks to the mobility of the trajectories. But, if it is necessary, he ought not to hesitate to order a change of position.

As far as possible, he must not parcel out the reenforcing artillery, otherwise he will decrease the power of his fire.

The Conditions of Artillery Fire

The putting in operation of artillery necessitates reconnaissance, the selection and occupation of battery positions, organization of the observation, of the SRA, of the liaisons and communication system, and arrangements for close defense.

On these different points, the German regulation formulates some considerations and some instructions which, taken together, conform to the French conceptions.

Some passages, however, merit being summarized.

Reconnaissances. — Reconnaissances "of command," effected by the artillery commanders in person, ought, generally, to precede the detail work executed by the reconnaissance detachments and the detached scouts. (Footnotes: Reconnaissance of routes.)

It is well that the task of the different reconnaissance detachments be coordinated by the division artillery commander, in order to avoid the same work being done twice and resulting in wasted efforts. It suffices, generally, to use two reconnaissance detachments for light artillery and a detachment for heavy artillery, independent of those of the advance-guard battalion.

Observation.—It is important to note the manner in which observation is decentralized even to the battery. (Footnote: One recalls that there exists in the German battery a lieutenant observer.)

In general the battery mission is possible

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of fulfillment from a primary observation post of the battery. But when, from this post, it is not possible to see the enemy front lines, or when the distance no longer permits efficient support or indeed before this difficulty arises in the course of the combat, each battery of direct support sends, well forward, an advance officer observer. He is equipped with a telephone or with a portable radio set. (Tornisterfunkgerat.) His mission is:

1st. To assist the primary observation post in observation and the search for objectives, to take over, if necessary, the direction of the fire.

2nd. To supplement the action of the liaison detachment in keeping his battery informed on the events of the combat, the advance and the needs of the infantry.

His role should not be confused with that of the liaison officer. He does not hold himself close to the infantry commander but goes where he can see best. He has the advantage, in particular, of making contact with the observer of the heavy weapons of infantry.

The SRA, which is a division artillery agency, utilizes the observation battalion, the airplane and the balloon as means of securing information.

The observation battalion has for its missions:

(a) The surveillance of the battlefield;

(b) The location of the enemy artillery;

(c) The adjustment of the fire for the friendly artillery;

(d) The establishment of a skeleton survey of topographic points;

(e) The printing of the firing charts and of topographic data (canevas de tir);

(f) The distribution of the meteorological bulletin.

In mobile warfare, only that part of the flash ranging battery utilizing

terrestrial observation possesses sufficient mobility to operate continuously. It will often be limited to providing tactical observations. It is capable of surveillance over a zone of 8 to 10 km wide and 12 km. deep. The time required for it to go into action varies from 45 min. to 6 hours, depending on its mission and the amount of topographic data already available for its use.

The sound ranging battery requires 4 to 6 hours for its deployment, 1 hour 30 minutes to 2 hours 30 minutes to give some usable results for firing, 2 hours to 2½ hours to change position.

The provision of reconnaissance airplanes for the SRA, if not provided for by the plan of observation of the army corps, should be the subject of a special request by the division artillery commander. Generally a single airplane is assigned for a designated time.

It assists in the search for targets, the observation of fire and the surveillance of the zone of action of the fire.

Liaisons and communications.—"As much for the exercise of command as for the conduct of fire, the artillery, more than all other arms, has need of perfect combat liaison."

The establishment of the different liaisons ought to follow these principles:

1st. Every artillery commander should establish communication without delay with each of the units (emplacements) to which he has to give orders.

2nd. Every artillery commander ought to establish without delay close liaison with the supported infantry and eventually connect with other artillery with which its fires should be coordinated.

3rd. The communications which are vital to effective combat should be reinforced.

4th. It is always necessary to determine

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what communications (liaisons) are immediately necessary. In situations without gravity, instructions should often be given to establish only the principal liaisons.

5th. A reserve of means of communications should always be provided so as to be able to establish new communications which may become necessary and to be equipped for rapid installation in a new position.

One finds in the German division nearly the same scheme of artillery communications as in the French division and, in addition, those of the observation battalion with the commander of the division artillery on the one hand, and with the heavy battalions (these are considered as "Urgent") on the other hand. The observation battalion is responsible for establishing three outside lines of 2 to 3 km; the personnel should be furnished by the division signal battalion.

Work in Common with the Infantry

The cooperation of the two arms is inseparable in time and space. It is of decisive importance for the success of the combat. It is facilitated by the contact and the good fellowship of the two commanders, by the selection of command posts so that a personal conversation is possible, by the establishment of observation posts and locating batteries behind the supported infantry, and by permanent liaison details.

In general, direct support is furnished the infantry regiments by the light battalion. When strong support is important these battalions are reinforced by light and heavy artillery. When several battalions are thus charged with direct support of an infantry regiment, the artillery commander assigns their missions to them. The direct support of a lower echelon, for example the

assignment of single batteries to support front line battalions, weakens the possibilities of concentrating a battalion at the right place and at the decisive moment. It should be done only when the fronts are very large and the artillery limited in amount.

To accomplish an independent combat mission, a fraction of the artillery (battalion or battery) can be attached to an infantry unit. This may be rendered necessary also "for reasons which prevent centralized fire direction, as for example poor visibility or a too extended front." But the effectiveness of such use of the artillery will have all its full value only if the commander knows enough to concentrate it on important and selected objectives. As far as the situation and terrain permit, the fire of a battalion attached to the infantry ought not to be divided by allotting each battery special missions. The return of this artillery to its organic control ought to be instigated as soon as possible by the division artillery commander.

The repugnance of the German artillery for all preconceived and rigid action, its ideal to fit the fire to the necessities of the combat, to reducing lost time (*temps mort*) makes the work of the liaison detachments of fundamental importance.

As soon as the basis of common action has been determined, the direct support battalions send their liaison detachments close to the supported infantry. Ordinarily the liaison detachment of a battalion is sent to the zone where support is of the most importance and where the intervention of the artillery ought to be particularly rapid. This will often be with the battalion which is to be the center of gravity of the attack or which awaits the principal effort of the attacking enemy. In certain cases, the liaison detachment can also represent its battalion commanders

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with the commander of the infantry regiment.

The liaison detachments of the heavy battalions are often sent with the commanders of the direct support light artillery.

The two principal missions of the liaison detachment with the infantry are:

1st. To inform the infantry on the plan of the direct support artillery, the combat position of the battalion, location of command posts, observation posts, the possibilities of observation and of fire in the combat zone, the scheduled concentrations, the forward observers which have been sent out.

2nd. To inform his battalion on the dispositions and plans of the supported infantry, the location of the front lines, the command post of the infantry commander, the zone of action of the heavy infantry weapons, the needs for fire in time and space (footnotes: The German regulation is not precise as to how the calls for fire are made, who takes the responsibility of coordinating them, what authority allots them. It seems that each time these instructions must be included in the particular order), the displacement of the liaison detachment.

But it should be well understood their duties are not restricted to those mentioned.

The chief of the liaison detachment ought, in following the progress of the combat and the intentions of the infantry, to initiate the execution of the measures necessary to the effectiveness of this Arm, such as adjustments, coordination of the forward observer stations and even changing their positions. In certain cases, to strike more rapidly the obstacles which particularly hold up the infantry, he himself can direct the fire or send out auxiliary observers (footnotes: For this he ought

to be provided in advance with a sketch of the battery positions and of their contingent zones).

His role is equally moral. He ought as much as possible to make himself known to the subordinate infantry units; he ought also to stimulate the activity of his artillery.

In anticipating the needs of his battalion commander, he can temporarily leave the infantry commander on condition that the continuity of liaison be assured. He has the advantage of making contact with the commander and the observer of the heavy infantry weapons to learn quickly, and without ambiguity, the plans and the objectives of the two weapons.

"The nature, the extent, the importance of the missions of the liaison detachment necessitates a particularly careful choice of the person for its chief."

Work in Common with the Tanks

This entirely new chapter merits being fully analyzed, the more as it has not yet any counterpart in the French regulations.

One of the principal duties of the commander, in the case of an attack with tanks, is to combine to the best advantage the action of the artillery and of the tanks, for the essential benefit of the infantry. This cooperation is necessary from the manner in which the tanks are employed. The action of the artillery ought never to be fitted into a scheme of maneuver in which the tanks do not have a definite objective.

The divisions to which the tanks are allotted ought also to receive artillery reinforcement.

Attack of an Enemy in Temporary Positions

In this case, it is important above all not to let the favorable opportunity escape and attack by surprise, without

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waiting for the cooperation of the artillery and tanks to be arranged in detail. It is a matter then principally for the artillery:

1st. To neutralize the enemy zones towards which the tank attack is not or cannot be directed.

2nd. To quickly protect the first elements of infantry (advance guard, in the case of unforeseen encounter) to reach the positions conquered thanks to the tanks.

The direct support of the tanks themselves depends on the number of batteries which are available and on the possibilities of observation. They will strive, at least, to protect them by firing high explosive or smoke shell on the hostile antitank weapons without impeding the progress of the tanks.

Attack of an Enemy in Prepared Positions

To the artillery falls, in first importance, the missions for the benefit of the infantry which the tank cannot perform itself. These are in particular:

1st. The counter-battery, of high importance as the tanks are fully occupied with the reduction of the points of resistance.

2nd. The neutralization, at times, of the enemy anti-tank guns. They usually expose themselves only at the moment of the attack; so that rapid and localized smoke screens are often more effective than explosive shell fires.

3rd. The neutralization of the heavy weapons of the infantry wherever it cannot or has not been undertaken by tanks.

The use of smoke troops (literally, devices for emitting fog) can in a large measure lighten the tasks of the artillery. Besides, the greater the difficulties of observation are, the more it is necessary to have available artillery spotting planes.

Missions of the Artillery Prior to the Attack

Before the attack the artillery has for missions:

1st. To protect the assembly and the approach march of the tanks against the enemy artillery;

2nd. To cover by its fire the noise of the tanks in movement, especially at night;

3rd. To support feints, pretended attacks or diversions in order to deceive the enemy defense on the point chosen for the engagement of the tanks.

4th. To batter with its fire the observatories and battery positions of the enemy, the known fields of mines, and, just before the attack, in anticipation of their possible movement to firing positions, the hostile antitank weapons.

Missions of Artillery During the Attack

The employment of the artillery depends on the way in which the tanks intervene in the combat.

The regulation envisages the case where the tanks approach the enemy position at the same time as the infantry. The artillery lays down at that time the observed fires on the zone of advance so as to neutralize for the longest possible time the observatories, the antitank weapons and the enemy machine guns, until the tanks are in position to accept the responsibility for this mission. A little before the contact with the enemy, these fires are raised and replaced by barrage fires.

If the tanks' objective is only the infantry lines, the enemy artillery ought to be neutralized during the entire duration of the attack. If they are to penetrate even into the zone of the battery positions, the fire ought to be raised in time. The principal difficulty for the terrestrial observation as for the air observation, is to know with certainty the position of the first wave of tanks, in order to be able to constantly adapt the fire to the movement.

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If the visibility is too bad, one may be constrained to regulate the artillery fire entirely according to a time schedule. The inconvenience of a rigid scheme of fire is less than to see the artillery fire on its own tanks.

Displacement of the Artillery.

The artillery ought to use the penetration of the enemy position by the tanks to displace forward some of its units to new positions from which it can support new infantry attacks beyond the advance of the tanks. Thus, in the same way as the tanks supplement and complete the action of the artillery remaining in position, the artillery in its turn, from its new positions, immediately takes over the support of the infantry when the aid of the tanks is no longer available.

Only the alternate support of the infantry, first by the tanks, then by the artillery, evades the danger that the offensive impetus be broken. It is an error to make the change of position of the artillery coincide with the regroupment of the tanks.

Artillery Tank Liaisons

Artillery employed in the support of the tanks sends a liaison officer with the chief of the tanks. He accompanies the attack aboard a tank equipped with radio. He provides also liaison with the troops which are eventually to be returned to the division artillery commander for smoke missions.

Immediate Support of the Tanks

Besides the general support of artillery, the use of the tanks necessitates immediate support to operate solely against the enemy antitank weapons.

If the medium and heavy guns of the tanks do not suffice for this task, the commander can designate some artillery units as "tank protection artillery." This artillery sends forthwith a liaison officer or, better, a liaison detachment.

Before the attack, most often in the night which precedes, these batteries are pushed forward in some way to have the shortest and surest liaison. They ought not to open fire before the attack, save for defense. If observation posts most favorable to the execution of the mission are susceptible of being seized by the infantry jumping off immediately before the tanks attack, it is recommended to hold a part of the protection artillery, coupled, behind the line of departure of the infantry, ready to profit by the infantry progress to improve the efficiency of its fire.

This very vulnerable artillery accompanies the tank attack with its trajectories and the aid of observation. Also it is very important to give it the best observation posts and, if possible, an airplane. Its observers follow as close as possible to the infantry front lines.

There ought to exist a clear understanding between the artillery commander and the tank commander in order that the artillery be rapidly forewarned of the objectives to bombard and of the position of the front lines interference, in the event the observation ceases to function during the attack. This understanding should include some code signals and some designations of known points in order to indicate objectives recognized or assumed from the study of the map or of the terrain, as possible locations of nests of antitank arms.

Such accord affords to the immediate support artillery of the tanks the possibility of taking in advance all the technical measures necessary to bring down the most rapid fire on the foreseen objectives.

Resume and Conclusions

Among the numerous problems which arise in the use of the artillery, the easiest have been resolved in nearly identical fashion in Germany, in France and probably in most other foreign countries.

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Choice of battery positions, observation, reconnaissance, camouflage, protective measures for antitank protection, for example, are everywhere the subject of nearly identical plans (footnote: It has not been thought necessary in this analysis, to mention the ideas common to the two regulations).

But the principal problem remains that of support rapid, continued and sufficient to the attack. There is no question that this problem is treated in an entirely different spirit in Germany and in France.

The German regulation, in its first part, distinctly gives priority to the term "rapidity," with this thought dominant, that timely action most often leads to decisive success, while avoiding putting in action of more extensive means.

What is the cause of the different views or tendencies which have been described in the course of this analysis:

Decentralization of the command of the artillery to the division echelon; decentralization of the sound ranging, of counter-battery and of interdiction to the same echelon; tendency to decentralization of observation to the battery echelon and of liaison to the infantry battalion-artillery battalion echelon; contingent subordination of the artillery units to the infantry; fundamental role of liaison and of observation; rejection of plans of rigid employment,

repugnance for preconceived plans tending to paralyze initiative and esprit (footnote: By contrast there is noted a tendency to centralize reconnaissances, see page 12) etc.

These conceptions can have diverse consequences. They develop a sense of responsibility and initiative in the lower echelons but to the detriment of these same qualities in the higher echelons. They render possible the immediate exploitation of the events of the battlefield which occur on the combat line, but they make it difficult to restore control of the elements in the hand of superior authority. They necessitate instruction and seasoned troops. They permit easy but localized successes, by audacity or surprise. They do not dispense with being sooner or later obliged to secure powerful effects by methodical preparation.

Every regulation follows without doubt, in a certain measure, the influence of the national turn of mind and of tradition. The memory of past success in 1870 and on various occasions of the Great War is probably not without influence on the audacious turn which the German artillery takes.

There remains to examine in the next article how the principles which have been brought out are applied in the different phases of the battle.



Recently graduated officers of the National Guard and Reserve Class, FAS, collaborated on a class book, known as the Comanche County Cannon College Clarion, summarizing their experiences during the course, and holding up the foibles of their instructors to the scrutiny of all. The instructors, however, hardened by similar semi-annual exposure, are reported by now to be confirmed in savoir faire and aplomb.

The 1938 Knox Trophy Battery

BY CAPTAIN E. T. WILLIAMS, FA



CAPTAIN E. T. WILLIAMS

Editor's Note. Battery B, 83d Field Artillery, Fort Benning, Georgia, won the 1938 award of the Knox Trophy, offered annually by the Society of the Sons of the Revolution in the Commonwealth of Massachusetts.

THE award of the 1938 Knox Trophy to Battery B, 83d FA, gave me that same real satisfaction that it has given other Battery Commanders in the past.

The pride of accomplishment that comes to the fortunate battery commander can not obscure the realization that such a comprehensive test of firing efficiency, mobility, and communications can not be conquered

without the highest degree of cooperation by every individual, officer and enlisted man, in the battery. I do not believe that any battery ever gave more enthusiastic, capable, and loyal support than members of Battery B did in this regard.

The men of this battery have further reason to be proud, for the present Battery B, 83d FA, dates back only to its reconstitution on December 1, 1934. On that date the morning report shows that the personnel of the battery consisted of the battery commander, Capt. George D. Vanture, and one enlisted man, the 1st Sergeant. Six noncommissioned officers were assigned from other organizations as a nucleus during December, 1934. From this modest beginning Capt. Vanture organized, equipped, and trained the battery from the ground up. I inherited command of the organization on April 1, 1936, upon Capt. Vanture's departure for change of station and found the battery had been brought to a high state of efficiency. Too much credit can not be given him in this accomplishment. It indicates what can be done by organizations in an emergency with a small cadre of well-trained noncommissioned officers.

Three years and three months following its reconstitution this battery took the Knox Trophy Tests for 1938, and won! To the best of my knowledge it is probably the most youthful organization which has ever joined the ranks of the winners.

Space does not permit me to list the names of all the individuals who rendered invaluable assistance in training prior to and during the actual test, for every member of the battery did his part and did it well.

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SEATED, CAPT. WILLIAMS, L-R: 1ST SGT. HUNTER, LTS. BARKSDALE AND YARBROUGH



THE BATTERY AT FIELD INSPECTION

To the battery executive, First Lieutenant Knox Yarbrough, who trained and commanded the firing battery, and to 2d Lt. Battle M. Barksdale, Reconnaissance Officer, with less than a year's service, who had charge of the detail training, too much credit can not be given.

The energetic, thorough, efficient, and dependable work of 1st Sgt. Harry Hunter was noticeable in all departments of the battery.

Sgt. James C. Wilson, of the Instrument Section; Sgt. Phillips, of the Signal Section, and St. Sgt. Decatur Johnson, the Motor Sergeant, were all signally efficient in the execution of their duties.

The battery commander is at present at the Command and General Staff School at Leavenworth thirsting for knowledge (and solutions); the battery executive is at Fort Sill continuing his education, the

reconnaissance officer is learning to be a horse soldier in Battery A, 83d FA; the 1st sergeant and signal sergeant are in Hawaii making some BC happy, but the battery remains at Fort Benning under the able guidance of its present Battery Commander, Capt. Robert Montague, who will lead it to further laurels.



STAFF SERGEANT W. H. LEWIS

Knox Medal Winner

Staff Sergeant Wayne H. Lewis, Headquarters Battery, Tenth Field Artillery, Fort Lewis, Washington, was adjudged the winner of the Knox Medal, awarded by the same society to that enlisted man making the best record as a student at The Field Artillery School. Sergeant Lewis was born Feb.

3, 1910, at Hoxie, Kan., and enlisted in the Army Jan. 3, 1929. He has since served at Fort Lewis, having been promoted to Staff Sergeant July 28, 1936. His home is at 901 South G Street, Tacoma, Wash.

Commencing a Modern War

BY COLONEL CONRAD H. LANZA, FA

WAR is one thing that the World can not ignore. It disapproves of war, endeavors to abolish it, claims that it is useless, states no one ever gained anything by it; still notes its presence.

After the World War, many believed that war could be abolished. At that date the dominant nations were the British Empire, France, Japan, and the United States. Russia temporarily was not a great power. It did not seem that the superior military and naval strength of these countries would be challenged, or that among themselves any cause would arise that would justify a war. Between the great powers, arbitration of minor differences that might affect them seemed practicable and reasonable. Other nations were to be forced to keep the peace by withholding money and supplies needed by them, obtainable only from the great powers, and without which it was believed the weaker nations would be unable to wage war.

