

The FIELD ARTILLERY JOURNAL



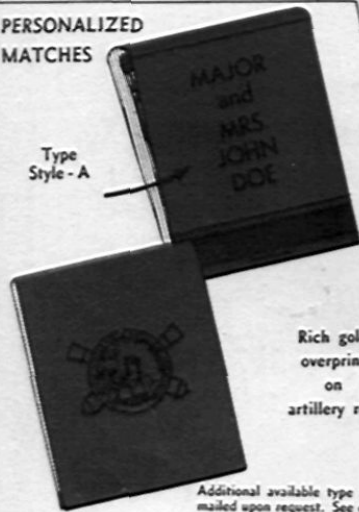
AUGUST 1946



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MEMO TO: *Members* 5 Aug 46

This space will be utilized from time to time for brief reports, requests and other matters ill-suited for location elsewhere in the Journal.

Application for Membership. We all "miss the woods for the trees" now and then. Jerked up sharply by several members for conducting a membership drive without including a membership application in the Journal, remedial action has been taken, below.

Uncommon Artillerymen. Greater membership co-operation in the matter of recommendations—particularly of former enlisted men meriting this honor—is requested. (See June issue.)

Children's Books. Members ask why a "he-man's" magazine reviews and advertises children's books. Answer, in five parts: (1) few things are more important than the small fry either to their parents or to the Nation, (2) children like to read (maybe yours don't fight for the comics—mine do!), (3) most parents are not discriminating in children's books, which vary as widely in quality as do books for adults, (4) we've enlisted the help of a mother who knows the field, and (5) you can widen your child's horizons—or someone else's—through the magic world of good books, by following our columns. Initiated in the May issue, with a follow-up in July, the program will be accelerated in succeeding issues.

D.D.



By the way, have you added your matches?

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*In brief, membership eligibility is as follows: Active (voting) members are limited to field artillery officers either on active duty or on active status with the National Guard or Organized Reserves; Associate (non-voting) membership is open to all officers and former officers of the Army, Navy, and Marine Corps, any person who served in the FA in time of war, and those civilians approved by the Executive Council.



New Commandant at the Field Artillery School

●

*T*HE MEANINGFUL PHRASE, "the battle is the pay-off," applies without reserve to Major General Clift Andrus, who relieved General Hibbs late in June to become the 20th Commandant of the Field Artillery School. Joining the 1st Infantry Division as Artillery Commander in May, 1942, General Andrus was with the division throughout its glorious campaigns, which spanned the entire period of European-Mediterranean operations, and included the historic landings on D-day at Oran in October, 1942, at Gela, Sicily, the following summer, and at Omaha beach on June 6, 1944. General Andrus succeeded General Heubner in command of the division in January, 1945, and remained in command until his recent return to the United States. General Andrus' decorations bear striking testimony to his brilliant record; he wears the Distinguished Service Cross, the Distinguished Service Medal, the Silver Star, the Legion of Merit with cluster, the Soldier's Medal, and the Bronze Star with cluster. He has also been honored by the award of eight foreign decorations.

General Andrus was elected Vice-President of the United States Field Artillery Association at a recent special meeting of the Executive Council.



**OF MORE THAN
PASSING INTEREST**

Happy Birthday. August 1st has been designated Air Force Day. The USAAF is 39 years old.

Colors Return. Simultaneous nationwide ceremonies for the return to the States of colors brought into the Federal Service by National Guard units will be held on 11 November 46.

What Price Security? One out of four of the nation's 13,000,000 World War II veterans has already filed a disability claim with the Veterans Administration.

Division Associations. More than 40 divisions of World War II now have active associations and societies. Hq, AGF, has a section devoted to assisting these worthy activities.

OCS Training. To standardize training in the future, all ground force OCS candidates will attend a 24 weeks' course at Fort Benning. Commissioned upon graduation, officers then attend the basic course of their arm.

Oldsters to Fly. Due to the critical shortage of trained pilots among officers in the higher grades, selected RA officers of the ground combat arms will be given a 16 weeks' course at the AGFATS at Fort Sill. Age restriction—not over 42.

Artilleryman's Bank. Concurrent with the closing of the wartime Treasury Department banking facility, the new Fort Sill National Bank opened for business at Fort Sill on July 1st. Authorized as a national bank, all deposits are protected under the FDIC. Maj. Gen. R. McT. Pennell, Rtd., former FAS Commandant, is President.

Inf-Arty Team. Few realize the relative weight of doughboys and artillerymen in modern battle. Actually there were 2 artillerymen for every 5 infantrymen in First Army during the decisive Battle of the Bulge.

Overseas Cemeteries. American World War II war dead (including both service personnel and civilians) rest on a total of 209 cemeteries outside the continental limits of the U. S.

Additional Regulars. On or about 20 Aug, the WD will recommend some 800 additional officers for permanent commission in the RA, to bring total strength to 25,000. These appointments are not related to the recent Congressional authorization for 25,000 additional RA officers.

The FIELD ARTILLERY JOURNAL



"Contributes to the Good of Our Country"

VOL. 36

AUGUST 1946

NO. 8

- Cover: Peace is one year old this month; at least, most of the shooting stopped a year ago. Symbolic of our victory over Japan is this shot of a 105mm howitzer being landed by LCM somewhere in Alaska.
- Frontispiece: Major General Cliff Andrus, U.S.A., new Commandant at the Field Artillery School.

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The Last World War

A report made to the War Department on 22d April, A.D. 2064, by General Gibbon A. Yew, following the awful tragedy which took place in that year. All characters in this narrative are fictional (or certainly ought to be) and any resemblance to real persons, dead persons, or persons yet to be born, is purely coincidental.

AS I TOLD reporters who visited my cell yesterday, I have had a raw deal in this matter, even from the Press, which printed my explanations only in part, and with nasty insinuations to the effect that my story might be slightly colored by self-justification. They used the word "alibi" too often. As a matter of fact, I followed accepted doctrine throughout. My only mistake—a slight one—was my inability to conceive that a war could last over a few hours. But I will begin at the beginning, for I want posterity to know the whole story, including the historical events leading up to this war.

Lebensraum. It is just a hundred years ago that Professor Anton Czrkwicz, while toiling away in his laboratory at Riegesdorf (a tiny state created by the United Nations after the second World War), suddenly stumbled upon the secret of prolonging human life—to

what extent we do not even yet know, since millions of people are now over 100 years of age and some three thousand or so who were living in Riegensdorf in 1964 had already celebrated their 170th birthdays. The latter group includes very few outsiders, for the National Party leaders of Riegensdorf kept Professor Czrkwicz a virtual prisoner until he took his own life in the year 2031, and they watched him closely to prevent him from giving his secret to the rest of the world.

With its death rate virtually at a standstill, the once tiny Riegensdorf was soon packed with large families and began to demand "lebensraum" as it provoked quarrels with its smaller neighbors and gobbled them up one by one. At first, the Riegensdorf population's increase included a top-heavy proportion of aged people, but as it became clear that Professor Czrkwicz's discoveries



not only prolonged life but also prepetuated youth and middle age, the world became alarmed at the increasing size of that nation's armed forces, which by the turn of the century included vigorous military men of the age of seventy or above.

The Master Race. At about this time the World Council* took action to coerce Riegensfuehrer Konrad Schmutzig into checking the territorial aggrandizement of his people. The Council also demanded that the secret ingredients of the annual inoculations given all Riegensdorf people to prolong their lives be revealed to the rest of the world. Schmutzig's reply was to invite the World Council Delegates to a conference.

For a week the delegates were treated to magnificent entertainments and led from one demonstration to another. They were astounded by the cultural and scientific advances of the Riegensdorf people. In former times, Schmutzig explained, great thinkers had barely reached maturity and begun to make contributions to science when senility and disease swept them way; but now they went on indefinitely in the full vigor of life to produce marvels of invention undreamed of before. Thus, said Schmutzig, Riegensdorfers had truly become the master race. At this point, delegates who had read the history of World Wars II and III grew pale and whispered uneasily to each other.

Enlightenment. Delegates from Great Britain, the United States and Russia had gotten together and compared the reports which their spies had been gathering during the previous week. The conclusions reached left them all wondering, for apparently Riegensdorf had been progressively reducing the size of its army for the past three years. Enlightenment came during the second week of the conference.

"We are through now with our accomplishments in the arts of peace," Herr Schmutzig announced to them, "so we will proceed to the field demonstrations of our latest equipment for waging war. In this we have not been idle, especially in the field of

electronics."

As in the previous exhibitions, the officials in charge of the military demonstrations revealed absolutely nothing concerning the principles or detailed theory of the engines brought forth for brief inspection; but they permitted the delegates to see them in action, or where this was unsafe, to hear the blasts from fifty miles away and to visit the ruins of mock-up cities laid flat with atomic missiles carried to the target area by rocket propulsion and directed to the vicinity of the objective by radio control.

"As you have no doubt learned through your intelligence agencies," Herr Schmutzig remarked with a smile, "we have been able to reduce the size of our army considerably; we have no need either for a large force to operate our engines of destruction or to occupy the areas devastated by them. The bewildered survivors, if any, will merely have to be rounded up. We hope, of course, that we will never have to employ these forces; we want to live at peace with the world."

At the final banquet given in honor of the World Council Delegates to the conference at Riegensdorf, the Prime Minister of England broached the subject of sharing with mankind in general the secret of prolonging human life.

"If this were done," Schmutzig explained, "a serious world problem of overpopulation might result. It is questionable whether all races in the world are worthy of perpetuation. Individuals of proven worthiness can, of course, enroll under our leadership, and as citizens of our great land, they will become entitled to the annual treatments."

The "great land" to which Schmutzig referred already consisted in the year 2000 of all of Poland, East Prussia, the Baltic States, White Russia, Slovakia, and all of the Balkan States east of the Danube.

As all know, the next twenty years saw the spread of Riegensdorf domination all over Europe and Asia, though the masters did not share the secret of prolonged life with their conquered peoples. The nations of the western hemisphere formed an alliance and entered an armament race with the masters of Europe, but they were

always far behind in new developments, and were forced repeatedly to adopt humiliating policies of appeasement.

Then, in 2026, people in Riegensdorf began to die. At first it was confined to the very oldest people—men who had been at the threshold of death when Professor Czrkwicz perfected his serum. They seemed suddenly to wither within the course of a year or two. Then many younger ones died. Dictator Schmutzig, himself then in his 107th year, became alarmed and called in Professor Czrkwicz, threatening him with violent measures if something were not done. The scientist merely explained that the limit of the powers of the rejuvenating serum had been reached. After all, he said, was it not sufficient for a man to live well over 130 years? The answer, Schmutzig warned him, was no, and Czrkwicz had better get busy and do something about it.

Truth Will Out. It was not until 2031, however, that the facts were revealed: Czrkwicz and his fellow conspirators had been weakening the doses of active ingredients in the life-prolonging serum; that issued for the use of the party leaders had actually been reduced to plain, sterile liquid, with the result that several high government officials had weakened, aged, and succumbed to illnesses during the past two years.

The scientists fled just ahead of the revelation, hotly pursued by agents of the dreaded Polzooko (contraction of "Politischeuntersuchungsburo") and took refuge in America. But not for long. Knowing his hour was at hand, Professor Czrkwicz turned over his secret to the American Medical Association together with a written confession of his sorrow and remorse over the results of his invention. He then took his own life a few minutes before the avenging assassins of the Polzooko were able to reach him.

I was then a youth of twenty, a student of electronics at Harvard University. Today I am fifty-three, though still able to do the hundred yard dash in nine and two-fifths seconds, thanks to the serum of Professor Czrkwicz, which is now available for administration

*An organization of victorious nations set up after World War III and successor, substantially, to the Holy Alliance, the League of Nations and the United Nations.

to everyone except felons and the insane. Unfortunately, it is still available in Riegensdorf, too, where Schmutzig still rules and secretly plans to annihilate all human beings except those who bow to the yoke of the Master Race.

Ionosphering. From 2031 to 2064 the United States made great strides in science. I am proud to have been an apprentice in the study of developments perfected by that great scientist, Dr. Liebschutz, a refugee from the wrath of Schmutzig and now in his 163d year. He had reached the prime of life, as it was then known, when he first began taking Professor Czrkwicz's serum in 1964. Liebschutz's pilotless ionosphere jet ships have been kept under control by ground instruments at altitudes of 90 miles above sea level for as long as 31 days, and are far superior to anything produced by Riegensdorf. His achievement in launching a missile that reached the moon has surpassed any development yet perfected by science, though he modestly admits that it had no practical value except as a step in the progress toward interplanetary commerce. After all, he depreciated, the moon is rather a large target and relatively only a short distance from us.

Dr. Liebschutz taught me everything I know concerning the operation of directors for the ground control of pilotless space ships. It was he who recently induced the War Department to entrust to me the operation of the great radar coordinating unit at Bar Harbor, Maine.

Pair of "Youth Juicers." The War Department, however, has been excessively conservative in accepting new devices, and it was through its influence, not to say coercion, that I was obliged to consent to the presence in my control station of those two cantankerous old die-hards, Colonel Gunnar E. Scharke and Colonel Christianity Pickett. Both these gentlemen were retired from the Army for age in 1960, and would no doubt have been long rotted away in their graves in Arlington Cemetery had they not happened to be spending the summer of 1964 in Riegensdorf. Yes, they were already back numbers a hundred years ago, senile and shorn of

all powers except the gastronomical. But having won a villa on the Dniester River in a poker game with a wealthy Riegensdorfer, they were constructively eligible to citizenship in that country, and through the oversight of the Riegensdorf Government, they were able to get their annual inoculations and halt the advance of biological decay at the 68 year stage. They remained loyal to the United States, of course, but never failed to travel each year to Riegensdorf to get their ration of the "youth juice" as they loved to call it. In a discreet sort of way, they were spies for our War Department, bringing home information on every trip. It could only be the Polzooko's conviction that they were in their second childhood, and therefore harmless, which enabled them to get away with this. However, the War Department was well satisfied with Colonel Gunnar E. Scharke's detailed reports on Riegensdorf's newer developments, all of which he carried in his head, a perfectly safe place for them, while his colleague, Colonel Pickett, threw the Polzooko agents off the track with his absurdly amusing vagaries concerning hundred mil errors. At any rate, these two old timers (each as well preserved as a fruit cake at 168) have quite a "drag" with the War Department, which has come to their defense on the many occasions when some weary taxpayer has written a hot letter to the *Washington Post* demanding information as to how much longer the Treasury proposes to pay these old officers their retired pay. You can understand this well enough. Between them, these two old buzzards have drawn close to a million dollars in pay checks since they were laid on the shelf in 1960. Figure it out for yourself.

But I digress. Sufficient to state that the War Department deemed these old colonels a sort of counterweight who prevented the scientists from swinging off too far in radical developments. I will admit that Scharke has had some rather pertinent and practical suggestions for the employment or modification of our control machinery; and whenever I become too impatient with their persistent arguments for retaining some armed ground forces, I have to admit that they just as often have raised the spirits and morale of

our director operators with their highly amusing stories about World Wars I and II, as well as the yarns they remember hearing as children about the conflicts on the once barren western plains between the semi-civilized settlers and the wholly barbarous red men. Particularly fascinating to me were their tales about a legendary character known as Buffalo Bill. The whoppers got bigger every year but we never tired of them. When they asked questions, we'd always humor them with patient explanations. For example, whenever we showed old Colonel Pickett a new piece of equipment he'd invariably pipe out, "What's the probable error of that thing?"

"Pick, old Boy," I'd explain, "Our locator devices have maximum errors of only about one ten-thousandth of the range, which is negligible except for targets on another continent. But as I've told you before, the rest of our devices are perfect pieces of machinery; they can't make an error."

"I will sing you a song from Reginald DeKoven's great opera 'Robin Hood,' " said Pickett one day, grabbing up his battered old guitar.

I am the Sheriff of Nottingham

A truly most remarkable man

I never have yet made one mistake

I'd like to for variety's sake

In fact infallible ere I am

The Sheriff of Not-ting-ham!"

"Suppose," he continued insistently, "suppose somebody presses the wrong button?"

"Well, naturally, a machine will only do what you tell it to."

"And suppose you want to bring an ionosphere ship down onto a target by remote control. What is the probable error in that case?"

"Ionosphere ships cost over twelve million dollars apiece," I explained. "We can't throw them down by the dozens on the desert proving ground just to find the center of impact and measure the extent of the dispersion. But I am confident that they are as perfect a device as ever man built."

"Gibby," he replied solemnly, "if man ever builds anything that can't make errors, I'll eat it."

Once we had actually tested the fall of two ionosphere ships with dummy loads in the desert of New Mexico. The

(Continued on page 484)

LET'S PULL TOGETHER —

Coordination of Supporting Arms in Amphibious Operations

Lt. Col. R. M. Brewer, FA

DURING the recent war tremendous advances were made in the employment of supporting arms in amphibious warfare. Techniques were improved and ammunition expenditures increased to the point that frequently the enemy was forced to abandon his beach defenses and withdraw inland prior to the actual assault landing. Naval gunfire, Navy and Army air, field artillery, amphibian and land tanks, and chemical mortars all combined to ease the doughboy's task.

The statistics on ammunition expenditure in recent operations are staggering. More important, due to improved intelligence and operational techniques, a high percentage of bullets, bombs, and shells were accurately directed on specific targets. Yet in spite of the tremendous advances achieved, there remains at least one field in which there is considerable room for improvement. Reports of recent operations indicate that, while air strikes and naval gunfire were used on an unprecedented scale and with great effectiveness, there was still need for more effective coordination between the supporting arms.

Described in this article is a system of liaison and communication which I believe would insure the necessary degree of coordination between the supporting arms. The exact system described has probably never been employed. However—and by no accident—it follows closely the doctrine and practice of the Tenth Army. It is limited to the corps level and below.

COORDINATING AGENTS

It is fairly obvious that representatives of the supporting arms must be on hand at corps, division, and lower echelons to advise the commanders and to handle requests for and delivery of the support desired. Herein lies the first difficulty: there is no standard agreement as to who should furnish these coordinating agents (liaison officers), nor is there

any standard nomenclature for them among the arms and services. To circumvent this latter difficulty, they will be referred to as liaison officers in this article.

Essentially the liaison system of the

Commissioned in 1940 upon graduation from the Military Academy, Lieutenant Colonel Brewer's combat service included tank destroyer experience with the 1st TD Group in North Africa and Italy before joining the VII Corps staff in England in the spring of 1944. As corps antitank officer and assistant corps artillery S-3, he participated in the VII Corps planning for the cross-channel assault and subsequent operations until late in the spring of 1945. Colonel Brewer is now serving as an instructor at the Command and Staff College.

field artillery should remain unchanged in an amphibious operation. Briefly the principle is for the *supporting* unit to maintain liaison with the *supported* unit. The basic unit of artillery support is the direct support (or combat team) battalion. This battalion maintains liaison officers not only at the command post of the supported infantry regiment but also at the command post of each infantry battalion of the regiment.

Experience has shown that naval gunfire liaison officers and air liaison officers (either Army or Navy, depending on which service is furnishing close support to the ground troops at the time) should also be present at the infantry battalion command post during the early stages of an amphibious operation. This requirement has been met by the organization of *joint assault signal companies* designed for attachment to assault divisions in amphibious operations. The company includes 13 *shore fire control parties* and the same number of *air liaison parties*. This number is sufficient to provide one of each type of party for the division, the three regimental, and the nine infantry

battalion command posts of the division.

The shore fire control party is a joint organization including a Navy officer for liaison purposes and an Army officer (usually a field artilleryman) for forward observation. (Actually these officers exchange duties from time to time.) The latter, who is called a "spotter" in Navy lingo, generally has direct radio communication with a direct support firing ship. It is customary, whenever sufficient firing ships are available, to give each assault infantry battalion the direct support of a destroyer or cruiser. All naval liaison officers within a corps and all ships of the supporting fire support group are in a radio net controlled by the commander of the fire support group. This setup permits quick response to requests for fire (by the direct support ships) plus great flexibility and, when required, complete centralization under the command of the fire support group.

The air liaison parties are made up of air personnel and are provided primarily to perform liaison functions, but they are also capable of directing air strikes onto close-in targets. However, naval air strikes are usually directed by an airborne "coordinator" or by the leader of the striking group rather than by a ground station. Therefore, the primary mission of the air liaison officer is to advise the commander and transmit requests for strikes.

RESPONSIBILITY FOR COORDINATION

We have seen that each of the major supporting arms — air, naval gunfire, and artillery—has adequate liaison and control systems. But as yet we see no organization to coordinate their activities. There is no guarantee that two weapons will not attack the same target while other vital targets remain untouched. Obviously, some coordinating individual or agency is required at each ground force echelon. The most common practice at the division level and the almost universal practice at corps and higher levels is to give this job to the artillery officer. This appears to be the best solution.

I think this doctrine should be expanded to include every ground force echelon, for I believe that the artilleryman is in the best position to handle the job of coordination. In the first place

he is accustomed to thinking and acting in a supporting role. Also he knows the relative effectiveness of the various calibers of bombs and shells. Then again he already has in operation an efficient agency which, with a minimum of augmentation, can handle the added burden. He is familiar with the organization of the ground forces and the personality of the various commanders. Lastly, since it is generally conceded that the supporting arms should be used in the order artillery, naval gunfire, and air, it seems reasonable that the artillery should coordinate activities to prevent employment of other, more expensive, weapons on missions that artillery can handle. Quoting from a recent Tenth Army report: "Fixing on the artillery officer in each echelon the responsibility for coordination of artillery, naval gunfire, and air support worked well on Okinawa."

PLANNING THE OPERATION

Many major decisions must be reached at the highest echelons—theater and joint task force headquarters — before any of the detailed planning can be carried out logically within the corps. Among these decisions are organization of participating land, sea, and air forces; assignment of objectives and areas of responsibility; and selection of the target date.

The burden of detailed fire planning prior to the operation generally falls upon the corps. Corps artillery must assemble all target information. The corps artillery commander will probably confer with the gunnery officer of the naval fire support group

and a representative of the supporting air forces, and together they will work up a general plan for support.

Following this conference staff representatives of the supporting arms, including probably the artillery S-3, must get together and, in a series of lengthy sessions, actually work out the details of the fire support plan.

Complete coverage of the subject of prior planning would require a volume; I merely touch on it here as background for what follows. After all, the planning for an amphibious operation takes place over a period of months, and there is plenty of time to work up a reasonable fire support plan even if our staffs are not too well organized. But when the troops hit the beach and start calling for high explosive on an enemy weapon that's hurting them, there is no time for trial and error methods; no time to call together the artilleryman, the Navy man and the airman. *They must already be together.* They must know each other and know how to work together.

CONDUCT OF THE OPERATION

To quote again from the same Tenth Army report, "for efficient operation, the coordination agents of all support arms must be closely associated, both physically and mentally. The artillery coordinating agent in each echelon should be responsible for and have authority over the other agents to insure coordination."

I feel that if the liaison officers are kept together, both afloat and ashore, coordination will approach the automatic, requiring not more than a few seconds. On the other hand, if these liaison officers are permitted to establish

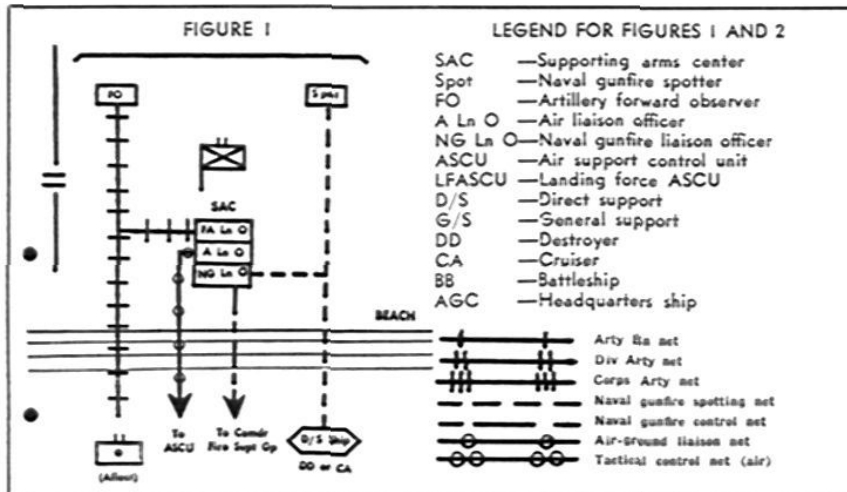
themselves wherever they please, coordination will become difficult. For this reason I feel that at each echelon the artilleryman should be responsible for setting up an establishment in which all liaison officers from supporting arms work together on common situation and operation maps. The installation might well be called a supporting arms center or SAC for short. On Iwo Jima one marine division established such an installation at the division headquarters and dubbed it the "supporting arms tent."