The great powers were so sure that war was unnecessary that in 1928 the Kellogg-Briand Pact was written, and was signed by an overwhelming majority of states. By this document it was agreed to abolish war as an instrument of national policy, and it was solemnly promised never to resort to war for the settlement of any international dispute. For years it was out of place to suggest that war was possible, much less probable. It was an age when disarmament was seriously considered, warships were sunk, fortifications neglected, armed forces on land, sea, and air allowed to fall to minimum numbers.

Ten years passed; nations that once were weak have grown. They are no longer willing to be treated as inferiors.

They are arming so rapidly that it is doubtful whether the Big Four of 1918 can yet claim to be so designated. To continue their own superiority the great powers have increased their own armaments. A race has existed between the *Have* nations, and the *Have Nots*, as to which is to be stronger.

For the common man it seems clear that war was not abolished ten years ago, but that today it is knocking at his door; threatening his security. He watches feverishly and with interest, daily accounts of wars and rumors of new wars; he considers what happens to the unhappy people already involved; reads about cities being bombed, women and children mutilated, homes destroyed. He wonders when his turn will come; just what can he do about it.

The world is undergoing a rude reaction. War is not only common talk; it exists. The newspapers announce continual threats of additional wars, either through extensions of present wars, or from developments elsewhere. Not only possible, universal war appears quite probable. There is a great fear that the new war is to be a terrible catastrophe, that it will end civilization, that nations may be caught insufficiently prepared.

Our President, members of his cabinet, our ambassadors, have announced that if a general war breaks, no assumption should be made that the United States will stand by neutral. The people are back of this assertion.

War is a complicated phenomenon. It is not safe to follow historical precedents too closely; technical developments gradually make obsolete methods and materiel that had formerly been generally accepted. At present there are more technical improvements and

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inventions than ever before, some of which have not been tested, or have not been fully tested, in war. There is divergence of opinion as to what the probable results will be. Information is sought from Spain, best available source; or from China, next-best source.

The consequences of a lost war are so disastrous that every nation hesitates to be the one to start; no one is sure that success is in sight. A short, decisive war—should war be inevitable—is a dream and a hope of every general staff. But how can it be obtained? There has been no reasonable indication that it is even possible. The wars in Spain and in China make it appear very doubtful.

No general staff is certain that its plan for future wars will work. It is impossible to foresee the political, industrial, and military events which will arise, and which will profoundly influence the course of hostilities. The tendency is to plan to start a war unexpectedly, and attempt to complete it before unpredictable factors alter the original situation.

Past wars were dangerous to personnel in the theater of operations. As a rule people in other areas were not directly affected by military operations. This has now changed.

Bombing and shelling of cities occurred during the World War. It aroused indignation throughout the Allied nations, without, however, stopping the evil complained of. Bombings by the British in India and in Arabia; bombings in Bolivia and Paraguay; by Italy in Ethiopia, resulted in strong expressions of disapproval from other nations, but did not in any way abate the continuance of new bombings.

Events in Spain and in China indicate that hereafter citizens far from the battlefield may be subjected, without much notice, to destructive losses of life and property, by intentionally bombing or shelling inhabited places. At first such

actions aroused pity, but it is now plain that this condition will from now on be customary. When a nation engages in war, its entire population will be subject to perils of military operations. No one may escape on the ground that he is a noncombatant, or by reason of sex or age. A cruel doctrine—all are to be treated as the enemy, or one of the enemy, and destroyed, killed, wounded, maimed, gassed, if advantageous to the opposing forces.

Everyone is now in danger. If war comes, no one can be sure of escape from war's horrors. How much notice, if any, will there be before death and destruction arrives? To answer this question it is necessary to consider how future wars are likely to commence, both for the aggressor, or offensive; and for the attacked, or defensive.

THE OFFENSIVE

Tactics of national armies are fairly well known. Not infrequently they are subject to changes, as new weapons and new experiences demonstrate their need. For example, German tactics as to utilization of mechanized forces appears to have been recently under reconsideration, and at this time it is uncertain how they intend these units to function.

Maybe numerous features are in doubt, but there is unanimous agreement that any nation starting a war should do so as a complete surprise. Surprise is not a new idea; it is a very old principle; its value is universally acknowledged. But there have been changes in the application of this principle; especially as to commencing a war.

Surprise may be either as to:

- Time,
- Location, or
- Forces.

The three factors are all desirable, but of the three, time is the most important.

COMMENCING A MODERN WAR

If the enemy can be attacked at an unexpected moment, he might be unprepared, and suffer a serious and possibly irreparable defeat. Conversely, if there be no surprise, the attacker might be defeated in his initial operation. Between nations of about equal power the aggressor will seek to have his initial operations commence as a surprise. If surprise in *time* is not obtainable, surprise as to *location* of the initial attack will be attempted, and then surprise as to the *forces*, and particularly character of materiel, involved. All three factors will be sought for.

Declarations of War. Until this century, the ancient rule of chivalry, requiring that as a matter of honor, a formal declaration of war be made, prior to commencing hostilities, was habitually followed. It was not rare to designate a particular hour, after which war would be in effect. Before declaration of war, a period of diplomatic tension was usual, which was generally accepted as an intent to bring about a war, so that when the declaration arrived no surprise as to time occurred. Both sides had been aware of the impending danger, and both had had some opportunity to prepare for it.

Declarations of war, formal or informal, have disappeared. They simply are no longer considered necessary: the old rule of chivalry as to warning a man before you strike is out of date, and considered contrary to the principle of surprise.

POLITICAL TECHNIQUE

Diplomatic Tension. A short period of diplomatic tension immediately prior to a declaration of war has been changed to having diplomatic tension normal over long periods, not necessarily indicating outbreak of war in the immediate future, or at any particular date. It enables the aggressor to postpone a date for commencing war until circumstances are entirely favorable. Prolonged diplomatic

tension is valuable for propaganda purposes; it enables one's own nationals to be brought to a point of view where they will not only expect war, but will be ready to engage in it with enthusiasm, and thoroughly convinced that it is just, necessary, and absolutely unavoidable.

Diplomatic tension provides an opportunity for maneuvers, military tests, and increased production of war resources. Under pressure of an apparent emergency, greater efforts and more funds can be made available than when peace exists. When everyone knows that there is no emergency, a desire to economize often results in drastic curtailment of funds and supplies. Under an emergency such as a threat of war, there is no limit to preparatory measures which may be undertaken. Particularly, maneuvers may be conducted in areas selected for mobilization should war occur. If defects in the war plan, or in materiel or in supplies, become apparent, they can be corrected by continuing the period of diplomatic tension.

Diplomatic tension affords a test of allies. It can be determined who will assist. Arrangements are made as how mutual assistance on ground, air, and sea is to be rendered. Combined war plans are discussed, modified, corrected and expanded; use of pooled resources is provided for; dates and places for initial operations are decided.

Diplomatic tension affords the possibility of observing the probable alignment of enemy forces. A partial mobilization, possibly disguised as a maneuver, may be accurately reported upon by secret agents, friendly commercial planes, and other sources of information; this will afford some indication of enemy strength and distribution of forces. It will probably be brought out which, if any, nations will assist the one considered as the expected enemy,

and the length of time it will take for such enemy allies to reach the intended theater of operations can be calculated.

Whenever it appears during diplomatic tension that one's own forces are deficient as to numbers, resources, materiel, or finances; or that the enemy, including probable allies, is too strong, war is postponed. Necessary steps are taken to correct deficiencies, to accumulate additional resources, materiel, or gold, while watching for a moment when the expected enemy may be least suspicious, or may himself be in difficulties, through his defects, political troubles, lack of allies, or other reasons.

The date for commencing a war should if possible be unknown to, and its near approach unsuspected by, the nation to be attacked. It may be possible to exercise diplomatic tension in such manner that between several nations, each may believe that some other nation will be the one to be attacked. If surprise as to time can not be concealed, it is essential that the diplomatic tension afford no indication as to where the major efforts will be, nor as to the forces to be employed.

Diplomatic tension, as a means to prepare for war, requires delicate adjustment. Excellent liaison is essential between the diplomatic officials and the military forces. If the latter are not ready for war, diplomatic tension must be continued, but not to such an extent as to exasperate a possible antagonist so far as to lead him to seize the initiative, and himself start the war by surprise. When the date for the war has been finally decided, nothing should arise in the diplomatic tension to indicate any substantial change from usual unsettled conditions.

A nation having no desire for war, no aims which justify war, wishing to live in peace, if it believes itself liable to be attacked at some unknown future date, may prefer not to wait until the probable

opponent finds the conditions markedly in his favor. If there must be war, military considerations might indicate it best to start it, in order to avoid a worse one later. Suppose certain nations are suspected of arranging for a war to be launched against other nations at some distant undeterminable time. Would it not be better to take the bulls by their horns, and give them a good thrashing now, instead of delaying until the bulls have grown, when the job will certainly be more difficult? Or it is the problem of the savage dog roaming at large. Shall one wait until the dog kills somebody; or having noted his actions, and foreseen probable results, remove him promptly as a hazard to civilization?

Diplomatic tension having been maintained, any favorable combination of circumstances may be taken advantage of to commence a war without further warning. It is essential that any country contemplating such a move maintain its own people continually enthusiastic, by suitable exploitation of wrongs, injustices, indignities, and the like, charged towards states with whom the war is to occur.

There are two sides to a war; either side may start it. To assure that the people will support the war with energy, the employment of diplomatic tension as a preparation, will, using a variety of arguments, and for varying reasons, be continued. When some side is sure that war is sooner or later inevitable, and believes that a propitious moment has arrived, when with least danger, it can, by availing itself of the principle of surprise, secure an initial advantage which its opponent will not be able to overcome readily, war will be started.

MOBILIZATIONS NO LONGER SLOW

Mobilization. Completing mobilization in an orderly manner before undertaking major operations has long been

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a well-known rule. Failure to follow it has been dangerous, and was a major factor in the defeat of the French armies in 1870. In 1914, from two to three weeks were required for mobilization, during which only minor operations were conducted.

Best information indicates that in new wars there will be no delay to await completion of mobilization. Based on necessities created by diplomatic tension, partial mobilization, before war are possible and common. Additional facilities, improved motor roads, greatly increased numbers of motor vehicles, better railroads, new arrangements and regulations, have made it possible to shorten the time needed for complete mobilization.

A present tendency is to increase peace strengths of regular troops to mobilization strengths. This has been completed in Germany, and its regular army needs no time for mobilization, other than for transportation to war stations of troops not already there. (One reason why nations adjacent to this country are in constant fear.) With this system, regular troops are usually stationed at, or close to, the frontiers, in numbers sufficient to start immediately the initial operations called for by their war plan. They can commence war any day.

Formal mobilization may not even be ordered. By a series of successive partial mobilizations, under guise of maneuvers or necessities of diplomatic tension, such mobilization and changes of station as are absolutely necessary for initial operations can be completed, or nearly so, before hostilities. Subsequent mobilization will be to reenforce front-line troops, and accumulate reserves for later use. Modern methods now available enable this to be done within remarkably short time.

It might be thought that if regular divisions are habitually at war strength, that reserve divisions would need a

correspondingly longer time to mobilize. This is not the case. Mobilization regulations in Germany prescribe that men of as low a class as the 20th will report as early as M-2 day. The German reserve divisions appear to be organized somewhat on the order of our own National Guard. With exceptions, personnel live close to the home station of their organization, and they can be assembled within a few hours. Transportation is secured by taking over previously assigned civilian cars and trucks in the vicinity; other supplies and the armament are stored and ready to use. Extensive tests in mobilizing this type of unit have been had this past summer. Reports are not yet at hand, but there is nothing impracticable in the scheme. We do have reports that reserve forces, called to arms about 9:00 PM, were assembled, equipped, transported, and in line for action on the frontier, by daylight of the following morning. Mobilization is not what it used to be. Speed is now the main requirement.

Mechanized and motorized forces may on mobilization appear at places quite distant from their usual stations. With motor roads and railroads, overnight movements of large forces for distances of from 100 to 200 miles or more can be made. Peace stations may be used to camouflage an intention to use forces in some entirely different area.

The rule of completing mobilization before commencing major operations has not changed, but the application of this rule has. The days when at the commencement of a war delays in initiating major operations were customary, in order to admit completion of mobilization, are gone forever. Hereafter, mobilization will be sufficiently completed, prior to date of war, to enable operations on ground, air, and sea, to start on the very day war breaks.

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WEAPONS IN THE AIR

Initial Air Operations. Air forces are usually at war strength. They need no delay for mobilization. At a selected date, and without warning, and when no expectation of immediate war may exist, they can be instantly turned loose, to discharge death and destruction on enemy defense positions near the frontier to be attacked by the ground troops and on enemy airdromes, cities, utilities, and centers of production.

First attack may fall when towns and establishments are filled with people completely unsuspecting danger. Blows of this kind, repeated continuously as fast as planes can return, reservice, and reload, may cause panic, and should accomplish some dislocation of enemy mobilization, and prevent countermeasures.

There is no evidence as to what will be the results of a war commenced in this way. Those contemplating it hope that it will be so decisive that the enemy attacked will never be able to develop his expected strength. Wholesale abandonment of important cities, problems of fire, deaths, wounded, devastation, are foreseen. A great relief problem may be created, and interference with mobilization, and some disruption of production and transportation seems probable. That all this will be barbarous, involve dreadful suffering, may force life to return to primitive conditions, is understood and expected. Do we not hear that the next war will end civilization?

General staffs would like to know how long it will be after such bombings are had, before a decision can be expected. Nobody knows. It is easy to see that if the offensive does not overcome the hostile air force in a short time, the former will be subjected to the like treatment in their own homeland. They understand this, and to avoid return attacks by air, intend to try to destroy utterly hostile airdromes at the

beginning, so that there should be no substantial reaction. However, they are not sure they can do it. Nations, realizing the danger, increase their air forces, with a view to be in a position to make initial air operations horribly destructive; and secondly, to provide for protection of their own forces and populations by preventing similar losses and destruction.

Under current tactics, first bombings will include cities. These contain command posts, communication centers, terminals, warehouses, utilities, and other objectives of undoubted military importance. Incidental loss of life, and of nonmilitary property will contribute to the hoped for demoralization.

Surprise as to *location* of objectives of air raids is not probable. No power has sufficient planes to attack as first objectives all possible targets. It will have to limit itself to places having some special political, industrial, or military value. Such places are well known, and probable targets of hostile air forces crossing a frontier should, within limits, be divivable by the defense.

There are differences of opinion as to whether initial air operations should begin by day or by night. By day, targets are readily identified, and bombing is more accurate. There is a possibility that if surprise as to *time* is secured, business and industrial sections may be crowded, and large casualty losses scored. This will increase the difficulties for those bombed. Disadvantages of day operations are that the bombing forces will be discovered; strengths and courses will be noted; warnings will be sent out by the defense, and the target may have time to set up defense measures. Greatest danger—enemy air forces may arise, may delay the invaders, may intercept them before they reach their intended target, or afterwards on their way home. Of

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course, the strength of invaders should be such as to give reasonable probability of overcoming hostile forces, but surprise, or complete surprise, will certainly be more difficult by day. Possible interference is the major disadvantage of day bombing.

If initial air operations are by night, the target cannot be so readily identified, and bombing is less accurate. Losses to the enemy will probably be less. On the other hand, frontier guards and OP's may not be able to determine the strength or course of the invaders, and the probability of interception by defending air forces will be reduced. It will take war experience to decide whether, against a vigorous opponent, of comparable strength, day or night air operations are best. At present, it is impossible to tell whether the next war will start by day or night.

That initial unexpected air operations will accomplish much destruction and interference with order and mobilization is admitted. It is not admitted that this alone will secure decisive results, even if surprise as to *time* is complete.

THE CHAINS OF FORTIFICATIONS

Initial Ground Operations: Nations adjacent to possible hostile states have fortified their borders. An offensive may find it possible to turn a fortified line, passing, if necessary, through neutral territory; or it may assault. As new fortified lines are being built, turning movements are rapidly becoming less practicable. Assault seems to be the method which in the majority of instances will be the one used for invading a hostile state.

For an assault or piercing operation to be successful, and utilizable, a gap must be forced of such size that a sufficiently large force can advance through it to wage a major battle under favorable circumstances. For such a mission, surprise as to *location* is very important, in order to prevent strong enemy forces having time

to assemble in rear of the sector attacked. With frontier forces habitually at war strength, a surprise as to *time* will for this case be of less importance—the frontier garrison must be counted upon as being continually alert.

An aggressor nation having more than one frontier will probably elect to maintain a defensive on one or more frontiers, and limit his offensive to selected sectors on a single frontier.

The first phase of ground operations is likely to be penetration of a fortified front. For this mission the major task falls to the artillery.

ARTILLERY ALWAYS THE SINE QUA NON

The World War proved that defenders were hard to drive out of improvised positions, provided they had had a few hours to organize. Modern border defenses are selected as to location; are camouflaged and sited to make bracketing by observation difficult; and at commencement of hostilities will be found manned by fresh troops, with ample supplies and ammunition. With underground communication between forts, bases for bilateral observation by the defense exist, requiring for a successful attack neutralization over considerable areas. Overcoming this kind of defensive position is a much more formidable mission, and requires means superior to those necessary in the field in 1918. The problem is to be solved by artillery fire.

Best ideas are that this is possible, provided that the artillery attacking has large caliber guns, with plenty of ammunition to fire an artillery preparation which in volume, and in weight of shells, shall be commensurate with the targets on the fronts selected for the attack. Modern tendency is greatly to increase the heavy artillery, and to supply ammunition in amounts many times larger than had been expected before

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the wars in Spain and in China made it evident that attacks against even moderately defended positions did not succeed unless prepared by ample artillery support. To conceal the real attack, artillery action with great intensity may occur at places not intended to be further included in the initial operations.

Some armies are now equipped with field batteries up to 10-inch caliber, capable of rapid movement over roads, and of being emplaced within two to three hours. To blast a gap through a prepared defensive line, a considerable number of large-caliber batteries is needed. Information is lacking as to just how many large guns are on hand in certain armies.

When the enemy's defenses are on, or close to, the frontier, the attacker may have his artillery and ammunition ready in advance of hostilities, and may start an artillery preparation, without an intent to do so on any particular date having been previously discovered. Closed frontier zones, over which travel on the ground or in the air is prohibited, are a sign that preliminary preparations of this kind are in progress, or have been completed. Installation of materiel is habitually accompanied with plans of fire, and preparation of firing data. Under present mobilization plans, frontier artillery forces are regular army troops, constantly at war strength. It is therefore possible to have everything so completely organized that an artillery preparation can be started at any time, day or night, and regardless of weather conditions.

There are no good data known as to how much of an artillery preparation is needed to neutralize a modern underground reinforced steel-and-concrete fort. From the point of view of the attacker, the time should be short. Unless the time can be reduced to one night, or better, to only part of one day or night, neither strategical nor tactical surprise will be

obtained. For this reason, the artillery preparation should not exceed 12 hours, and it ought to be less than this. If it can accomplish its mission within 6 hours, a strategical surprise as to *location* may be possible, and an advance through a gap may be completed to a satisfactory depth before the enemy has had time to bring into line strong reserves in rear of the sector penetrated. To insure as short an artillery preparation as possible, intensive fire at maximum rates is necessary.

If the artillery needs no more than 6 hours for its preparation, and starts its fire in the morning, a breakthrough on the night of the first day of war may be hoped for. By using regular divisions stationed on, or near, the frontier, together with regular mechanized and motorized divisions, all at war strength, and within a march-time distance not exceeding the length of the artillery preparation, a sufficient force may be assembled for a surprise invasion, if the war plans for assembly and advance are ready. Local reserve divisions, mobilized within 24 hours, may be used as a support and reserve for the front-line divisions. The days of lengthy mobilization periods are past forever. Movements forward are now planned to start only enough hours after war commences to enable the artillery, already in position, to complete neutralization of selected enemy frontier defense zones.

Coordination of ground and air forces, and particularly of artillery and air forces, is absolutely necessary. Initial air forces cross the frontier at the same minute that the artillery opens fire; this is H hour of M day.

If the piercing of a fortified front is intended, the hour for commencing the war is the hour desirable for the initial advance of the ground forces, minus the time needed for the artillery preparation. Opinions differ as to whether the

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initial advance of ground forces should be around daybreak, with preceding artillery preparation and air operations by night; or whether the artillery preparation and initial air operations, had best be by day, and the initial ground advance later on the same day, or during the following night. There are advantages and disadvantages for both day and night artillery preparations and air operations, and subsequent ground movements. Each case will depend on the local conditions.

Initial artillery operations will include shelling of cities, road and railroad terminals and centers, and other objectives from 20 to 25 miles in rear of the enemy front. Air forces are to be released for more distant operations. New types of long-range guns are available. Their exact nature is secret, but it appears that a range of 50,000 meters has been obtained. The use of single guns to shell cities, as used to be the practice in 1918, is no longer contemplated. War is faster, and effect of a decisive character is desired within a few hours. For shelling a city, or part of a city, fire is to be by battalions, using rapid, intense, destructive fire over a considerable period of time.

If the fortified lines of the defense are at such a distance in rear of the frontier as to make an advance of the artillery of the offensive necessary before fire can be opened, a delay in initial penetration would result. In this case a surprise breakthrough would seem to be improbable, and certainly would be more difficult. New fortified lines, back of the frontier, are under construction and in some cases are completed. For such a situation, the mobility of the new types of artillery, together with ample numbers of crosscountry vehicles in the ammunition trains is counted upon. There are absolutely no data as to what the artillery can accomplish against modern continuously fortified fronts.

The main factor in this problem is how much artillery, and how much ammunition are required to smash through a fortified front in around 6 hours. We have available the reports of fire against underground steel and concrete forts during the World War, Liege, Antwerp, Verdun, etc. Allowing for improved forts, and admitting that these are probably immune to gas attacks, information available indicates that to obtain neutralization of a modern fort, hits on or near each turret or gun and machine-gun emplacements will be required. Direct hits on turrets are not always essential; nearby hits will frequently damage the turret mechanism sufficiently to make it unworkable. Direct hits on guns and machine guns firing out of embrasures are desirable, but again they may be neutralized by fragments from hits close by. For fire against concrete, the large-size guns should be used; nothing smaller than 155-mm. is of much value, and it is desirable to have calibers of 12-inch to 16-inch. The best results, in 1914, were from 12-inch mortars. It is probable that the new 10-inch guns are equivalent in power to the 12-inch pieces of a past generation. If the number of targets is known, the number of guns and quantity of ammunition required to neutralize the targets within any desired time can be calculated. The probability of success can be determined.

The strongest lines of concrete and steel average around 2½ forts per kilometer. The number of guns and machine guns in the forts is variable, depending on the terrain, but will usually be not less than 4 per fort, or 10 per kilometer. This gives 10 targets of concrete and steel per kilometer to be neutralized within the time fixed for the artillery preparation. The number of guns needed for this mission will vary with the size of the gun and the range, but can always be calculated. Two batteries of about 10-inch caliber firing

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20 rounds per piece per hour, or 160 rounds per hour in all, should at average ranges accomplish the mission within 6 hours, if the location of the targets is accurately known. For neutralizing field forces present, additional guns in usual numbers are necessary. Spain indicates that depending on whether the targets are in cities, woods, hills, trenches, etc., from 100 to 150 guns per kilometer of front, of from 100-mm. to 240-mm. caliber are needed.

When on the offensive, success depends mainly on the artillery. Without artillery of proper strength, and ammunition for it, there is no prospect of forcing defended fronts. Tanks and air forces may and should assist, but nothing has yet been found which can substitute for artillery for ground operations.

It is doubtful whether artillery of attacking troops will assist in artillery preparations. It was customary during the World War to do so, but in order that the artillery accompanying infantry may be fresh for what can be expected to be arduous duties after penetration of an enemy front, no preliminary tasks may be assigned them. For the artillery preparation a special force of artillery, complete with staffs, is to be furnished. It will not need complete transportation; ammunition will be brought up in advance. Organization of this artillery is not settled. It may be part of an artillery reserve, used to reinforce front lines for each operation. This policy was used by the Germans first, for siege artillery, in 1914. It worked so well that the Allies also adopted it, and by 1918, had a strong artillery Reserve, used for all operations. It is certain that large artillery forces will be habitual in the future, and like other commands an organization is definitely necessary.

If the artillery is successful in neutralizing, within, say 6 hours, a sizable sector of the enemy front, exploitation is to be performed by a rapid advance

through the gap. It is generally, but not certainly, indicated that the initial advance will be by mechanized troops, who will penetrate as deeply as possible into enemy territory. Motorized troops are to follow, turning to right and left, and widening the territory seized, possibly in rear of fortified fronts still held by the enemy. For mopping-up operations, reduction of isolated works temporarily neutralized, but neither seized nor destroyed, troops of ordinary equipment are to be used. This is a complicated maneuver, and requires a well-drawn plan, and good troops. Present plans are to use only regular divisions for initial combat operations. Reserve divisions will commence to be available probably on M-2 day, and will be used according to the situation at that time. For a great initial success, hoped for by general staffs, a deep penetration before encountering strong hostile forces is necessary, and this will depend primarily on the ability of the artillery to open a path of sufficient width and within a few hours.

This system of attack, on the scale contemplated, is at present just an idea. It has been tried on a small scale in Spain, and with success. It is impossible to foresee what the effect would be if employed against a well-defended front. Provided the necessary artillery and ammunition are available there is nothing impracticable in the plan, and no better one has been brought out to date. If swift action is to be had, with a view to a short war, pounding the enemy's defenses to a state of complete neutralization, followed by a powerful thrust into enemy territory by strong forces, appears to be the most promising means to success.

It is not certain that open warfare, in the sense of rapid field movements, will be possible even if fortified frontiers are pierced. China and Spain indicate that a small force, until brought under

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strong artillery fire, can from almost any position, stop large forces. In the absence of surprise, only artillery can cause even weak forces to evacuate territory.

No one knows whether a mechanized force, breaking through a fortified frontier, will be able to proceed far before it is stopped. If major forces are met with, a stalemate seems certain, and in this case, a breakthrough would secure only a minor and probably unimportant gain of territory.

There have been hopes that in the next war, open warfare will prevail, and that decisive battles, like those of the good old days, will be fought within a comparatively short period of time. Some have believed it would be possible, by surprise at the commencement of a war, to secure such an advantage as would preclude the enemy from establishing position warfare. The Chaco, Spain, and China, do not support this idea. It now seems probable that any major war is likely to be a long-drawn-out tragedy. This does not prevent the securing of decided advantages by proper commencement of a war.

Uncertainty troubles general staffs and commanders. They do not know how modern warfare, with its complexity of new weapons, and unprecedented quantities of ammunition, will turn out. It is hoped:

- a. That initial air bombings, and artillery shelling of places within 25 miles of the enemy's front, will prevent the enemy from concentrating major forces in time.
- b. That a breach in enemy defenses can be made wide enough to enable imposing numbers of troops to pass through.
- c. That by utilizing mechanized and motorized units, space can be gained sufficient to deploy so powerful a force that the enemy will be unable to stand.

This will be tried. It remains to be proved,

whether, and under what circumstances, it can succeed.

THE DEFENSIVE

To avoid surprise, through unexpected commencement of war, nations maintain on land an information service and a security service of guarded frontiers.

Information as to possible enemies, secured during peace, is a function of the diplomatic service and of war department general staffs, and will not be considered in this paper.

Frontiers exposed to attack are observed and guarded. Diplomatic tension is frequently a normal condition; regular armies at war strengths are common; modern mobilization requires hours instead of weeks; all of which makes sudden attack possible. Frontier forces are at, or near, war strengths; they maintain observation and precautions as in time of active hostilities, not involving crossing the frontier. There is no likelihood that a frontier can be approached or crossed by hostile air or ground forces without immediate detection, and counteraction.

Air Operations. A hostile air force crossing the frontier is sure to be accepted as an act of war. Antiaircraft defenses will go into action, and rear elements of the defense will be alerted. There will be no delay. The importance of immediate action is recognized and fully provided for.

When frontiers are crossed by day, the number, type, and course of invading planes can be observed, and within limits, the probable objectives determined. Places of military value close to a frontier, are usually provided with permanent antiaircraft defenses. In rear areas, only the large cities and certain other locations are liable to attack, and the defense can concentrate around a relatively small number of such exposed probable targets. In initial operations the enemy is not likely to attack minor objectives; the inhabitants here

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need to take precautions, but they are in materially less danger.

Defense air plans may provide for intercepting invading air forces before they reach their target, or on their return home. Airdromes must be at such distances from the frontier as to be not only out of range of artillery in enemy territory, but that there will be time after warning has been received to assume combat formations before the enemy can arrive. Air forces of an invaded state may themselves effect a surprise by attacking from unexpected directions, or by concentrations from several airdromes.

Main efforts of defense air forces may be operations into enemy country, or may be directed to repulsing invaders. It is certain that the air forces will be called upon for more than one mission, involving.

- a. Observation of frontiers.
- b. Attacking concentrations of enemy ground troops.
- c. Attacking enemy air forces.
- d. Reprisal bombings.
- e. Supporting surprise counterattacks.

No nation has enough planes to undertake all these missions in full at the same time. Each will solve the problem in accordance with its war plan and local circumstances. Care must be taken, in case war starts at night, to avoid erroneous countermeasures, due to incomplete observation.

Variations in air plans, depending on the particular hour of the day or night that war starts, may be necessary. Flexibility to suit conditions the details of which can not be exactly foreseen, must be provided for. Before and after war begins planes and balloons for frontier observation and patrolling must be available at all hours. Plans for intercepting invading air forces will probably vary with the time and weather. Plans for supporting

counterattacks will depend on the hour, or on the day, selected for these to occur.

Precautions against Enemy Air Operations. In spite of protests against bombing and shelling of cities, there is going to be such activity, regrettable as it may be. It is necessary to take serious measures to avoid unnecessary losses coupled with sudden refugee-and-casualty problems.

An obvious partial solution is to reduce populations in cities to the minimum required for war purposes, while furnishing maximum protection to those who must remain. This requires the evacuation in an orderly manner, and on short notice, of large numbers of citizens from cities which are likely to be bombed or shelled. More has been done in this line than is generally known.

The evacuation of the aged, the infirm, and of children, will as a rule be started, and if possible completed, during the period of diplomatic tension.

It will be hastened by using all rail and road facilities. In Paris, plans provide for evacuating all automobiles not earmarked for military purposes, each filled with unnecessary (to the operations) citizens, including large numbers of women and children. If all roads, leading out of Paris, are temporarily declared one-way roads, it is estimated that all these motor vehicles can be sent off within 5 hours. For such a plan to work smoothly, every car owner and driver must be instructed in advance as to:

- a. Whom he is to take in his car.
- b. The route.
- c. The destination.
- d. What disposition is to be made of passengers after arrival.

A large part of citizen evacuation will be by rail, to camps and centers designated and prepared in advance. London counts upon 3 days as necessary for sending away the school children

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and unneeded women. The British plan is well-advanced, and includes provisions for shelter and supply of refugees. Other countries have plans to send away from cities large numbers of individuals not needed for war purposes.

Workers in cities must be kept advised as to where their families are, and as to their condition, otherwise their morale will fall at the very time when it should be high. If it is not certain that dependents are better off than they would be in cities which are subject to bombing and shelling, workers will try to leave their employment to see their wives and children. Evacuation plans need to provide for full and easy connections between workers in cities and families at evacuation centers.

It has been assumed that evacuation centers established at places of no military importance, and not engaged in war work, will escape bombing and shelling. This is now conceded, but policies may change. Cities are bombed primarily because they contain objectives and personnel engaged in the furtherance of the war. Districts which are purely residential probably would escape attack, as long as more worthy objectives remained as targets. But no one knows.

For protection of workers in cities, antigas protection and underground shelters are provided. Constant improvements are being made in this direction. Yet it is doubtful whether cities close to the front would be able to carry on. In Spain, bombing and shelling of objectives has occasionally occurred, day after day, at ½-hour intervals; this has practically stopped production, due to shock caused to workers. It is a great advantage to have war industries located far from theaters of operation.

Panic due to publication of news with alarming headlines has to be guarded against, as this may unfavorably affect morale. Some states on M day are to

suppress newspapers; others will censor their news. Main source of news will be the radio, readily controlled, which is to broadcast news all day long. Cheap radio sets, to facilitate wide reception of government broadcasts, are available. For example, in Germany they are sold for about \$8.50, payable in 12 monthly installments.

Other precautionary measures to reduce losses and sustain morale, which will not interfere with vigorous prosecution of the war, are necessary.

Ground Operations. To prevent invasions through surprise, exposed frontiers are fortified. Fortifications enable a front to be held by a smaller force, which permits of large forces being assembled in the reserve or for surprise counterattacks.

Since fortified lines are not found in the American continent, except for short stretches in South America, it might seem that the United States is not specially interested in their attack or defense. Since announcement that no assumptions are to be made that we will remain neutral, it appears possible, if improbable, that we might eventually become involved with some continuous fortified line.

Modern fortified lines are permanent concrete and steel underground forts at short intervals, each fort mounting one or more guns and machine guns; intervals between forts are covered by minor works, and by fire from the main forts. Obstacles to tank attacks, and to motor vehicles operating across country are in place; all roads and lines of approach have been rebuilt to provide for passage through sharp turns and obstacles under fire of the permanent works. Intervals between forts vary with the terrain; latest information shows that the strongest lines known to be in existence at this date, along the Rhine frontier, average 2½ forts per kilometer of front.

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In connection with the forts, the fortified lines provide garrisons constantly at, or near to, war strengths; underground garages for mechanized units of the defense; underground garages for airplanes; underground lines of communication. Each permanent element of the defenses has an independent plant for furnishing power, light and ventilation, including provision for excluding gases.

As far as is humanly possible, there is no probability of these fortified lines being penetrated by surprise. They are always on the alert. They can be pierced only by a regular attack, involving an artillery preparation by heavy artillery, and the expenditure of large amounts of ammunition. Whenever an artillery preparation starts, the defense will understand that a piercing operation is proposed, and without delay will endeavor, by intensive use of roads and railroads, to accumulate reserves in rear of the threatened sectors, in time to prevent any exploitation of an attack, should a portion of the front crumble. Positive measures of defense: Counterbattery to neutralize the enemy artillery; air protection to protect arrival of new troop units.

The new fortified frontiers were at first believed to be unbreakable. It was thought that they could be pierced only after prolonged operations. Some lines were placed close to the frontier, either to protect resources, or to deny to the enemy any possibility of advancing. Such lines permit an opposing nation to establish in time of peace, on its side of the frontier, the artillery and ammunition for attacking the fortified line. Were the latter really unbreakable, this might not matter, but the new defense measures have brought out new measures of offense, particularly more and better heavy artillery, and much more ammunition. Many writers believe that it is now possible to smash through a

modern fortified line, provided the needed artillery is available.

A fortified line on or close to the frontier does admit of a sudden attack, and if it be true that it can be broken within a few hours, such advanced locations are a serious disadvantage. To correct this possible defect, additional lines in rear are being constructed, at such distances as to make it necessary for an attacker to displace his artillery forward to attack them. According to a speech by Chancellor Hitler, on 12 November, 1938, the German fortified line on their west frontier will be in three, and in places in four, lines. According to unofficial information, some sectors have really five and six lines. Piercing a defensive front of this depth in a single operation would with present means appear impracticable. It remains to be proved whether a single line can be penetrated in one short operation.

If the defense can ascertain in advance the probable sector to be attacked, it may install its own forces, particularly artillery and ammunition, not only to assist in defending the sector to be attacked, but for launching a counterattack elsewhere. Artillery in the same sector as that where the enemy is firing his artillery preparation will have the mission to crush the hostile attack in its early stages. Artillery fire in a different sector would ordinarily have the mission of smashing through the enemy's defenses to establish a gap through which a counterattack can pass. The artillery and ammunition for this kind of mission must be prepared in advance, and suitably camouflaged; the troops for the advance have the time (required for their own artillery preparation) in which to assemble and deploy. At the commencement of the fire they could be a considerable distance away, provided good lines of communication, properly protected against enemy activity, are available.

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Fortified frontiers enable troops to be mobilized in rear with a view to their employment at unexpected places as a strategical surprise. This is possible only if the fortified front does contain the enemy.

The major effort of the German forces in 1914 was in an extensive enveloping movement around the Allied left. This was a surprise as to location and as to force. It had not been foreseen that the enveloping movement would extend so far to the west, or that it would be so strong. To meet this danger it was desirable to have Allied troops in sufficient strength face the new movement. All that was immediately available was the small British Expeditionary Force, plus a few French territorial divisions — quite insufficient. The main French reserve was its Fourth Army, which was near Rethel, in rear of the center of the four armies in line. It was too far to the east to meet the new hostile advance, and was not favorably situated with regard to roads and railroads to enable it to move westward in time. The solution was to send it into line straight to the front, while the French Fifth Army side-stepped to the left. A slow and difficult maneuver—only partially successful. It was necessary to retreat to the Marne in order to obtain time to correct a faulty location of the reserve.

Present policies are to take advantage of the fortified lines to accumulate as large a force in the reserve as possible. This will be the main force, and will be stationed around road and railroad centers, whence it may be transported quickly to one of several possible areas of employment. It will probably include major forces of artillery. Arrangements for utilization of the reserve must be made in advance (to include depots and dumps) to avoid necessity for establishing such indispensable accessories to modern war at a time when any delay might be fatal.

In no case should main reserves be close to the front, where they might become engaged in local operations from which it might not be possible to extricate them. Until the situation is developed, the defense retains large reserves which it seeks to use by surprise in time, location, and force. A classical illustration is the attack of Bluecher against the French right at Waterloo. With present extensive fronts, a surprise by enveloping is not easy, but it is not impossible. Motorized troops, by wide turning movements, or by piercing fronts, may secure surprise in time, location, and force.

For the defensive, success will be enhanced by ability to hold with small forces fortified covering positions, while retaining large mobile reserves in rear. For the artillery, counterpreparation must be fired without loss of time. Artillery preparation for a counterattack will start according to the war plan. It may start the same day, or night, following the beginning of war. But it may start at a later period, if it is desired to await results of initial operations before committing the reserve. This dual mission requires a division of the main artillery forces, as distinct from organic artillery; to reinforce troops in line, and to be held in reserve for a main thrust at a date, place, and force to be determined on some yet-undetermined day.

SUMMARY

The principle of *Surprise* has not changed; but its application has.

Declarations of war are no longer to be expected.

Diplomatic tension between countries liable to be at war will be a normal preliminary condition which may extend over prolonged periods. This provides the opportunity to explain to one's own people the mission of the possible war with reason why the war will probably be necessary, just, and unavoidable.

Also, to test war plans, materiel; to note the proposed enemy's reaction; to determine what other nations will become involved in the war, and on which side. If the numerous factors are at any time favorable, war without warning is launched; if the factors are not favorable, the period of diplomatic tension is allowed to continue.

To insure instant action when war is commenced,

- a. Air forces will be constantly mobilized.
- b. Frontier forces, particularly artillery, will be normally at their posts, at war strengths, and with full supplies of ammunition.
- c. A considerable part of mobilization will be made, secretly or otherwise, before hostilities start.
- d. Major operations will commence on the day, or night, war breaks.
- e. Completion of mobilization, after hostilities commence, will require at most but a few days, possibly only hours, and will not delay operations already started.

Initial war operations will include bombing by air forces, probably by both sides; and a ground attack by the nation taking the offensive, and starting immediately on the commencement of war. The initial ground operation will include strong artillery preparations against one or more sectors selected for a piercing operation.