To get a better picture of how this system would actually function, let's look first at the situation which would exist immediately after a landing—that is, assault battalions ashore but regimental command posts still afloat. This situation is shown schematically in Figure 1. Note that naval air is represented in both Figures 1 and 2. If Army rather than Navy air is cooperating, the ASCU (air support control unit) should be replaced by an AGIC (air-ground information center) and a TCC (tactical control center), since the ASCU combines the functions of both. Also a forward control team would be found in the forward area if Army air is participating.

After the establishment ashore of the regimental command post, there is no great need for the air and naval gunfire liaison officers at the battalion command posts; therefore they may be withdrawn. However, the spotter should remain.

After the direct support artillery battalion is operating ashore—and here is the most controversial point of all—the air and naval gunfire liaison officers formerly at the regimental command post should move to the artillery battalion fire direction center. This would then become the lowest supporting arms center at which requests for support would be processed. If the artillery battalion cannot satisfy a request and it is apparent that it is beyond the capabilities of division and corps artillery, this supporting arms center can call direct for naval gunfire or an air strike. Division and corps centers monitor such requests and can disapprove them if they desire.

The final picture is indicated schematically



in Figure 2. This diagram, although it appears complicated at first glance, has actually been reduced to the simplest possible form. For one thing, only one artillery forward observer is shown with each infantry battalion, where in practice there would be two or three. Also the infantry and artillery command posts are shown in the same location. This is the exception rather than the rule, but inasmuch as they are linked together closely by radio, wire, and liaison, I have shown them together for simplicity. Also missing from the diagram is the general support artillery of division and corps as well as a number of general support ships that would be present in addition to the one shown. Note that solid lines with tick marks indicate artillery channels; solid lines with bubbles, air channels; and dotted lines, naval gunfire channels.

I believe this system would insure coordination and at the same time provide flexibility. It achieves centralized control without sacrificing the speed of delivery vital to the success of close support missions.

AMPHIBIAN TANKS

Rapidly developed during the latter stages of the war was the technique of employing the amphibian tank [LVT (A) (4)] as an artillery piece. This came about because the amphibian tank did not prove successful as a land tank. The weapon proved so successful in the artillery role on Leyte that it was thereafter considered primarily an artillery piece, despite the fact that it was continued in use as the first assault wave.

As was done by some units in the Pacific, the "amtank" battalion should be trained and equipped so that after crossing the beach and being passed through by the infantry it can immediately assume an indirect fire role. The battalion, with its four amphibian tank companies, can develop the firepower of four battalions of 75mm artillery. Initially the companies should function in the role of direct support artillery, responding directly to calls for fire from artillery forward observers. As soon as the organic divisional direct support artillery is ashore, the amphibian tank companies should be assigned reinforcing missions. This is desirable since companies are not organized or

LET'S PULL TOGETHER

equipped to handle observation and liaison or to lay extensive wire nets. The reinforcing company should be furnished a radio to operate on the fire control channel of the reinforced artillery battalion.

SUMMARY

The points that I think worthy of emphasis are:

1. Careful, detailed planning is essential as in all military operations.
2. Liaison officers from each supporting arm should be furnished to each ground force echelon down to the infantry battalion.
3. At each echelon these liaison officers should be combined to form an installation ("supporting arms center") under the direction of the artillery officer.
4. After establishment of the

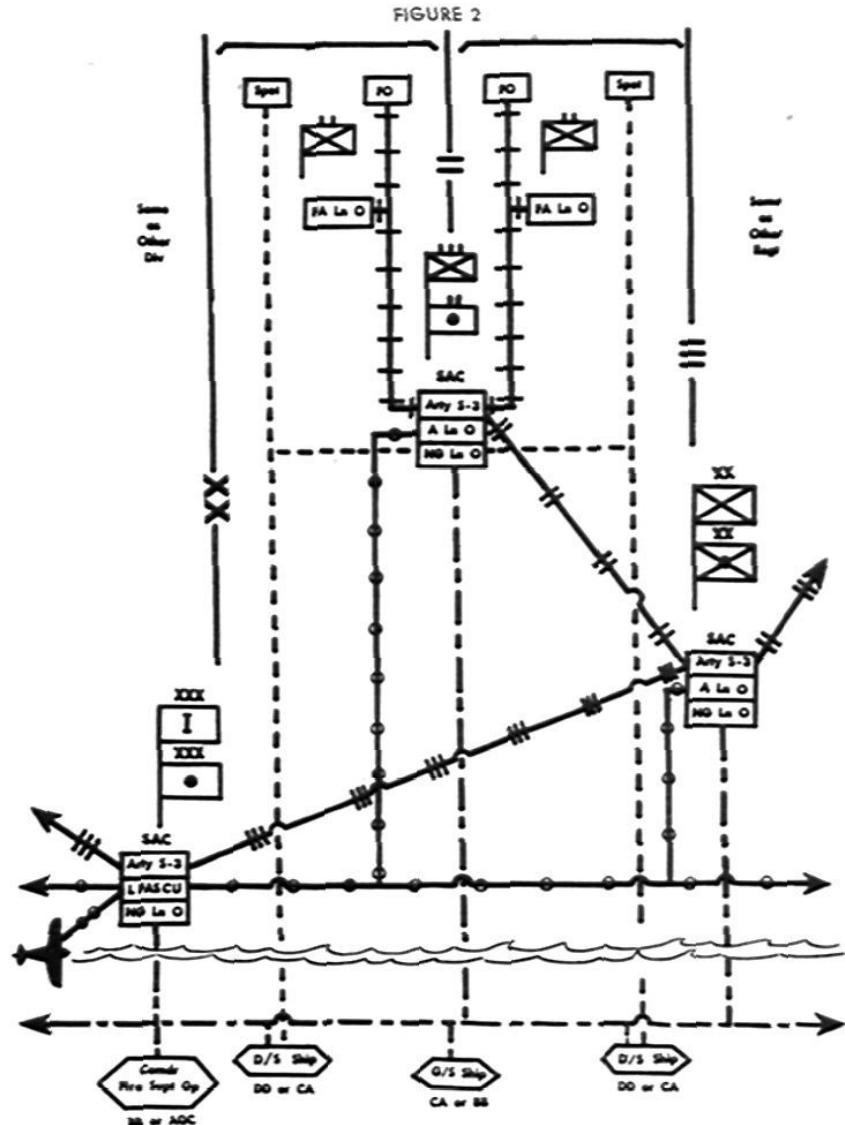
regimental command posts ashore, liaison officers from supporting arms, except artillery, are no longer required at battalion command posts.

5. After establishment of the direct support artillery battalion ashore, its fire direction center should become the lowest operational "supporting arms center," thus eliminating the need for liaison officers, except artillery, at the regimental command post.

6. All requests for support should clear through a "supporting arms center."

7. Coordination should be achieved at the lowest possible center.

8. Any center may call directly on any supporting arm for support, but all higher centers monitor requests and disapprove them when the situation dictates.



TARGET GETTING

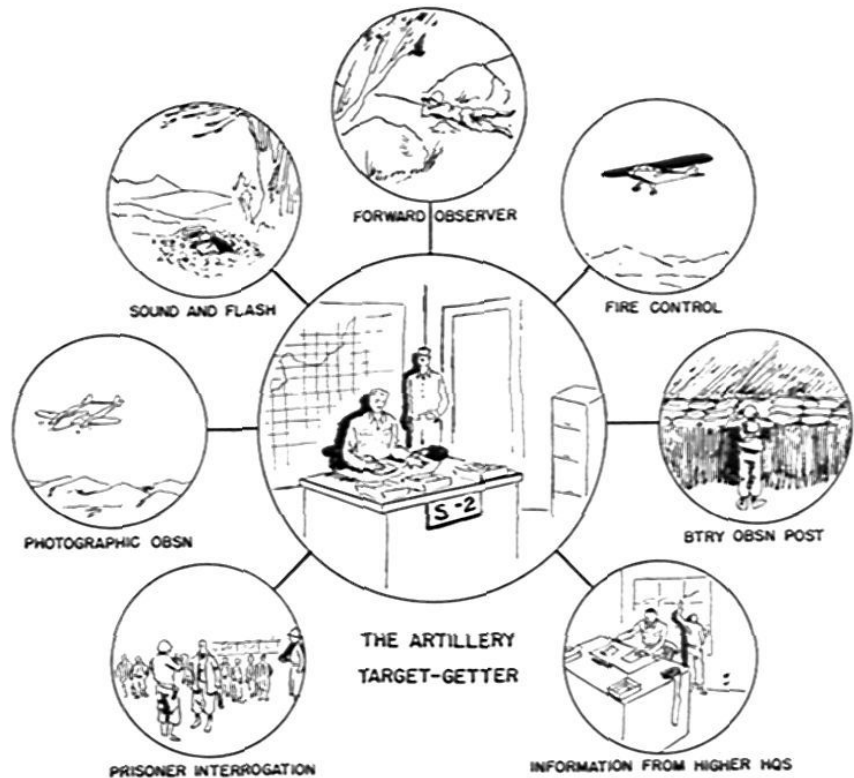
... *We need less theory and more practice*

By Col.
Robert F. Hallock, FA*

ARTILLERY exists to shoot. It shoots effectively only when targets are known and known completely. Colonel Bill Bartlett used to hammer this home to his students years ago at Fort Sill: "We have long trained artillerymen in the three basic departments—moving, communicating and shooting. All three are valueless unless we know what to shoot at. We must add the fourth department—*target getting*." The soundness of this doctrine was proved over and over again in combat, from Casablanca to the Ardennes and from Pearl Harbor to the atomic bomb. The Seventh Army Artillery Officers' Conference report hit the point squarely with the words, "Continuous search for targets, with simultaneous efforts to increase the accuracy of their locations . . . is the greatest single factor in determining the effect of fires."

Lacked "Know-how." Examples of our shortcomings in the field of target getting may be listed without end. My own headquarters, that of a corps artillery unit, entered combat in the fall of 1943. We had never heard of the phrase "shell report." Our S-2 section and records consisted of one major, one sergeant, a map with a few grease pencil notations thereon, and a scratch pad with a few entries of suspected enemy batteries. A year later the same section included six

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officers, seven enlisted men, maps, charts, files, and gadgets of many kinds, the whole occupying three rooms. And each person and each item had been added to meet a specific need.

I once listened to an artillery staff planning fires to support an attack. They worked from an unmarked map. "Here's a main road junction; looks like a good place to interdict. This ravine is probably a reserve assembly area. Put a battalion on it. That reverse slope would be a good place for artillery. Let's hit that hard." And so on. Known targets? Practically none.

Training Dilemma. Before we attempt the solution of the problem of intelligence training, let us consider the underlying reason that S-2 training has been less adequate than S-3 training. To me, it's simple. S-3 training in peacetime is primarily objective and practical, S-2 training is primarily subjective and theoretical. The S-3's material exists. His troops, his equipment, his ammunition, his position areas, are materialized and visible. His fire commands are received by flesh and blood soldiers, his guns

thunder, his shells crash. And whether they burst at the right point or not is definitely determinable. The S-2's training material is "the enemy." But *there is no enemy* in time of peace, nor could the S-2 even designate one, for training purposes. Utterly meaningless, therefore, are such things as "the enemy's" national characteristics, his tactical doctrines, his weapons, organization, and state of training and morale. Yet, in combat these are the things that the S-2 lives with and dreams about for weeks and months on end. Little wonder that our S-2s were weak at the outset. I wonder if the S-3s would have done any better, had as little imagination been shown in their pre-combat training.

Consider the relative combat importance of the work of the S-2 and the S-3. So far as the shooting end of the business is concerned, surely the individual who knows the target is the key man. A trained private can assign, and frequently has assigned, a fire mission to a unit, but the man who knows a target, and furnishes information of it to an artillery unit which fires on that target, does for the moment command that unit, whether he be an infantry

private, an air force lieutenant, or the corps commander. *The S-2 and his agencies tell the S-3 what to do.* v. What are we going to do about it? Have we actually set up that fourth department — the department of getting targets — in our TO's, in our training programs, and most important of all, in our thinking? Such a set-up must be the basis of our solution.

The S-3 "Complex." Peculiarly unfortunate is our subconscious thought that the "line of promotion" runs: battery executive — battery commander — battalion S-3 — battalion executive — battalion commander. (Incidentally, this "S-3 complex" carries over, with similar and equally unfortunate results, to a "G-3 complex" at the higher staff levels.) If a battery reconnaissance officer is very capable he may get to be an executive, and a battalion S-2 may occasionally metamorphose into the S-3, and so get into the line of promotion. We must rid ourselves of such complexes. The officer who knows what we're shooting at and why must be assumed to be available for, and competent to, command.

Responsibility and rank go hand in hand. If we propose to put greater responsibility on our S-2's, and to require bigger and better results from them, their rank should be in proportion. If, as I believe, the target-getter and target-shooters are equally important members of one team, then they should be of equal rank. In any event, S-2's must be carefully selected for general efficiency, all-around capability, and aptitude for the duty, and must not be assigned to that duty solely because they are neither expert gunner officers nor expert communications officers.

Clarifying Functions.

Reconnaissance and survey of terrain under our control is a pure S-3 function, and the S-2 should be relieved from these duties. I suspect that these duties were originally handed the S-2 for the same reason that he so frequently drew the jobs of mess officer, claims officer, post exchange officer, liquor supply officer, and social committee chairman; namely, that he didn't have any enemy to work on. If you see fit to send the S-2 to lead a patrol through the enemy lines to locate

a hostile battery, or to survey an OP on Monte Cassino, well and good, but let the S-3 worry about position areas and orienting lines.

S-2's should be required actively to coordinate and supervise the training of all observation and intelligence personnel in their own headquarters and subordinate units, especially including forward observers and their parties. It is generally agreed that more forward observers must be supplied.

There is a considerable body of opinion to the effect that the designation of S-2's and S-3's should be dropped, and that their functions should be combined in one consolidated section known as the operations section. This decision is a relatively unimportant one, but it is certain that the S-2 and S-3 personnel must work as a close-knit team, and be readily interchangeable.

Integrated Emphasis. Officer training on all levels from basic courses to refresher courses for general officers should include integrated intelligence training, to the end that all commanders become indoctrinated with the importance of intelligence training and as familiar with the details of intelligence operations as they have been with the details of S-3 operations.

Infantry and artillery intelligence training must also be integrated at all levels from army to company and between the Command and Staff College and the Field Artillery School, so that the various arms may work more closely together on the battlefield.

The well known AGF tests for field artillery units have been much maligned, but served a valuable purpose in checking the functioning of units. They totally disregarded intelligence training. An effort has been made to cover this lack in the Tests prescribed by AGF letter 15 Jun 1944, Subject: Combat Intelligence Training Tests. These tests mark a long stride forward, but are elementary, stressing map reading, reconnaissance, scouting and patrolling, and reporting of observations. They should be expanded to cover the functioning of an intelligence system as a whole rather than merely the functioning of individuals.

Field manuals for S-2's are not yet satisfactory. FM 6-130, Field Artillery

Intelligence, is a long step in the right direction. But much of it and most of the 30 series on Military Intelligence are in generalities and are written for commanders and staffs in general. The S-2 needs a detailed manual for his own work, comparable to the S-3's FM 6-40, Field Artillery Gunnery.

Incidentally, it appears to be a fact that most of the practicing S-2's in combat units during this past war were other than Regular Army officers. Combat is a hard teacher, and they learned their lessons fast and thoroughly, but much of these lessons has never been reduced to writing. They are rapidly returning to civil life, and much of their practical "know-how" will be lost to the service unless action is taken to record and codify their valuable knowledge.

Field exercises and maneuvers, regardless of scale, invariably should be two sided. A single battery on a morning's RSOP should detach a portion, perhaps 25%, of its personnel to represent the enemy and to receive training in observation. If firing is involved, maximum range lines protect the observers, or they may operate on a flank. The battalion should operate similarly. Two units may operate against each other in the same manner. The observation battalion should always operate as the enemy.

To fill in the "no enemy" void, we should designate one foreign army, arbitrarily and in turn, as our supposed enemy for the day, or for the month, or better, for the year. If this is undiplomatic, word it, "organized, equipped, and trained in a manner similar to . . ." The nomination may be made at any level from War Department to battalion. Such a study in pre-war years of the British, the German, the French, the Japanese, the Brazilian, the Canadian Armies would have been invaluable in this war.

In sum, let us demonstrate that we mean it when we say that intelligence training is important. Let us give the S-2 complete and practical instruction in his duties, let us materialize his job, give him authority, time, and facilities with which to perform it, and require definite and practical results. Let us have done with the loose theory and loose talk—*target getting is vital to the Artillery.*

ETHICS OF SURRENDER

By Captain Willis C. Rowe

Reprinted by courtesy of THE INFANTRY JOURNAL

I stood, arms upraised, in the street of a flaming village while a German soldier searched my pockets. I felt an indescribable mixture of relief and shame that the war, for me, was over for a while. I hadn't given the order to surrender—my battalion commander had—but I felt a certain responsibility just the same. During those last moments, when grenades were crashing around the cellar door and men began whispering *surrender*, something inside me rebelled. I could have yelled for them to follow and rushed out into the street. They might have followed. But I waited too long and the battalion commander passed the word to surrender. Then it was too late. The will to fight was gone. True, further resistance probably would have been useless (the Krauts had a burp gun trained on the door) but still, there was a chance—and we had let it pass. Standing in the darkness my face burned with shame and disgust. I hated my CO and hated myself.

Later, while shivering and starving in Germany, I thought the whole thing over. My resentment toward the battalion commander vanished. He had fought well and bravely while he thought there was any chance for success. Surrounded and overrun, with wounded men lying unattended, it had appeared to him that continued resistance could only result in our deaths without a chance to inflict further casualties on the enemy. So he surrendered—as simply as that.

But had it been that simple? As we marched out of the gutted village in the gray dawn, I had heard American machine guns firing in the far end of the town. Some of those kids, who hadn't thought of surrendering, were still holding out—selling their lives dearly, while, unknown to them, the surviving remnants of their outfit were marching off to captivity.

Here, then, is my question. When is surrender honorable? What combination of conditions and

circumstances must exist before you can throw down your arms in the face of the enemy? I can find no answer in any military writings—official or otherwise. It is a complex and delicate subject. One who has never faced the problem of surrender cannot speak truthfully and freely on the matter. Few of those who have surrendered have talked about it. Many of those who

Primarily an infantry problem, nonetheless there are many times when artillerymen find themselves defending their gun positions with small arms.

didn't surrender failed to live to see a day when they could talk.

But history provides many examples of men who refused to quit. There was the "lost battalion" of 1918, the beleaguered forces at Bastogne, the defenders of the Alamo, Little Big Horn, and Thermopylae, the British at Arnhem. We honor their courage and sacrificial spirit; yet because the Japs preferred death to surrender we call them fanatics, because they were our enemies.

However, we have highly honored some troops who surrendered: the defenders of Wake and Corregidor. We even awarded the nation's highest medal for valor to a commander who surrendered. How can we simultaneously honor those who surrendered and those who refused? I maintain either that we who surrendered were cowards or that those who died at their posts when surrounded and outnumbered were murdered through omissions in their training.

We went into combat with the attitude that we would never surrender and that we would take damn few prisoners. We usually looked on German prisoners with hostility and contempt. Germans who surrendered

without a fight were spared, although we despised them. Those who fought to the end were usually killed, especially if they had killed any of us.

The Germans, on the other hand, treated us courteously after we surrendered even though we stepped over their own dead and wounded as we came out of our cellar. They even displayed a certain camaraderie toward us as fellow front-line sufferers. This brings up another question, also apparently never thoroughly considered. When is it proper to allow an enemy to surrender?

The only argument that makes much sense to front-line fighters is that taking prisoners saves lives by averting last-ditch stands. The argument that mercy toward the enemy may save their own lives if they are ever caught in a similar position usually doesn't mean much. If they are good troops, they usually do not contemplate surrender until the situation actually exists.

Civilians are shocked at the idea of killing enemy soldiers after they have surrendered. Yet, how can anyone judge who has never seen his buddies mangled or been shot at himself? I myself hate to see rear area troops mistreat prisoners. The front-line soldier considers prisoners his property and believes that noncombatants have no business either fraternizing with or mistreating them.

Both English and German civilians felt a bitter hatred of enemy fliers who had to bail out during a bombing mission and there were many instances on both sides of such airmen being lynched or beaten by civilians. Only the intervention of the military saved many of them.

But how can we censure a man, who has just seen his child blinded or his wife crippled, if he seeks vengeance against the individuals whom he feels to be responsible? Is the argument that these individuals are only instruments performing their duty to their state sufficient under the circumstances? And what of the sons of these same civilians who may be similarly shot down in enemy country?

The general attitude toward our own men who surrendered is vague and indefinite. Everyone, including the ex-captives themselves, studiously avoids the word "surrender." Instead they were

captured, caught, picked up, bagged, and so on, as though it were possible to be captured without surrendering. Many ground force officers in Germany began saying "when did you go down?" in imitation of the Air Forces officers prisoners. Once, in Paris, I wearied of all this beating around the bush and told a rear echelon major that I wasn't "picked up" as he puts it. "I surrendered—unconditionally!"

An English girl is the only person who ever made any insinuating remarks to me about my capture but I notice odd looks of appraisal from most people when they hear that I was a prisoner. The bolder ask how it happened, in an embarrassed sort of way, but most persons just keep their mouths shut and wonder—but you can see them wondering.

Is surrender, then, shameful or is it not? If it depends on circumstances then what are these circumstances? There are some instances where there seems to be no choice. These might be: when a man is wounded and defenseless; when he is surrounded, unarmed and outnumbered; when an airman is shot down in enemy territory; when a seaman's ship is sunk in hostile waters. Tankers seem to think they are justified in surrendering when their vehicles are knocked out and they are cut off. Perhaps surrender might be justified when a position is untenable and there is no possibility of accomplishing the mission or when further resistance can only mean casualties without opportunity to inflict appreciable loss upon the enemy. However, these are vague generalities and offer little solace to the individual.

As a specific example let us take the case of a rifleman defending a position. He crouches in his foxhole, shells bursting all around him. The shelling stops and he peers over the rim of his hole. Enemy soldiers are rushing his position—rifles and machine guns blazing, bayonets fixed, grenades in hand. He looks around. The other men in his squad have been killed or wounded. There is no leader. He thinks of escape but there are enemy soldiers in his rear. Up to now he hasn't fired a shot—only occupied a hole for the

enemy to shoot at. What should he do? What is he expected to do? He has never been told. If he fires on the advancing enemy they surely will have no mercy on him.

One man might fire on the enemy—even meet them with the bayonet—in which case his parents get a telegram. Another might throw down his arms and surrender—in which case he will probably go home eventually, alive and apparently with honor. Which man was right? Was the first man simply foolhardy? He did what he thought was his duty—what he was expected to do. Was his position "untenable" or could he have "accomplished his mission?" Could he have inflicted "appreciable loss" on the enemy? Was his position "tactically hopeless"?

And if our rifleman goes down fighting, what of the general and his staff who surrender a few hours later

because their defenses have crumbled and their position has become "tactically hopeless?" Is a general justified in saving his life after a mere private has sacrificed his on the perimeter of the defense? There is something radically wrong with training which leaves it to the individual to decide when surrender may or not not be appropriate and honorable. Is any soldier (private or general) incapable of inflicting loss on the enemy and thereby contributing toward final victory so long as he is unwounded and has weapons and ammunition? On the other hand, can we preclude the possibility of surrender when the only alternative is death?

I maintain that these questions should and must eventually be answered—officially and in black and white for the instruction of troops and officers.



Employment of Radar by XV Corps Artillery

By Brigadier General Edward S. Off, USA

THE BACKGROUND

RECOGNITION of the value of radar as a means of locating targets for field artillery came to the XV Corps as early as 1 March 1944, when the corps commander, Lieutenant General Wade H. Haislip, and I were en route from Anzio to Naples aboard an American destroyer.