The defensive may elect to counterattack at once on some sector favorable to his war plan; or may assemble reserves in rear of a fortified front, and at some distance therefrom, with a view to a surprise operation as to time, location, and force, after the initial operations appear to have committed the enemy to some definite line of action. Such reserve forces will include major artillery commands.

COMMENTS

New inventions have in the past given the offensive in war temporary advantages. For example, gunpowder; and in more recent times, quick-firing artillery; tanks. Sooner or later, the defensive has found countervailing measures to protect itself from new materiel and new methods. It is entirely possible that the same thing will happen again with regard to bombing, shelling, gases. A way will be discovered to reduce their effectiveness. It may take time, but under pressure man's inventiveness works fast.

Initial operations in the next war should commence with caution, to avoid unpleasant and bloody surprises. This does not mean that the war ought to be conducted in a slow manner. On the contrary, the best opinions are that both for the offensive and the defensive, swift and energetic action is indispensable. But however rapidly operations may move (and there will be no limit) they need to be accompanied by careful observation and analysis of combats. Commanders must have a major duty of observing, and without delay acting on, changes in organization and materiel required; manufacturing establishments must be ready quickly to produce new materiel, or increased quantities of current materiel, as the war experiences indicate. Whichever side can observe faster, and apply lessons of the war, to making changes in armament and tactics before their opponents, will secure most important advantages.

* * * *

Major forces of artillery are required for a modern war. This is the age of materiel. War threats are rampant, and the results of a lost war will be incalculable. Artillery cannot be improvised after war breaks. It must be provided, equipped, supplied with ammunition, manned, and trained, *before* the war.

Hollywood Fights A War

BY LIEUT. HARVEY S. FORD, FA-RES.

NO ONE any longer denies that the movies rank with the most important of American industries. The providing of entertainment of no mean quality at a price within the reach of everyone is in itself a service of sufficient value to commend them to the public. Moreover, the movies are steadily improving in nearly every phase of their activity, and especially in the type of story material now being used. But in one phase at least the movies have made little or no progress, and that is in their treatment of war.

It should be said here at the beginning that this is not an attempt to argue for a too-strict adherence to history, nor a plea for mere surface realism. If for the purposes of creating the required dramatic situation it is necessary to have Lee win the battle of Gettysburg, there should be no complaint. Again, if the hero fires a six-shot revolver twenty or thirty times without reloading, or rides through a hail of rifle and machine-gun fire without even mussing his hair, we should not object. A motion-picture director should be allowed as much freedom or poetic license with his materials as a novelist or any other creative artist. But if these liberties should be tolerated, there are others, presently to be discussed, which may be termed tactical blunders, and which spoil the effect of even the finest of war films by making them appear ridiculous.

Since the earliest times war has been favored by the attention of novelists and dramatists, because there is inherent in war, as in no other human activity, the greatest of opportunities for the emotion-rousing situation.

Among major wars Hollywood naturally devotes the most time to the World War, with films on the Civil War and French Revolutionary and Napoleonic wars not far behind in number. However, pictures based on these great wars really do not offer the director a great deal except background and atmosphere. For one thing, the audience is usually too well acquainted with the details of these wars for comfort. Also, to attempt to give anything more than a narrowly restricted scene or two from one of the great battles would not only be exceedingly difficult but costly in the extreme. Therefore the director tends to concentrate on films based on British or French colonial warfare—the Bengal Lancer or Foreign Legion opus. Here the same dramatic setting of war is obtained, but on a smaller scale, easily within the limits of the budget. Here, too, war is more personal and offers more frequent and logical opportunities for the much loved man-to-man death struggle. It is unfortunate but it must also be added that it is in this type of film that the director usually makes his crudest blunders.

To illustrate, let us sit through an imaginary movie (we are doing Hollywood no injustice in this, for nearly all of these war pictures follow a similar and quite familiar pattern). Hardly before we have settled in our seats we are introduced to a distinguished looking and much-decorated colonel (bearded if French, moustached and with monocle if British). He announces in tones of utmost gravity that the enemy Riffs or Afghan tribesmen (as the case may be) have concentrated

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and have collected huge amounts of military stores and ammunition preparatory to an invasion. The regiment will march at dawn and proceed with the greatest possible speed to the scene of the concentration, for the Empire (French North African or British Indian) is at stake.

We will omit here the love story, since our interest is purely military (of course the foregoing scene is laid at a ball, where the colonel communicates his alarming information to the hero, while the heroine tearfully listens). To return to our movie, dawn duly arrives, and out rides the colonel at the head of his regiment, accompanied by a brilliant staff. We prepare ourselves to witness a regiment on the march, but what actually appears is a small column that would hardly amount to a weak platoon. The effect is ludicrous and somewhat like that of the comic-opera army—all officers and no privates. Doubtless it would be too expensive actually to hire and outfit a regiment of extras for the film, but in that case why not call the unit a platoon, put a lieutenant at its head, and be done with it?

Running our eyes along the column we note with surprise that there is no artillery included. Admittedly our column is to fight against overwhelming odds, yet evidently our colonel did not think the support of a little shell or shrapnel fire would be necessary. Assuredly he must subscribe to the theory that one white soldier is the equal of a thousand natives. About now we begin to get glimpses of large numbers of exceedingly mean looking tribesmen, indifferently concealed behind sand dunes or crags, who are carefully noting the progress of the column. Momentarily we await the return of someone from the advance guard with news of the presence of the enemy—and then we recall with a shock that there is no advance guard, and that in

fact our colonel has not sent out a single scout. And this in hostile territory fairly swarming with savage tribesmen! We begin to doubt seriously our colonel's sanity, to say nothing of his fitness to command.

Presently there looms up ahead the entrance to a defile or gorge, an ideal place for an ambush. We would bet our last dollar that the tribesmen will be here. Certainly it is a locale to be avoided, or if this is absolutely impossible, it should never be entered without thorough reconnaissance. Here is our colonel's last chance. Will he now, at the last moment, send out an advance guard? He doesn't, but we didn't have much hope that he would.

The column now passes through the entrance to the gorge, marching in closed formation, the men singing cheerfully. Gloomily we await their instant annihilation, and sure enough, a tremendous fire breaks out from the sides of the defile. However, the tribesmen must be miserable shots, to say the least, for little damage is done. Here and there, it is true, a soldier clutches his breast and falls, but strangely enough, in spite of their very unfavorable position, the soldiers seem to be hitting a great many more of the enemy. After a few minutes of this the column retreats, having suffered a total loss, as near as we can make out, of about eight men. We can only explain this amazing piece of luck by assuming—and this seems hardly possible—that the leader of the tribesmen is an even more inexpert commander than our colonel.

The scene now shifts back to the fort, where an attack is expected as a follow-up to the defeat in the pass. The tribesmen evidently are in no hurry, which is convenient, since it gives the romance angle time to develop properly. In spite of the delay, our colonel

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makes no effort to evacuate the women and noncombatants, and though a siege has long been expected, it seems that water is scarce and that there is hardly enough food or ammunition to last a week. We are now convinced that it would be unjust to court-martial our colonel; the man is obviously mad.

Due to our commander's aversion for outposts, he is of course unaware of the approach of the tribesmen until he looks over the parapet and sees them. Since the tribesmen also have no artillery, and the walls are of stone and appear to be about six feet thick and at least thirty feet high, it looks like a bloody assault with scaling ladders. But this is not the method adopted. Indeed, no. Instead, our tribesmen advance to the attack of strong fortifications, in broad daylight, on horseback! Again we wait for madness to be rewarded by disaster, and again we are disappointed, for the loss of the tribesmen is trifling. Truly, the Lord must watch over those who march in where angels fear to tread.

The siege drags on, and the garrison is reduced to starvation rations. At the last moment the relieving column—brought up by the hero, naturally—arrives, and the tribesmen disperse. Of course, since the relieving column also marched without advance or flank guards, it might also have been easily ambushed, but we have long since ceased to wonder. Hardly waiting for the final embrace of hero and heroine, we rise and leave the theater, arriving on the street in a slightly dazed condition, for we have just witnessed the modern miracle of war as it is conducted in Hollywood.

Major Martin W. Jones, 218th FA, has constructed graphical charts for K-transfer, of the type devised by Captain H. F. Handy, FA, for all combinations of charge and projectile for the 155-mm. howitzer materiel with which his battalion is armed. He was assisted by Sgt. Maj. Kenneth de Brauwere, 3d Bn.

There may be exaggeration in this review of an imaginary film, but surely no great amount. Certainly the main points are familiar and will be recognized by every movie-goer. Yet pictures based on professions other than the military—as for instance the medical or legal—are not so grotesquely directed. No director, for example, would have a surgeon conduct an operation with a jack-knife while wearing a bathing suit, yet that is no more ridiculous than sending a punitive expedition out without any artillery or an advance guard. Frequently the scenarios of war films are first rate, and the results would be fine pictures, were it not for the fact that incredibly stupid handling of the military side of a film often makes a burlesque out of the whole production. If common sense is not sufficient guide in such matters, Hollywood might do well to hire a military expert for films based on war.

EDITORIAL NOTE. Hollywood, it is frequently reported, does indeed hire military men as technical directors. But perhaps they have as little influence with the box-office end of the business as do the authors of the plays portrayed. Lieutenant Ford has well pointed out the affronts—if somewhat innocuous ones—offered the intelligence of audiences of military movies. But it is a pity that the nonmilitary members of those audiences do not realize what the soldiers know—that you can't make much of a movie of characters in battle, for the dramatis personae visible on a battlefield are those to whom something has happened—or will shortly occur. In the meantime we may hope that the National Guard, the ROTC, and the CMTC will train our youth to take advantage of cover somewhat faster than the movies can untrain them.

Dirty Field of Glory

BY PETER B. KYNE

THIS story begins in the sacristy of the shell-riddled cathedral at Bacoor, in Rizal, Luzon. Andy Bogue, our company cook, had a weakness for sacristies and would set up his kitchen in one whenever the opportunity presented, which was strange, for while Andy was not a communicant of any faith, he had a leaning toward the Roman Catholic Church, which arose from the fact that up on the Sacramento river he used to shoot ducks with a Catholic priest and if he missed a duck and cursed, his pal never heard him. This prelate had still further strengthened the bonds of affection by becoming the chaplain of the First California Volunteer Infantry. His job being to administer spiritual comfort to the dying, he conceived it his duty to go forward with the skirmish line because there lay his best field for gathering in the sheaves. As a result he had been wounded three times. In fact, in connection with this chaplain (he was the Reverend Father McKinnon) I will change step long enough to relate a little story.

It was during Lawton's Bill Poster Campaign in Laguna Province and we were assaulting the town of Santa Cruz. There was some sharp work in a cane field and Andy Bogue got himself a Filipino soldier just as the man was going over a fence. Our orders always were to get the rifles of the deceased, so Andy marked his bird down and presently, the line having advanced, he went to the spot and leaned over the fence. Father McKinnon was on the other side, kneeling beside a dying Filipino soldier and giving him the last rites of the Church.

Andy was terribly glad to see his old shooting crony of the Sacramento. He

stood there looking over the fence listening to Father McKinnon intoning: "*In nomine Patris*—." He looked up, recognized Andy Bogue and interrupted himself long enough to say: "Why, hello, Andy, I didn't know you were in Luzon. What outfit?"

"L of the 14th Infantry, Father. Glad to see you. Say, I got that gugu you're working on. Hand me up his rifle and belt, will you, Father? I got to be movin' on."

Father McKinnon handed up the rifle and belt.

"Three hundred yards if it was a foot, Father," Andy informed the priest proudly.

"Good shooting," replied Father McKinnon. "Goodbye, Andy, and good luck to you. Hope we get to shoot ducks again up on the Sacramento. *Et Filii et Spiritus Sancti . . .*"

Said Andy, when telling me about this afterward: "Doggone it, Pete, I wish I hadn't run into them two. The Filipino was just a kid and he knew I was the feller that downed him. He looked at me kinda funny. Damn, I don't feel well about that. I wish I was back up on the Sacramento."

He was still wishing it the day this story began, in the sacristy of the church at Bacoor. Perhaps he had a feeling that the ghost of that Filipino kid would always be between him and the padre if they ever shot ducks together again. I was visiting Andy during that slack period in the late afternoon, when the supper is made up and all ready to put on the fire say half an hour later. We were discussing the immortality of the soul and Andy was wondering if that Filipino,

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provided they should meet in the hereafter, would be a good sport about it, when into our midst, with loud cries of lamentation, barged the Prince of Kitchen Police, Jim, the coolie. If you haven't made the acquaintance of Jim, the Prince of Kitchen Police, you should read my story SHORT ORDER in the July-August issue of the FIELD ARTILLERY JOURNAL.

It was Thursday and, as a tribute to Jim's excellence at two bits a day American money. Andy had given him the afternoon off, as usual. Jim had gone prowling over into the village and now, two hours later, here he came with every appearance of being pursued by devils. He made a dive for the floor in front of Andy, grabbed his master round the knees, and commenced to babble a tale of riot, murder, and sudden death.

Andy Bogue boxed Jim's ears to quiet him and also to teach him not to interrupt again two white men engaged in a serious discussion of the ultimate disposal of their immortal souls. "What's the big beggar howlin' about, Pete?" Andy demanded. "*Hablar* to him."

So I soothed Jim in Spanish and finally got the story. It seems he had gone prowling around among the local natives and they, not knowing he spoke both Spanish and Tagalog fluently, had not bothered to pipe down when he appeared, his lost-dog face as void of human emotion and human intelligence as the head on a totem-pole. So he had listened, waited an hour to allay suspicion and then ambled back to the company kitchen casually, until he got inside the sacristy, when he blew up.

The tactical situation was as follows: A launch had kicked two cascoes in on the beach back of the church about noon that day and those cascoes were loaded entirely with rations. In the convent next door to the church were stored perhaps a

couple of hundred thousand rations and we had a lot of double-compressed baled alfalfa hay in the church. I had finished rebuilding the road from Zapote river to the Imus river and the engineers were going to put up a bridge; as soon as the rainy season was over the campaign would be pushed south, so we were accumulating rations for man and beast.

The Filipino army beyond Imus was hungry and a plot had been hatched to massacre L Company, the only outfit left in this district, and get the rations. We had about fifty men for duty of which sixteen were on outpost a mile up the road.

The civilian natives in Bacoor had dug up their bolos. That night there was to be a very heavy attack launched on our outpost and it was believed that the rest of us immediately would boil out of the church and double-time up the road to save the outpost: then, from the bush on both sides of the road the local men, with their bolos, were to jump out on us, three to one, and kill us all before we could say Jack Robinson. Then they would go on, with our rifles and ammunition and flank the outpost, after which Pio Del Pilar's forces would come in, occupy Bacoor, and own these rations.

"It must be true," I told Andy, because Jim just couldn't think this all up by himself."

"Cripes," Andy replied, "that was a sound idea when you suggested I give Jim Thursday afternoon off. What are we going to do?"

"I'm going to tell the first sergeant," I replied.

I did and he took it so seriously he made me go with him to our company commander, a man who was the newest recruit in the company, having recently been commissioned from civil life. In

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his previous incarnation he had been assistant professor of mathematics in a jerk-water western university, but I imagine having heard that second lieutenants were paid a hundred and twenty-five dollars a month, he chucked his mathematics and, so acute was the scarcity of officers in the regular service in those days, that here he was commanding us, and we did not like him and had no confidence in him, although he was cool enough under fire. He just didn't know and hadn't been around long enough to find out, but he was the type that never would admit he didn't know, consequently he wouldn't admit that in the circumstances it was sound military procedure to lean on old Dad Keyes, our first sergeant.

So now, when old Dad had me repeat my story, the company commander bent upon the top sergeant a patronizing smile and murmured: "Nonsense. I don't believe a word of it."

"It sounds reasonable to me, sir, and I think we ought to take measures of a sort,—” Dad protested respectfully.

"When I desire your advice, sergeant," came the cool reply, with a very cool and superior smile, "I'll ask for it."

Old Dad went to pieces. "Do you mean to tell me, sir, that you do not intend to do something about this?"

"I do. That will be all, sergeant."

"Very well, sir," said that competent top, "then I'm taking command of the company, because no matter what happens to me as a result, I'll not risk having these good men murdered by a man who doesn't know his business. I know what to do and by God. I'm going to do it, whether you like it or not, sir."

He started away, but the officer said: "Er-e-er- don't fly off the handle, sergeant. What—er— what do you advise?"

But Dad Keyes did not look back. He was on his way. A little later, one

by one, men slipped out the back of the church, walked up the beach a little way, screened from sight of the villagers by the cut bank, climbed up, entered the woods and made their way unobserved to the outpost. I seem to recall that we sent twenty men with intrenching tools and orders to dig in and hold on until daylight, if attacked; at daylight Dad planned to take the rest of us and advance toward them in skirmish order, which would have been too bad for any natives lying in wait alongside the road. Dad wasn't at all apprehensive. He figured the outpost would hold, and he sent the outpost sergeant word that if they didn't hold it would be just too bad, because the rest of the outfit wasn't going to leave the church at night to support them! And they were to put a cossack post out in their rear.

Now, when we took Bacoor we found parked in the plaza four prehistoric pieces of artillery. They were six-inch muzzle-loaders with about ten-foot tubes and were mounted on wooden platforms with low hardwood wheels, on which they had been hauled around from Cavite by caribao. It must have been a heart-breaking job moving them. They had hauled five around and one gun had been dragged down to Zapote river and emplaced near the bridge. They shot spikes and slugs and ten-penny nails and old broken iron pots and the Lord knows what out of that gun and actually did some damage with it before the cannoneers from Kenley's battery about thirty yards across the river knocked off the native gun crews with their pistols. I was on the burial detail after Zapote river and counted thirteen dead natives around this old Quaker.

On the fateful afternoon of which I write, a gig bearing a Lieutenant Commander Wainwright (I heard he made

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the grade of admiral before he retired) and six bluejackets had come ashore for the purpose of blowing up these four guns. I watched them ruin the first one. They put a charge of nitroglycerine and guncotton in first, with a wire leading out through the touchhole, to an electric battery. Then they filled the tube with mud and when the gun was fired half the tube was blown off.

After putting this one gun out of business Mr. Wainwright knocked off work to discuss with our company commander the contents of a bottle of something or other and it must have been old stuff because Mr. Wainwright lallygagged the afternoon away while his men sat around and smoked; apparently they were unwilling to blow up any more guns unless he was present.

Having made his dispositions to protect the outpost. Dad Keyes now turned his attention to those two cascoes loaded with rations down on the beach. He decided they should be guarded, because, after the town natives discovered we couldn't be tolled out of the church they might make the best of the upset situation by launching an uninterrupted raid on the cascoes; a couple of hundred of men, women and children could tote quite a lot of rations off into the bush before daylight.

Now, one of the drawbacks incident to bringing one's self prominently into a situation is that the wretches who benefit by one's activities promptly saddle one with additional labors. Dad selected a guard of six men for those accursed cascoes and then, to my infinite horror, blandly announced that I would be a lance-jack for the night and take command of the guard. I was young enough and conceited enough to have been highly complimented at his trust in me, but, young as I was, I was now an old soldier and I would very much have

preferred to spend that night in the church—"nor heed the rumble of a distant gun."

I said to Dad, tragically, I imagine: "Sergeant Keyes, are you going to risk having us all scuppered with bolos just to save a lot of blankety-blanked condemned beef and desiccated potatoes that no self-respecting soldier will ever eat? These local cut-throats will come down on the beach and swarm all over us and I don't relish odds of about a hundred to six. I'm too young to die."

Dad got a misery in his eyes. "Petie," he pleaded, "somebody's got to do it and you'll do as well as anybody else. There's a number of fishermen's bancas tied up on the beach. Skid one out on the mud and tie it between the cascoes. The attack won't come until after the tide is in, anyhow, and if it does come and you can't hold it off, slide off into that banca, paddle off in the dark and let 'em have the damned rations."

"The moon will be up about eight o'clock and I seem to remember that last night the moon was full, "I answered bitterly "so we'll have nice shooting light—until we start paddling away into the dark!"

Not knowing what else to do Dad fled, leaving me to make my own dispositions. I remember burrowing a hole in the cargo down back of a large barrel of vinegar, upon the head of which I laid out a hundred loose cartridges. In front and on both sides I built up a rampart of canned goods and had just finished when Mr. Wainwright and his doughty crew of six came down to the beach with the pious intention of getting into their gig and going back to the Monadnock. Alas, the heavy gig was stranded in the mud exposed by the low tide and nothing short of a derrick could remove it because of the terrific suction.

Now, the navy, living peacefully

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aboard ship, had not developed to the same extent as the army that light feeling of responsibility anent the property of other people, particularly enemy aliens, and by the way these navy files stood around discussing how they should spend their time until the tide should come in some four hours later, I realized Mr. Wainwright needed some sound advice from a freebooter. So I popped overside and said to him:

"Sir, why not help yourself to a couple of those bancas high and dry up on the sand. You can sit in one and a couple of men can grasp the outriggers and skid you out over these mudflats to deep water, because you won't have to pry those flat-bottomed bancas out of the suction. You can paddle off to the Monadnock and paddle back tomorrow to finish your job."

"That's a sound idea, soldier. Who's the corporal of the casco guard?" I told him I was. "Very well," he said, then, "Attention to orders. When the tide comes in get out here and rock this gig gently until it's loose in its bed and the water can get under the hull and lift it clear. Then tie the painter to your casco and throw out this boat anchor over the stern, but be sure the gig doesn't bump the casco once it's riding free. You'll have to head it quartering to the incoming waves, but it will ride that way all right. We have a couple of bottles of nitro-glycerine and quite a little guncotton in this boat, because we didn't dare leave that stuff around for fool soldiers to monkey with. A good stiff jar will cause nitroglycerin to explode. You drop a little bottle so big on the pavement and you'll go to your Maker in a red shower. *Sabe usted the burro, soldado.*"

I said I did and would be guided accordingly. As Mr. Wainwright and his detail departed on their voyage in the bancas it occurred to me vaguely that for

the second time that day I had shoved in my oar without being asked to, and had accumulated a dirty job as a result.

After sunset quite a number of natives of both sexes and all ages came down on the beach and lit a large bonfire. I wondered what they planned to celebrate. My demise, probably! They began sticking pieces of bamboo in the flames until the ends caught fire, then some of them dashed around waving these torches in the air. I thought it all a very foolish and childish way of making merry, as I watched it with a jaundiced eye while the soft tropic night came down.

Suddenly my sentry on post fired into the brown of them and they scattered like quail. For the first time since I had held up my hand I had an opportunity to show my authority. "Hi, you," I yelled to my sentry. "How dare you open fire on noncombatants! Who in the hell gave you permission to shoot your piece."

"They been wig-waggin' with fire," he protested. "Look down the beach to about the mouth of the Imus river."

I looked—and sure enough the same pantomime with torches was going on down there—and I noticed it ceased the minute the show was over on our front. So I forgave the sentry, in view of the fact that he hadn't hit anybody but had purposely planted his bullet in the middle of the bonfire, scattering it considerably. In fact I was glad now that he had fired. At least the local cutthroats would realize we were on the job and no foolin'.

The moon came up. Shooting light! I could have read a newspaper by it. Then the tide commenced creeping in and presently a gentle rain fell. Incidentally, from that day to this I have never seen rain and moonlight commingled. About ten o'clock I went overboard naked and rocked the gig loose and secured it as per instructions; then

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dressed and got down back of my vinegar barrel and waited for firing on the outpost.

Presently I heard it—all Mauser and Remington stuff, and I wondered if it came from across the Imus river or was on our side of the river. The fact that I heard no Krag firing indicated to me that the outpost was accepting the situation with cheerfulness . . . then suddenly the Krags cut loose for about twenty volleys and the firing became general; in about an hour it tapered off and ceased. Our failure to cooperate had spoiled the enemy's battle plan, so they called it a night and withdrew from the outpost front.

However, they had another ace up the sleeve of their kimona. Suddenly from the cut bank right in back of Bacoor church and about a hundred yards from the cascoes about twenty rifles commenced pecking away at the cascoes, in a final belated effort to bring the gang out of the church to save the casco guard. I forbade my men to return the fire, because it would have meant firing at their flashes and given them a similar target and would have been a waste of ammunition anyhow. Moreover, by treating the incident with contempt and evidencing that contempt by silence, the effect upon Dad Keyes would, I knew, be much more comforting and bolster up his resolve not to commit a military crime by changing his battle plan after becoming committed to the action.

Suddenly I became the proprietor of a perfectly horrible thought. Bullets were whining overhead and rapping into the case goods, but altogether too many of them were dropping into the water very close to that accursed navy gig with its cargo of nitro and guncotton. Mr. Wainwright had assured me that, even from that distance, if an explosion occurred it would scatter me and my guard and at least one casco far and wide.

And he had said something about bumps being practically fatal! Well, if a bullet should drop into that nitro-glycerine that would be a bump of sorts, wouldn't it? I asked myself. And answered myself in the affirmative, after which every nerve and muscle fibre in me went blah and I sank down on my hunkers behind my vinegar barrel and waited to meet my God.

Fortunately for me I am mostly of Celtic ancestry; hence, optimism comes easy to me. Presently I decided I'd have to test my luck and get that boat out of the line of fire, for the burden of command was on me. I owed my men that much. And it came to me suddenly that I had not informed them of the explosives in the gig, so they were still as happy as if they had good sense, in consequence of which it would be pretty brutal of me to disillusion them. No, all the suffering rights were mine . . . I rose chattering, slid out of my few sketchy habiliments and, with my pocket knife in my teeth, went overboard on the far side of the casco, half waded and half swam around the stern of the casco and with just my head showing above the surface made my way over to the stern of the gig, where I cut the anchor rope and then beat it for the side of the casco and untied the painter. I got it loose in time to throw my weight against the side of the gig amidships and keep it from bumping the casco; then I started walking it seaward and around the stern of the casco into the lee of the unexposed side.

The enemy saw me and concentrated on me. I think I prayed a little as I pushed and dragged, got knocked off my feet as the water deepened and the waves broke over me unless I leaped and rode with the boat over them. At the stern of the casco the water was up to my neck when a wave receded;

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when a wave came in, as I was rounding the stern, I had to flatten and throw my feet against the stern to hold the gig off; eventually I got it around and went forward into shallow water, where I stood for hours until, just before dawn, the ebb tide left it securely in the mud again and I crawled back onto the casco, cold and tired and shaky. After I had disappeared around the stern of the casco the enemy, despairing of drawing the main company out of the church, went home and Dad Keyes spat out his cud of eating tobacco and went to sleep in his little private cubbyhole high up in back of the main altar.

At daylight he and the company commander came down to the casco. I stuck my head up. "Well, Petie," said old Dad, "anybody hurt?"

"No casualties," I replied, and removed my hat and inclined my head over the bulwark of canned goods. "Is my hair white, Sergeant Keyes?"

"Hell, no," said Dad. "Why should your hair turn white? You mean to tell me, Petie, you were scairt that bad?"

"Worse," I replied and told him why. And right then and there I came pretty close to killing the company commander. He had a peculiarly short, dry, mirthless chuckle and now he chuckled at me. Dad gave him a dirty look, then took another look at a very badly frightened and outraged eighteen-year-old boy—and promptly sat down on the sand and laughed until he cried. "Dad, is my hair white, says Petie," he kept keening over and over again. "Is my hair white? says the kid." He was still enjoying himself when mess call went up at the church and I yelled: "Casco guard dismissed," and fled to put some of Andy Bogue's coffee under my belt.

Arrived at the church I discovered our coolie K. P., Jim, was a hero, but that I

was not. Sundry soldiers were slipping Jim small silver and Bull Durham tobacco and slapping his sweaty naked back and assuring him he was a *mucho bueno* Chino, but nobody appeared to consider I had done anything when I pried the tale out of the inarticulate coolie. All Andy Bogue said to me was: "Hello, kid. They kept you awake, didn't they?" He was so proud of Jim that he robbed the company commander's private store of commissary goodies of a can of Boston brown bread and gave it to Jim. I remember that very clearly because it was too much Boston brown bread for Jim and I helped him eat it, although what with fright and harrowed feelings at being laughed at my appetite was a trifle off.

When those Navy files came back in the morning I told Mr. Wainwright what his inattention to business the previous afternoon had done for me and begged him to finish his job pronto and go away. And he laughed at me, too. Some men have a very debased sense of humor.

Andy Bogue's pride in his coolie was thereafter enormous. He never even scolded Jim. He would even smile at the coolie and Jim would smile back and if Jim burned the slum or the rice Andy would say: "I'd ought to sock Jim for that, but hell, he don't do it very often and anyhow, if it wasn't for him, maybe we'd all have been buried in gunny sacks, on account of being cut to little pieces."

I kidded the alcalde of Bacoor about the flop he'd pulled and told him he'd better mind his step or one of these days he'd find himself entirely surrounded by German silver handles.

About this time General Frederick Dent Grant, looking like a carbon copy of old Ulysses, his famous father, took command of the brigade and made his headquarters in Bacoor. The old man's sleep was ruined at nights by hearing

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cannonading at a distance, so he made inquiry and discovered that what he heard was five-pound tins of embalmed beef exploding in the convent where it was stored. Upon discovering that the soldiers wouldn't eat it, because the first time we tried it most of us had ptomaine poisoning, he decided to put a dirty one over on the enemy!

He gave all that embalmed beef to the alcalde for distribution to his people, and the good old alcalde sent every can of it out to Pio Del Pilar's shattered army, and months later when our regiment got into the enemy's trenches at Des Marines it found the empty cans! Prisoners, however, reported that there had been no casualties and that on the contrary the enemy was infinitely obliged to General Grant because they had been awfully hard up for grub when he made his donation. We all figured that embalmed beef would end the war in the south—and it didn't.

One day a casco was kicked into a creek near Bacoor and L. Company went aboard it. We were going back by water to Malate Barracks where the war soldiers, of which I was one, were to be discharged under General Order 40. Andy Bogue was, naturally, the last man to board the casco after seeing his kitchen plunder loaded, and at his heels padded the faithful Jim, all unconscious of the fact that this was the day he was to lose his lord and master.

"Andy," said the top sergeant, "the coolie can't come."

"The hell he can't," Andy complained. "Why can't he?"

"No authority for the travel. Petie, you tell Jim he'll have to get off and go somewhere. There's a quartermaster coolie camp at Imus."

"I know it—and if Jim goes there his ancient enemies of the road-building gang will kill him," I told Dad.

I got out of the casco and took poor old Jim with me, explaining why this act was necessary. I took him over to the cook of B Company, which had recently arrived from Alaska, gave Jim a fine recommendation and presented him to the B company greaseball and said goodbye to him. But he wouldn't stay put, although I ordered him to. He had to be ejected from the home-going casco by force and then, realizing he was again at a loose end he squatted on the bank of the creek and wept. Andy Bogue leaped ashore and gave him a dobie dollar and a number of pats on the back and assured him he was *mucho bueno* and then the casco was slipping down the creek and Andy jumped aboard and his hard face was all twisted and he said that, strange to relate, he felt as if he'd lost a damned good friend.

The last we saw of Jim he was still squatting on the bank weeping, so I suppose it was true, as Andy Bogue remarked, that Jim had a soul and maybe we'd meet him in Fiddler's Green and, by God, if we did, he, Andy, would make no bones of it. He'd shake old Jim's paw and to hell with what people thought.

I felt pretty sorry for Andy because Jim was more to him than most men. For instance: Andy had drunk from a foul ditch once, in defiance of regulations and while he did not acquire dysentery or typhoid fever, as he had every right to, he did pick up a mess of larvae that hatched in his stomach and in the fullness of time Andy was a terribly sick man and the doctor couldn't discover what was wrong with him. Finally one morning the mystery was plumbed. Andy began to gag and up came a pink worm about eighteen inches long, slowly unfolding from Andy's blue lips.

"Cripes, what is it?" Andy gurgled.

"It's a tape-worm executing a forward

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movement, or an embryo python or something," I told Andy.

"Pull it out," Andy begged, but the sight made me ill and I started to gag; whereupon good, reliable old Jim stepped up, took the worm between thumb and forefinger and drew it forth. Andy yelled: "Good Lord, I got worms, jest like a dog," and ran and cast himself on his cot in the cook tent and moaned—"I got worms and that damned doctor didn't know it. And I ain't got no vermifuge."

We held a conference over Andy and finally decided a diet of salt water might bring their Wormships up. So Andy flew at it and the salt water made him vomit and up they came and Jim hauled them out the moment the head of one appeared. The rest of us roared with laughter at Andy and his worms but Jim was all sorrow and sympathy. We got Andy's worms one at a time over a period of a week and after the last one Andy began to improve and eventually got well enough to be belligerent again.

Andy was the only man I ever heard of who had those kind of worms.

That day we left Bacoor saw the finish of our days of derring-do—with the exception of Andy, who, in a previous incarnation, had been second mate on a whaler. The weather was dark and lowering as we poled the casco down the creek and out into Bacoor bay and the wind was coming, stronger and stronger, in little puffs, as it does when a typhoon is blowing up. Dad Keyes begged the company commander to lie in the creek, but the company commander said his orders were to pole off into Bacoor Bay, drop anchor and there await the arrival of a steam launch from Manila that was to tow us in to Binondo, at the mouth of the Pasig river. Dad pointed out that it was safer to wait in the sheltered creek than in the middle of the bay, but that company commander

had no confidence in the judgment of his top sergeant and he wasn't very smart, anyhow.

So out into the bay we poled and anchored and pretty soon a fool could see that the launch wasn't coming and that we had better get back to shore in a hurry, for if we didn't we'd fill and sink with the typhoon just about breaking. We tried to pole back against the wind. No go. So we quartered it and came to rest on a sand bar off the mouth of Zapote river. And here Andy Bogue said to the company commander: "Mister, you don't know which way is up. You say we'll rest here but I say we won't. This sand bar will be awash in half an hour and the casco will be smashed and we'll all drown. Can't you see we got a flood tide against a typhoon? There'll be breakers thirty feet high. Pole off and to hell out of here."

The company commander said nothing, for he was a badly worried man. He wished now he had taken Dad Keyes' sound advice. He didn't even reprove Andy Bogue for his bald disrespect and Andy didn't give a hoot because he was master of a casco now, not a company cook. We got the casco off and Andy took the big sweep, with four men to help him and we bore off toward the breakwater outthrust for a couple of miles into Manila Bay. Suddenly the typhoon broke and the wind in back of us sent that casco on her way at a rapid clip. Out in mid-channel Andy saw he had gone far enough on that tack, so he brought her around on the other tack, to set her in quartering toward the beach at Paranaque. We shipped two seas wearing around and some fool yelled and started to pray; Andy swiped him on the jowl and ordered him to pipe down—and then we were around with the seas on our tail.

Andy ordered everybody to sling his

DIRTY FIELD OF GLORY

rifle over his shoulder by the gun sling so his hands would be free. "I'm settin' her down on the beach," he howled. "Get set, you soldiers and when she hits, jump overboard. Here's where we all go to hell together."

Afterwards we estimated we had come twelve miles in forty minutes before that storm—and no sail, just the high sides of the casco and the oval bamboo house amidships. We came in like an express train on top of a thirty-foot roller and it broke under us and up the beach we raced; then—bang, we hit the sand, and that casco cracked from stem to stern—and we all went overboard. We got thrown up the beach and sucked back several times but finally we all made the grade and then got busy salvaging the tentage which was all that followed us ashore when the casco broke in two.

The company commander came up to Andy Bogue and said: "Corporal Bogue, our thanks are due you for saving our lives."

Andy favored him with a look of contempt unutterable, then turned away and said to some buck so the CO could hear him:

"If that bird should die and bequeath his brains to science one o' these here

Filipino mosquitoes could deliver the gift. Now we're here and nothing to eat and the bridge across the Paranaque river down and nobody knows where we are and maybe we'll starve to death before they find us. And all because he didn't stay in that creek, like a sensible man would, when he might have known the typhoon signal was flyin' from the captain o' the port's office and once that typhoon signal is up no small craft leave the river."

He bent his bleak gaze upon the subdued company commander and seemed inclined to make a very serious remark, but must have come to the conclusion that cussing a company commander wasn't done in the 14th infantry, so he turned to me, sighed and said:

"Gosh, kid, I wish I was back on that stinking ol' Sacramento river. It'd be just about sun-up there now, and when the sun comes up over them marshlands there ain't nothing lovelier anywhere. I'd be standin' up forward with a heavin' line in my hand and wavin' to the farmers' gals along the shore and the wild ducks would be gettin' up in front of us—" He paused and wagged his head lugubriously. "Why the hell I ever joined the army I dunno. Guess I must ha' been kinder crazy!"



All-around athletic outfit is 124th FA, Chicago, whose polo team, National Junior Champions, swept New York indoor series; whose jumping team won a large share of trophies at the International Livestock Exposition, Lt. W. S. Wakem alone winning two firsts, two seconds, two thirds, and a fourth; whose heavyweight football team defeated seven of the Midwest's best amateur teams; which launched a middleweight team this season; whose boxing team is always a feared contender; and whose program of interregimental activities is diversified enough to attract all its members.

The Convergence Problem

Within the last few years there has been adopted a solution of the problem of distributing the sheaf from staggered gun positions, which rests upon an initial convergence at approximately target range.

In accord with a time-honored convention, and one to which grave consideration must be given, the approved method, as laid down in Field Artillery Book 161, "The Firing Battery," prescribes that the commands for attaining both convergence and distribution be given by the battery executive. Thus there is no shift in data not ordered by the Executive, nor unrecorded as such.

Nonetheless, a desire to speed up the procedure has resulted in a number of experimental solutions of the problem, none quite meeting all the requirements. Lt. H. E. Mikkelsen, 13th FA, in a JOURNAL article, proposed a convergence fan, by which the gunners themselves should attain convergence, the command CONVERGE AT being repeated by the Executive.

Prompted, as he writes, by the description of the Mikkelsen device, an officer of the 24th Field Artillery has prepared the following article:

EASY CONVERGENCE

By FIRST LIEUT. JAMES L. FRINK, JR., FA

SPEED, with accuracy, is the major requirement of firing batteries today. Staggered positions and convergence have tended to slow the tempo, thereby devolving upon battery executives the problem of devising and experimenting to overcome this condition. Many have already worked out systems which they have sought to make as foolproof as possible due to the rapidity with which the gunner or chief of section must employ them. Battery "F," 24th F.A. (PS) now has a device that we believe foolproof as well as simple in construction and operation.

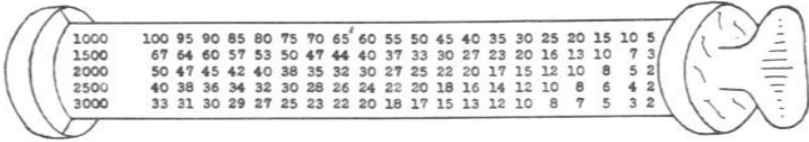
In detail it is as follows: A wooden roller, $1\frac{3}{4} \times 9$ inches, around which is glued a convergence table of 5-yard intervals (5-100) and ranges from 1,000-8,000, is inserted in a tin case of the same size closed at one end. The roller at its ends, fits snugly in the can, while the center section is of less diameter to prevent the convergence table from rubbing the can when the roller is rotated by a knurled knob which projects out the open end of the can. A small window is cut in the tin case just large enough so that only one range may be read through it. Also a long slot or window is cut in the side of the can the length of the printed intervals of the CV table that can now be seen on the roller. Around the tin case is placed a tin sleeve with a window in it. For convenience, the whole device is bracketed (removable) to the top shield of the gun just over the left wheel.