The skipper invited us to make a tour of the ship during which we visited the radar station. There I noticed several closely grouped echoes on the horizon and asked about them. The commander said they were reflections from objects upon a small island which we were passing. It occurred to me that it might be possible for a radar to pick up targets on a battlefield. This possibility lingered in my mind despite discouragement from some sources and finally, early in October 1944, Brigadier General James F. Brittingham, Artillery Officer of the Seventh Army, furnished the XV Corps Artillery with an SCR 584 for ground use, together with an officer who believed that we might be able to pick up ground targets. I jumped at the opportunity to try the experiment.

Major John W. Green, CAC, handled most of the technical problems in person. Early in November, when another corps rejected the idea, General Brittingham gave us an additional set, operated by Lieutenant John W. Post, Radar Officer, 68th AA Gun Battalion. Though skeptical at first as to the capabilities of the equipment in this unexplored field, he soon became an enthusiastic convert.

Much credit for the success of the subsequent tests must go to Lieutenant General Haislip and Colonel Joseph B. Frazer, who was the XV Corps Antiaircraft Officer. Recognition also is due the Sixth Army Group, commanded by General Jacob L. Devers, and the Seventh Army, commanded by the late General Alexander M. Patch.

Our tests progressed in actual battle under various conditions of weather

and terrain from October 1944 until April 1945. Primarily, they concerned the employment of radar for general field artillery use, rather than for countermortar missions. The SCR-584 was used to provide battlefield intelligence, to locate moving and fixed ground targets for corps artillery, and to adjust friendly artillery fire. In February 1945, nine per cent of the corps artillery missions were based on radar.

Since the completion of the XV Corps battle tests, reports in service journals have noted the success of radar for field artillery work, and in one instance ascribed credit for this pioneering effort to the Field Artillery School.* The purpose of this article is to assist in completing the record upon these significant and interesting experiments.

Both radar sets of the XV Corps were kept in operation until the end of the war. When we started, the Corps front was along the La Vesouze River near Luneville, France. The last actual mission, fired as a result of radar intelligence, was at the crossing of the Danube River in the Donauworth area, on the 26th of April 1945.

*See *Coast Artillery Journal*, March-April, 1946. See *FIELD ARTILLERY JOURNAL*, January, 1946; *Infantry Journal*, November, 1945.

Brig. Gen. Edward S. Off is now serving as Deputy G-3, Headquarters, Army Ground Forces. During the war General Off served initially as the Artillery Commander of the 91st Infantry Division, moving on to become the XV Corps Artillery Commander in September, 1943. He remained with the XV Corps throughout its lengthy and varied period of combat in Europe, which included the campaigns of Normandy, Northern France, the Rhineland and Central Europe. General Off wears the Distinguished Service Medal in addition to numerous other awards for service and valor in combat.



STATISTICAL DATA

The chart tabulates statistics for the period October 1944 - April 1945, as taken from my diary. These figures are not complete, since they include only the missions fired by artillery under the direct control of XV Corps Artillery; that is, the many radar missions fired by artillery organic to or attached to the divisions are not included. Furthermore, these are missions which the tactical situation and the ammunition supply made it possible to fire; none of the multitudinous reports by radar which gave us *intelligence*, but which led to no immediate firing, are included. Brigadier General Beiderlinden, 44th Infantry Division Artillery Commander, concurs in my belief that during January, February, and the first half of March, 1945, at least two—and perhaps three—times as many radar missions were fired by *division* artillery than were fired by corps artillery. Furthermore, no effort was made by me to get *all* corps artillery radar missions entered in my diary until February, '45.

Some explanation of these charted results is necessary in order for the deductions to be sound. In October, the ammunition supply was limited. Although I was anxious to fire missions reported by the radar in order to keep up interest of the individuals concerned therewith, it was necessary to balance carefully the use of ammunition during this static period in order to support a future offensive then being prepared.

In November, the same situation continued until the 12th of the month. We began a great offensive from the Luneville area on the 13th and after four days of furious fighting, achieved a

COMPARISON OF AIR OP, GROUND OP AND RADAR MISSIONS, WITH PERCENTAGE OF TOTAL MISSIONS OF XV CORPS ARTILLERY, OCTOBER, 1944, TO APRIL, 1945, INCLUSIVE

Month (1944)	Total Missions	Air OP Missions	Ground OP Missions	Radar Missions
October	3095	711 (22.94%)	284 (9.17%)	23 (.74%)
November	4441	300 (6.76%)	257 (5.79%)	76 (1.71%)
December	5507	367 (6.67%)	562 (10.21%)	7 (.12%)
January ('45)	5307	302 (5.69%)	399 (7.52%)	75 (1.41%)
February	5165	381 (7.37%)	684 (13.24%)	471 (9.1%)
March	5064	407 (8.03%)	276 (5.45%)	330 (6.51%)
April	1584	259 (16.35%)	136 (8.58%)	7 (.44%)
Totals	30163	2727 (9.04%)	2598 (8.61%)	989 (3.27%)

complete breakthrough and had a fluid battle which lasted the remainder of the month and into December — a battle which took the 2nd French Armored Division and the XV Corps to the Rhine River and Strassburg.

We continued to have a fluid situation during the first part of December, and here again used available shells to hammer the great Maginot Line forts in the Bitche area. During the latter part of the month we were on a very wide corps front, on the defensive, and again with the ammunition situation so tight that practically all of our available ammunition had to be expended in observed close support of our front line troops. The radar was not in position until the 27th of the month.

The same type fighting prevailed to a large extent in January. It will be noted that in this defensive period, division artillery did much radar firing. However, the front became stabilized and in certain critical areas we used the radar to give us some effective results in hampering the supply of enemy troops.

The radar fired more missions in February than were fired by air OP's. Flying weather was bad, the front was still stabilized as it had been in January, and we had worked out a more effective application of artillery fire to a moving radar target. This was achieved by having a section of the fire direction center physically at the radar set with authority to use certain amounts of ammunition on these missions and with a communication system (often direct to a corps or a division battalion) to make quick firing possible. The terrain on the right of the corps front was mountainous (Low Vosges), but elsewhere was broken and rolling.

During March, XV Corps passed to the offensive on the 15th of the month, broke through the Siegfried Line, and turned the Germans completely out of position. By careful pre-planning we had the radar sets where they could check upon the rearward movements of the Germans and we capitalized on this form of intelligence with some amazing results, including intelligence missions around 40,000 yards (although normal radar intelligence extended from our front lines out to about 25,000 yards). The situation was fluid the latter part of March. We crossed the Rhine.

During all of April, the situation remained fluid and although the radar was in position much of the time, extensive use was neither possible nor vital. This is reflected in the small total number of missions fired for this month as well as in the small number of air and ground observed missions.

The results of using radar on the ground role were checked from many sources, especially from prisoners of war and from examination of targets which had been overrun. General Devers was present on one occasion and observed the destruction of a battalion of German artillery along a road running northwest from Zweibrucken, caused by a 240mm howitzer and based on radar information. Many other individuals from the supported divisions and from corps artillery units made observations of the results. Most of these were not recorded in my diary and verification is impracticable now except by a search through voluminous after-action reports. On one occasion, I took steps to have the two radars in widely separated locations observe a given portion of a road. The picking up and evaluation of targets by the two sets completely confirmed the reliability of radar in the ground role.

SPECIFIC INSTANCES

Among the interesting experiences afforded by referring to my memory and that of Brigadier General William A. Beiderlinden, Artillery Commander, 44th Infantry Division (whose units fired a great many radar missions not shown in the tabulation above) and that of Colonel John A. Berry, Jr., Executive Officer, XV Corps Artillery, the following are typical:

Futile Search. In late October and November, on the La Vezouze front, a German main supply road passed through a village named Leintrey which was located on a prominent hill. Time and again the radar picked up movements on the road at or near this village and we fired on the targets with a gun, a battery or a battalion. After we captured Leintrey, French civilians told an officer of the 173d FA Group that the Germans had searched every house in the village in an effort to find a concealed radio set which they thought was giving the Americans information of movement on the road.

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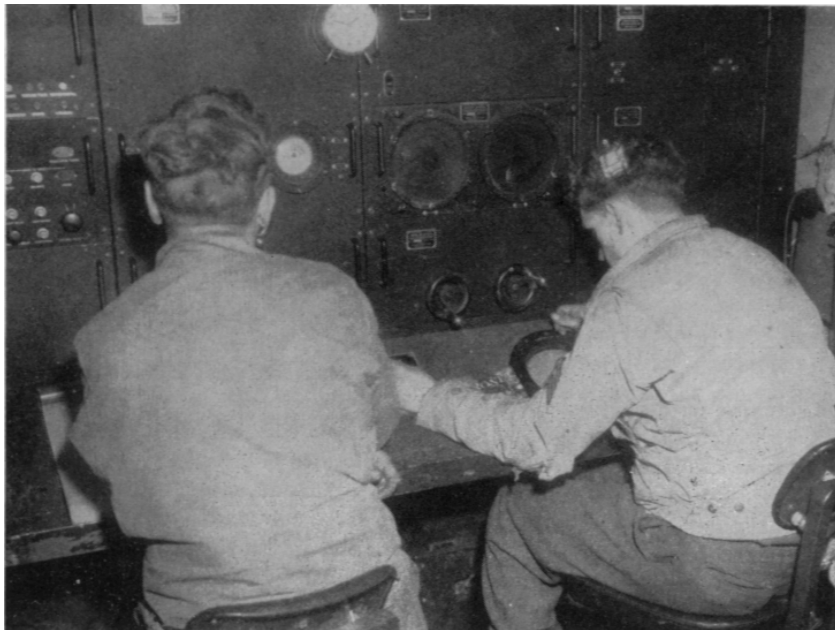
Abandon Plan. In the Gros-Redercher area the radar picked up what appeared to be a considerable tank concentration moving down the road towards the 44th Infantry Division. This target was plastered by both division and corps artillery weapons. Prisoners of war later stated that this was a movement of tanks in preparation for a counterattack, but that the artillery fire had been so destructive the plan had to be canceled.

* * * * *

The Game of War. On another occasion in the Gros-Redercher area, the radar picked up what appeared to be a horse-drawn vehicle on the front of the 44th Infantry Division. This target was given a "cat and mouse" treatment by a single gun. If the wagon stopped, fire would stop. If the vehicle started forward or turned around and started back, a single round was plunked down in front of the vehicle. This went on for some time. The personnel at the radar set certainly had relief from the monotony of war through cogitating as to what the German driver must be thinking!

* * * * *

Stalking Stalkers. On a semi-dark



Interior view of SCR 584, showing radar operators at their posts of duty.

night the radar picked up a patrol in "No Man's Land" and reported it to the infantry regiment on that front. It was found at regiment that this was a *friendly* patrol (dispatch of which had not been reported to the radar). The infantry requested that the patrol's progress be tracked. In the course of tracking, radar picked up what appeared to be a stalking German patrol. Alerted by radio, the friendly patrol leader attacked the enemy patrol and captured some prisoners, in addition to inflicting other casualties.

* * * * *

Neutralization Plus. In the Sarreguemines area, the radar picked up what was evaluated as a battalion forming to attack the 63d Infantry Division. Heavy artillery fire was placed on this concentration, and it was learned later from prisoners of war that a counterattack had been forming but that the artillery fire had been so devastating that it was never launched. In the same area, photographic interpretation showed that the Germans were using a road leading north from Sarreguemines extensively during the night. A radar was shifted to take this road under observation. The first night many "juicy targets" were attacked as a result of the radar; the second night the targets were fewer; and the third night they were almost nonexistent. A few

days later another photograph, taken after snow had fallen, showed that this road was no longer being used by the Germans.

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Out-of-Bounds. During a "silent" period of artillery fire, while preparing to cross the Rhine River, one of the XV Corps radars picked up some extensive movement of what appeared to be armor on a road well back from the river and on the extreme left of the Corps zone of action. The officer at the radar set correctly deduced that this was American armor, since it was in much greater quantity than any German armored movement which had been noted for some time, and that it was probably from an American element of General Patton's Army which had forced a crossing earlier. This radar intelligence resulted in getting the Third Army units moved back into bounds so that our artillery support and our attack of enemy targets between the river and the road on which the armor had been moving would not result in damage to friendly troops.

DIARY SPEAKS

A few excerpts from my diary might be interesting:

27 October 1945: "It is possible that the counterbattery fire received during the night was in retaliation for the

effective fire the 182nd FA Bn had just been placing on radar-detected traffic on roads."

"Radar entered the field of counterbattery during the night 28-29 October when the 214th AA Gun Bn Radar Station picked up an object at the same location as Hostile Battery E3X at coordinates Q27980196. The 772nd FA Bn was adjusted effectively by radar on the target. Radar picked up all rounds for effect and reported them 'right in there.' " (Note: It will be noted also that at this time the radar was also involved in adjusting artillery fire.)

29 October: "The radar again succeeded in detecting a 'mass of metal' at (27289909) during the night. The 208th FA Bn was adjusted on the point by use of the radar and covered the area very well."

1 November: "During the night the radar picked up five different instances of enemy activity. Most of this was along roads, but one location was a 'mass of metal' in the vicinity of Leintrey suspected of being a sound truck which was harassing our front line troops."

4 November: "During the night XV Corps Artillery fired prepared fires on twelve fixed locations furnished by the radar of the 214th AAA Gun Bn. One location plotted in exactly the same location as one of the CBIO's enemy batteries; another radar location fell in an area from which the sound base had obtained three plots; and a third location was verified by another sound plot. The remaining locations furnished were points at which metallic objects were not picked up on previous nights. Twice during the night traffic was detected moving on the road and B Battery, 214th AAA Gun Bn, covered the area with fire."

28 December: "The radar station, 214th AAA Gun Bn, which had been in operation in the Luneville area, was set up in the zone of the 44th Infantry Division. The radar had 'line of sight' to the road north of Sarreguemines, and supplied the artillery with several profitable targets during the night."

April 26 (at the crossing of the Danube): "The radar went into operation and during the night was the source of seven missions on enemy personnel and vehicles moving south." (Note: I personally inspected some of these targets

and found that the radar had been correct and that the fires had been effective, as evidenced by destroyed vehicles, weapons and dead personnel.)

REACTION OF UNITS

Immediately after VE Day I caused each unit and each functional element of each unit to submit brief written descriptions of some of their activities during the war, under the headings: "Most Satisfactory Operation," "Least Satisfactory Operation," "Most Interesting Operation," and "Most Difficult Operation." Some of these reports follow:

MOST SATISFACTORY

Heavies Work. "Operations are best illustrated by the activities during the nights of 19, 20, and 21 March 1945, when the German Army facing the XV Corps was pulling out of the Siegfried Line in the vicinity of Zwiebrucken, Germany." (Note: The radar information was the first indication that a large-scale withdrawal was being made on the front of the XV Corps.) "The roads leading northeast from this area were jammed with enemy transport of all types. One radar section was in action on the high ground near Bochweiler, and the other was emplaced about 6,000 meters east of this position. Both sets had good line of sight to the retreat roads. Targets were detected on nearly all 'visible' roads. Since most targets were out of range of the medium weapons, the corps heavy artillery battalions kept up a steady barrage on roads, crossroads, and towns which were picked out by the radars as being the most active." (Note: Four radar missions were fired by the 173rd FA Group during the night, and the 208th Group fired 12 radar missions during the night.) "In this operation, a combination of good radar sites, plenty of enemy road traffic, and good long range artillery support resulted in a great number of Germans killed, and a great deal of enemy equipment destroyed." (*Radar Section, attached to 3rd FA Obsn Bn.*)

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Satisfaction Soars. "The most satisfaction in using radar for artillery is derived from the view of a pulse ceasing after the mission has been shot. This new method of hitting the enemy is almost as satisfying as shooting at the enemy from a normal OP. Here you

sit in a large van and shoot at pulses which indicate enemy movement. The exactness of the machine coupled with a good registration would often bring telling fire on supply and ammunition trucks along a back road, which before only had spotty harassing fire to contend with. No matter which way they turned, artillery fire followed relentlessly. Many times it was noted that particular supply roads were abandoned. Truly satisfactory results were obtained in more than 70% of the targets fired upon. It is easy to distinguish personnel from vehicles. When the shell bursts causing the numerous pulses from running infantry to dilate the dial the observer's satisfaction soars. At those times the battalion concentrations finish the picture by causing a cessation of pulsation." (*Btry. Off. 182d FA Bn.*)

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Finish with Pozit. "Many of the targets picked up by the radar OP were obviously supply vehicles moving up under the cover of darkness. We would track the vehicles with our 'beam,' and when they reached a certain point that had been previously adjusted on, we would give the order 'Fire,' with consideration for the time of flight. It was with great satisfaction that we

would watch the 'splash' of the bursting projectile on the screen cover the target. Sometimes there would be a scurry of activity after the burst; the solution for this was three or four rounds of 155mm Pozit, to catch the fleeing survivors." (*975 FA Bn.*)

LEAST SATISFACTORY

Skepticism and Short Ammo. "From 12 November to 20 January, the radar sections were engaged in experimental and development work in ground detection. The principles of operation now used with the SCR-584 were worked out during this period. Several tactical installations were made near Luneville during the month of November 1944, but no one position was occupied for any length of time until 30 December 1944, when a position just south of Sarreguemines was occupied until 19 January. During this phase of operations, ground detection with radar had not yet been closely integrated into the Field Artillery tactical setup. Many officers were skeptical, and no satisfactory scheme for utilizing the data provided by the radars had been worked out. Communications were poor, and ammunition was short. The artillery was reluctant to engage single moving targets, preferring to wait for a concentration of vehicles. Such a concentration



40 feet long and 11 feet high, the SCR 584 "was not designed for not intended to be used in exposed forward positions."

seldom occurred in this sector. All told, the situation was very discouraging to the radar operators, who were spending long hours at the oscilloscopes, detecting and tracking numerous targets, and getting no (or very little) fire on any of the targets.

"The situation soon improved, however, when a second set was emplaced north of the Rohrbach-Les-Bitche behind a Maginot Line Fort. Battalion officers were detailed by Corps Artillery to set up a small Fire Direction Center in the radar set itself. A 'sniping gun' was provided, and wire lines were laid direct from the radar to the gun position. With this arrangement few targets were detected which were not fired upon. The radar operators learned to sense shell bursts rapidly and accurately. The Field Artillery officers learned what the machine would and would not do, and soon were thinking up new ways to adapt Field Artillery methods to the capabilities of the machine. All in all, the least satisfactory phase of operations of the radar section rapidly cured itself once the newness of the technique had worn off, and the radars were integrated into the Field Artillery tactical setup." (*Radar Section attached to 3d FA Obsn Bn.*)

* * * * *

On Clear Nights. "Registration by radar left much to be desired. A point must be selected on the map within the beam of the instrument, but even then initial rounds were often most difficult to locate. However, by firing WP and using the telescope on the fan, on clear nights rounds could be brought visible to the line of the beam so that they could be sensed for range. K's deflection corrections were excessive but transfers generally conformed, once the corrections were determined. Further study by comparison of radar and visual means is necessary before radar can be trusted. Radar effect should be checked on the ground whenever possible." (*182d FA Bn.*)

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Slow and Ungainly. "The least satisfactory operation with the radar OP occurred in the vicinity of Worms, Germany, at the XV Corps crossing of the Rhine. With no advance notice, the radar OP was ordered into position and our battalion was called up and told to operate it. This was an AA radar unit, a

very ungainly tractor-trailer affair. By the time they were set up, many precious hours had gone. By the time wire communications were in to this distant point, two more hours were wasted. When we were finally ready to fire, we received 'March Order.'

"This pointed out two major defects in that particular radar equipment. First, it was not designed for tactical work with field artillery. Secondly, no provision had been made for a quick and simple means of communication for the unit." (*957th FA Bn.*)

* * * * *

MOST INTERESTING

Numerical Error. "The most interesting operation in the use of radar is the machine's uncanny ability to record events happening in the dead of night. One incident can show how accurate the machine is. Radar picked up a twenty-one man enemy patrol making its way toward our lines. Our elements were alerted and the radar observer tracked the enemy while a regimental S-2 kept our front line elements informed by telephone of the patrol's progress. The doughs prepared an ambush, and when the shooting was over there were about twelve dead and eight prisoners. Radar had miscounted by only one man! No wonder every operation increases both our respect and interest in this machine." (*182d FA Bn.*)

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Awesome Accuracy. "The most interesting phase of the radar unit was its instantaneous and precision methods. The burst of the projectile, miles away in the target area, would register immediately on the viewing screen and it was awesome to realize that you could read the range to within ten yards. When an enemy vehicle would enter our beam, it was thrilling to follow him and plot his every turn, even though he might be twenty-five or thirty thousand yards away, and out of artillery range. Though it might be dark and raining outside the radar truck, it was comforting to know that you could keep such accurate check on the enemy, and on your own artillery fire." (*975th FA Bn.*)

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MOST DIFFICULT

Long Night. "The most difficult tasks encountered by the radar section during operations from 12 November

1944 to 8 May 1945 were those in connection with occupation of position. The radar set used (SCR-584) was not designed for nor intended to be used in exposed forward positions. The set itself consists of a semi-trailer and 4-5 ton 4x4 tractor approximately 40 feet long and 11 feet high. The trailer weighs 11 tons.

"On the night of 12 November 1944, in Luneville Sector, one radar section was ordered into position in the vicinity of Hablainville, France. The attack was to jump off on 13 November and it was desired that the radar be prepared to support it. Reconnaissance of the area showed that there was only one position that would give the desired coverage. This was a bare hill approximately 2000 yards from the front lines. The emplacement had to be dug at night and because of the press of time the set had to be put into the hole the same night. It was the dark of the moon and the weather was typical for November in this part of France—rain and light snow, with the ground well soaked with water. The top of the hill was packed with shell and bomb craters. A large bulldozer was borrowed from the Engineers for the task of digging the emplacement—a hole 50 feet long, 12 feet wide, and 11 feet deep! The dozer started work at dusk; by six o'clock it was pitch dark. With the aid of white tape, much shouting and some sixth sense, the dozer operator continued work and had the hole completed by midnight. By this time the top of the hill was a quagmire. The equipment was dragged 200 yards through the mud and squared away so that it could be backed into the hole. Once in the hole, considerable blocking and jacking were required to get the set anywhere near level. The power plant trailer was likewise dragged through the mud and leveled up in the same hole with the radar. The emplacement was camouflaged with nets, and a light snowfall effectively erased all signs of digging.

"When an attempt was made to put the set into action, it was found that the rough handling and the unstable footing of the leveling jacks had sprung the trailer frame so that it was impossible to raise the antenna elevator. Three hours work in the snow and rain was required to fix the elevator so that it could be run up. The job was completed

at about 7 o'clock the next morning.

"This night's work brought out one important fact. Unless working under ideal conditions (i.e., firm soil and bright moonlight), the emplacement for an SCR-584 in a forward position should be dug by bulldozer one night, improved and readied for occupation during daylight (if conditions permit), and the set itself emplaced the second night. This allows time for the hole to be cleaned out, and stable footings for the leveling jacks to be built." (*Radar Section attached to 3d FA Obsn Bn.*) * * * * *

Care and Imagination. "The use of radar for observation of our artillery fire during the hours of darkness or during fog is to say the least an entirely new type of technique. In the employment of radar, I believe the most difficult task is the original registration. After a successful registration, transfers, except on targets at extreme ranges can be easily made and good effect obtained on the target. The difficulty of registration lies in the effort to locate the original round. For some reason usually the corrections as determined by our FDC only occasionally gave us rounds that fell within the beam which is thirty miles wide. As the angle T grows larger the difficulty increased because the machine will only tell whether the round is over or short of the OT line. It will tell nothing as to deflection because its final solution is a target. A slight error in judgment of the factors will throw the round outside of the beam and the machine will give no indication of a burst. With a little imagination, careful computation of factors from map data, and confidence in the radar unit a satisfactory registration can be obtained.