When a gun is in position, the executive paces its interval from the base piece, rotates the roller so that 1,000 may be read through the range window and moves the sleeve so that through its window may be read the gun's intervals in yards. This is also mils for CV at 1,000 and saves printing an additional row for yards interval. From now on, nothing moves but the roller. Just set off in the range window the CV range (you can see but one) and look through the sleeve window for the right shift (you can see but one figure or figures). The only error that could occur is one of misunderstanding the spoken commands.

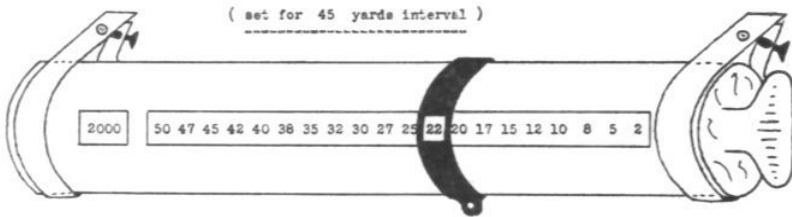
The executive or the gun telephone operator repeats the entire commands including the convergence range. The gunner sets off initial shift, deflection difference and site. The chief of section at the start of the problem is by the device. He sets off CV range and commands the gunner Right "So much" after the gunner has set off site, and proceeds with his normal duties.

THE CONVERGENCE PROBLEM

(1) ROLLER

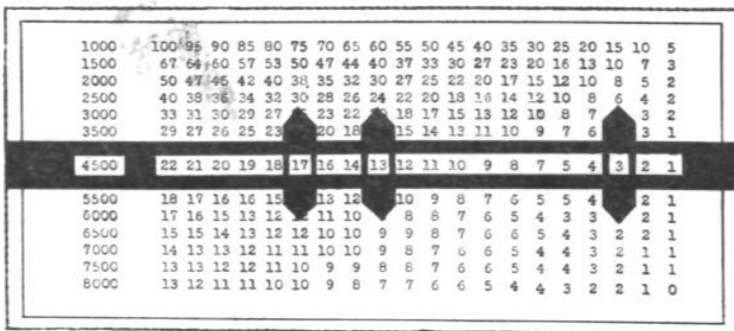


(2) ROLLER and CAN ASSEMBLED w/BRACKETS.



(3) RECORDER'S BOARD

(set for 15, 60, 75, yards intervals)



TOP TO BOTTOM—

SCHMATIC DIAGRAM OF DATA FOR ROLLER

THE ROLLER ASSEMBLED

RECORDER'S BOARD WITH PIECE-INTERVAL

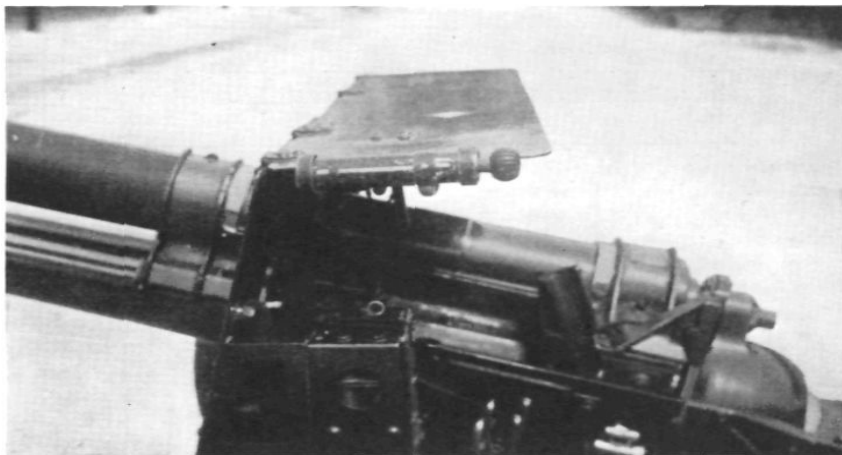
INDEXES SET

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The recorder, with a board to which a CV table is glued, moves a horizontal band (encircles board) of tin containing three sleeve windows, to 1,000 yards and sets these windows over the paced intervals. From then on, setting the horizontal band range window over any range gives the proper convergence for each gun through its sleeve window.

Note. Also induced by the Mikkelsen fan to devise a simple convergence corrector was 1st Lt. C. F. Kenniger, Btry C, 125th Field Artillery, of Proctor, Minnesota. Lieut. Kenniger's is a typewritten convergence table, with intervals from 5 to 100 yards, and ranges 5,000 to 10,000. The table is faced with

clear mica, isinglass, of celluloid, with edges bound with tape. The range card is similarly prepared, but is on a slide like that of a slide rule, with slots through which the intersections of appropriate interval and range may be read. Thus simply arranged, it measures but 5 by 2 inches, is weather and wearproof, and may be carried easily in the pocket or a notebook. It is less error proof than other devices described, particularly for use at a piece, but should be convenient for Executive or Recorder. (It will be noted that the system advocated above by Lt. Frink includes the first step toward solution of the Recorder portion of the problem, up until then little considered.)



FRINK CONVERGENCE ROLLER FIXED ON UPPER SHIELD OF BRITISH 75-MM. GUN



Blame Mess Sergeant Lamb, Btry, C 83d FA, if your 118 pounds of pork, 22 of chicken, and 12 of leg of lamb, when barbecued, and annointed with the following sauce, don't register as they did at Fort Benning: 3.5 gals. water; 5 No. 2½ cans tomatoes; ½ gal. tomato catsup; 3 pints prepared mustard; 1 gal. Worcestershire sauce; 1 quart vinegar; 6 lemons; 4 medium-sized onions; 6 cloves garlic; 1½ oz. red pepper; 3 oz. sugar; 1 lb. butter; ½ lb. salt; ½ oz. black pepper; 1.5 oz. chili powder. Use hickory and oak for the barbecue fuels.

Service Practice of the 387th Field Artillery

BY LT. COL. A. H. MEANS, FA-RES

THIS is the story of the organization of artillery range and the conduct and direction of fire thereon by a reserve regiment, the work being done by the reserve officers assigned or attached thereto.

The 387th Field Artillery (155 How.), with twelve officers from the 385th Field Artillery (75-mm.) attached, trained at Boise Barracks, Idaho, Aug. 7-20 inclusive. Boise Barracks is one of the older posts located on the eastern edge of Boise, a pleasant city with tree-bordered streets and a population of 22,000. The permanent buildings have been turned over to the Veterans Administration while a cantonment area of roughly five hundred acres is under lease to the Idaho National Guard (Brig. Gen. M. G. McConnell, Adj. Gen.). Arrangements were made with the Guard to use the latter area. The nearest available terrain suitable for artillery firing was an area of rolling sagebrush country some 21 to 26 miles south of camp, depending on the route traveled, and inhabited only by jack rabbits, a few sage hens, and an occasional rattlesnake; the whole being covered by a thick pall of alkali dust.

In May. S-3 Third Reserve Area (Maj. R. W. Yates, FA), and the unit instructor (Maj. J. R. Young, FA) and commanding officer (the writer) of the 387th made a reconnaissance of the area and also investigated available maps and survey data. The latter consisted of a U. S. Geological Survey Sheet, scale 1:125,000, a topographic map, oriented on Y-North, scale 1:62,500, prepared by the 116th Engineers (Idaho National Guard) of the area immediately to the

north; an accurate right-of-way map, scale 1:4,800, covering a portion of the main line of the Union Pacific Railroad which passed about two miles to the north; and an uncontrolled mosaic, scale 1:20,000, which subsequent work proved quite accurate, flown by the Army Air Corps Detachment of Salt Lake City (Capt. D. W. Goodrich, AC). Certain landmarks, such as water tanks and signal towers appeared on both railway map and mosaic and were also visible throughout the area. Upon return to Salt Lake City a Y-grid was superimposed on the railroad map and coordinates of the critical points shown thereon were determined.

At this time the 2d Battalion 10th Field Artillery, with two active batteries (Maj. Ray L. Burnell, FA), was designated as the training organization for the 387th and the latter was provisionally organized into two battalions to conform with the 75-mm. organization of the former.

Shortly after the return from Boise a staff conference was held to discuss details of training in general and service practice in particular. The regiment was informed that all officers, other than field officers, would fire two problems, to be assigned on the basis of estimated or known proficiency of the firer and that conduct and direction of fire was to be entirely in the hands of the regiment. Arrangements were made to insure that every officer had a copy of FA Book 161. A general outline of types of problems was indicated and gunnery instructors were assigned. Regimental S-3 (Capt. K. H. Hunter), our only Field Artillery School graduate,

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was made senior instructor, and two battalion instructors (Capt. F. E. Young, Jr., and 1st Lt. Floy McGinn) were designated for the two provisional battalions. They were directed to select assistants of their own choosing and to be prepared to operate a total of four (two for each battalion observation posts, the work of all to be coordinated by the senior instructor. Careful records of each problem, based on the current Fort Sill cut sheet, were to be kept. With this directive as a basis the gunnery instructor group, totalling twelve officers (two from the 385th FA) made their plans, had necessary forms printed, and otherwise perfected their organization.

For about two years it has been customary, during the summer, to conduct outdoor field artillery trainer practice for two hours on Sunday mornings, attendance optional, and in general confined to those living within a 40-mile radius of Salt Lake City. Prior to camp this training was intensified and the instructor group attended ten two-hour sessions.

On August 7 seventy-seven officers, including three of field grade, reported for duty. Included in this group was one graduate of the Command and General Staff School (Regtl CO) and one of the Field Artillery School (Regtl S-3). Two field officers had wartime commissioned service, while of the remainder sixty-three received their commissions via the University of Utah ROTC. Eight officers had attended five or more camps, forty-four less than five and more than one, and twenty-eight one or none. The civilian occupation of about fifteen percent was engineering.

The first week of camp differed from the usual. Practical work in the field was stressed, and among other things consisted of a CPX and a combined-arms exercise with the 414th Infantry (Col. E. L. Shattuck) which was in training with a

detachment (Lt. Col. M. S. Lough) of the 38th Infantry from Fort Douglas, Utah. Evening conferences, attendance optional, covered the work of the next day. Two days were devoted to the field artillery trainer. The first day the entire regiment participated, and the second, those officers who most needed additional instruction including those who had been unable to participate in this type of work on an inactive basis.

Concurrently four stations were established on the range, the coordinates of each determined independently by three survey parties, and the mean of the three sets of results calculated. These, plotted on the mosaic, gave a satisfactory fire-control map. With the aid of a detail from 10th FA targets were placed on the range, 1600 to 5000 yards, consisting of oil drums (which gave indifferent visibility) white muslin panels about three mils wide, (which showed up well), and a group of silhouettes (type-E pistol targets). Four OP's, for axial and small-*T* problems, were selected, spaced at approximately equal intervals for 350 yards along a low lava knoll with a platoon position about 150 yards in front of each OP. Two flank OP's for large-*T* and bilateral-observer problems were established and a telephone net with central switchboard was planned for the whole. With this set-up it was estimated that four days, with four hours firing per day, would complete the program.

Service practice began the second week and continued Monday through Thursday, the motor column leaving camp at 7:00 AM, firing starting about 9:00 AM and continuing until 1:00 PM, at which time a sandwich lunch was served in the field. During the first two days four OP's were operated, one platoon serving each OP, and thereafter two OP's with one battery per OP. The guns were served and commanded

SERVICE PRACTICE OF THE 387TH FA

TABLE I-TYPES OF PROBLEMS AND AMMUNITION EXPENDITURE

| | 37-mm. | | | 75-mm. | | | Total | | |
|----------------------|---------------|-------|--------------|---------------|------|---------------|---------------|-------|---------------|
| | No. of Probs. | Rds. | Rds.p. Prob. | No. of Probs. | Rds. | Rds. p. Prob. | No. of Probs. | Rds. | Rds. p. Prob. |
| Percussion Precision | | | | | | | | | |
| Axial | 23 | 268 | 11.7 | 8 | 64 | 8.0 | 31 | 332 | 10.7 |
| Small-T | 27 | 325 | 12.0 | 2 | 28 | 14.0 | 29 | 353 | 12.2 |
| Large-T | 18 | 253 | 14.1 | 7 | 75 | 10.7 | 25 | 328 | 13.1 |
| Percussion Bracket | | | | | | | | | |
| Axial | 22 | 177 | 8.1 | 9 | 86 | 9.6 | 31 | 263 | 8.5 |
| Small-T | 17 | 117 | 6.9 | .... | .... | .... | 17 | 117 | 6.9 |
| Time Bracket | | | | | | | | | |
| Axial ..... | .... | .... | .... | 7 | 81 | 11.6 | 7 | 81 | 11.6 |
| K-Transfers | | | | | | | | | |
| Time Bracket | .... | .... | .... | 1 | 17 | 17.0 | 1 | 17 | 17.0 |
| Per. Bracket ..... | .... | .... | .... | 2 | 16 | 8.0 | 2 | 16 | 8.0 |
| High Burst ..... | .... | .... | .... | 1 | 9 | 9.0 | 1 | 9 | 9.0 |
| Center of Impact | .... | .... | .... | 1 | 7 | 7.0 | 1 | 7 | 7.0 |
| Totals | 107 | 1,140 | 10.7 | 38 | 383 | 10.1 | 145 | 1,523 | 10.5 |

by their own personnel, individual reserve officers serving as executives under supervision of officers of the 10th Field Artillery. Conduct and direction of fire, including critique of problems, was conducted by gunnery instructors from the 387th. The program was completed on schedule, 1523 rounds (1140 37-mm. and 383 75-mm. shrapnel) were fired in 145 problems, an average expenditure of 10.5 rounds per problem.

Percussion-precision problems were normally carried through the first phase of improvement fire except where ammunition expenditure was excessive, in which case a one-fork bracket was obtained and the firer asked for his next command. In bracket adjustments a 200-yard bracket was obtained, plus proper distribution of the sheaf. Observation was materially aided by the dust, which, although heartily cursed by all, especially those who rode the tail of the motor column, rendered worthwhile aid by magnifying a 37-mm. burst to about the size of a 75-mm. and the latter proportionately larger.

The number of minutes consumed per problem, including approximately five minutes for critique, were for 37-mm.;

Axial, 13.6; small-T, 18.7; and large-T, 28.3. The corresponding 75-mm. figures were 18.5, 12.5, and 28.5 respectively. Time per problem varied greatly and the overall average of 19.8 minutes, including critique, is considered a more informative figure.

All problems were rated on the basis of the current Field Artillery School cut sheet with one important exception—computation of initial data was omitted. In order to economize on time, problems were assigned in advance and the necessary data calculated outside of problem time, in some cases with aid from an instructor. Had the normal procedure been rigorously followed it is tentatively estimated that the percentage of superior and excellent problems would remain unchanged while *unsatisfactory* would increase 5 or 6% at the expense of *very satisfactory* and *satisfactory*.

It is interesting to note that the greatest percentage of unsatisfactory solutions occurred with the simpler problems, while ratings were higher on those more difficult. This is explained by the fact that assignment of problems was based upon the known, or estimated, skill and experience of the firer, the

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less-experienced firing the simpler problems.

It is believed that this somewhat ambitious attempt on the part of a Reserve regiment to conduct this phase of its own training itself produced worthwhile results in the way of instruction, increased confidence, and morale. The indicated conclusions are: (a)

The necessity of careful advance planning; (b) the great value of the field artillery trainer as a preparatory instrument for service practice; and (c) the fundamentally sound character of university ROTC training. The justification for publishing these results is the hope that they may be helpful to others contemplating a similar problem.

TABLE II—RATING OF PROBLEMS FIRED

| | Superior | Excellent | Very Satis. | Satis. | U | Total |
|-----------------------------|----------|-----------|-------------|--------|-----|-------|
| Percussion Precision | | | | | | |
| Axial | 1 | 8 | 6 | 10 | 6 | 31 |
| Small-T | 1 | 7 | 7 | 12 | 2 | 29 |
| Large-T | 2 | 5 | 6 | 10 | 2 | 25 |
| Percussion Bracket | | | | | | |
| Axial | -- | 8 | 12 | 10 | 1 | 31 |
| Small-T | -- | 8 | 6 | 2 | 1 | 17 |
| Time Bracket, Axial | -- | 2 | 5 | -- | -- | 7 |
| K-Transfers | | | | | | |
| Time Bracket | -- | -- | 1 | -- | -- | 1 |
| Percussion Bracket | 1 | 1 | -- | -- | -- | 2 |
| High Burst Registration | 1 | -- | -- | -- | -- | 1 |
| Center of Impact | | | | | | |
| Registration | -- | 1 | -- | -- | -- | 1 |
| Total | 6 | 40 | 43 | 44 | 12 | 145 |
| Percent of Total | 4.1 | 27.6 | 29.7 | 30.3 | 8.3 | 100.0 |



FIELD ARTILLERY RIDERS TRIUMPH IN MEXICO CITY

The Field Artillery Horse Show Team, from Fort Sill, Oklahoma, won the Team Class Championship of the International Military Equestrian Contests at Mexico City, December 16, 17, 18, being in first place all three days. Captain H. S. Isaacson, on "Virginia Navarre," rode that well-known mount to the individual trophy for Best Horse in Show, taking first place in two of the three days' events.

The team (Major N. J. McMahon, team captain; Captains H. S. Isaacson, L. S. Griffing, E. L. Andrews, and Lt. W. A. Harris) won five out of six classes entered. "Silent Sam," "Billy the Kid," and "Judge" were other horses in the

winner's circle. Final team standing was—1st, United States; 2d and 3d, Mexico; 4th, Cuba.

The riders were royally entertained by their hospitable hosts, and weathered a round of official visits and ceremonies held in their honor with as much distinction as they displayed in the show ring, judging by a report received, in part as follows: ". . . made a very favorable impression upon all people in Mexico. Their fine riding, sportsmanship, and gentlemanly conduct on all occasions were the subject of admiration on the part of all who witnessed their performances, and with whom they came in contact."

The Underslung Truck Winch

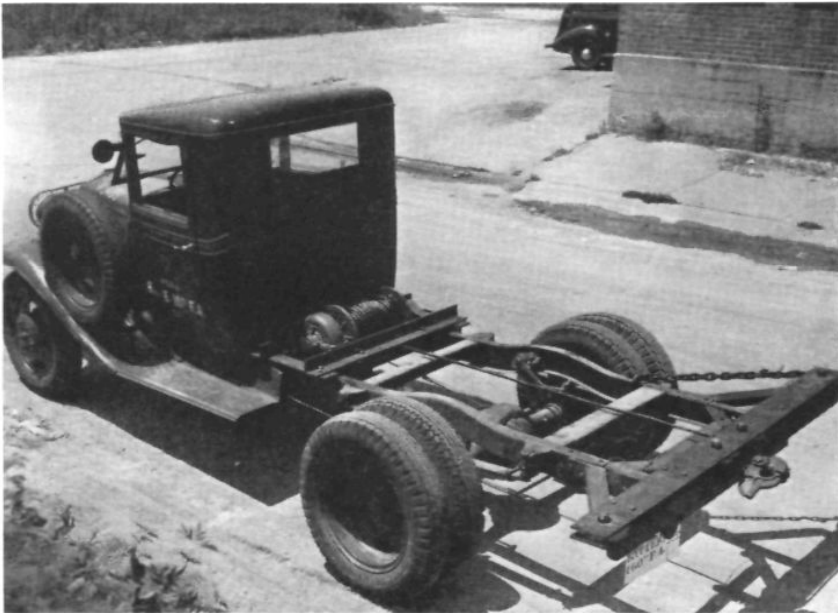
By Major Charles R. Taylor and 2d Lieut. Charles B. Dear
160th Field Artillery, Oklahoma National Guard

SINCE the principal requirements of the Field Artillery are to shoot, march and communicate, anything that will be of assistance to secure better performance of any of these requirements is of immediate interest to the field artilleryman.

With the wide adaptation of truck-drawn field artillery came the problem of negotiating difficult terrain under any and all conditions. This same problem is faced by the oil industry, and there has been a great amount of experiment and development along the line of moving heavy equipment into difficult positions in a minimum amount of time. When oil is discovered, the race for development is similar to that of a struggle for strategic

positions in battle. There is no consideration of weather or terrain, for the purpose must be accomplished with the greatest amount of speed and accuracy.

The problem of loading and transporting heavy equipment under difficult conditions brought about the development of an underslung winch. The use of the winch in field artillery is not new, but a type that has all the advantages of the type which occupied a considerable part of the truck body space, yet occupied no body space at all and did not interfere in any way with the hauling capacity of the truck, is new. The winch has proved itself valuable, not only in loading, but



TRUCK CHASSIS WITH WINCH AND PULL-AROUND

practically indispensable in moving trucks and convoys over difficult terrain.

2d Lieut. Charles B. Dear, Battery E 160th Field Artillery, Oklahoma National Guard, Haskell, Oklahoma, having had practical experience with winches of various types used in the oil fields, realized the need of them in Field Artillery. With the aid of Colonel Chas. A. Holden, commanding the 160th FA, and Major Chas. R. Taylor, commanding 2d Bn 160th FA, he was able to secure from the factory of the Tulsa Winch Co., Tulsa, Oklahoma, a truck body winch which was tested and demonstrated during the Third Army Maneuvers at Camp Bullis, Texas, and also the home station.

Officers present at the demonstration at Camp Bullis, Texas, believe that this type of truck unit, equipped with the winch, fills a long-felt need of truck-drawn artillery. This unit is the underslung Tulsa type, with power take-off lever in the cab which controls the raising and lowering of the load. It has a pull-around system mounted on the rear frame of the truck. The winch is attached to the truck behind the cab, below the truck bed, with the cable passing between the bed and frame of the truck. This winch was especially built for trucks whose body load prevents the winch cable from running over the top of the truck bed.

The safe working load of this particular unit is 12,000 pounds and the breaking point is approximately 45,000 pounds. The total weight of the winch is 450 pounds and it has a line capacity of 330 feet of 9/16 inch wire cable.

Upon completion of several experimental tests with the truck and winch at the home station, the following conclusions were drawn:

1. As long as the truck motor will run, it is practically impossible to stick



RACKING UP SLOPE WITH PULL-AROUND

the truck so it cannot move under its own power.

2. This unit provides a substantial tow chain of any desirable length up to the amount of line on the winch.

3. It replaces block-and-tackle arrangements used for power when stuck.

4. The truck winch unit can dislodge any other truck or gun when stuck.

5. The truck can be moved forward, backward, or sidewise, and power can be applied in any direction with the aid of the pull-around unit.

6. A truck and gun can easily be moved up a 70-to-90 degree incline without damage.

7. The winch can be used equally well in a descent, since it will not spin backward unless turned by the motor.

8. The winch does not in any way interfere with the hauling capacity of the truck.

THE UNDERSLUNG TRUCK WINCH



**GUN AND TRUCK
ASCENDING A
NEARLY VERTICAL
BANK WITH THE
AID OF THE
UNDERSLUNG
WINCH**

The list price of the Model 18 winch is \$200.00, which includes a two speed forward and one reverse power take-off and all underdrive equipment.

The installation is \$25.00, net, which includes labor installing the winch and all side irons and bolts. The time required to install a truck winch on a truck is approximately eight hours. The installation can be made in the field or in any garage, provided they have such tools as drills and wrenches.

The weight of the winch does not affect the truck balance in spring suspension. By the winch being placed back of the cab, the weight is equally distributed throughout the truck. The truck with the winch installed was used throughout the III Army Maneuver and no difference was noticed in speed, maneuver, or fuel consumption.

In the picture of the chassis showing winch installed in back of cab, one will see some mechanism on the rear end of



OVER THE TOP

the frame, which is called the "pull-around." This piece of equipment, installed on the truck, is \$45.00, net.



Footballers of 146th FA, Seattle, defeat K. of C. team 12 to 6, after scoreless first half, Halfback Tomlin making both touchdowns. . . Officers and ladies of 111th FA (Virginia) hold dance in new Portsmouth Armory, with State Adjutant General and Mrs. S. Gardner Waller as guests of honor.

National Guard & Reserve Officers' Class (Fall, 1938)

BY 1ST LT. M. H. WEISMAN, FA-RES

FOLLOWING a brief band concert on the morning of Saturday, September 17, 1938, twenty-nine National Guard and seventeen Reserve officers from twenty-four states of the Union were welcomed to the N. G. & R. O. Course of the Field Artillery School. Mingled with the welcoming remarks of the commandant, Colonel Augustine McIntyre, were some precautionary words indicating that the way of the civilian-student-cannoneer was not as vacationlike as might be expected by those who are detailed to the school as a reward for meritorious civilian soldiering.

Immediately after these remarks the class underwent a physical examination, as a result of which two officers were returned to their homes. The remainder of the week-end saw the class settling down in their temporary homes in Lawton; this settling down, of course, included a Saturday night reconnaissance of local fun spots. By Sunday evening, however, all were nose deep in the first day's study assignment of seven pages in FAB 1 and 118 (actually!) selected paragraphs in various other texts; in addition to the prescribed "study" assignment, the schedule also indicated a "reading" assignment of Chapters 8, 9, 11 and 12 of FAB 200. This is typical of the assignment for each day of the thirteen weeks of the course. Rumor, confirmed by personal observation and experience, has it that the average student spent three to four hours nightly in preparation for the following day's classes and problems. Homework frequently included additional work of staking out

problems, plotting, preparing work and Command Sheets, or preparing solutions to requirements of problems. Later in the course, with the advent of outdoor problems, staff conferences were in session in all sections of the "student quarter."

The scope of the course, in accordance with par. 6f (2), AR 350-600, is: "Tactics of Field Artillery, and command and staff functions to include the division artillery; gunnery to include preparation and conduct of fire, the firing battery, and service practice; fire direction within the battalion; logistics within the infantry division and division artillery; signal communication within the division artillery; construction and care of materiel; construction, operation, maintenance, and inspection of motor transport; basic infantry tactics to include the battalion."

The subjects presented by the various departments of the school are as follows: Conduct of Fire; The Firing Battery; Service Practice; Preparation of Fire; Materiel; Motors; The Associated Arms; Signal Communication; Field Artillery Training; Logistics; Combat Orders; Reconnaissance and Occupation of Position; Staff Duties; Artillery Tactics and Fire Direction. The class participated in three field exercises, one involving the 75-mm. regiment, another the 155-mm. regiment, and the third the brigade with 75-mm. and 155-mm. units. Students also witnessed demonstrations in the use of camouflage; infantry fires; effects of various types of field artillery weapons and ammunition; an infantry battalion in the advance guard supported by a

NATIONAL GUARD AND RESERVE OFFICERS' CLASS

75-mm. battalion; methods of training anti-aircraft riflemen; field expedients on motor marches; the infantry battalion in defense of a center of resistance; and the 81-mm. mortar.

Space does not permit of a more detailed description of the course. However, even from this outline sketch it can be seen that the class was given an insight into the operations and offices, the tactics and techniques, the line and the staff of all units of a field artillery brigade. Certainly no member of the class can make claim as a master gunner, yet each has developed a degree of proficiency which enhances his value to the national defense. Perhaps, at this date, the course is analogous to a symphony rich in theme and melody. The dilettante leaving the concert hall after first hearing a composition will audibly recall some passages while others dance in his brain. Later other portions are recalled until, with further hearings, he is so imbued with the music that he can follow the playing without score. Similarly with N. G. & R. O. graduates—they have heard the symphony of a Field Artillery Brigade; themes of RSOP's and fire-direction are recalled; faintly there dances through the minds of the would-be cannoners melodies bearing on displacements by echelon; a minor motif that "the shortest distance between two points is not necessarily a straight line" is recalled as a discord. At home, at armory drills or conferences, at summer camps, maneuvers or CPX's, the part-time red-legs will recreate the symphony of Santa Barbara. When the academic fog has

cleared, "Confused at 3,000" will be but a pleasant memory of student days.

The course is certainly concentrated and requires of each student constant hard going. Discouragement, in the course of work, was experienced by all. However, farewells were painful for, in their strides, all had learned to "take it." Naturally, criticisms of the course by individuals exist. You can't please everybody.

In materiel, some preferred all of the work on a single type of weapon, while others preferred the work as given with more time allotted thereto. In this connection, some National Guard officers naturally liked instruction in the materiel with which the individual officer's regiment was equipped; some Reserve officers, undoubtedly because of the greater possibility of change of assignment, preferred the more varied instruction.

"All work and no play, etc., etc." The Post offers ample means for sport and relaxation. The class sponsored a number of dinners, and parties during the week-ends were in session both on and off the Post. The Artillery Hunt, the Men's Choral Group, and the Dramatic Club were sources of pleasure to a goodly number of the class. Certainly, all who attended enjoyed themselves and profited professionally in the three months of make-believe war.

Following a brief band concert on the morning of Saturday, December 17, 1938, the students were awarded Certificates of Proficiency and reluctantly set out for their homes.

May the number of N. G. & R. O. graduates increase and may they contribute to our common goal!



Ohio's 135th FA was Honor Roll unit in attendance for October and November, leading all others in state, and each time by exactly the same percentage to the second decimal point—90.18.



HERE'S HOW!

The Seventh Field Artillery

Fort Ethan Allen, Vermont

(Christmas card of the Regiment, designed by Captain Harry C. Larter, Jr.)



United States Field Artillery Association

IN accordance with the call of the Executive Council, the twenty-ninth annual meeting of the U. S. Field Artillery Association was held at the Army and Navy Club in Washington, D. C., on December 14, 1938. Colonel E. L. Gruber, in the absence of Major General Robert M. Danford, presided.

A quorum was present in person or by written proxy for the transaction of business.

The Secretary-Treasurer presented and read his annual report and financial statement, which are appended hereto, and made a part of the minutes.

The President had previously appointed Lt. Col. J. B. Anderson and Major J. W. Mackelvie to audit the financial statement. At the direction of the chair, the secretary read the report of the auditors, which stated that the auditing had been performed and the financial statement had been found to be correct.

The chair stated there were three vacancies in the Executive Council to be filled. These were caused by the expirations of the terms of office of

Major General Robert M. Danford (member pro tem), of Brigadier General William Bryden, and of Lieutenant Colonel Ralph C. Bishop, FA-Res.

The President had previously appointed a nominating committee, Colonel A. C. McBride, Colonel F. A. Doniat, and Lieut. Col. Julian F. Barnes. Colonel McBride, its chairman, read his report, which submitted the names of General Danford, of Lieut. Col. W. C. Crane, and of Lieut. Col. Ralph C. Bishop. The opportunity being made for nominations from the floor, and none being offered, it was moved, seconded, and adopted that the polls be closed, and that the secretary be directed to cast the unanimous ballot for the nominating committee choices.

Present at the meeting were several who had made trips of considerable distances to attend the meeting, and who left immediately afterward for their homes. Among these were two members of the Council, Colonel C. C. Haffner, Jr., 124th FA, Chicago, and Colonel W. H. Sands, 111th FA, Virginia.

THE FIELD ARTILLERY JOURNAL

ANNUAL REPORT OF THE SECRETARY-TREASURER FOR YEAR ENDING NOVEMBER 30, 1938

| | | |
|---|-------------|-------------|
| Assets, November 30, 1937 | | |
| Balance checking account..... | \$ 3,274.60 | |
| Savings account..... | 3,583.29 | |
| Securities, <i>face value</i> | 24,600.00 | |
| | | \$31,457.89 |
| Assets, November 30, 1938 | | |
| Balance checking account..... | \$4,709.70 | |
| Savings account..... | 3,644.07 | |
| Securities, <i>face value</i> , \$24,600 (less \$1,220 liquidated*) | 23,380.00 | |
| | | 31,733.77 |
| Gain..... | | \$275.88 |

A detailed statement of receipts and expenditures for fiscal year 1938, as compared with fiscal year 1937, is as follows:

| RECEIPTS | | |
|--|-------------|-------------|
| | <i>1937</i> | <i>1938</i> |
| Membership dues and subscriptions | \$8,067.11 | \$8,976.94 |
| Interest on securities..... | 608.12 | 508.13 |
| Interest on savings account..... | 71.73 | 60.78 |
| Books and magazines..... | 1,003.17 | 1,596.34 |
| Miscellaneous and liquidated securities* | 27.94 | 653.42 |
| | | |
| Cash on hand November 30, 1937 | \$9,778.07 | \$11,795.61 |
| | | 6,857.89 |
| | | \$18,653.50 |
| EXPENDITURES | | |
| Printing and mailing FIELD ARTILLERY JOURNAL | \$3,285.32 | \$3,421.11 |
| Office supplies | 205.44 | 349.85 |
| Postage, express, telegrams..... | 214.56 | 426.16 |
| Rent and telephone..... | 470.78 | 423.42 |
| Services | 1,850.15 | 2,015.00 |
| Authors, engravers, photographers | 1,449.11 | 1,919.90 |
| Books and magazines..... | 859.32 | 1,161.58 |
| Insurance, tax | 49.00 | 67.04 |
| Trophies..... | 162.23 | 70.28 |
| Donations | 7.00 | 7.00 |
| Miscellaneous: copyright, refunds, etc. | 201.95 | 288.39 |
| Prize essay and thesis..... | 300.00 | 150.00 |
| Government bond..... | 2,250.00 | ..... |
| | | |
| Cash on hand November 30, 1938 | \$11,304.86 | \$10,299.73 |
| | | 8,353.77 |
| | | \$18,653.50 |
| Total receipts for year ending November 30, 1938 | | \$11,795.61 |
| Total expenditures for year ending November 30, 1938 | | 10,299.73 |
| | | |
| Surplus of receipts above expenditures..... | | \$1,495.88 |

(*Securities liquidated included the sale, at foreclosure (authorized by the Executive Council in March, 1938) of \$1,000 bond of the Textile Crafts Building for \$174.43, net after brokerage charges were deducted, and the receipt of a liquidating dividend on principal of four \$1,000 bonds Union Turnpike, at the rate of \$55.00 per thousand, which netted \$218.66, the result being a depreciation of face value of securities of \$1,220, and total cash receipts of \$393.09. It will be noted that if the \$1,220 written off be added to the net gain, \$275.88, the result will equal \$1,495.88, the surplus of receipts over expenditures, and also the gain in "cash on hand," which includes only checking and savings accounts.)

UNITED STATES FIELD ARTILLERY ASSOCIATION

There are no outstanding bills of importance, save the one to the printer, customarily outstanding at time of annual statement. For clarity in determining fiscal operation, the securities are ordinarily carried at face value, a process complicated this year because of unexpected liquidation. However, if the proceeds of liquidation, \$393.09, be subtracted from the operating surplus, \$1,495.88, it will be noted that the remainder, \$1,102.79, is the operating profit for the year. This is too large a sum, but it was not possible to foresee the extent to which increased membership, hence income, would be attained, particularly during the latter half of the year, and due, almost entirely, to the efforts of members of the Executive Council. In this connection I should like to bring to the attention of the membership the acts of Colonel William H. Sands, 111th FA, who, at his own expense, prepared a series of letters to field artillery regimental commanders of the National Guard, and who originated a booklet which was sent to each National Guard officer during the summer; of Colonel C. C. Haffner, Jr., 124th FA, who, at his own expense, prepared,

printed, and sent to each National Guard officer of the arm a large three-color advertising folder; and of Lieut. Col. Ralph C. Bishop, FA-Res, who, at his own expense, prepared letters to be sent to each regimental commander of Field Artillery Reserve. Without this generous expenditure of personal funds and time, the Association would not be able to show this profit, nor could it conveniently duplicate the promotion effort with the means ordinarily available.

Thanks, too, are due many officers in the field, who have evinced the most whole-hearted support of the Association and its purposes. To the interest and energy of all these is due the fact that membership has attained a new post-war high, an increase of 474 paid memberships over last year. On this, the occasion of the last annual report to be submitted by me, I wish to express my personal thanks to the membership for the assistance rendered, without which nothing could have been attained.

Respectfully submitted:

MICHAEL V. GANNON, Captain, FA,

Secretary-Treasurer.

ENTRIES IN ESSAY CONTEST

Six entries have been received in the 1939 Prize Essay Contest of the United States Field Artillery Association, which closed January 1st. A committee has been named to select the winner, and it is hoped the prize essay can be published in the March-April number of the JOURNAL.

The entry titles:
Firing Tables for Battery Executives.
Rounds Per Man Per Minute.
We Must See With Our Own Eyes.
Technique or Results?
The Cavalry-Artillery Team.
The Autogiro—An Observation Post.

Colonel Cortlandt Parker, Field Artillery, will command the Army contingent at the New York World's Fair, and 400 officers and men, chosen for their character and professional fitness, from units of the Second Corps Area, will occupy Camp George Washington, on the fairground site, beginning April 20.

Reviews

The Ramparts We Watch. George Fielding Eliot. Reynal & Hitchcock. \$3. This book has been widely and favorably reviewed before the general public. We review it here for the professional military men who are our readers.

"The Ramparts We Watch" presents to the American people an explanation of the national military policy which the times require.

Many books on "preparedness" have been weak and silly exaggerations; this book is a notable exception. It is as sound, reasonable, and readable a survey of our world position and its military implications as has appeared in many a year. That so excellent a book should appear just at this time is especially fortunate, because many of its truths are made self-evident by the morning papers. The truth is, the morning papers have been almost too helpful; there has been hysterical pointing at bogeymen; the public has been fed much scarey hokum by its pet columnists. With Major Eliot's help, the public and the columnists too can separate the facts from the jitters. We have been encouraged to note that Eliot's book has already been quoted by several omniscient but excitable pundits, who are now struggling back to earth after a gay holiday with Jules Verne.

Every officer in the armed services can profitably read these sane and sound analyses of our politico-military situation in the world, of the strategic problems thus raised, and of the relations of our air, sea, and land armaments in solving those problems. For the junior officer, it will be a

revealing experience. For the more mature and experienced, it will be an excellent reorientation.

Officers who must speak on national defense or on world developments will find the book a treasure chest. Well-stated, highly quotable sentences abound, begging to be borrowed. Samples will appear as this review proceeds.

* * *

Force remains the final arbiter. A full-dress argument of this proposition opens the book. When Eliot was writing, of course, he could not know how ably Herr Hitler and his neighbors would apply themselves to the same argument; had he foreseen, he need only have stated the proposition and invited us to stand on the ramparts and look. As a matter of fact, we were there already, watching across the eastern and the western seas, and uneasily rediscovering that this is "a world where cannon, aptly called 'the final argument of kings,' still speak with a decisive voice."

Yes, we are looking out from our ramparts, and wondering how and when *we* shall have to deal with Force, this final arbiter. "Of the factors affecting the foreign policy of any state, the military factors, having to do with the possible or actual application of force . . . are fundamental. . . ." Thus, while Herr Hitler shows *how* fundamental, the author introduces an exceedingly helpful explanation of American foreign policy and its military implications.

It is often said that the United States has no foreign policy. It is difficult among a free people. Eliot points out,

REVIEWS

to foretell public opinion on every question of foreign relations. But on three points our popular agreement approaches unanimity.

"(1) The people of this country will not stand behind any league or covenant with foreign nations which may automatically involve us in a war not of our own making," and in which we have no direct and vital interest.

"(2) They will not permit any territory of the Western Hemisphere to become the field of forcible exploitation and colonization by any non-American nation.

"(3) They are resolved to continue the existing measures of restriction upon foreign immigration."

The wide field remaining, upon which American public opinion is not fixed, cannot be the subject of a firm policy either military or diplomatic. Some interesting points:

Countries which ally themselves in axes against "international Bolshevism" may easily discover a hotbed of Bolshevism in some South American republic, if it suits their purpose so to define it.

The author covers a good deal of the globe in additional commentary, as ". . . despite much brave talk it is inconceivable that the Philippine budget . . . could support a military establishment which would outweigh in Japanese calculations the very great advantages . . . of full control of the Philippines."