"Incidentally, one of the most difficult tasks in relation to radar on ground targets is the assessing of the effect of artillery fire by interpreting the indicators. At times evidence pointed to very excellent effect, but it was never conclusively proved." (*182d FA Bn.*) * * * * *

Heavy Load. "The greatest difficulty in connection with running a radar unit as an artillery observation post was the process of fitting radar's specialties to our normal artillery operations. Radar-

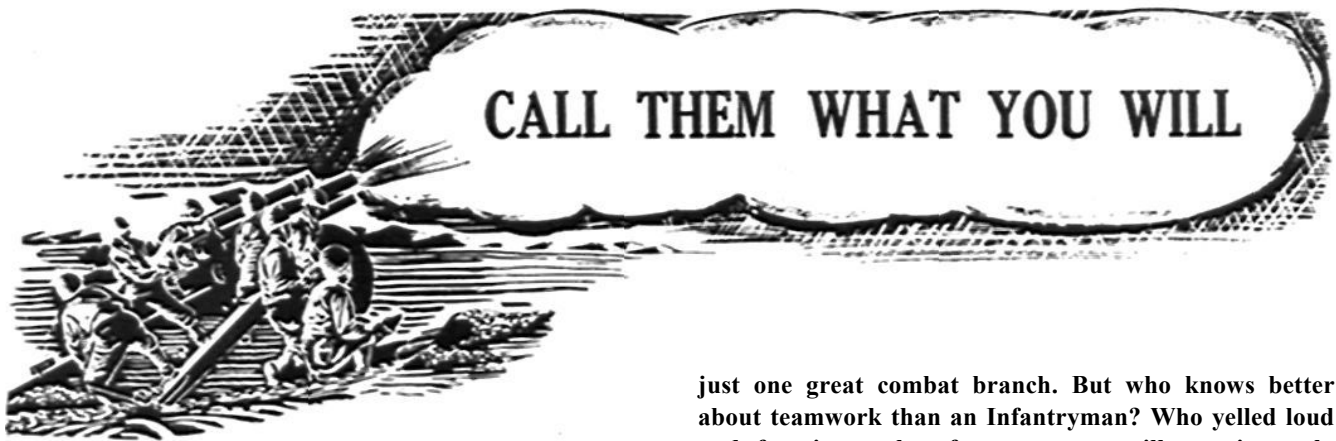
located targets were usually isolated enemy units, and not worthy of massed ammunition—especially when ammunition was being allocated at the rate of eight rounds per gun per day! Further, since these targets were usually moving and speed was also essential. A wire direct to the guns helped, except that it adds to the heavy load on the artillery officer and his recorder at the radar observation post. They had to plot the target, decide whether to fire, measure the range and deflection, compute 'site,' operate telephones, fill computers pad and keep ammunition records—all in addition to making intelligence reports to higher headquarters. This is an exceptionally heavy load, and over long periods, would probably lead to errors or a slowdown in operation." (*975th FA Bn.*)

FROM DOUBT TO DEPENDABILITY

The obstacles met and overcome by Major Green, Lieutenant Post and the veteran crews of the 584 radio sets were incredibly great, particularly in the early days when the project was still purely experimental. Great credit is due the ability of this group to overcome these obstacles, not least of which must have been a lowering of morale because so frequently there was no ammunition available to expend on targets which they knew for certain were lucrative. The radar equipment was very heavy, having been designed for an entirely different purpose, and the exceedingly muddy conditions coupled with the necessity to get the equipment on high ground, where suitable roads were not available, caused many a headache to the officers and men engaged on the work. Radar requires "line of sight." Exposure during daylight in most locations was too risky, so locations had to be evacuated *before* daylight and reoccupied *after* dark. The task of interpreting the echoes developed constantly from the beginning, and presented many interesting situations. For example, echoes did not show up in familiar terrain which had never been there before simply because rain had fallen and a piece of wooded ground or a house produced reflections. In the earlier part of the work, we fired on several targets detected by the radar and suspected of being weapons or

vehicular concentration areas. After the retrain on which these targets were located was overrun, investigations proved that occasionally the echoes thought to be from targets were in some cases apparently from terrain features made more sensitive by wet weather. It was found that the radar would operate through dry snow quite successfully. One night the officer at the radar station picked up enough echoes to give the appearance of tremendous German activity taking place on our front. Wisely, he continued observation and analysis and deduced that his multitudinous echoes were being caused from wet snow. Later experience proved that wet snow can give a radar considerable difficulty. In view of the heavy equipment involved and the fact that all occupation had to be done at night, it appeared that it would not be feasible to keep the radar in supporting positions as the troops advanced. However, by careful map study and prior planning we found it entirely possible to keep one radar set on each of the two main roads being employed in the Corps advance, ready to operate shortly after nightfall, no matter how fluid the battle.

The emergence of radar in the ground role from a "screwball experimental dream" to an accepted, dependable, and much desired intelligence agency was amazingly rapid and widespread in the divisions of the XV Corps. So great was the need for an agency that could see the enemy during periods of low visibility and complete darkness, so urgent was the necessity to find a means with which to warn the front line infantryman that something was approaching him from "No Man's Land," and so quickly were factual results from radar disseminated, that almost overnight there was a clamor from the divisions for radar coverage on their fronts. From all sides I was offered assistance in laying communications to my radar sets. Brigadier General Beiderlinden of the 44th Division Artillery, Brigadier General Murphy of the 100th Division Artillery, Brigadier General McGaw of the 63d Division Artillery and many others told me that if I would tell them where the radar set was to be emplaced they would lay any lines I needed to tie it in with their artillery units or with their infantry.



CIRCUMSTANCES have forced our JOURNAL behind in its publication timetable. We hope soon to catch up with our work. This thin (48-page) issue will help in that effort.

Curiously, there is a slight advantage once in a while in being short-handed and behind in our work. It was so this month. The August issue of the *Infantry Journal* arrived just as we were about to go to press. All was complete except these two pages which, like haircuts, are always "put off until tomorrow." In this instance, the Editor read the lead editorial, *Call It Infantry*, in the *Infantry Journal*, tossed his own scribbles in the wastebasket, and struck off on this tack.

The *Infantry Journal* is a splendid magazine. We submit that every artilleryman should read it. We add, with equal conviction, that the up-and-coming doughboy should read the artilleryman's magazine. (In this connection, be it noted parenthetically at this point that THE FIELD ARTILLERY JOURNAL is confused by and questions—in the best of good humor but nonetheless firmly—the *Infantry Journal's* recently adopted paternalistic claim, on its cover and masthead, to being "the magazine for the ground combat forces.") Teamwork is highly important throughout the entire Military Establishment, but a closely-knit and mutually sympathetic and supporting Infantry-Artillery team is vital, above all others, on the field of battle.

CALL IT INFANTRY

Quoted below are words lifted from the editorial, *Call It Infantry*, that highlight the thread of its idea pattern. They are strong words and they merit careful reading.

"What is going to happen to the Infantry? . . . (they) were with the outfits that took the worst the war had to offer . . . that stood 90% of the Ground Forces casualties—and got 12% of the decorations. . . . Every Infantryman hears talk about teamwork—about having

just one great combat branch. But who knows better about teamwork than an Infantryman? Who yelled loud and fast in combat for support—artillery, air, tank, antitank, chemical—for any support he could get? . . . Today's Infantryman . . . looks over the new Army setup, and hears talk about one big branch eventually, and thinks—thinks pretty hard. . . . What would that do to the Infantry (man)? . . . he'd like to be sure that . . . nothing will happen to the Infantry except to make it more modern and powerful. . . . For the Infantryman has seen how the war-with-machines idea can arise and bring with it forgetfulness of the fighting soldier. . . . A central Infantry authority such as a chief is probably not the answer, but . . . some reassurance would seem good to have. . . . When you ask men to do what Infantry has to do . . . you are saying in the very words of your demand that the Infantry is . . . the heart of a fighting Army. . . . But suppose it is some day decided to put many branches together into one. We would still have to have some specific name for the men who would do what now the Infantry does. . . . What would we call that part? That's simple enough. Call it Infantry."

CALL IT ARTILLERY

Artillerymen are the first to agree that the doughboy takes the worst war has to offer, and with the least credit. Most vocal in these matters are our forward observers, who took it side by side with the doughboy, and those Artillerymen who actually commanded Infantry units in battle. All in all, the doughboy has no better friend than the redleg.

But Artillerymen know—as do the veteran Infantrymen—that the doughboy cannot advance or beat off determined counterattacks without artillery support. They know the truth of the Army Ground Forces Commander's words: "Infantry and Artillery . . . are not self-sustaining; they cannot operate independently . . . they must support each other at all times and together must receive support from armor, engineers, mechanized cavalry, and other dependent supporting branches." Artillerymen also know what the

enemy thought. To quote one German POW: "We could see the American planes in time to dive into a ditch. We had a chance to hit American tanks with our 88's. But when our positions were smothered, without warning, by an American artillery concentration—then, not even the birds or rabbits could escape. Artillery caused most of our casualties, and the shell fragment wounds were twice as deadly as bullet wounds."

Artillerymen know further that nothing anywhere-in-the-book ties our dual battle role (to support the Infantry by fire and to give depth to combat) to rifled barrels. As clear as these printed words is the fact that the *artillery function* will be greater and broader, if war comes again. Take counterbattery as an illustration. It will extend outward and, with one Artillery arm a foregone conclusion, upward to hitherto inconceivable ranges in neutralizing new pilotless weapons not yet off the drafting boards.

Thus, to the first point of this editorial. Equally logical is the Artilleryman's query, "What is going to happen to the Artillery?" Delete the words about casualties in the quotation from *Call It Infantry*, above, and substitute "Artillery" for "Infantry." The result makes equal sense. In other words, suppose we do put many branches together. What would we call that part that does what now the Artillery does? That's simple enough. *Call It Artillery*.

THE DEEPER QUESTION

But this JOURNAL is not content to drop the point here. This JOURNAL has gone on record several times, and here repeats, that it not only doubts the soundness of the one-big-happy-family idea but also feels deeply that the present organizational structure does not adequately provide for the

integrated artillery guidance found necessary by experience in two great wars. But even these are *relatively* unimportant. This JOURNAL is prepared to push far deeper into the ground soldier's concern than mere worry over the naming of the respective functions of the ground arms. Call them what you will. This JOURNAL is concerned over the more vital question, "What is going to happen to the Army Ground Forces?"

The problem is interwoven with many complicating factors, including the political. If we retain our branch identity, as recommended, unquestionably we sacrifice a degree of the singleness of purpose enjoyed by the Navy and the Air Force. The Navy and the Air Force also enjoy a continuing psychological advantage with the public. We can't blink the fact that *foxhole* lacks the fascinating ring of the *bounding main* and the *sky blue yonder*. After this month, moreover, our AGF leadership will be denied the advantage of propinquity in the constant swirl of policy making in Washington, the hub-of-the-wheel.

These are a few of the problems wrapped up in the question, "What is going to happen to Army Ground Forces?" National security hangs on the answer. It must be good. It must be better than any answer produced after any other war.

This JOURNAL contends that the answer can only be *right*, if we have articulate and high-spirited Infantrymen, Artillerymen and Armored Cavalrymen—justly proud, as individuals, of the essential functions of their great arms, but *more proud and more aggressively cohesive*, as individuals, in their over-riding role as ground soldiers.

The battle *is* the pay-off. The Army Ground Forces pay off in battle.



THE FIELD ARTILLERY JOURNAL

PUBLISHED MONTHLY BY THE UNITED STATES FIELD ARTILLERY ASSOCIATION WHICH WAS FOUNDED IN 1910 WITH THE FOLLOWING OBJECTS — AS WORTHY NOW AS THEN

The objects of the Association shall be the promotion of the efficiency of the Field Artillery by maintaining its best traditions; the publishing of a Journal for disseminating professional knowledge and furnishing information as to the field artillery's progress, development and best use in campaign; to cultivate, with the other arms, a common understanding of the powers and limitations of each; to foster a feeling of interdependence among the different arms and of hearty cooperation by all; and to promote understanding between the regular and militia forces by a closer bond; all of which objects are worthy and contribute to the good of our country.

The Field Artillery Journal is not a medium for the dissemination of War Department doctrine or administrative directives. Contributors alone are responsible for opinions expressed and conclusions reached in published articles. Consistent with the objects of our Association, however, the Field Artillery Journal seeks to provide a meeting ground for the free expression of artillery ideas in the changing present.

The
UNITED STATES FIELD ARTILLERY ASSOCIATION

Organized June 7, 1910

Honorary President

HARRY S. TRUMAN

President of the United States

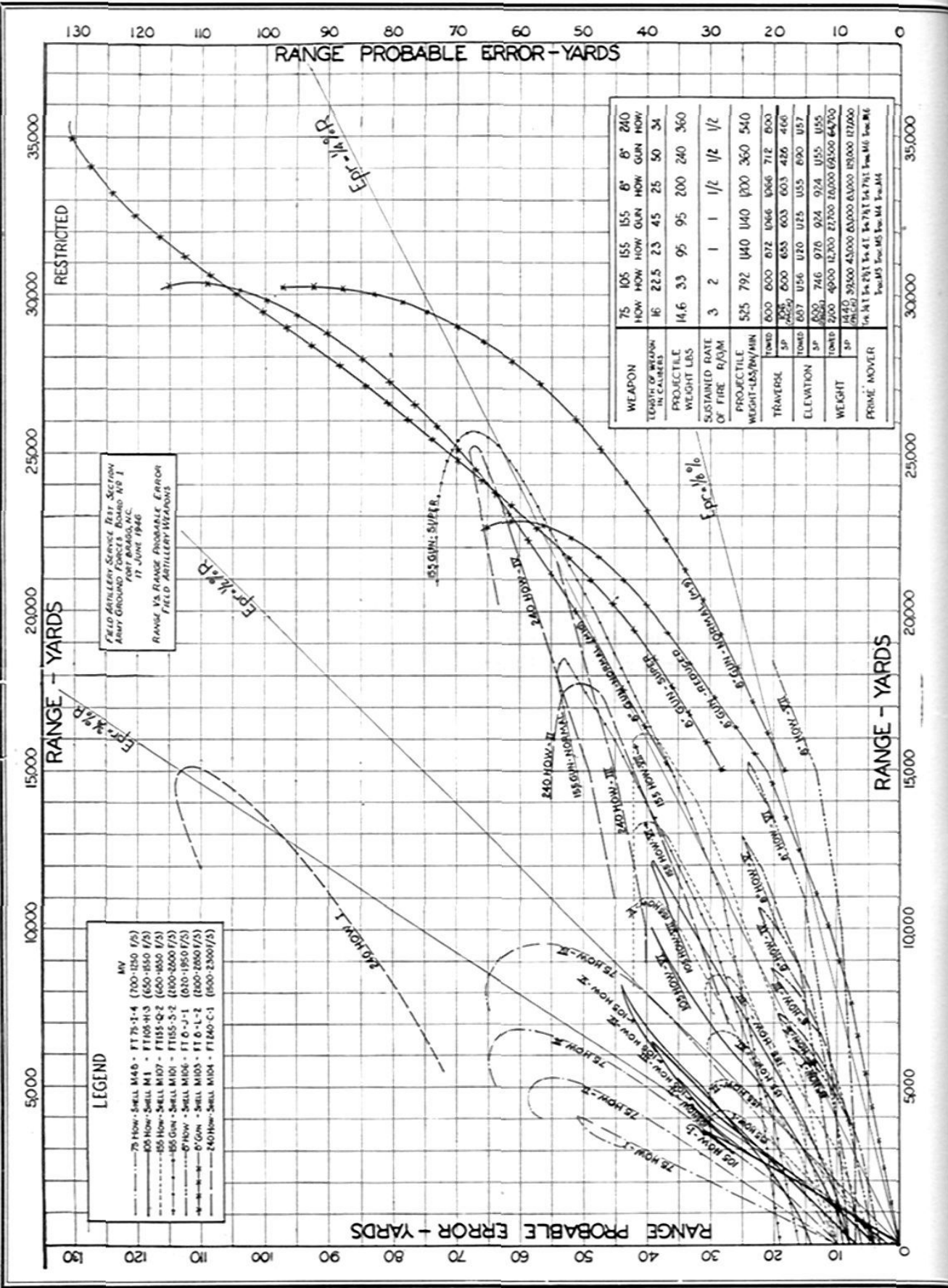
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LEGEND

Weapon	MV
75 How - Shell M146	FT 75-T-4 (700-1050 F/S)
105 How - Shell M1	FT 105-H-3 (650-1050 F/S)
155 How - Shell M107	FT 155-Q-2 (600-1050 F/S)
155 How - Shell M101	FT 155-S-2 (1100-2000 F/S)
155 Gun - Shell M106	FT 0-J-1 (810-1950 F/S)
8 Gun - Shell M103	FT 0-L-2 (600-2000 F/S)
240 How - Shell M104	FT 240-C-1 (600-2300 F/S)

WEAPON	75	105	155	8"	6"	240
LENGTH OF WEAPON IN CALIBERS	16	22.5	2.5	45	25	50
PROJECTILE WEIGHT LBS	14.6	33	95	95	200	240
SUSTAINED RATE OF FIRE R/30M	3	2	1	1/2	1/2	1/2
PROJECTILE WEIGHT-LBS/R/30M	525	792	1040	1000	360	540
TRAVERSE	Towed 600 600 672 1966 1966 712 600		SP 205 600 653 603 426 460		Towed 607 1956 170 175 155 690 187	
ELEVATION	SP 690 746 976 924 974 1155 1155		Towed 200 4000 12,700 27,700 10,000 69,500 64,700		SP 15,870 59,500 43,000 63,000 19,000 17,000	
WEIGHT	14,147 54,791 34,417 54,791 34,417 54,791		Towed 15 15 15 15 15 15		SP 15 15 15 15 15 15	
PRIME MOVER	Towed 15 15 15 15 15 15		SP 15 15 15 15 15 15		Towed 15 15 15 15 15 15	

FIELD ARTILLERY SERVICE TEST SECTION
 ARMY GROUND FORCES BOARD NO 1
 FORT BRAGG, N.C.
 17 JUNE 1946

RANGE VS RANGE PROBABLE ERROR
 FIELD ARTILLERY WEAPONS

THE accompanying chart shows graphically the probable error in yards, plotted against range, for our standard field artillery cannon, firing high explosive shell. The data is taken from firing tables and other publications of the Ordnance Department. This chart shows at a glance the relative accuracy in range of the weapons listed, for all propelling charges.

The legend in the upper left hand corner of the chart contains five main columns, giving, from left to right, the following data: (1) Key to the curves used. (2) Weapon. (3) Projectile. (4) Firing table. (5) Minimum and maximum muzzle velocity.

The central or main part of the chart shows by curves the relationship between range and range probable error for specific weapons and propelling charges. Propelling charges are identified by roman numerals or the words "normal," "super," or "reduced." The horizontal argument, range, is plotted on a scale of one unit equal to 1000 yards. The vertical argument, range probable error, is plotted on a scale of one unit equal to 5 yards. Superimposed on the curves are four lines representing range probable error as a percentage of range; namely $\frac{1}{8}\%$, $\frac{1}{4}\%$, $\frac{1}{2}\%$ and $\frac{3}{4}\%$. By means of this chart it is possible quickly to read the range probable error for a weapon with any given charge at any given range. It is also possible to see at a glance the accuracy zone into which the curves fall. For accurate readings as well as convenience in use, the chart should be enlarged, the squares subdivided, and the curves for the several weapons distinguished one from another by use of contrasting colors.

The tabulation in the lower right corner lists some of the principal characteristics of the weapons useful for planning purposes. For example, the fifth line "Projectile weight, lbs/bn/min," gives the total weight of ammunition that can be fired per minute by a battalion. When the characteristics of the towed and self-propelled carriages differ, both are shown.

The principal point to be noted on this chart is the superior accuracy of the 8-inch howitzer.

ARTILLERY— in Street Fighting

Translated and digested at the Command and Staff College from a Russian article by MAJOR G. MENSHIKOV in *Krasnaia Zvezda (Red Star)*, 16 May 1945

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One of the distinguishing features of street fighting in large towns and cities consists in the fact that the main part of the artillery employed is used in direct firing. For instance, in the battle for Berlin, around eighty per cent of all the batteries at the disposal of the infantry units conducted their fire, as a rule, from open positions.

This method of employing the artillery is dictated by the characteristics of street fighting. In the complex labyrinth of streets and alleys of European cities it is difficult to determine the line of contact between the fighting forces. The enemy is separated from one's own forces in the majority of cases by no more than the width of a street, at times only by the interior walls of buildings or the floors between the upper and the lower stories. It is obvious that, under such condition, it is impossible to conduct fire from concealed positions.

Direct fires increase to a marked degree the ability of the infantry to advance. On account of the very nature of the battle, it is the artillery that crushes and the infantry that seizes the objective.

In the defense of inhabited places the enemy relies on solid stone buildings. Our infantry is literally forced to fight for every building. The success of the attack depends on how well-prepared the assault operations have been from the point of view of the artillery, that is, how completely the enemy's fire means have been suppressed.

One important circumstance should be emphasized: An attack in a large inhabited place will not be successful in

the absence of fire superiority over the enemy. The infantry is not in a condition, without the help of the artillery, to gain the upper hand; its weapons are not possessed of sufficient destructive power. For this reason, when the street fighting begins, most of the artillery weapons should be turned over to the infantry units as reinforcement.

The subordination of the artillery pieces to the commanders of companies and battalions does not denote complete decentralization of control. It is not permissible to disrupt the entire artillery organization. It is extremely necessary to leave a certain number of guns, preferably of heavy and extra-heavy calibers, to engage in independent firing. These guns should be under the division artillery commander as a fire reserve to be used in support of the operation as a whole.

The fire reserve is used mainly to counteract the enemy's artillery and mortars. In addition to this, the concentrated fire of this group of batteries may be used for action against especially powerful enemy strongpoints. These batteries may also be assigned supplementary missions: interdiction fires and the destruction of supply installations and command posts.

Another peculiarity of the combat activities of artillery in towns and cities is the difficulties relative to the controlling of fire, not only of large masses of artillery but also of the direct support artillery of the infantry. Due to limited observation of the field of fire within a city, it is difficult to select a firing position for a battery or even a platoon.

Therefore, the artillery fire is controlled for the most part by the commanders of small units, and especially by the commanders of the individuals guns. This circumstance does not minimize, of course, the role of the various staffs in the organization of reconnaissance during the course of the street fighting. The activities of the reconnaissance organizations will, however, be conducted mainly in the interests of the small units.

It is well known that in the fighting in the streets of Berlin the enemy defended himself with exceptional stubbornness. He made an effort, to the full extent of his ability, to hold the positions he occupied. It is obvious that this called for calmness and objectivity on our part. Elaborate preparation preceded the taking of any proposed objective. The objectives were carefully studied, along with the approaches leading to them, the composition of their garrisons and their system of fire. After this, under cover of darkness, our guns were brought up in order to open point-blank fire with the break of dawn. Depending on the assigned mission, the fire was conducted either for the neutralization of the enemy forces or for the complete demolition of the buildings. The battle was terminated by an assault by the infantry and consolidation of the seized objective. The seizure of other strongpoints was prepared in a similar manner; each forward movement of our forces was preceded by an artillery preparation of the objective in the above-mentioned manner. Complete cooperation was thus secured between our artillery and infantry.

Combat in a large city, as has already been shown, is characterized by extreme complexity. In addition to the physical and moral strains involved, a high degree of combat skill is required of the participants. From the standpoint of the artillerymen, this means above everything else, the ability to find their targets quickly and destroy them in a single blow and to maneuver skilfully in the labyrinth of streets, alleys, and courts. Let us examine a typical example from the battle for Berlin.

A gun commander was assigned the mission of supporting an assault on a large building. To begin with, he studied in detail the targets on which he was to open fire and selected a firing position.

The position selected (the ground floor of a corner building) answered every necessary requirement. It afforded protection for his gun and was provided with suitable approaches. A broad, low window insured sufficient traversing fire, and thick outside walls securely protected the crew and the gun itself from enemy action.

Having secretly taken up his position, the commander unexpectedly opened fire on the enemy. In a short while the artillerymen had fired twenty-two rounds, destroying five enemy machine guns. The unexpected and accurate fire produced a stunning effect on the enemy. The enemy soldiers that had escaped injury abandoned their posts in panic and concealed themselves in the basement, where the assault forces cornered them. The gun was moved, in the meantime, to another location, and at once prepared to lend support to the infantry in its assault on the next strongpoint.

Not infrequently, in cities, one runs into buildings with very thick walls and narrow, embrasure-like windows. Medium artillery guns are not very effective against them. In such cases, the assistance of larger calibers is hurriedly sought.

At the intersection of two Berlin streets stood an ancient brick building of small size, but with very strong walls. Numerous, narrow, embrasure-like windows enabled the enemy to fire from almost any position. When it became evident that the 76-mm and 122-mm guns were powerless to crush the weapon emplacements in the building, it was decided to call on the 152-mm guns. From a distance of four hundred meters, these guns destroyed the building and annihilated its garrison.

Frequently there were observed cases in which a building that was being defended by the enemy was literally riddled with holes by artillery projectiles; yet the garrison continued to defend it. This is explained by the fact that the enemy personnel took refuge in the basement during the time that the shelling was in progress. Since the basement was lower than the ground level, it was impossible to reach them with the fire of our guns. In such cases, in order to crush the enemy resistance, the building was destroyed down to its very foundations, obstructing the

entrance to the basement and thus rendering it useless for future use. To demolish a building is not such a simple matter. Even point-blank fire from a single high-power gun, could not complete this mission. Under such circumstances, the artillerymen fired at the same spot with several guns at the same time. After two or three salvos the walls and ceilings of a medium-sized building of three or four stories would collapse, ending further resistance on the part of the enemy.

In narrow streets lined with tall buildings, where it was not possible to bring up the guns on account of the proximity of the enemy and where buildings were to be destroyed, our forces made considerable use of rocket projectiles. The projectiles were brought up in their containers and placed in second and third stories, usually on a table opposite a window, and the containers were laid out in the direction of the building to be destroyed. The simultaneous firing of two or three projectiles brought about the collapse of the building.

The enemy acted quickly as soon as the building they occupied was set on fire. As a rule, setting a structure on fire forced the enemy to abandon the objective being defended. For this reason, it is necessary to make extensive use of incendiary artillery shells in street fighting.

The artillery engaged in indirect firing, as a rule, fires counterbattery fire. But this does not exclude its employment when massed fire is required for direct cooperation with the infantry, especially in preparations for attacking large enemy defensive positions.

Indirect fire should be preceded by careful preliminary preparation. Fire for adjustment must be conducted with extreme care. It is indispensable that the commanders obtain, with the help of the infantry commanders, a definite knowledge of the terrain and the dispositions of the infantry. In order to avoid firing on one's own forces, it is necessary to begin fire for adjustment by shooting over the target, gradually bringing the fire down on the target. This will prevent hitting anything that may be nearer than the target. Observation of every shot is necessary when firing for effect.



For Heroism and Service



DISTINGUISHED SERVICE MEDAL

Major General JOHN B. WOGAN for outstanding service from October 1942 to April 1945 as Commanding General, 13th Armored Division. He organized, trained, and prepared the division for combat, overcoming numerous difficulties caused by limited facilities and other factors inherent in a new command. By his ability and skill, he created an efficient, smoothly-working staff and produced a division which in maneuver was rated outstanding in tactical marching, use of supporting weapons in attack, aggressive command reconnaissance, and physical condition of troops. Later General Wogan displayed courageous leadership while commanding his division's attack in the Ruhr Valley, Germany, an operation in which he was severely wounded. By his application of the latest techniques of armored force units, and heroic disregard for personal danger, he contributed materially to the superior battle performance of the 13th Armored Division.

Brigadier General HERBERT S. CLARKSON, for exceptionally meritorious and distinguished services in the performance of duties of great responsibility during the periods April 1943 to July 1945.

Brigadier General ERNEST J. DAWLEY, for exceptionally meritorious service as Commanding General, Ground Force Reinforcement Command, European Theater of Operations, from March 31 to May 31, 1945. Through his effective leadership and guidance, officer and enlisted reinforcements were prepared for combat duty and then assigned to fighting organizations. He constantly endeavored to improve standards of instruction, so that replacements could fill gaps in established units without hampering the smooth operation of tested teams. He recognized the great importance of maintaining high morale among reinforcements, and instituted far-reaching plans to achieve that end. Always working under the pressure of difficult schedules, he produced combat replacements who kept American divisions at maximum strength and efficiency, insuring them undiminished power with which to crush the enemy.

Brigadier General GEORGE D. SHEA, for exceptionally meritorious and

distinguished services in the performance of duties of great responsibility during the period October 1944 to April 1945.

Colonel LEWIS F. KOSCH, for exceptionally meritorious and distinguished services in the performance of duties of great responsibility during the period May 1941 to September 1945.

OAK LEAF CLUSTER TO DSM

Maj. Gen. WILLIAM BRYDEN
(second)

LEGION OF MERIT

Maj. Gen. JOHN E. SLOAN
Brig. Gen. ARTHUR R. HARRIS
Col. FREDERICK M. BARROWS
Col. JULIAN H. BAUMANN
Col. OLIVER P. BENNETT
Col. STANTON L. BERTSCHEY
Col. JOHN K. BOLES
Col. JOSEPH C. BOYER
Col. CHAS. H. BRAMMELL
Col. JEFFERSON CAMPBELL
Col. FRANCIS T. COLBY
Col. JAMES V. COLLIER
Col. HUGH CORT
Col. MARION P. ECHOLS
Col. ROBERT C. F. GOETZ
Col. ROBERT F. HALLOCK
Col. EDMUND H. JONES
Col. STACY KNOPF
Col. PETER J. KOPCSAK
Col. ERIC S. MOLITOR
Col. GEORGE R. PARKS
Col. THOMAS A. ROBERTS
Col. WILLIAM E. SHEPHERD
Col. JOHN H. TIPTON
Col. JOHN B. WARDEN
Col. EVERETT C. WILLIAMS
Col. STERLING A. WOOD
Lt. Col. HENRY H. ARNOLD
Lt. Col. DONALD C. BEERE
Lt. Col. PHILIP L. GORE
Lt. Col. FREDERIC C. HENDRICK
Lt. Col. JOSEPH H. HODGES, JR.
Lt. Col. HAROLD A. LIEBE
Lt. Col. JAMES H. LIGHTFOOT
Lt. Col. CHAS. R. REVIE
Maj. PHILIP G. LAUMAN, JR.
Capt. LEE P. McCARTER
M/Sgt. JOHN M. McMAHAN

OAK LEAF CLUSTER TO LEGION OF MERIT

Brig. Gen. WILLIAM H. SANDS
Col. GEORGE S. BEURKET

Col. HUGH McC. EXTON
Col. CHAS. P. NICHOLAS
Col. MERCER C. WALTER
AIR MEDAL
Maj. Gen. A. V. ARNOLD

BRONZE STAR

Col. ROBERT F. HALLOCK
Lt. Col. PAUL D. PHILLIPS
Maj. LUNDY L. ZEIGLER
Capt. THOMAS H. KARAMESSINES
1st Lt. ARTHUR L. DERBY, JR.
M/Sgt. RAYMOND J. HANFIELD

ITALIAN MEDAL OF VALOR

Col. ROBERT F. HALLOCK

PURPLE HEART

Maj. IRA H. FOWLER
1st Lt. WILLIAM MAUGHN, JR.
1st Lt. GEORGE E. SHAVER

BATTLE HONORS

THE 29TH FIELD ARTILLERY BATTALION is cited for outstanding performance of duty in action against the enemy in France from 6 to 13 June 1944. The battalion landed on the Contentin Peninsula in Normandy on D-day, 6 June 1944, as a part of Combat Team 8, the first combat team to land in VII Corps sector. Reconnaissance parties and forward observers accompanied the leading elements of the infantry. During the landing operation, the entire personnel and materiel of one howitzer battery were lost when a mine sank the landing craft transporting this battery to the beachhead. The remainder of the battalion was debarked in an area 1,500 yards from its predesignated landing point, necessitating a rapid change in plans. Despite these apparently overwhelming handicaps, the battalion went into position to effect immediate fire support of the 8th Infantry. With only 43 per cent of its assigned strength, because of casualties, shortage of landing craft, and the loss of one howitzer battery, the battalion delivered highly effective fire on the enemy and its installations. Throughout the six days following the initial landing, the battalion fired 262 missions and expended 10,029 rounds of ammunition. During the entire period, the enemy held the favorable dominating terrain. The loss of one of the battalion's airplanes and both

pilots, because of enemy action, denied the battalion use of its organic aerial observation. However, aggressive, active reconnaissance neutralized the enemy's advantage. Although subjected to unrelenting hostile fire, all officers and men of the battalion demonstrated outstanding aggressiveness and professional skill in the fulfillment of their missions. The deadly accuracy of the battalion's artillery support contributed substantially to the steady and continuous advance of its supported infantry and the ever increasing toll of personnel and equipment exacted from the enemy. The extraordinary courage, determination, and esprit de corps exhibited by each member of the 29th Field Artillery Battalion exemplified the finest tradition of the military service.

THE 34TH FIELD ARTILLERY BATTALION is cited for conspicuous gallantry and heroism in battle on 21, 22, and 23 February 1943 in repelling an attack by vastly superior forces which were attempting to break through the Allied lines in the vicinity of Thala, Tunisia. The 34th Field Artillery Battalion completed a 100-hour forced march from Tlemcen, Algeria, covering a distance of 735 miles in bitter weather over tortuous and almost impassable mountain roads on the night of 21 February 1943. Without prior reconnaissance or adequate maps, harassed by enemy fire, and forced to maneuver through a congested, narrow road, nevertheless, the battalion occupied battle positions, set up communications, established observation posts, and was ready to deliver fire by daylight. Although enemy force were entrenched only 2,500 yards distant and there were only three platoons of friendly infantry in front of the artillery, the unit maintained constant and steady fire with such deadly effect that enemy tank units were dispersed and driven back. The cool, determined manner in which the 34th Field Artillery Battalion entered into battle after an almost incredible forced march contributed in great measure to the defeat of the enemy's attempt to break through the Thala defile. The gallant entry into battle and the heroism with which the volume of fire was maintained, despite terrific enemy fire, are in keeping with the highest traditions of the American military service.

THE 78TH ARMORED ARTILLERY BATTALION is cited for outstanding performance of duty in action against the enemy during the period 29 and 30 July 1944. On the morning of 29 July 1944, the battalion was in position near an important cross road southwest of Notre Dame de Cenilly, Normandy, France. At 0830B, it was reported that an enemy force of approximately 200 infantrymen, supported by 15 tanks, was attacking an outpost held by elements of the * * * Infantry * * *. The outpost was forced to retire under extremely heavy mortar and small-arms fire, and when one of the four M10's attached to the outpost was set aflame by

mortar fire, the remainder withdrew. This withdrawal left the defense of the cross road the responsibility of the 78th Armored Field Artillery Battalion. The enemy infantry managed to get as far as the hedgerow separating them from the battalion's M7's before the advance was checked. A total of 126 enemy dead was counted along this hedgerow and 7 enemy tanks were destroyed. The battalion moved to a new position near St. Denis le Gast, Normandy, France, and prepared to furnish supporting fire to advanced units. At 0230B on the morning of 30 July 1944, a German armored column of more than 20 vehicles and cannon, accompanied by 350 infantrymen, penetrated the battalion's position along a road which separated its batteries. Sustaining the initial shock quickly and efficiently, firing 105mm howitzers at ranges of 50 yards and less and using all available weapons, the battalion destroyed all the enemy vehicles, killed 100 of the enemy personnel and wounded or captured the remainder. Simultaneously with this close-range fighting, Battery C, not reached by the enemy, plus three guns of Battery A and four of Battery B, fired indirect fire continuously for a forward observer on a German column to the northeast. In less than 2 hours, guns of all batteries were again firing on this enemy column. This accumulated fire resulted in the death of an additional 1,200 Germans and the destruction of 97 vehicles and cannon. The courageous performance of the officers and enlisted men of the 78th Armored Field Artillery Battalion and the complete devotion to duty, with utter disregard for safety, demonstrated by each individual contributed to the destruction of an enemy that was capable of annihilating the battalion's position.

THE 80TH FIELD ARTILLERY BATTALION, on 3 February 1945, supported the 53d Field Artillery Battalion, which was in direct support of the 63d Infantry Regiment, in a flanking movement to bypass Munoz and clear Highway 5 to San Jose. Following the infantry forward elements, the battalion pushed its way by bulldozer across soggy rice paddies, swamps, and deep irrigation ditches. Enemy machine-gun, mortar, and artillery fire were received on this move and a danger of tank attack was always imminent. For 3 days and 4 nights, the battalion was attacked repeatedly by infiltrating enemy infantry, all of which was repulsed. On the morning of 7 February 1945 at 0330, the remnants of a Japanese armored task force, attempting to withdraw from Munoz to San Jose, attacked the battalion position area and neighboring infantry units. Eleven enemy tanks, carrying infantry, and 10 personnel carriers were taken under fire by 50-caliber machine guns on the battalion perimeter. One tank was set afire and halted on the road, while the remaining vehicles deployed. The accompanying enemy infantry dismounted and vigorously attacked the positions of the 80th Field Artillery

Battalion and elements of the 63d Infantry Regiment and 53d Field Artillery Battalion in the same area with small-arms, grenades, and machine-gun fire. Without hesitation, the cannoneers, except those necessary to man the pieces, deployed as infantry. Making use of bazookas, machine guns, and carbines, the men of the 80th Field Artillery Battalion repulsed the attack and then, seizing the initiative, sent bazooka teams forward, deploying their 155mm howitzers to more advantageous positions for direct fire, and, at dawn, engaged in a vicious artillery duel with the tanks, at ranges of 50 to 300 yards. Enemy tanks scored direct hits on several gun pits. When the last enemy gun was silenced, it was found that six enemy medium tanks, five light tanks, ten personnel carriers and two 105mm howitzers with prime movers had been destroyed in the close proximity of the battalion position area. The 80th Field Artillery Battalion distinguished itself in action by its extraordinary heroism and exhibited such gallantry, determination, and esprit de corps as to make it outstanding in this engagement. The magnificent courage and devotion to duty by all members of the 80th Field Artillery Battalion are a credit and inspiration to the armed forces of the United States.

THE 84TH FIELD ARTILLERY BATTALION is cited for conspicuous gallantry and heroism in battle on 21, 22, and 23 February 1943 in repelling an attack by vastly superior forces which were attempting to break through the Allied lines in the vicinity of Thala, Tunisia. The 84th Field Artillery Battalion completed a 100-hour forced march from Tlemcen, Algeria, covering a distance of 735 miles in bitter weather over tortuous and almost impassable mountain roads on the night of 21 February 1943. Without prior reconnaissance or adequate maps, harassed by enemy fire, and forced to maneuver through a congested, narrow road, nevertheless, the battalion occupied battle positions, set up communications, established observation posts, and was ready to deliver fire by daylight. Although enemy forces were entrenched only 2,500 yards distant and there were only three platoons of friendly infantry in front of the artillery, the unit maintained constant and steady fire with such deadly effect that enemy tank units were dispersed and driven back. The cool and determined manner in which the 84th Field Artillery Battalion entered into battle after an almost incredible forced march contributed in great measure to the defeat of the enemy's attempt to break through the Thala defile. The gallant entry into battle and the heroism with which the volume of fire was maintained, despite terrific enemy fire, are in keeping with the highest traditions of the American military service.



PERIMETERS in PARAGRAPHS



By Col. Conrad H. Lanza, FA, Ret.

THE SITUATION IN EUROPE

RUSSIA VS. THE WESTERN POWERS

THE current relations between Russia and the Western Powers dominate the world strategical situation. Differences have become intensified. The Russian press has been quite hostile to the Western Powers; avoiding hostile remarks, by contrast, the American and British press has become more and more insistent that their governments *get tough* with Russia.

Logic? The government directed Russian press represents Russia as being engaged in a struggle to establish the democratic life, particularly with regard to improving the standards of life of the laboring class. It claims that Russia is the sole government in the world having such principles, and charges that the Western Powers are some kind of Fascists, for capitalism and against democracy. The deduction to be drawn from that argument is that all nations should join the Soviet Union in order to participate in the blessings of the society which it has established.

The fallacy in the argument is that although the ideal of improving the standard of life is desirable, the methods employed by the Soviet Union to accomplish that ideal have in 30 years of practice failed to accomplish this. On the contrary, the standard of life within Russia has never approached the standards realized by the Western Powers for all classes including their laboring classes. Russia's answer is that this is only temporary, and that she would be able to raise her present standards of life, were she not under the obligation of fighting, or preparing to fight, Fascist aggressors.

Russia is engaged in a propaganda campaign to convince her own people that the Western Powers are hostile, and will sooner or later become aggressors. Consequently the need to build the greatest military force the world has ever seen, even if this requires (as it will) temporary reductions in living conditions. As previously explained in this column, Russia has started the first of three 5-Year Plans, considered necessary to accomplish her objective of becoming the strongest power on earth. Completion of the plans, with expected readiness to fight any or all nations, is scheduled for 1960.

Heavy Going. World War II caused enormous destruction within Russia. Nearly all mining and industrial areas west of the Ural Mountains were destroyed or severely damaged. Many of the farming areas were crippled by carrying away of livestock and farm implements and by the burning of buildings. Extensive lands have grown to weeds. The current season has been deficient in rain, and crops for 1946 will apparently be less than what is urgently needed.

As against these undesirable factors, there was during World War II, and since then, increased industrial production in the Urals, and to the east thereof, with material extension of farming areas. With what is obtained from these new areas, plus the production of the occupied states of central Europe and considerable help from the UNRRA in Poland, White Russia and the Ukraine, Russia has been able to feed her people, and industrial production is increasing. In

all, Russian production is not expected to equal pre-war levels until 1948. And as stated it will not be sufficiently great to undertake a major war until about 1960, provided the Western Powers maintain their present military might.

End Justifies Means. A major objective of Russia is to consolidate her authority within the occupied states of central Europe. Convinced that Russian ideals and systems of government are best for the world, the Soviet is seeking to enforce this ideology wherever her troops are located. Being unhampered by our Western moral code, the Russian government believes that it is fully justified in liquidating opposition wherever it is met. According to some reports, even murder is condoned. Refusal of authority to buy food is a standard method of argument, and a rather efficient one. Transfer of entire populations or of certain classes within a state, such as former officials, teachers, the clergy, either to concentration camps or to distant areas, is common practice. These pressure methods are employed wholesale, and affect millions of people. For example, the population of the three small Baltic states is reported as having already been reduced over 50%, or by over 2,000,000 of people killed or deported.

Special attention is given to destroying religions, by death or confinement of the clergy. According to the *Protestant Life* of Switzerland, just about half of the clergy in the predominantly Protestant states of Latvia and Esthonia have already been liquidated. Reports from the Vatican indicate about the

same situation in the Catholic states of Lithuania and Poland.

In enforcing its system, the Russians have taken the precaution to establish an iron curtain at its frontiers, and to prohibit foreigners from circulating within the areas where oppressions are being widely enforced. Strong opposition has been met by Russia locally and it is expected that, notwithstanding the severe measures used, several years will be required to eliminate open opposition.

The Western Powers have done nothing for the Baltic states. They have been insisting on "free elections" within central Europe, particularly in Poland and Romania. No such elections have been held.

Some special differences between Russia and the Western Powers follow.

Loans. The United States is the holder of most of the wealth of the world. Its government recognizes this, and has sought to capitalize by consolidating its own Allies, and toning down Russian expansion.

The recent loan to France, for example, will tend to draw France into the camp of the Western Powers. France has had a military alliance with Russia since 10 December, 1944, and has since been wavering between a permanent connection either with Russia or with the Western Powers. For a time France believed she could remain in between without committing herself to either side. That policy—similar to that of Laval who sought to remain halfway between Germany and the Allies—has failed. The French have also become scandalized by the disclosure that the 1944 alliance with Russia has a secret clause authorizing the Russian Secret Police—famous NKVD—to operate freely within France and to arrest, without reference to other authority, any person alleged to be Russian.

Economic considerations aside, the more recent loan to Great Britain, who has a military alliance with Russia signed in 1942, will be to the military advantage of the United States.

Russia is following the example of the United States. It has announced two loans of unspecified amounts, one to Poland and the other to Yugoslavia. In both cases it was specified that the loans

would be used, among other purposes, for raising military forces. It is understood, from other sources, that Poland is to raise 30 divisions and Yugoslavia 20 divisions for the Soviet cause. The United States had been approached for these loans, but had insisted on free elections and other evidences of real democracy.

The United States had considered a loan to Russia, and recently had invited Russia to come and get one. However, it required as conditions that Russia should join and become an active member of the new International Bank, and comply with the Bretton Woods financial and economic agreements. It now seems that Russia will not take the proffered loan, and will not subscribe to the Bretton Woods agreements.

Trieste. Russia has been insisting that this port at the head of the Adriatic be ceded to Yugoslavia, as the mountains back of Trieste are mostly inhabited by Yugoslavs. The Western Powers have insisted that Trieste remain Italian, as its citizens are mostly of that race.

Trieste is a first class port, with excellent facilities. It is not essential to Italy as Italian centers of production are closer to other equally satisfactory ports. Neither is Trieste essential to Yugoslavia, which has a nearer port at Fiume.

Prior to the war, Trieste was the point of shipment for south Germany, which found it more convenient to ship certain goods by that port than by North Sea ports, next best available route. Trieste has for long been the main port for both Austria and Hungary, and would still be if normal conditions prevailed.

If Austria, or part of it, and Hungary are to remain under Russian control, it is important to Russia that Trieste be under their jurisdiction as a port. Assignment to Yugoslavia, which just now is a Russian puppet state, would be a satisfactory solution. For the Western Powers to allow Russia to reach the Adriatic at Trieste would be to permit close contact between Russia and Italy, and open the possibility of Russia establishing a naval port in the Mediterranean. If realized, the latter possibility threatens naval rivalry within

the Mediterranean which is now lacking, as the Western Powers have no competitor there. Contact between Russia and Italy might lead to an increase of Communist agitation within Italy. At the election of 2 June, the Communists were a decided minority, polling under 19% of the vote. However, nearly all the Communists are in north Italy, and constitute a 5th column under Russian guidance which had been giving considerable trouble. This could be intensified were there direct land connection between north Italy and Russia.

A proposition has been made to make Trieste a small independent state under the United Nations. This was done after World War I in the case of the Danzig state, due to inability of the victors to decide to award that city either to Germany or to Poland. As is well known, that became the final straw which started off World War II, and is not a happy precedent for attempting to do the same thing with Trieste.

As the matter stands, Trieste is not essential to either Italy or Yugoslavia, regardless of whether economic or military conditions are considered. It is of prime importance to Austria and Hungary for both military and economic reasons, and is economically important to south Germany. It is of major importance to Russia as it would be her first direct outlet to the Mediterranean.

GERMANY

The occupation of Germany in four zones, each administered by a separate Ally, is contrary to the provisions of the Potsdam Agreement and is causing considerable difficulty. Germany as a whole was an economic unity. It was not entirely self sufficient either in food or in certain raw products. However, by importing deficiencies at established points of entry, a closely integrated and highly efficient economic system had been developed. This is now completely broken.

The main food areas are in east Germany, which is occupied by Russia. No food is allowed to go west. As a result, the United States and the British Empire have been compelled to import and issue gratuitously an immense quantity of food into the zones controlled by

them, over and above what would otherwise have been necessary.

The main mineral producing areas were in the Ruhr and in Silesia, respectively in the British and Russian zones. Russia is reported to be developing the Silesian area for her own benefit, and nothing is available for the rest of Germany. The Ruhr is being mined for coal and some industrial activity exists.

Interest to All. The Ruhr is an international problem. It is solidly German, and its people wish to remain in Germany. Being deficient in coal, France would like to have it, and the industries would enormously help France to reestablish herself as a first class Power. If she cannot annex it France is willing to compromise provided that Germany is deprived of the products of the Ruhr, except as the Allies permit.

The British could well integrate the Ruhr in their own economy, and have already partly done so. Russia wants what she calls her share of the Ruhr industries. It would seem that if this claim is allowed, the Allies should have their share of the Silesian area.

Coupled with the question of the disposition of the Ruhr has been the desire of all of the Allies to destroy German industry. Two ideas were in view—the professed one being that this would prevent Germany from ever rearming. The other, about which little is said openly, is to prevent German competition in international markets, with the hope that the Allies will gain those markets, and thereby bring prosperity to their respective home lands. This policy if insisted on will result in a large unemployment problem among Germans, as it is physically impossible to employ the former industrial workers on agriculture, as there is no land for them.

Although not yet officially confirmed, it seems to be understood that the Saar area which produces much coal and has large industries will be awarded to France.