"Many of our Latin-American neighbors have no reason to love us."

Of Mexico: "Our relations with that nation have been good or bad almost in precise proportion to the degree of public order and stability of government prevailing south of the Rio Grande."

Of Great Britain: "The ties of blood and language are strong; but the security of a great nation is not based on

sentiment; it is based on what some may think a cold-blooded and unfeeling appraisal of selfish interest. It is precisely on these lines that British policy toward ourselves has ever been conducted. . . ."

Of the European situation: "We could certainly help to make [the defeat of Germany and Italy by France and Britain] inevitable, in default of a quick and overwhelming victory on land. But that defeat is inevitable anyway, in such a default. And [Germany and Italy] know it. If they gamble, they will gamble on a quick victory; and a quick victory is precisely the goal which we can do little to hinder them from achieving. Therefore our support of Britain will not appreciably increase the risk to be weighed by the authoritarian powers as antecedent to a further appeal to force in Europe."

Of Canada: "We are, for reasons of our own security, irrevocably committed to the defense of our Canadian neighbors."

Of Australia: "In the event of any Japanese threat to Australian security, the interests of the United States would, in the judgment of the writer, be very definitely and clearly involved."

Of Germany: "With Germany it must be admitted at once that our relations are not good and likely to grow worse."

Of German colonial ambitions: "For the Azores Islands to pass into German control . . . would be a matter of such grave concern to this country that it is a question whether we ought not to resist it by force. . . ." Reason: They are in mid-Atlantic, only 2,000 miles from New York, 1,700 from Bermuda, and less from Newfoundland; an important link in proposed plane services by the southern route.

Of Italy: "The average American seems to take Mussolini far less seriously

than he does Hitler. It is as a supporter and possible partner-in-conquest of Germany that Italy appears most likely to be of concern to us."

These are random samples from the wide and dispassionate discussion of the American position in world politics, by which a base is formed upon which to consider what Eliot calls the national strategy, "the methods by which military power must act to defend us against attacks and to support our rights and our possessions. . . ." Briefly, Eliot's conclusions give the American strategic essentials as:

1. A fleet superior to any hostile combination which can be assumed in either the Atlantic or the Pacific (but not in both oceans together). For reasons given, Britain cannot be assumed an enemy.

2. Concentration of the fleet in one ocean.

3. An Army adequate to defend all naval bases and important harbors, and to give anti-air defense to our cities; a GHQ Air Force capable of repelling any conceivable attack (but not an inconceivable attack); and enough mobile troops for modest expeditionary forces, or for defense against possible (but not against impossible) landing forces.

4. Absolute safety for the Panama Canal; plus construction of the Nicaragua Canal.

5. Just balance between all elements of the armed forces, neither depending entirely on one nor neglecting another.

6. Such ability to act offensively, that any potential attacker must weigh not alone a possible failure of his expedition, but also a danger to his own safety.

On the whole, as may be seen, ours is a naval strategy. Our home position has that insular impregnability which Britain enjoyed until the airplane came. Therefore the Army must, in the long

view, support the Navy; and nowhere is unquestionable safety so all-important as at the Panama Canal, which gives our fleet interior lines against an Asia-Europe combination, and in effect doubles our fleet.

From these conclusions follow two very interesting chapters on our strategical positions in the Atlantic and the Pacific, with particular emphasis on the Caribbean area as "the strategical key to our two chief sea-frontiers." Major Eliot makes bold to say (and we feel that public opinion will echo him) that should any of the Caribbean possessions of Britain, France, or the Netherlands be threatened by a strong enemy, we might "have to assume the responsibility for their defense," which is a diplomatic phrase. The longing with which he gazes at the British island of Trinidad, off Brazil, makes one downright hungry; an American naval base at Trinidad would go far to balance certain potential bases in Africa, or in the Canary or the Cape Verde Islands, which are much nearer to South America than any we now hold. "It might be remembered," he adds, "that the war-debt question with Great Britain and France is as yet unsettled." One other conclusion must be quoted: "This is the all-important fact of Pacific strategy: that we can, if we have to, direct such an attack against Japan as will be a deadly threat to her security, while she cannot do the like by us."

Those chapters which we have reviewed up to this point, about half the book, hold the greatest interest for the well-rounded military students. In a time when the established balance of the world is in solution, and the new compound has yet to appear from the colors, fumes, vapors, and explosions of prodigious chemistry, this first half of "The Ramparts We Watch" is a firm platform from which to appraise the whirling developments.

REVIEWS

The rest of the book is a painstaking and sympathetic explanation of our armed services. While directed more to the general public than to the professional man, the military reader who comes this far will undoubtedly be interested to the end. We do not feel it necessary to explain the author's proposals for an adequate fighting force in detail here; we have our own sources of authoritative opinion on such matters. Non-military people, who lack such sources, may be assured that Eliot gives them no exaggerated picture; and it is a picture which will certainly develop in them a friendly feeling for their fighting men.

In general terms, he considers that the Regular Army, for its harbor defense, antiaircraft troops, overseas garrisons. Air Force, and mobile army, requires 238,700 men: an increase of 55,000 or 60,000 over present numbers. The National Guard should have 219,000, or about 10,000 more than are now supported. "It is hardly conceivable that any attack from outside could produce an initial effort which a mobile force of 200,000 troops plus a GHQ Air Force of 1,000 planes could not destroy."

Oddly enough, it is when he passes from great affairs to military details that Major Eliot occasionally and very slightly stubs his toe. In so much praise of a fine work, we hope that we may include some trifling cuts.

He repeats the aged fable that 30,000 regular troops in the hands of the Federal government would have quickly suppressed the South at the beginning of the Civil War, and says that such is "the considered judgment of most military students." We must sho'ly challenge that remahk, suh! Modern students of the subject have not felt so certain that several million people could have been suppressed by "one Army Corps."

And there is a reference, speaking of Sampson and his fleet in 1898, to "the masterly series of combinations which in the end brought the Spanish squadron to its ruin." Perhaps we put too much faith in Walter Millis's "The Martial Spirit" as we lift a quizzical brow; but really we have heard no naval gentlemen calling those combinations "masterly." Maybe the author is thinking of Hearst and *his* fleet.

Some of Eliot's proposals for a better state of readiness for war seem to us of dubious expedience, at the least.

He suggests that, to get the best initial force on M-day, each National Guard regiment should transfer a large part of its officers and men to affiliated Regular regiments, thus placing the Regulars, all arrayed, in the first line and leaving the National Guard to train recruits and come up later. Such a proposal appears to us pure "laboratory," unworkable in practice and undesirable from its inherent faults. The National Guard would never accept such a proposal; and if it should, all of us who have ever been through a regimental reorganization can guess whether the best or the poorest men would be transferred. At the same time. Eliot forgets to mention the C.C.C. as a pool of men trained in many essentials for field service, or to calculate the considerable reservoirs of young ex-soldiers, ex-ROTC cadets, and ex-CMTC trainees, who may be useful in expanding the initial force. We should roughly estimate that there are 600,000 suitable men in all these reservoirs, although admittedly they cannot be summoned to the ranks willy-nilly.

He makes another proposal that the Federal government, by placing strings on appropriations, shall induce the States to stop using the National Guard for police duty, especially in labor disputes; and thus make the National Guard more attractive to the skilled

THE FIELD ARTILLERY JOURNAL

workers which it badly needs. We doubt that such a scheme can be forced upon the States that oppose it.

Finally. Major Eliot is free from that dread task of the General Staff, the finding of the money. In expansive style he can say that this and that should be done. His conclusions as to what the Army and Navy need are not extravagant; but the General Staff officer, while reading them, will at the same time be working in his head a series of estimates to defend before Congress, and he will pray that Major Eliot's address to the people of the United States—with accompanying pantomime abroad—carry real conviction to the audience.

—W. B. P.

Lord Roberts, by Lt. Col. H. de Watteville, C. B. E. Blackie & Son. Limited, London and Glasgow. 1938. Five shillings.

A gunner's story about a gunner is bound to be of interest to field artillerymen even if the subject be neither an American nor contemporary. Col. de Watteville, the author, served from 1900 to 1923 in the Royal Artillery, and Lord Roberts began his career in the artillery of the East Indian Company before the army of that colorful commercial organization became a part of Her Majesty's Indian Army. The first chapter, dealing with the Victorian soldier, his virtues, shortcomings and peculiarities,—the latter were not always liabilities—is perhaps the most interesting in the book. The rest is a business-like record of Lord Roberts' life, but not, unfortunately, more

than that. An "army junior" born in India in 1832, he died in France in 1914 while visiting the Indian Corps of the British Expeditionary Forces. In the span of his life there was intimate knowledge of wars in India, Abyssinia, South Africa and France. His own book, "Forty-one Years in India," has covered part of this as thoroughly as it can ever be told, and Col. de Watteville mentions, in his preface, the importance of that book as source material. An extract, describing the blowing in of the Kashmir Gate at Delhi in 1857, is included as an appendix, and will remind American readers of Lt. Summerall at the gate of Peking.

That some of today's problems were also yesterday's problems is well illustrated in this book. One of the real weaknesses of the East Indian Company's army, says Col. de Watteville, was that its officers were promoted "by a strict and slow seniority." Stream-lining also appears in a punitive expedition in 1871, as it did in our P. I. D. of 1938, when officers had their baggage allowance "reduced to a bare forty pounds, and that in a climate where some provision of mattresses, blankets and waterproof sheets was essential." Incidentally, it is rather surprising that the author omits mention of Lord Roberts' combat loading of transports for the Abyssinia campaign in 1867, a modern touch as compared to the accepted practice of the day. Lord Roberts was also a consistent exponent of the wide-envelopment attack, and it is reasonable to suppose that he would not find very much that he would regard as new in today's teachings at Leavenworth.

—H. W. B.



The Spaulding Lecture Series

The background of military history, rather than its detail, was the subject of a series of eight lectures, delivered during January by Colonel Oliver L. Spaulding, FA, of the Army War College, as part of the winter program of the Lowell Institute Lectures at Boston, Mass. These lectures, free to the public, are given in the Lecture Hall of the Boston Public Library, Boylston Street. Those given by Colonel Spaulding were at eight PM. Tuesday and Friday evenings.

The lecturer (head of the Historical Section of the War College; holder of many honorary degrees for his historical researches, and author of well-received works, of which "Pen and Sword in Greece and Rome" is the most recent) developed the general subject of "Evolution of the Military Art." in the series, whose lecture titles were:

1. Military Greece, from Agamemnon to Alexander. The Perfected Phalanx. (Twelfth to Fourth Centuries B. C.)

2. Carthage and Republican Rome. Hannibal and Scipio. Ancient Fortification and Siegecraft. Marius and the Marian Legion. (Third and Second Centuries B. C.)

3. From Caesar to the Crusades. The Roman Frontier, Backswing of Military Leadership to the East. The Emperor Maurice and the Byzantine System. (First Century B. C. to Twelfth Century A. D.)

4. The Military Renaissance in Western Europe. The Introduction of Gunpowder: The Cannon and the Matchlock Musket. The Swiss, Dutch and Spanish Tactical Systems, Gustavus Adolphus. (Thirteenth to Seventeenth Centuries.)

5. The Era of Louis XIV. Turenne and Condé. Substitution of the Flint Lock and the Bayonet for the Matchlock and Pike, Logistics and Siegecraft, Vauban. (Seventeenth Century.)

6. The Eighteenth Century. System of Fortified Lines. Prince Eugene of Savoy and Marlborough. Blenheim; Fontenoy. The Controversial Tactical Writers. Frederick The Great.

7. Frederick, Washington and Napoleon. Reciprocal Influence of Europe and American Tactics. Staff Organization.

8. The Post-Napoleonic Era. Development of Armament and Transportation. The American Civil War and the World War. Summary.



Inspired, as the Recruiting News reports, by the beauty of the Wyoming scene, Technical Sergeant Howard S. McDonald, 76th FA, Ft. F. E. Warren, "never had a lesson in his life," turned to painting for expression. One of his canvases, "Antelope Country," was hung in the American National Art Show at Rockefeller Center, N. Y. C.

Some Forward Observations



THOSE WHO READ General Scott's "Wounded Knee—A Look at the Record," in this issue—and all should do so—will note how typical is the incident of a pattern of our history in which the nation can take little pride. The settlers, impelled by the westward urge, stream over the Indian country in violation of treaties. The Indians are understandably aroused; make hostile gestures. Troops are ordered to disarm them, but unscrupulous whites foment insurrection, prompted, perhaps, by recognition of their own advantages when the Indians shall have been destroyed. When casualties occur, the instrument of the national will—the United States Army—is made the goat; officers and men of long, honorable, painful service for their country are impugned.

And this despite the fact that the troops, in constant contact with the Indians, aware of the latter's misfortunes, unflinching sympathetic with them, as shown by many records, take every precaution to avoid injuring them unnecessarily.

There is still another pattern not too attractive (early entry in the 1939 understatement contest): The newspaper-headline employment of such words as massacre and murder, without the cautious quotes. Many of the 18 wearers of the Congressional Medal of Honor, awarded for service in this action, are dead. The copy readers, however, did not know about these awards. Nor did they care much, if any. An attempt to interest publishers in the other side of the story was fruitless. The other side is never news.

One of the oldest institutions in this country is the United States Army. It will surprise some to know that it considerably antedates the adoption of the Constitution. Newspaper knowledge of even its commonest forms of trade jargon was not advanced much even by the War, following which a newspaper reported: "The 83d Field Artillery marched through the city yesterday with 75 of their famous French millimeter guns."

The libel laws begat the newspaper practice of referring to the accused, until his guilt had been established by the proper authorities, as "the accused;" his offense as an "alleged" one; the incidents of testimony as "it is said."

It is said that the alleged publishers of the alleged newspapers should look more penetratingly hereafter into the alleged truth, before they fly off half-cocked at the expense of those who have laid at the feet of their fellow citizens the last full measure of devotion.



THE ANNUAL REPORT, published in this issue, records that the Association gained 474 new members in the fiscal year ending November 30, 1938. Since then it has added 300 more, and they continue to come in. The National Guard representatives on the Executive Council, Colonels Sands and Haffner, long have felt that membership in their component would grow as soon as more found out about it. They resolved to bring the matter to the attention of their fellow wagon

SOME FORWARD OBSERVATIONS

soldiers in the Guard. Colonel Sands got the lists; Colonel Haffner, at his own expense, prepared and sent out those handsome three-color folders some of you have seen.

Formula for the simple life: Choose your predecessors a quarter century in advance, and tell them that, no matter how much it hurts, it is up to them to lay by increments of financial reserve so that the matter won't trouble you when your number comes up. Then get a couple of other fellows to do your work.



ONLY A FEW years ago, we were the "brass-buttoned gentry," the "gold-braid boys," were "preparing for the last war," and the like of that, in the public prints. Now, God save us, we're the "experts."

The very publications that sneered at the profession of arms, that fought even the most modest of defense appropriations, that tried to hamstring the ROTC, and that accused the armed service, Regular, Guardsman, and Reserve alike, of being that class which "fomented" wars, now call loudly for the service experts to foretell the future.

Alas, the services have no such experts. They have only people with fairly good memories, and some acquaintanceship with history. They know it to be actuarial experience that if such-and-such happens, then it is very probable that thus-and-so will occur.

Over the such-and-such they have no control. They are painfully aware, however, of the implications of the thus-and-so which follows, and with which they will have to deal.



IT IS DIFFICULT to learn anything definite about artillery in the Spanish

Civil War. A United Press despatch of January 20 furnishes one morsel for thought. The Loyalists are quoted as attributing the slow-down of the Insurgent drive that date to shortage of munitions, the Loyalist estimate being that the Insurgents used 1,600,000 shells in 28 days while occupying 2,700 square miles. The despatch didn't say who counted the shells. But this would be 592.5 rounds per square mile, or 21.16 rounds per square mile per day. Looked at that way, it doesn't seem like much.

Let us assume 40 pounds as the mean weight, packed, of a complete round, and the total is 32,000 *tons*. To lift this mass in one *minute* from ground to truck tailgate—say, three feet—would require the expenditure of 5,809 horsepower.

This could incline one to quarrel with the tables of organization, except that the thought of how many times that ammunition had to be manhandled is more likely to make one too tired to fight.

Take it away, cannoneers.



THE JOURNAL has received a letter from a Bulgarian artillery officer, which reads, in part: "Having received the July-August number of The Field Artillery Journal which I enjoy greatly to read its content which is thoroughly satisfying, I wish to continue to receive your Journal during the coming 1939 year.

"Please enroll me as a subscriber . . .

"Expecting your positive answer, I remain truly yours . . ."

The editor, confronted with many foreign exchanges, only the illustrations in which he reads with any degree of fluency, would give a pretty if he could write Bulgarian as clearly as this correspondent does English.

Or, for that matter, English.

MILITARY BOOKS

Following is a list of books on military subjects which are recommended for their professional value as well as interesting content:

| | <i>Price</i> |
|--|------------------------------------|
| | <i>(Domestic postage included)</i> |
| THE UNITED STATES ARMY IN WAR AND PEACE— <i>Col. O. L. Spaulding</i> | \$6.00 |
| WARFARE— <i>Spaulding, Nickerson and Wright</i> | 3.00 |
| PEN AND SWORD IN GREECE AND ROME— <i>Col. O. L. Spaulding</i> | 2.00 |
| ELEMENTS OF ORDNANCE— <i>Lt. Col. T. J. Hayes</i> | 6.50 |
| FROM SAINTS TO RED LEGS— <i>Heiner</i> | 1.00 |
| FIELD ARTILLERY: The King of Battles— <i>Maj. Gen. H. G. Bishop</i> | 1.00 |
| CARBINE AND LANCE, A HISTORY OF FORT SILL— <i>Nye</i> | 3.00 |
| R. E. LEE— <i>Freeman</i> (4 vols., each)..... | 3.75 |
| A MODERN MILITARY DICTIONARY— <i>Col. Max B. Garber</i> —Cloth..... | 2.50 |
| —Leather..... | 2.75 |
| THE STORY OF RECONSTRUCTION— <i>Henry</i> | 5.00 |
| COMBAT INTELLIGENCE— <i>Schwien</i> | 2.00 |
| INFANTRY IN BATTLE..... | 3.00 |
| THE INFANTRY BATTALION IN WAR— <i>Lt. Col. Walter R. Wheeler</i> | 3.00 |
| CAVALRY COMBAT..... | 2.50 |
| MILITARY HISTORY OF THE WORLD WAR— <i>Col. G. L. McEntee</i> | 7.50 |
| THE SIEGE OF ALCAZAR—(<i>McNeill-Moss</i>)..... | 3.50 |
| ARMY MESS MANAGEMENT SIMPLIFIED— <i>Maj. E. A. Hyde</i> | 2.00 |
| TOMORROW'S WAR— <i>Stephen Possony</i> | 2.50 |
| NOTES ON FRENCH ORDNANCE, 1717-1936— <i>Hicks</i> | 3.50 |
| THE RAMPARTS WE WATCH— <i>Eliot</i> | 3.00 |

A reduction of 10% will be made to JOURNAL readers who purchase any of the above books through the U. S. Field Artillery Association.

The Association is in a position to obtain for its members not only books on military subjects but biographies and fiction as well, at a reduction of 10%.



Artillery and Ballistics in Simple Terms. Dr. Hans-Hermann Kritzinger and Dr. Friedrich Stuhlmann. With 41 illustrations. Bound, 16.50 Reichsmarks. Published by Julius Springer, Berlin, 1939.

A reference book for officers and enlisted men of the German military forces. It contains definitions and general explanations of many terms used by the Ordnance, Artillery, Air Corps, and Navy in connection with firing.

Included within the main text are a few biographical sketches of scientists instrumental in developments which have affected the design or use of military armament. A supplement contains a few English, French, Italian, and Spanish military terms with their German equivalent.

The arrangement is excellent and the book will be of material assistance to students of Germany military matters.

—J. M. L.

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