Lot of the Vanquished. About ten million Germans have been, or are being, expelled from Poland, Czechoslovakia and other lands. Most of these lived at their former residences since birth. Those from Hungary and

Romania have been there for centuries, and never had seen Germany. All are being driven out without any property other than hand baggage. Their homes and other property are confiscated. These Germans are being crowded into American and British sectors without either property or means of livelihood.

Something like 4,000,000 Germans are still held in slave labor as POWs. Of these, it is estimated that Russia holds as many as 3,000,000. The United States has transferred approximately 118,000 German prisoners to the British in England. The American forces in Italy hold 48,000 of which about 44,000 are employed in labor, the balance being in cages. England has about 270,000 German POWs, exclusive of those received from the United States. In view of what the United States furnished, the British are releasing the Italian POWs. In Italy, the British held approximately 60,000. And finally, France holds approximately 400,000 POWs.

In addition to Germans returned to occupied Western zones, there are possibly a million Czechs, Poles, Hungarians, Slovaks, Yugoslavs, and other nationals who prefer to live under Allied rule rather than to remain in their allegedly "liberated" homelands. Among these over 150,000 Poles are still in the British military service, and do not desire to return to Poland under the present circumstances. All these unfortunate people are anti-Russian.

The Allies have agreed to the following measures intended to destroy German industry:

1. About 30,000,000 tons of German shipping has been allotted to the Allies, on the basis of tonnage lost during the war. The British Empire thus receives about 11,300,000 tons; the United States, 4,200,000; France 1,800,000; Greece 1,175,000; Russia 1,000,000.

2. The Allied Control Council has issued a law prohibiting German scientific research which might be useful for military purposes. This includes nuclear physics, radar, and similar modern scientific methods and appliances.

3. By order of the Allied Military Government, all books and memorials relating to Nazism and German military history are to be destroyed by 1 January 1947. This includes reference works. Zone commanders are charged with carrying out this order, which does not include books held privately.

In the middle of May a cessation of the organized destruction of German industries was ordered in the American zone. The population of the zone is about 13,000,000. It appears that if the

destruction were carried out, there would be no work for several millions of people, who thereby would become a financial liability of American taxpayers. Further study of the situation is required. At approximately the same time the United States in its zone stopped reparation deliveries of industries to Allies, pending an arrangement to administer all of Germany as an economic unit as prescribed by the Potsdam Agreement. Under the existing four zone arrangement, it has been estimated that the United States will be obligated to pay \$1,000,000,000 a year to feed and support its German zone, whereas if goods and services were free to move between all zones, it is believed that it would be possible to materially reduce the burden to the American taxpayer.

In view of this action, the U. S. Military Government (C.G. is Lt. Gen. Lucius D. Clay) on 29 May granted local German officials considerable responsibility on economic matters, including direct allocation of raw materials, such as coal, oil, etc.

There has been no difficulty in administering occupied Germany. The occupying forces as of 1 June comprised approximately: in the U. S. zone, 315,000 troops; British zone, 350,000 troops, exclusive of German "labor" troops, whose numbers have not been reported except from Russian sources, who claim they number over 250,000; French zone, 110,000 troops; Russian zone, not reported, but estimated as 500,000 or more.

COMMENTS

The difficulties which have prevented an agreement of uniting the four occupied zones into a single unit rest upon an inability to satisfy (1) the demands of France for an extension of her boundaries into Germany beyond what the United States and the British Empire believe reasonable, and (2) the demands of both Russia and France as to the disposition of the Ruhr. Efforts to arrive at a conclusion acceptable to the four Powers are being made through conferences by the respective Foreign Ministers. The United States has proposed that if an early agreement is not reached the problem be referred either to the United Nations or to a Peace Conference of all the Allies, for investigation and recommendation. At date of writing, Russia had announced that this proposition would be vetoed by her.

The probability that Nazism can be eradicated in Germany by burning books relating to that subject, overthrowing monuments, and similar devices is a repetition of Hitler's methods to eradicate anti-Nazi ideas. When he caused anti-Nazi books to be publicly

burned, that was at the time considered in the United States as ill advised, barbaric and perfectly useless.

History has precedents on this. It was customary to burn books during the Medieval Ages which were considered by the authorities as detrimental to the existing government. For example, unauthorized copies of the Bible. As far as this writer knows, this kind of action never

succeeded. No more so than the execution of undesirable leaders of an opposition party.

Ideals cannot be destroyed by force, although they may be temporarily driven underground. If no argument can be brought against Nazism other than the victors don't like it, that argument will not appeal to an intelligent German. Not everything that Nazism (or Communism for that matter) has stood for is wrong, only some of their principles. Other principles were wrongly applied, such as

redistribution of property which may have had some justice but was improperly applied by killing owners, especially if they happened to be Jews. If the bad principles of Nazism, of which there were many, were publicly exposed, very little explanation would be required to convince even a German that such practices rightly brought the odium of the world upon his country. Forbidding him to read certain books or to have certain monuments won't do it.

THE MIDDLE EAST

PALESTINE

No action has been taken on the comprehensive report of the Anglo-American Commission submitted on 20 April. Late in May, the British Government issued invitations to both Arabs and Jews to submit their views to the High Commissioner for Palestine prior to 20 June. Pending this no action is to be taken on the recommendation of the Commission that 100,000 Jew refugees from Europe be admitted to Palestine this year.

Sink All Differences. In the meantime Palestine remains in a general state of turmoil with Arabs and Jews irreconcilably opposed, one to another. Palestine is about as large as Vermont, but with a population three times as large. Jews number about 550,000, and Arabs 1,200,000. Arab population is increasing faster than Jewish. If it were not for admission of Jewish immigrants, the Jews would decline relatively in numbers.

The Arabs of Palestine are solidly backed by all independent Arab states. Sinking all their differences among themselves (and these were not minor), the kings, presidents and princes of seven Arab states met at Cairo in May, and announced their complete agreement against Jewish immigration into Palestine which in their opinion would be a violation of former British pledges. They stated: "They have great hopes that the friendly relations now existing between the Arab states and the two friendly democracies [the Americans and British] will not be spoiled by the insistence of the two democracies to carry out the measures affecting the rights of Palestine Arabs." They further directed the Arab League, which was to meet in Syria on 8 June, to: "take due measures to preserve the future of this country dear to all Arabs."

The Arab League, consisting of 30 high diplomats met as directed. However, their sessions have been secret, and the results unknown at date of writing this account.

Slick Business. A new factor was injected into the situation by the "escape" of the Grand Mufti on 8 June from France where he had been in arrest in quarters near Paris. As late as 8 May, the French government had assured the British that the Grand Mufti was guarded and could not escape. He made careful preparations for leaving France including a very polite letter to the French government announcing his "escape" and in which he thoughtfully included his unexpended French ration and gasoline coupons. On 9 June he arrived by air at Damascus, where he was enthusiastically received. Next day he disappeared.

Haj Amin el Husseini was appointed Grand Mufti of Palestine by the British in 1921. The British assumed that his duties would be limited to matters relating to the Moslem religion, of which as Grand Mufti he became a leader. There was no objection to his acts as a Moslem. However, the Grand Mufti entered politics, and soon became a master of Arab intrigue. As a political leader the Arab Christians (who number about 100,000) have acknowledged him as their representative. Prior to World War II, the Grand Mufti led two Arab revolts against the British in Palestine.

Believing that the Grand Mufti would undoubtedly lead another revolt after the outbreak of war in 1939, the British attempted to seize him. He fled in turn to Iraq, Iran and Turkey. Later he appeared in Germany as a friend and collaborator of Hitler. He was in Germany in 1945, where the French found him. Ever since he had been in arrest.

The Grand Mufti has never been adjudged as a war criminal. He is, however wanted by the British authorities in connection with the murder by Arabs in 1937 of the local British commander at Nazareth. He could be indicted and extradited.

The Anglo-American Commission considered in its report the status of the Grand Mufti. It did not recommend action against him. They stated that their investigation proved that the Arabs felt that World War II was not their war, and that the Grand Mufti was doing what he could for his own people, who had no direct interest in the war. It appears that the return of the Grand Mufti to the Arab world will probably result in his reassuming his former leadership. As noted, he is anti-British and presumably anti-American.

The exact effect of the Grand Mufti's reappearance can not be judged until it is known who backed his "escape." This could not have been arranged so neatly and rapidly without previous planning.

Military Realities. The military forces in and about Palestine are approximately as follows:

The British have the equivalent of 3 divisions, all completely equipped including armor, artillery and transportation. There are supporting air forces, with flank bases at Cyprus and in Iraq. Including usual supporting troops, the total force is estimated as 100,000 men. British auxiliary troops include a division without artillery in Iraq numbering about 9,000 men—all Arabs, but British led and an excellent desert force. There are also 19,000 MPs in Palestine, who have armor and are British led—12,000 of these are Arabs, and 7,000 Jews.

The Jews have one small division without artillery, and numbering about 8,000. One quarter are on full time,

and the remainder are reserves. This force has transportation.

A guerrilla force exists secretly and is estimated as 56,000 men, of which 16,000 are trained as guerrillas and are equipped with infantry weapons including flame throwers and mortars. The remaining 40,000 are unorganized reserves available locally for guerrilla operations. These forces have neither armor, artillery or air forces.

These unauthorized Jewish forces are engaged constantly in running Jewish immigrants into Palestine, burning bridges, interrupting railroads, and in general sabotage. Mission is to prove that regardless of the decision of the Americans and British the Jews can look after themselves and will do so.

The *Allied Arab States* have about 125,000 troops, divided from Egypt to Syria and Saudi Arabia. They have some armor and artillery and small air forces. It would be very difficult to unite these separated Arab forces into one force. Even if this succeeded, it would be outnumbered by the British in Palestine, in the proportion of 8 to 5.

IRAN AND AFGHANISTAN

Iran. At the beginning of the period, Iran was under an obligation to settle its differences with the rebel province of Azerbaijan by "peaceful" methods. This condition had been imposed by an agreement signed with Russia on 4 April. Azerbaijan took full advantage of the opportunity presented to her.

PHILIPPINES

On 28 May, Sergio Osmena was relieved as President of the Philippine Republic, by newly elected Manuel A. Roxas. Politically, the United States withdrew from the Philippines on 4 July. The islands are now independent.

Huklandia. Conditions are bad in the Philippines. Little has been accomplished in repairing the cities devastated by the war. There is a serious shortage of food. Most pressing problem is a military one—the armed opposition of the Hukbalahaps (Huks for short).

The Huks have pretty well taken over the government of three

By an agreement announced on 14 June, it was provided:

1. Azerbaijan becomes a province of Iran instead of an independent state.

2. Iran will appoint a Governor-General of Azerbaijan from a list of 4 names to be submitted by Azerbaijan. [Except for this official it seems that Azerbaijan is free to do as it pleases.]

3. Azerbaijan troops and MPs are recognized as part of the Iran Army.

4. Azerbaijan will remit to Iran 25% of the taxes it collects. Iran will reimburse owners of land confiscated in Azerbaijan for free distribution to tenants. [The owners, less those killed, live in Tehran as absentee landowners.]

5. Iran will connect the Russian railroad at Tabriz by a new railroad line to the Iran railroad at Mianeh. [This is about 100 miles.]

The proposed railroad is of considerable military importance. Provided Russia furnishes the material needed this line could be completed within a year. It would then be possible for Russian troops to travel by rail all the way to the Persian Gulf.

There has been minor fighting in the area south from Lake Urmia. This is likely to decline in view of the new settlement between Iran and Azerbaijan.

The government of Azerbaijan is being steadily transformed into a Soviet state. The head of the government is Russian trained Jafar Pishevari, who is installing his friends throughout the country. These have the exclusive right to bear arms, and are authorized to use them against individuals opposed to the government. Anybody not agreeing with the government is a Fascist and is slated for liquidation. A secret police has been organized under a Russian named Eadeff Dadar; it operates in the

same manner as the similar well-known Russian organization.

Afghanistan. On 13 June, an agreement making unimportant changes of the common boundary was signed at Moscow between Russian and Afghanistan. The making of this agreement has brought attention to the fact that Russia has some influence within Afghanistan. The only planes regularly flying into Afghanistan are Russian. The Afghans have a small air force, which is Russian trained and uses Russian materiel. The Russian embassy at Kabul is reported as unusually well equipped, and staffed by about 600 people.

The new agreement authorized the construction by Russia of hydro-electric plants in the northwest corner of Afghanistan. This area adjoins that part of Iran which by the April agreement was assigned to Russia for oil concessions. It is probable, but not yet verified, that oil will be found in northwest Afghanistan.

Peaceful Conquest. Russia has withdrawn her troops from Azerbaijan. In their place is a Russian organized and trained Azerbaijan army completely under Russian control. This control is being extended into Kurdistan, and into Afghanistan. There are no signs of immediate military operations in this area. Present indications point to a steady Russian advance not involving fighting, if and as circumstances indicate.

THE FAR EAST

provinces—Bulacan, Pampanga and Nueva Ecija. These form the rice granary of Luzon. This area, now commonly referred to as Huklandia, retains the normal government officials, but they are practically without power. The Huks have established CPs in each government building, and administer their laws. They collect the taxes, and maintain an armed force. Considerable minor fighting is going on continually between the Huks and the Filipino MPs, who are equipped with American jeeps, armored cars, and cub planes.

Huk government is practically Communist, although no connection with Russia has been shown. Each

small town has a Huk detachment which includes a commander, a judge, a finance officer, and some MPs. Taxes are collected without explanation as to the use to which they are to be put. Refusal to pay means immediate death, which is also the penalty if citizens apply to local authorities instead of to the Huk judge for legal remedies. In view of the terroristic means employed, Huk control of the population is good. It has resulted in a noticeable decrease in the rice crop, due to owners fleeing. This accentuates the already difficult food problem of the Philippines as a whole.

The Huks are anti-religious and favor easy marriage, easy divorce, confiscation of estates, and other usual communist ideas.

The Filipino Intelligence offices believe the Huks have some 20,000 infantry weapons and plenty of ammunition. On the day of Roxas' inauguration, it was feared that Huk troops would invade Manila. This they did not attempt. The largest force so far reported in any one place is a battalion of 400 men, with 2 battalions adjacent to one another. This was in Nueva Ecija, where the Huks can avoid armored cars and planes in the mountains. In the flat, open country of Bulacan and Pampanga, the Huks have been operating only in detachments less than a battalion.

Thes Huk Government is secret. This appeals to Malay races where secret societies have always been popular. Regardless of the civilizing effects of contact with the white races, these secret societies have tended to revert to savage practices and anti-Christian movements. So during May, report was made that Huks had flayed alive prisoners taken from Filipino MPs, and then roasted them while living over a fire. The evidence available indicates that in Huklandia, there is popular support for the Huks. The new President has appealed to the Huks to surrender their arms. No early response to this demand appears probable.

JAPAN

The American directed military occupation of Japan is progressing. There has been no opposition from the Japanese, who have cooperated loyally in general with directives given to them. There has been one protest, the contention being that the trial of the alleged Japanese war criminals was in violation of the Potsdam Agreement. The point is that, whereas the Potsdam Agreement provided for trial of *war* criminals, the charges and specifications presented at the trial now being conducted before an International Court relate largely to anti-war acts, some dating as far back as 1928. This protest has been disregarded.

Troops. The strength of American troops has been brought down to about 160,000 men. The ground troops are

under the Eighth Army; the air troops under the 6th Air Force. About 30,000 British troops are attached. The American 24th and 25th Infantry Divisions, with the 2nd Marine Division, are southwest from Kyoto. The Marine division is expected to be returned home shortly. The 1st Cavalry and 11th Airborne Divisions are at Tokyo and north thereof including Hokkaido. The British are at Kyoto and vicinity. A Chinese division is expected to arrive in June, and a Filipino division later.

Lot of the Vanquished. Measures for destroying Japanese industry in part have been taken, and are about the same as those applied to Germany. These include prohibition of production of synthetic oils and reduction in the amounts that can be imported or stored; reduction in electrical power; severe limitation of all industries of any importance. Thus steel is cut from a previous production of 9,000,000 tons annually to 1,600,000 tons. No aluminum manufacture is to be allowed at all. The machine industry is to be reduced 50%.

The same problem arises in Japan as in Germany. The possibilities of agriculture, as to which there is no contemplated restriction, are already about fully utilized. Further space for expansion is very limited, and the number of additional workers that can be gainfully used in farming is but a small number of those deprived of work in industries. A first class unemployment problem is presented and has not been solved.

To satisfy reparation claims, all Japanese war industries are subject to removal to Allied lands.

The prohibition of Japanese deep sea fishing has complicated the food problem and if persisted in will require an increased importation of foods. On 12 June, an extension of fishing limits was granted with the understanding that this was temporary, and established no precedent.

KOREA

The parallel of 38° North Latitude divides American occupied from Russian occupied Korea. About 50,000 American troops are in the south zone, which contains approximately 60% of

the Korean population. Koreans are escaping from the north to the American zone at the rate of about 10,000 per week. The inflow of Japanese refugees from the north is about half as great. All show undernourishment and are being cared for in refugee camps. Most of the Japanese who used to live in south Korea have been sent back to Japan.

Familiar Pattern. North Korea has been rather effectively Communized. According to newspapers from the Russian zone, all Russian orders and directives are "democratic" and solely for the benefit of the people. They refer to American orders as undemocratic, capitalistic, reactionary and against the interests of the people. No references are made to American participation in the late war. The "liberation" of Korea is alleged to be solely due to the Soviet armies represented to be the bulwark of liberty. The flow of Korean refugees into the American zone indicates that all Koreans are not convinced by Russian propaganda.

The Russian CP is at Heijo. The United States has long been requesting authority to establish a Consul there. No permission has been given, and notice was sent that if it was not forthcoming the Russian Consulate which has been all along at Seoul (the American CP) would have to close. However, there is an American Liaison Officer at Heijo, with a small staff. His movements are severely restricted, whereas there has been no restriction on Russian personnel in Seoul.

From a strategical point of view, north Korea is highly important to Russia. Together with Russian occupation of Outer Mongolia, Manchuria is enclosed between two Russian forces 500 miles apart, and one on each flank. The form of Manchuria resembles a mushroom, with the above mentioned Russian forces along the stem. In case of war, it would be most difficult to hold Manchuria against these Russian forces. The road and railroad net of north Korea are good for assembling troops on the Manchurian border. It should be presumed that Russia will not lightly surrender this favorable position.

Efforts between the American and Russian commanders to arrange for a joint Korean government have failed.

There has been no agreement, and none appears likely.

SOUTHEAST ASIA

Burma. Due to the censorship it is impracticable to ascertain just exactly what has happened, but strong British forces are attempting to establish order and it has been necessary to reinforce British ground troops with naval and air forces.

Two kinds of action appear prevalent. The least important is that of bandits, who are taking advantage of the disturbed conditions to rob and kill. The victims are mostly natives, and this kind of action has had no direct effect on the British occupation. It has had a serious indirect effect. Due to the assassination of numerous detached farm owners, there has been a substantial flight of agricultural workers to cities. This has resulted in a marked reduction of the rice crop, much needed to offset famine conditions in India.

The more serious opposition to British rule comes from the followers of Aung Sang, leader of the opposition and Major General in the Japanese Army, where he formerly commanded a Burmese force. General Sang's main body appears to be near the border of Thailand and is said to be well supplied with infantry weapons including numerous machine guns and mortars.

This Burmese force has not started operations against the British pending efforts for a peaceful adjustment. On 7 June, General Aung Sang was in Rangoon, and publicly expressed the native desire for complete independence, as opposed to the current Dominion status. He threatened to commence an offensive but refused to state whether this would be limited to civil disobedience or to the establishment of a separate government supported by arms. At present he controls a substantial part of Burma.

Malaya. Opposition to British Dominion status is found here too. All the Sultans are opposed to the British, and all have been relieved by the British of their commands. What they will do now remains to be seen.

Indo-China. All direct sources of information are controlled by France which has reported nothing. Chinese sources report minor fighting in Tonkin.

Thailand sources report that French troops chased hostile Annamites, who retreated into Thailand, and that on 24 May, the French troops violated the frontier by crossing the Mekong River with ground and air forces. This led to fighting which lasted a few days, when the French withdrew.

It appears that the French desired to put pressure on Thailand to cede to France certain areas (previously seized by France) occupied by Thailand in 1941. With Japan acting as mediator in a small war in 1941, France returned the areas by treaty to Thailand. France now demands their return.

Thailand has agreed to return the areas in dispute, provided an election is held to determine that the inhabitants prefer to be under French rule. Alternatively, Thailand proposes that this problem be referred to the United Nations for investigation and decision. To that reply France declines to agree, insisting that the areas be turned back to her without delay.

CHINA

The war between the Kuomintang and Communist governments has continued uninterruptedly. "Truces" have been declared from time to time. There have been peace teams of one officer from each of the American, Kuomintang and Communist armies. Nothing has had much effect. The war keeps right on, with the conflicting governments maintaining CPs side by side in Nanking, where both are in close liaison with General Marshall.

Shift in Policy. Although the Communist defensive operations in the Szepingtai area in Manchuria had been successful to date, they started withdrawing recently, in part toward Kirin and in part toward Harbin. This change of policy coincided with the return from Moscow of General Mao Tze-tung, chief of the Communist Party. Just what he did at Moscow is unknown, and the withdrawal in Manchuria may have been for other reasons. But coming at the same time, there is a suspicion that there was some connection between the two events.

The Communist movements were a return to the old system of strategy of refusing battle with imposing forces, and trusting to a multiplicity of small

actions. In view of the great extent of China, and the fact that the Communists have many sympathizers, it had been possible for the Communists to maintain this policy for 10 years. They temporarily abandoned it after taking over Manchuria from the Russians, and have now returned to the old idea. This puts it up to the Kuomintang either to divide their forces to chase numerous hostile mobile columns; or else remain concentrated, in which case the Communists will control vast areas not occupied. If the Kuomintang elects to divide, from time to time opportunities are presented to the Communists to annihilate some exposed detachment. And the war keeps right on.

Central China. Widespread fighting not involving large forces in any one place have been prevalent throughout Jehol, Hopeh and Shantung, with the Communists generally on the offensive. Although the Kuomintang has garrisons in certain cities within these provinces, the Communists have secured control of these provinces as well as Shansi.

Sinkiang. The Kuomintang Government has signed an agreement with Sinkiang. This great province is over 1,000 miles wide from west to east, with a maximum of 750 miles from south to north. It is sparsely settled, the latest returns giving a population of 4,360,000, of which about 400,000 are Chinese. The balance of the people are Turkish Moslems, who have maintained an independent government for some years. The capital is at Kuldja which is 50 miles from the Russian border, to which there is a good road. The Sinkiang Turks are of the same stock as the Russian inhabitants across the border. The dissidents did not succeed in occupying the entire province, the Chinese having maintained a garrison at Urumchi, which is 300 miles east of Kuldja.

The terms of settlement are that the Turks will preserve an autonomous government, but will recognize the Chinese Governor at Urumchi.

General. The United States has been active in attempting to negotiate a settlement between the hostile Kuomintang and Communist parties. The American efforts have not impressed the Communists. Although the United

States represents itself as an impartial arbitrator, they point to speeches by representatives of the American Government which state plainly that the United States is committed to support the Kuomintang. Acts prove more than words. For years the United States has financed the Kuomintang, has equipped and trained its troops, and has furnished immense quantities of weapons, ammunition and stores. It is still doing so. American troops have not taken part in the fighting of the civil war, but the U. S. Navy and the Air Force have furnished practically unlimited transportation for Kuomintang troop movements. It is suspected that Americans are controlling Kuomintang strategy. Thus, the Communists look upon the Americans as an active ally of the Kuomintang, and regard with suspicion invitations to stop fighting. In view of this situation, no real progress has been made toward peace.

As far as known, Russia has taken no part recently in the civil war. Nevertheless she is in close touch with the situation, as evidenced by the visit of the Communist leader to Moscow during May. Russia is consolidating in Outer Mongolia, with which a definite treaty was signed for a mutual alliance on 9 June at Moscow. Russian troops are in north Korea.

From Outer Mongolia on the west, and north Korea on the east, Manchuria is all but enclosed by Russian forces. Events in 1945, and earlier in 1941 in the undeclared war with Japan, prove that large Russian forces can invade Manchuria both from Outer Mongolia and north Korea and the Vladivostok area. In case of war it would be difficult to defend Manchuria against simultaneous Russian advances from opposite directions such as occurred in August, 1945. Japan in 1945 could supply its troops from arsenals in Manchuria. This is no longer possible, due to dismantling of the plants by Russia prior or withdrawal. Kuomintang troops in Manchuria must now be supplied by the United States.

For the present Russia is content to allow events to go on in China without interference on her part. She is keenly interested, however, and watches closely while the civil war goes on to an as yet unknown end.

Misleading



Dear Editor:

I notice you are running the reports of the VII Corps Artillery conferences which I held at Artern after V-E Day. However, you have described them as "battle lessons."

The use of this expression is misleading. You will find that we did not describe them as "battle lessons" but merely said that we were holding conferences to find from the persons who actually did it what was done and how it was done. We did not claim they were right; we merely sought to determine what they really did.

BRIG. GEN. W. B. PALMER, USA
The Army Information School Carlisle Barracks, Pa.

Hearts and Flowers

Dear Editor:

I have just been appointed to the Regular Army. It may sound like a case of "hearts and flowers" when I throw a compliment your way, but here goes. Our FIELD ARTILLERY JOURNAL has been a source of guidance for me for the past five years, and I credit it, in an important degree, with helping me to attain my commission. I am pleased, incidentally, with the changes in recent months and want to help in the present membership drive. Therefore, please enroll as a member —, a former staff sergeant and buddy of mine who, although he gave his right hand and sustained many other injuries, has never lost his keen interest in the Field Artillery.

1ST LT. JOSEPH F. O'CONNOR, FA
West Orange, N. J.

Club Within Club?

Dear Editor:

I have noted with interest the recent changes in THE FIELD ARTILLERY

JOURNAL. As an ex-artilleryman, I enjoy keeping up with the technique of the arm, but my chief interest in remaining a member of the Association is that it gives me a certain amount of contact with friends of former days. So, please arrange to bill me regularly! I have received every issue of the JOURNAL during the war. May I suggest that there might be some place in the organization for an ex-artilleryman's club?

COL. E. H. EDDY, AC
Pasadena, California
—Later, perhaps.—ED.

Something Will Be Done

Dear Editor:

Sorry, I can't use a *case* of matches, but if you added a third style with *Compliments of the Field Artillery Journal* on the front cover, it would be good publicity for the JOURNAL and a limited number could be used to advantage by many ex-servicemen like myself. Passing these matches amongst our civilian friends would serve to get the name of THE FIELD ARTILLERY JOURNAL and the Association before them. I, for one, will order such matches from you.

FRANK R. DENT
Hackensack, N. J.
—This is a good idea, and something will be done about it.—ED.

Our Mistake

Dear Editor:

Reference the item, "Tops All Others," on page 331 of the June issue, I distinctly remember the 34th Infantry Division's 500th day in combat and, without too much effort, can count approximately 50 days more subsequent to that time.

1ST LT. JOHN W. VESSEY, FA
Lawton, Okla.

Item referred to stated ". . . the 3rd Inf Div topped all others with 351 days in combat in World War II." It should have read 531 and not 351.—ED.

Versatile Pfc.

Dear Editor:

Although an ex-Infantryman, now in the Signal Corps, I find your JOURNAL very interesting and look forward to every copy. Enclosed a money order for one copy of *Hard Pounding*.

PFC. R. W. O'BRIEN

Memphis, Tenn.

For the Record

Dear Editor:

I have read Major Taber's article, "Non-Divisional Artillery in Burma," in the March issue of the JOURNAL, with considerable interest, having personally participated in part of the operation described by him. Although I agree with most of the matters of fact and evaluations of the article, I find myself unable to concur entirely.

The first thing that attracted my attention is probably not chargeable to Major Taber. I am sure he would agree that counterbattery against Namkahm did not cause the destruction shown in the picture on page 153. That destruction was caused by bombardment. The very few rounds of counterbattery fire were unobserved, were fired at night as a result of sound ranging, and were generally directed towards an area several hundred yards from Namkahm. Similarly the devastation pictured in Lashio was the result of air bombardment rather than artillery fire.

I question seriously the sentence "Corps artillery units were always in supporting distance, but their fire was not needed until we reached Mu-se on 22 January." I recollect being quite surprised because corps artillery units were not always within supporting distance. Furthermore, the Chinese infantry frequently asked for corps artillery support during that period, which was refused by the artillery commander, who felt that the expenditure of ammunition would not be justified under the circumstances.

In connection with the Jap 150-mm howitzer which shelled corps artillery positions in the vicinity of Mu-se about 23 January, I have several comments.

To the best of my recollection when this gun was initially located, by sound ranging, there was no attempt to fire through a zone, the two batteries being fired merely at center range. Only a very few rounds were fired, and I am not even sure that battery volleys were employed. Naturally in view of the approximation of the location, effective neutralization could be expected only if the plotted location were used as the center of an appropriate zone. If any ammunition were to be expended on such a target, it should have been enough to get some results. As for the enemy fire which caused the displacement of the corps artillery headquarters, that fire consisted of a total of about thirty rounds, fired approximately one round every five minutes, and as Major Taber records, the casualties were negligible. The fire by this one gun succeeded in completely neutralizing one battery of 105s and one battery of 155s, causing their displacement out of range of the enemy weapon and causing the displacement of the corps artillery headquarters still further to the rear. As Major Taber indicates, the Japs had excellent ground observation, while the corps artillery group did not have a single observer or liaison officer forward at this time. However, we did have a sound ranging platoon and a very efficient air observer. I am afraid that the results of that day's firing, both by the Japs and ourselves, resulted in much loss of face by the corps artillery in the eyes of our Chinese allies. As Major Taber said, the hills immediately ahead of our positions had been patrolled but there were higher hills further to the rear, still in the Japanese lines, which overlooked our positions perfectly. This condition was evidently not considered in placing these batteries, and they occupied their positions in daylight with no attempt at concealment. I am not in possession of the figures as to the number of rounds fired on the Jap position after it was finally located by Major Berry, our very fine air observer, but 600 rounds appears to me to be a very high estimate. There was no massing of fire on the area in which Berry saw the puff of smoke, nor were battery volleys used. Precision fire was used throughout on this and other *suspected* enemy positions in the area, and I am afraid

that the "devastation" in the area was not too great. The position was within 20 yards of a very large tree which, although it lost several branches, was substantially intact when I inspected the area a few days later. The enemy succeeded in moving the gun away from the position and there is reason to believe that this same gun was one of those which a few days later caused such heavy casualties to the Americans of the Mars Brigade in the Nampakha area. It is regrettable that the corps artillery did not take advantage of an opportunity, which it soon had, to occupy positions from which counterbattery fire could have been placed on these Jap weapons which were firing on our American troops.

My observation of the Jap ammunition, however, is rather different than Major Taber's in view of the fact that I frequently noted and officially reported throughout the entire campaign that the percentage of duds from Japanese artillery was quite high. I find comments on this in my notes for January 19, March 29, July 25, November 1944. In connection with the use of white phosphorus for screening, although the smoke did pillar, I know of at least three operations in the North Burma campaign in which smoke was used to excellent advantage in withdrawing troops from exposed positions and in seizing an area under enemy observation. Further, observation of fire of light weapons in the jungle was almost impossible from the air if the first round was not smoke.

Forward observers were used very rarely and, as Major Taber hints, when used they were really liaison officers rather than observers. There were no other liaison officers, incidentally, in this unit. This complete reliance on the air observer resulted in considerable loss of efficiency.

It was my observation that the best results were obtained from using the air observer for practically all registrations and having him work closely with the ground observers and liaison officers on all jungle targets near our own troops, in view of the difficulties of sound-observation in the jungle. Surveillance of preparations by the air observer was extremely valuable as well.

LT. COL. T. N. DUPUY, GSC
Washington, D. C.

THE LAST WORLD WAR

(Continued from page 454)

first, a trial shot, was reported by the radars as only 170 yards from the target. I was about to apply this error when old Pickett shouted, "Wait! You aren't going to punch that correction into the main computer, are you?"

"Why not?" I demanded.

"Why, Hell!" he snorted, "it's less than the probable error of the locator device."

"All right, all right!" I conceded, "this is just practice, so to make everybody happy, I won't put the correction into the director. But if it falls in the same spot again, will you admit I was right?"

"If it falls in the same spot again, Gibby, I'll give you a bottle of Scotch I've had in my trunk locker since World War III."

The man is exasperating; in this case all the more so, since the next ship was reported 660 yards from the target.

"Dispersion," he grunted smugly; "I told you so."

"What do I care about 660 yards of dispersion," said I, "when one of these missiles will wipe out half a county?"

But When? From the earlier part of the year 2060 it became apparent to the entire world that the western hemisphere nations were approaching parity with the might of the Riegensdorf old world empire, and that Schmutzig, who realized it as thoroughly as anyone, had determined to attack us before the balance of power could swing too far in our favor. As in every conflict during our age the power which could strike first might well score a knockout through making the full weight of its power felt before the unsuspecting defender could parry the blow or return it. Schmutzig planned to strike the first blow and we knew it. But when?

Our population had now grown to 735,000,000 people. It required the huge area of Central Brazil (which had once been rank jungle) to produce the food supplies which western nations needed to supplement their own production. We had exploited our great mineral wealth, and harnessed all the water power and wind power provided within our boundaries by nature. Yet all of this could be destroyed in a few days of bombardment by

Riegensdorf, if we could not neutralize their assaulting agencies.

Our Secret. Riegensdorf's weapons were huge rocket ships, sheltered in underground hangars. Each carried fifty tons of atomic explosives. Schmutzig planned to send them on a one-way trip to the industrial centers of this continent, setting them off by remote control when his plotters fixed them as being over the desired target. Schmutzig knew that our Rocketraid Warning System would tell us when these engines were within 500 miles of our coast, and that we would fill the air with thousands of pollywogs* but he also knew from his experiments that it would then be too late for us to prevent over half of his frightful missiles from reaching their selected areas. What the Riegensdorf gang did *not* know was that our Telaurivisigraph installations all along the Greenland coast were even now transmitting records of Riegensdorf secret meetings directly to our Headquarters at Bar Harbor and we were, to use one of Colonel Scharke's homely phrases, looking down their throats. The Riegensdorfers could not suspect this for they considered this technique impossible without our planting pick-ups right in their buildings, and of course no one could get across the international boundary into Riegensdorf with a piece of electronics equipment in his possession.

Riegensdorf leaders and scientists were unaware that Dr. Liebschutz had discovered for us and made practical the use of radiosonde wavesearch. Heretofore these devices would record thousands of sights and sounds simultaneously upon the same microfilm and nobody could unscramble them. But Dr. Liebschutz perfected a technique whereby he could use the records of Schmutzig's speeches, and those of his henchmen, as a part of the process of screening out these particular voices from the maze of other voices picked up by our wave search relay station on an uninhabited Lapland shoal. Once having identified and segregated the desired sound signals, it was a simple matter to zoom up and pull out the appropriate accompanying sight signals. Thus, without too much delay or difficulty, we were able to sit in our projection room

and see our enemies on the screen while listening to their discussions within a few hours after they took place. For once in the history of the world, an intended victim was going to be able to know in advance the exact time and place of the aggressor enemy's secret assault, as well as the details of its execution! This would prove of inestimable value to us as you will see later.

By the fall of 2063, we knew definitely that Schmutzig and his gang planned to destroy the civilization of the western hemisphere during the spring of 2064. The general public knew nothing of this. We could not even take high government officials into our confidence, for when too many people know a secret, it is bound to leak out, and Schmutzig must never be led to suspect that we were learning all the details of his plans.

The newspapers were full of editorials praising our diplomats for bringing about friendly relations with Riegensdorf and urging the War Department to destroy the last vestiges of international distrust by disbanding the armed forces.

We could tell how elated the Riegensdorfers were as we listened to the transcripts of their meetings. Schmutzig did everything he could to perpetuate our country's apparent delusion. He sent us a bronze statue of himself shaking hands with Uncle Sam while the dove of peace perched upon his shoulder. Engraved upon the accompanying bronze plaque were the words, "Zum Weltfrieden und treue freundlichkeit, wir halten immer allen fgest und treu zusammen." The Wodenstrasse and the Siegsallee in Riegensdorf had their names changed to Lincolnstrasse and Roosevelt Ring. Schmutzig and members of his staff visited Washington at Christmas 2063, and dined with the President in a room whose ceiling was entirely covered with a floral design reading "Peace on Earth, Good Will to Men." Schmutzig personally awarded the Order of the Black Eagle to Senator Merton P. Keeler, whose speech of reconciliation before our House of Representatives had succeeded in defeating the War Department's bill appropriating six million dollars to purchase a base in Northern Iceland for launching "pollywogs," the principal defensive weapon against atomic rocket ships. That same day we listened to the interception

*Common name for the electronic homing interceptor. M3 A6.

transcript of a secret meeting in Riegensdorf in which it was decided to divert rocket ships from Cincinnati to Pittsburgh in order to be more certain of saturating that more remunerative target! But we bided our time, for if we had revealed what we knew, few people would believe us, and Schmutzig would be warned to postpone his attack and modify his plans.

Target Date. In March we learned of the Riegensdorfers' target date — April 15. Early that morning, the rocket ships were to be brought out from their underground shelters, fueled, armed and attached to their launching devices. When all were ready, at a given signal, they were to be launched at the same instant, i.e. 0430 hours. Allowing for the difference in time and the time of flight, this would put them at their targets in American cities shortly after all but carousing parties had gone to sleep.

The drama of World War IV was approaching its climax. Under my direction all the atomic loads in the country were assembled at the bases of our ionosphere ships and loaded into these engines of destruction. I was taking no chances in my plans for the counterpreparation. The Chief of Ordnance was notified to get all the electronic homing interceptors, M3A4, out of war reserve and set them up at our "pollywog" launching fields along with the newer models M3A6. We did not order all leaves and furloughs canceled, for this might have excited notice in Riegensdorf; instead, all authorities competent to grant leaves were given secret orders to approve no more of them until April 16.

At 2100 hours, 14 April, the alert went out to all installations in brevity code. At that hour all commanders of radar stations, "pollywog" batteries, ionosphere ship bases, rocketraid warning stations and teleaurivisigraph installations went to their office safes and withdrew the sealed envelopes which contained the full details of Riegensdorf's foul plot, the precise location of their rocket ship assembly field, and the hour at which all concerned must be prepared to stand by for the counterpreparation.

D-Day. Our teleaurivisigraph sets kept tuned in to Riegensdorf for the next few hours, and to our great delight,

the final details were confirmed. We even overheard the report that the first four squadrons of rocket ships were on the assembly field at 0417 (Riegensdorf time) and that the remainder would be in place by 0428. The time for launching the Riegensdorf ships was retarded to 0435 hours.

At 0426 I stood by the director in our main control station, trembling with anxiety. The American pilotless ionosphere ships, packed with their dreadful freight, had been in the spaces for two days and were now hovering over the target area at altitude 90 miles. I gave the warning signal to all radar stations, watched for the coincidence of the No. 1 ship with the luminous index on the radoscope, and then pressed the firing button.

"On the way!" shouted old Colonel Scharke, who was watching the proceedings from his easy chair along the back wall.

"Where's old Pickett to-night?" I asked him.

"He flew down to the pollywog batteries on Long Island," said he. Probably he's worrying hell out of some young executive officer right now."

"He'll miss all the fun down there," I predicted. "Manning the pollywogs was probably an unnecessary precaution, for unless Riegensdorf holds out some rocket ships for a second assault, none of them will ever get off their assembly field, and the pollywog batteries will never get into action."

"Old Pickett is a pessimist, Gib," said Scharke. "He never did trust you."

FDC—2064 Style. Now the reports were coming in. The beams from 20 radar locaters throughout the western hemisphere careened off the surface of the Moon and came down at an almost vertical angle to track the course of our ionosphere Ship No. 1 as it hurtled down to earth — Schmutzig's first warning that we were taking any defensive measures, a warning which certainly must have come too late to permit him to change his plans or withdraw any rocket ships into their shelters.

The area covered by the intersecting rays on our central plotting board was slightly larger than usual—22,455 yards across. But we computed the center of it and measured the point of fall as 33,900 yards from the center of the enemy assembly field at an azimuth of 3910

mils. This placed the trial ship's fall between us and the target.

"Short!" cried Scharke. "Make a nice bold change on the next one, Gibby!"

"Will you pipe down, please?" I glared at him. (Bold change indeed! I had never known our equipment to miss the correction factors by over 5000 yards which is close enough to make dust of everything in the target area!)

"Corrections all ships!" I commanded. "South five nine; over eight one and down three. Where do you check that plot, Stevens?"

"Approximately correct!" reported Stevens from his correction computing graphoplot.

"Based on only one shot!" yelled old Scharke.

"Think I want to let them get away from us?" I cried. "Computers and plotters attention! Apply corrections as announced. Ships form column for descent on signal!"

"No. 2 ready!" came the report, "No. 8 ready! No. 3 ready, etc. All ships ready, sir!"

"Stand by for firing all ships!" I ordered. It was a thrilling moment. I held the reins of destiny in my hand. In an instant I would destroy the awful might of Riegensdorf.

"For God's sake!" yelled Scharke, "Aren't you going to get a bracket?"

T.O.T. I ignored his interference. The first ship's luminous dot approached the index on the radoscope. I pressed the firing button marked No. 2. Then No. 3 and No. 4. One after another I hurled our ionosphere ships down at Riegensdorf's helpless and vulnerable rocket ships until I had pressed the last button.

"Didn't you hold anything in reserve?" shrieked Scharke in despair.

For the first time I began to have misgivings. Suppose some computer had turned the wrong dial? Could there have been any slip in feeding the corrections for curvature of the earth into the missile plotter? But no, surely my well trained crews would not have made such a foolish and wholly avoidable mistake. Yet they must have been on edge just as I was at this crucial moment.

The reports now began to come in. The plots went up on the impact radoscope. A cry of consternation came from Stevens.

"Anything wrong?" I asked him nervously.

"Twelve thousand yards from the center at azimuth 4050," he reported.

"Still short!" groaned Scharke. "What did I tell you?"

"If only it were a few thousand yards closer, it would be effective nonetheless," I said, "possibly the first shot was erratic."

"Possibly our *trial* shot was erratic," barked Scharke.

Then came the reports on the remaining shots. They were in a group within two thousand yards of each other, not one was reported closer than 10,000 yards to the target area.

"How could I have miscalculated? What could I have done wrong?" I cried, wringing my hands.

"Wrong?" screamed Scharke, "You ignored the law of errors, guessed at your final data, crept on your range and trusted blindly in the combined infallibility of seventeen human agencies. On top of that you broke Rule 1 in any man's war and put all your eggs in one basket. Have you got any more ionosphere ships?"

"No," I confessed with a broken sob, "We will have to place all our hopes in the pollywogs now."

Pollywog Punch. There was no further use staying in the control room now. We could only hope that the location of our shots was incorrectly computed and that we may have gotten some effect after all. So we went to the Intelligence Room to listen to reports streaming in.

Warning of the approaching attack was now broadcast all over the western hemisphere. Our hopes of escaping it faded with the receipt of a report from a mid-Atlantic station that large missiles were detected moving westward over the Atlantic Ocean at a very high altitude.

Soon the rocketraid system began to spread the alarm from Greenland to Patagonia, furnishing data to the director stations of all our pollywog batteries. Then we began to hear that the pollywogs were in action.

As events proved, these weapons gave a rather better account of themselves than might have been expected. Discounting possible duplications in the claims of the various stations, it is safe to say that seventy-one of the Riegensdorf rocket ships blew up in the stratosphere,

causing only minor damage under them, such as broken windows. We could hear or feel the explosions of over twenty of them from our locations in the Control Room. But it is now known that forty-five of them reached their target areas. The Riegensdorf Control Station made some sort of error which caused two rocket ships to go down in Lake Erie instead of Detroit, so that that city suffered only the damage occasioned other lakeshore cities by the resulting tidal wave. Its industry is considered as capable of being repaired within a matter of weeks. But Cleveland, Pittsburgh, Philadelphia, Boston, San Francisco, Los Angeles, Mexico City, Buenos Aires, Santiago, Rio de Janeiro, Montreal and Toronto were smashed to rubble. The excellent results achieved by the pollywogs battery on Cape Cod brought down all the rocket ships destined for New York City and that metropolis might have been spared, but for the fearful blunder made at the Long Island battery. This was the most powerful and modern of all the batteries, and it was here that old Colonel Pickett had gone to look on before the attack.

Right 3200. The story of the Long Island tragedy, as told me by the recorder of its control group, is as follows: The launchers of this battery are fully automatic, i.e., they are pointed and controlled by directors and by electrical elevating and traversing mechanisms. The crew of twenty men had loaded them at the first alert warning and then had gone below to their assignments in the control room, 70 feet below the ground level in the re-inforced concrete, air-conditioned galleries. The battery commander stood before the director dials, listening to the data coming in over his earphones, while the elevation and direction control operators kept turning their handwheels slowly. These were the two best operators in the country; no one could compare with them for keeping the indices lined up to a fine hair's accuracy on the pointers that were connected to the Radar's beam reflector. The battery commander carefully punched the effects of weather, curvature and rotation of the earth, and speed of the target into his calculator. He read off the net corrections and announced them to the director operators:

"Elevation correction plus four; Deflection three — as you were — deflection one, three, zero!"

The operator pressed the plungers on the director; the launcher control operators spun their wheels rapidly to keep the indices aligned. Waiting in tense silence, they finally heard the distant hum of the Riegensdorf rocket ships.

"FIRE!" commanded the Executive.

The door to the stairway burst open; the bent and grizzled form of old Colonel Pickett staggered breathlessly into the control room; his red face shone with sweat; his eyes were dilated.

"Cease firing!" he gurgled weakly.

"ON THE WAY!" came a loud voiced report from the other end of the room.

"Too late to stop them, Colonel." The executive was cool, self-possessed. "What's the trouble, sir?"

"Your launchers!" the old man gasped, "they're pointed toward New York! Didn't you have a line-of-metal checker up there?"

"No need for that," said the Battery Commander, "these launchers are full automatic, director controlled. Whatever we punch into that director simply has to go to the guns. It's mechanically impossible for that machine to make an error. Doubtless you became disoriented, Colonel."

"Disoriented hell!" gasped the old man. "Never in my life have I ever been—well, hardly ever, anyhow. But I know the big dipper when I see it, and I can still find the polar star from it. Measuring with my hand in mils, I would say your launchers are pointed at a true azimuth of about 5050. That's a little north of west—New York City, by God!"

The Battery Commander grew pale. He rushed to the director and looked at the figures in its window.

"My God!" he shrieked, "you set deflection three, one, three, zero! The correction was only one, three, zero!"

The operator quailed. "That's what I thought I heard you say, sir."

The command radio began to sputter.

"Calling all pollywogs — calling all pollywogs! Cease firing! Check director settings. Pollywog missiles passing near New York City are being drawn into the heart of the city by the mass of steel and re-inforced concrete. Do not lay on inshore targets. Over."

The rest was in the newspapers. Considerable

damage was done to the skyscraper section of New York by the pollywog missiles. Being designed to "home" on a materièl mass, all those passing within the influence of the city had turned and dived onto the biggest structures.

Morning After. Surveying the damage, to date, the estimated loss in killed or maimed in the United States is 410,000,000 people. Over half the people of Canada and South America are reported to be dead. Only the cities of Chicago, Detroit, St. Louis, Cincinnati, Birmingham and New Orleans escaped the ruin brought through our pollywog barrage by the Riegensdorf rocket ships.

Early in the morning practically all western hemisphere broadcasting stations went off the air. All we could hear on the radio was triumphant march music from Riegensdorf, with boastful speeches by Schmutzig and his Minister of Public Enlightenment. We learned that our ionosphere ships had gone down in one of the forests of the restricted area surrounding the Riegensdorfers' rocket ship hangars. As no one was ever allowed in these areas except on government business, only a few score enemy citizens were killed by the terrible blasts which formed craters so deep that they revealed unknown sources of minerals 300 feet below the ground surfaces. All the windows in four Riegensdorf cities were broken; but the enemy's rocket ships sustained no damage and took to the skies as scheduled at 0435 hours.

The Riegensdorf leaders spent the afternoon of April 15th arrogantly calling upon the shocked survivors of the western hemisphere countries to surrender. But here they met a setback. We revealed to all the American nations our knowledge that the Riegensdorfers, like us, had expended every available ounce of atomic explosives in their first, terrific surprise blow. We told them that we still had a few industrial cities left, and millions of fighting mad people who were willing to form an army and finish the war by the barbarian methods of human conflict employed a century ago. As soon as it became apparent that there would not, indeed, be any more rocket ship attacks, every western hemisphere nation rallied around the United States and served notice upon Dictator Schmutzig that we had only

begun to fight, and let him bring on his armies, his air fleets and his navies! So I expect it will be a long and bloody war. Meanwhile, the public is clamoring for a scapegoat and, alas, I am to be the chief defendant in the Court-Martial which meets next week. Is this fair? After all, I have devoted my life to the development of monster machines of war for the defense of my country. Should I not be forgiven for my sublime confidence in them?

* * * * *

POSTSCRIPT

Extracts from the Speech of the President of the United States before the assembled Houses of Congress on Thanksgiving Day of the year 2071.

Gentlemen, we are gathered together to give thanks to Providence for the final victory we have gained over the enemy. It is not a day for rejoicing, since we have lost 60% of our population in the struggle and most of our land has been laid waste. We must look forward with calmness and determination to the rebuilding of our industry and the progress of science.

We must guide the wretched handful of enemy survivors into the paths of peace. War has become such a terrible thing that another world conflagration is unthinkable. We must prevent it at all odds by the formation of some sort of Community of Nations.

In retrospect we should be thankful that we were ultimately guided to victory by wise policies. Let us give credit where it is due. First, to our forefathers who made this a land of refuge for the persecuted: for if Professor Anton Czrkwicz had not taken refuge here from Schmutzig's vengeance, we should not have learned the secret of prolonging life before it was too late; and if Doctor Liebschutz had not taken refuge here, we would not have had his marvelous telaurivisigraph system, which we kept a secret from the enemy till the end of the war and which told us in advance of his every move.

Then we should give thanks to our eminently fair concepts of justice. For had not the Court-Martial acquitted General Gibbon A. Yew, clearing him of blame for his honest mistakes in the first few moments of this war, we would not have had his distinguished services

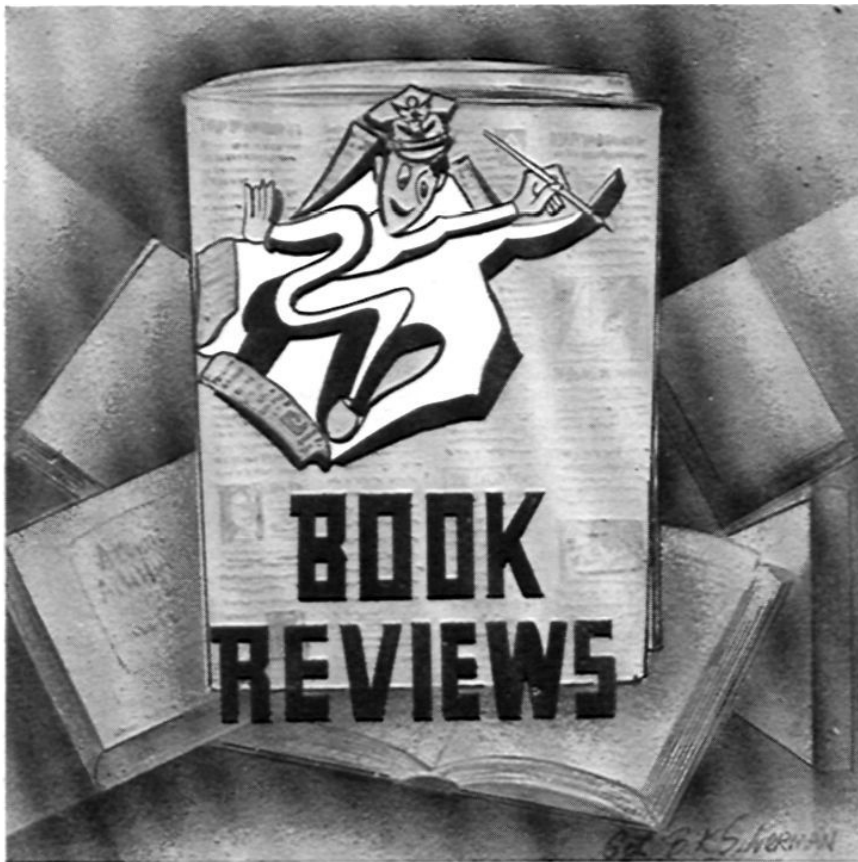
during the last phases of the conflict. For when the last known sources of uranium and plutonium were scraped from the ground to give us the materials for one last attack against our foe, using missiles filled with atomic explosives, it was Yew who conducted the adjustment, and this time he made no mistakes. As our old friend, Christiancy Pickett, remarked to him after he went to fire for effect: "Yew, you didn't get a 'U' this time, did you?"

And by the way, gentlemen, don't throw out that provision in the appropriations bill for the retired pay of these old colonels. You won't have to pay it much longer, for they have both refused to take their inoculations this year. I quote directly from their remarks the other day in my office: "We have hung around long enough," they said. "Four world wars are enough for us. We'll leave World War V up to some of you hundred year old kids." I shall never entirely understand the military mind. We know, of course, that there will be no World War V, for we fought this war to make the world safe for democracy, and moreover there are no materials left for making plutonium. So let us all unite in giving thanks that everlasting peace is at last assured.

Commissioned in 1917, Colonel Christiancy Pickett served with the artillery of the 4th Division throughout the European campaigns in World War I. In World War II, he went to the Pacific Theater with the 33d Infantry Division. At the present time, Colonel Pickett is the senior

Instructor with the Utah National Guard.





Thought-provoking Study

THE ABSOLUTE WEAPON — *Atomic Power and World Order*. By Frederick S. Dunn, Bernard Brodie, Arnold Wolfers, Percy E. Corbett, William T. R. Fox; edited by Bernard Brodie. 214 pp. Harcourt, Brace and Co. \$2.00.

By Lt Col. T N Dupuy, CSC

A book has been written which should jar us from our complacency regarding the atomic bomb. It is not an imaginative, lurid, impossible flight of fancy, nor does it grind an axe for someone's pet utopian theory. It is not, on the other hand, spoon-fed knowledge or a substitute for analysis. *The Absolute Weapon* is a thought-provoking study of a matter of such vital significance to the future of the United States that it should be required reading for every American citizen. It is one of the most important civilian contributions ever made to American military thinking.

The Absolute Weapon is a product of a group of the Yale Institute of International Studies. The Director of the Institute, Frederick S. Dunn, has written a provocative introduction, Bernard Brodie, who edited the book, wrote two

chapters, while Arnold Wolfers, Percy E. Corbett and William T. R. Fox have contributed a chapter each. The thoughts of the authors have been carefully integrated, and the result is a group product rather than the compilation of separate views on the atomic bomb. While it is impossible to say that certain parts of the book are more important than others, Brodie's chapters on the purely military implications and Wolfers' discussion of the effects of the bomb on Soviet-American relations will undoubtedly prove most interesting, and probably most productive of controversy, to the military man. The soldier cannot afford to disregard the interesting discussions of the factors involved in large-scale attacks and counterattacks with airborne atomic bombs, the enlightening exposition of some of the factors to be considered in a defense program if our nation is to have any hope of surviving a future atomic war, the suggested broad strategic concept of such a war plus the carefully considered estimates of the roles and functions of ground, air and naval forces.

The fundamental thesis of the book is expressed in the introduction: "While the

best way to avoid atomic warfare is to get rid of war itself, the strongest present ally in the effort to get rid of war is the capacity to resort to atomic warfare at a moment's notice." This paradoxical thought is supported by Wolfers' statement that "in the atomic age the threat of retaliation in kind is probably the strongest single means of determent," which leads Brodie to conclude that, from the national point of view, "the first and most vital step in any American security program for the age of atomic bombs is to take measures to guarantee to ourselves in case of attack the possibility of retaliation in kind," and Fox to assert that the "members of the United Nations should agree now to undertake instantaneous retaliation" as the first step in obtaining international control over atomic energy. While one may disagree with these conclusions, it is impossible to ignore the reasoning with which the authors elaborate these key statements.

One may find other things to disagree with. The section on relations with Russia, for instance, while extremely interesting, very objective, very frank, is not always logical. There are other gaps in the logic and it will be easy to find discrepancies and even apparent inaccuracies. One wonders at some of the unsupported assumptions, such as the flat discounting of the sabotage potentialities of the atomic bomb. The discerning reader may even get the impression that the authors deliberately and consciously eschew certain fundamental conclusions which they unconsciously tend to support. The problem is so broad, has so many varied aspects, is so far-reaching in its impact on the simplest as well as the most complex human relationships that it will be susceptible of a perfect, intellectually honest solution only when we have attained the Millenium. *The Absolute Weapon* is a long and firm step towards that perfect solution. For all its shortcomings, there is meat in every page. It is apparent to those who heard or read his first speech before the Atomic Energy Commission that Mr. Baruch has been influenced by *The Absolute Weapon*.

It is a book which will give most to the critical reader. The authors' statements and conclusions should neither be rejected nor accepted because of prejudice

or manner of presentation. The military man should consider this book as in the nature of a very generalized estimate of the national and international situation, and on that basis form his own conclusions and such decisions as it is within his scope to make.

Enthusiastic Loyalty

PATTON AND HIS THIRD ARMY. By Col. Brenton G. Wallace. 232 pp. Illustrations and maps. Military Service Publishing Co. \$3.00.

A National Guard officer, Col. Wallace served throughout the European campaign in the G-3 section of Third Army headquarters. Most of the time he was in charge of the Liaison subsection, a position which gave him unusual opportunities, of course, to know what was going on in all staff sections and in subordinate and adjacent units. He had many chances to see Gen. Patton in action. He is pro-Patton without qualification.

This book has two characteristics worthy of comment and commendation. In clarity and ease of reading it compares favorably with many of the books being turned out by professional war correspondents. It explains enough of army organization and methods to enable the civilian reader to follow the story, and does it without interrupting the story.

Col. Wallace gives more evidence, if any is needed, that Gen. Patton was always an advocate of the attack, of keeping operations flexible, changing the plan as became necessary or desirable, but keeping on the offensive. It is interesting to compare this credo with that of Marshal Montgomery, another successful soldier, as quoted by Alan Moorhead in his book, *Eclipse*: "You must make a plan and then both sides, you and the enemy, must fight the battle along the lines of that plan. If you have no plan, or are unable to carry out your plan for one reason or another, then you must abandon the offensive at once. The whole point is that you must never attack until you are absolutely ready and certain of being able to carry out your plan."

The following sensational and undocumented paragraph in Col. Wallace's book has been quoted widely in sales promotion: "On 26 July, although Headquarters Third U.

*S. Army had not yet become operational, General Patton was designated Deputy Commander of the Twelfth Army Group and was ordered to take command of the VII and VIII Corps for the breakthrough. * * * * The First U. S. Army has been given complete credit for the breakthrough, whereas General Patton planned it and executed it and used not only First Army troops but also a number of his own Third Army units, i.e., the 4th and 6 Armored Divisions, to make the actual breach."*

It is particularly unfortunate for any military writer to allow his enthusiastic loyalty to his commander, however eminent and successful he may be, to run away with itself. General Patton's Third Army did a splendid job of exploiting, side by side with First Army, the breakthrough that First Army made at St. Lo in Operation *Cobra*. However, General Omar Bradley, and not General Patton, planned this operation as the First Army Commander, a position which he yielded to General Hodges on 1 August 1944 when Twelfth Army Group and Third Army became operational. Since all concerned knew the timing of these projected organizational developments, General Patton was thoroughly familiar with the concept and timing and progress of the planning for Operation *Cobra* and the role his Army was to play. However, to say that General Patton "planned it and executed it" is factually incorrect. The inclusion by Colonel Wallace of this paragraph in his book was an error; it serves to cast doubt in the minds of informed readers as to the general dependability of the entire book; and it serves still further to confuse the uninformed. D. A.

Modern Robinson Crusoe

70,000 TO 1, by Quentin Reynolds. 217 pp. Random House. \$2.50.

This breath-taking tale of a modern Robinson Crusoe is a welcome addition to the lengthening list of splendid Quentin Reynolds books. *70,000 to 1* is the story of a young air force bombardier, Gordon Manuel, who was forced to bail out over New Britain early in the war. He finds himself the only American on an island overrun with 70,000 Nips. Such a setting provides

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The Autobiography of William Allen White was the March selection of the Book-of-the-Month Club. It has been high on the best-seller lists since publication. **\$3.75**

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The Sage of Emporia

THE AUTOBIOGRAPHY OF WILLIAM ALLEN WHITE. 648 pp. Macmillan. \$3.75.

Nowhere in print is there to be found a better description of American small town life and political realities than in the *Autobiography of William Allen White*. An active participant in the history of his day, William Allen White has proven himself a keen observer as well. The story of his life would be interesting regardless of who wrote it, but recounted by him personally it becomes a tale that is both engagingly human and brilliantly vivid.

His memoirs start with his boyhood days in Kansas in the late eighties. Through association with his father, Mr. White whet his political appetite at an early age. Upon graduation from college, he had a whirl as a Kansas City reporter before finally purchasing the *Emporia Gazette*, which he published until his death. Though never aspiring to office personally, White soon became a power in Kansas politics.

His influence was not long confined to the Middle West. An editorial entitled "What's the Matter With Kansas" was picked up by papers all over the country and made him famous overnight. Mark Hanna, the Republican boss at that time, had this editorial made into circulars and distributed them to "good" Republicans throughout the country. Through his writing and political activities, he became both famous and reasonably wealthy. But neither of these was ever reflected in his homey, down-to-earth style of writing. Probably the best illustration of this is the obituary which he wrote upon the death of his daughter Mary. This extremely difficult task produced one of

the permanent classics of literature. It won the Pulitzer Prize and has been reprinted in countless anthologies. And it has preserved lovable young Mary as a beautiful memory to two generations of youth.

Mr. White's writing reflects an intense interest in personalities. Since he was a close personal friend and great admirer of Theodore Roosevelt this book gives a new introduction to the immortal "Teddy" and many other leaders of that era. White's friendship with Roosevelt was a wedding of personalities and principles. A fearless crusader himself, White was a natural follower of Roosevelt. A political realist and well versed in the "know how" of the great game of politics, nevertheless he never wavered from the ideals of liberal Americanism in which he so strongly believed. The memoirs of this great American give a fresh and clear insight into the political and economic "growing pains" that characterized the period when American industrial might was coming of age. R. F. C.

Russia's Premier

STALIN. By Leon Trotsky. 516 pages; index; illustrated. Harper & Brothers. \$5.00.

By John R. Cuneo

The assassin's pickax failed to stifle Trotsky's final indictment of Stalin. He had finished seven chapters and one appendix. The English translation of all but the seventh chapter had been approved. From his copious unfinished notes the editor of the book made five chapters and two supplements. The whole sums up to a damning portrayal of a man of mediocre ability whose inordinate craving for personal power enabled him to use all means—fair and foul—to rise to the top of the Communist Party and of the Soviet Union.

If judged purely as a biography the book seems a successful effort by Trotsky to show Stalin and his influence. Bias is the chief charge leveled at the author. There is no doubt that he is prejudiced yet he made a studied effort to appear objective. When his sources were scanty, he frankly admitted the fact; when he drew on his own personal reminiscences, he did not conceal his identity as a witness; documentary evidence

is quoted in full. Indeed, sometimes the reader is swamped with the evidence. Certainly a great many biographies have been based on far less research. The mere charge of prejudice does not counterbalance the evidence contained in the book.

It fails as personalized history because Trotsky cannot be a historian where Communism is concerned. Based on his own account it is obvious that Stalin did not betray Communism—Communism merely went Stalin's way. The party leaders saw that Communism could not be imposed on Russia without the brutal ward politics of Stalin. The intellectual polemics of the Revolution could not hold the masses and so they were dropped with the same ruthlessness that characterized the Revolution. A historian would recognize that at that moment Communism became a Russian form of government, not a movement for the union of the workers of the world. But Trotsky could not see the connection.

Obviously this biography illuminates the period of history through which both its chief character and author moved. Therefore it cannot be missed by a student of any phase of Russian affairs. But there is a more important question in view of the fact that the destiny of the United States is tightly bound to Russia. Does it help the ordinary citizen in his desperate pursuit of trying to understand Russia?

The answer must be a qualified negative. It is not because Stalin is portrayed in such a bad light. It is unfortunate to have the head of a friendly state depicted in such terms but it is best to have such indictments in the open. The negative answer is because Russia's actions cannot be adequately explained by the past of certain leaders during a revolutionary stage of Russian history. They arise from far more complex factors. The qualification to the negative arises from Stalin's position as dictator which permits him, if he sees fit, to resist those factors. In this respect his character does influence the present.

The ordinary reader will probably find this book too long and confusing because of its names, political parties, varied digressions on all sorts of subjects and other features which discourage reading. Few will finish the book. Various appendices—the three

concepts of the Russian Revolution, a chronological guide, a glossary and even a list of Stalin's aliases and pseudonyms—help in some instances and hinder in others.

On the other hand there are brilliant passages of writing to reward the persevering reader. Short descriptions of individuals whose careers put to shame any adventure novels spice the pages. The 1905 and 1917 uprisings are superbly portrayed. Perhaps his death prevented a similar treatment of the purge trials of 1937 and 1938.

In short, this is a book which defies whole-hearted approval or condemnation.

Ammo Text

ELEMENTS OF AMMUNITION. By Theodore C. Ohart, Major, Ordnance Dept. John Wiley and Sons, Inc., New York, 1945. 412 pages, illustrations, index. \$6.00.

By Richard Cordon McCloskey

This is an excellent book for those who want to learn something quickly about ammunition design, development, operation and packaging. The author covers in elementary, but thorough, terms every type of ammunition and ammunition component used by our armed forces (and some foreign armies) except proximity fuzes, guided missiles, torpedoes, submarine mines and atomic bombs. Presumably these were left out for security reasons. Adding them to the next edition will make this a standard text, and eminently useful to anyone interested in more than merely pulling the trigger. The book is very well illustrated.

ETO Finale

THE LAST PHASE. By Walter Millis. 130 pp.; illustrated. Houghton Mifflin Co. \$2.50.

By Col. John E. Coleman, FA-Res.

Subtitled *Allied Victory in Western Europe, The Last Phase* was originally written for foreign-language circulation in France, Italy, Scandinavia, and (especially) Germany. Intended to be read by the vanquished, who knew many details of events from their personal experience, it had to be carefully and accurately prepared. The balance and



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The few errors are chargeable chiefly to the cartographer; for instance, it was our 29th Inf Div that landed on Omaha Beach, not the 20th. Such few slips won't bother the serious reader, however. Altogether this is a book wholly to be recommended for careful perusal and for one's personal military library.

High-level Organization

NATIONAL SECURITY AND THE GENERAL STAFF. By Maj. Gen. Otto L. Nelson, Jr. 601 pp.; index; illustrated. Infantry Journal Press. \$5.00.

Organization and the administrative process is part and parcel of the soldier's profession. Hence, most soldiers fancy themselves experts in these fields. I know I always have—that is, until I read *National Security and the General Staff*. This book jarred me to a full realization of my relative ignorance, and I approach this review with humility.

Major General Nelson is acknowledged as an expert in organization and public administration; in his own words, his book is "a combination of ideas and information obtained through academic research tempered and modified by on-the-job experience and observation." The original research was accomplished in 1939-40, when General Nelson was a Fellow at the Graduate School of Public Administration at Harvard University. His "on-the-job experience" was from a most enviable observation post during two years of wartime change (1942-44) in the office of the Deputy Chief of Staff in Washington. It is not too extravagant to state that there is no

other officer in our Army equally qualified to attempt so monumental a task. Remarkable to me, moreover, is the blunt and critical objectivity that General Nelson brings to his analysis, in view of his intimate personal role in the involvement of the wartime staff and command structure. Reassuring — or discouraging, in another sense—is his frank observation that "the more intimately one becomes involved with these problems, the less positive he is of the right answers." This recalls to mind some words I read somewhere sometime on the administrative process in general, ". . . let fools with forms make jest, that which administers best is best."

Personally I enjoyed the earlier (pre-World War II) chapters of *National Security and the General Staff* more than the later ones. The stage setting for the General Staff, its emergence and struggle for existence, and its great initial test in World War I, are all presented in fascinating and dramatic manner.

Unless he was there, on the other hand, the average reader will find the lengthy and detailed explanations of the Washington staff hierarchy in World War II somewhat exhausting. In my opinion, much of this material might well have been lifted into accompanying appendices, to permit more rapid progress to the heart of General Nelson's message, if such it can be called, in the final chapter called "What of the Future?" There is no basis in logic for quarrel with his urgent plea for a more reasoned unity in the top levels of our sea, air and ground services, particularly in the related fields of policy planning and methods of more effective control. These are essential for national security. Challenging to all is General Nelson's analogy between the present over-all organizational problem for national defense and the internal War Department problems in 1902, when the General Staff concept was formulating. The "level" of discussion has shifted, but the arguments are much the same. National security will be the winner if many—and particularly policy makers high in public life—read this splendid study.

D. A.

WRITING YOU'RE READING

By Maj. Robert F. Cocklin

Being a military magazine, the *Journal* devotes the majority of its book space each month to publications dealing with military things. However, our book sales indicate that many of the books purchased through the Association relate in no way to soldiering. The mission of this column, then, will be briefly to scan the field of books, both general and military, each month, as well as to note such other odds and ends of literary trivia as may seem to be of interest.

* * * * *

For the past few months, Taylor Caldwell's *This Side of Innocence* has maintained its lead in current fiction. Despite a luke-warm welcome by the *New York Times* book reviewer, the book made its first appearance on the best-seller lists early in May, and then bounded to the top and stayed there. It happens that we share the sentiments voiced by the *Times'* reviewer regarding the literary worth of this book; obviously, however, the hundreds of thousands who have bought the book feel otherwise.

* * * * *

Right or wrong, good or bad—and no reviewer has accused it of being indifferent—Ralph Ingersoll's *Top Secret* still stands unchallenged as the leader in the post-war parade of "now-it-can-be-told" military chronicles. Scrambled for a short time was *The Egg and I* when *Top Secret* briefly nudged it out of first place on the non-fiction list.

* * * * *

Speaking of *The Egg*, this book has been number one on the non-fiction menu for the past seven months! The publisher reports that, with the next printing, over 1,020,000 copies will be in print. Betty MacDonald's pen has truly bested the famous goose, for no EGG could be more golden.

* * * * *

I have had several unsolicited comments on *Winning Golf* by Byron Nelson. Many "How to Play" books are dull and of little or no value to the novice, but *Winning Golf* is truly the exception to this rule. Two par-shooting golfers have been high in their praise of this book, which has also been echoed by the duffers. Simply written, the tips from this

champion are guaranteed to improve your game.

* * * * *

The public still goes for the sexy novels. Proof of this pudding is the success of Rosamund Marshall's *Dutchess Hotspur*. A novel of Georgian London with a heroine whose experiences rival the adventures of the amorous *Amber*, Miss Marshall's book maintains an excellent sales record.

* * * * *

James M. Cain (*The Postman Always Rings Twice*) has rung the bell again with his *Past All Dishonor*. Dishing out his romance on the rough, tough and rugged side, Cain's reader following increases with each new publication.

* * * * *

With us again in *A World to Win* is Lanny Budd, the hero of so many Upton Sinclair books. Supported by a cast including Roosevelt, Stalin, Churchill and other great men of our time, Lanny is busy with the backstage efforts of those leaders in planning the victory so recently won. For those who have been pleased with Lanny Budd in the past this will be a welcome addition.

* * * * *

We who have been harassed continually by the radio commercial will chuckle over Frederic Wakeman's popular new novel *The Hucksters*. The hero is an account executive whose primary job is to maintain friendly relations between the advertising agency for which he works and one of its big clients. Mr. Wakeman has done a fine job with this new setting and in the course of the riotous tale, the reader will become acquainted with the processes that bring about that national menace—the commercial.

* * * * *

The Snake Pit by Mary Jane Ward continues its popularity. This story of an insane girl and her fight for recovery comes at a most opportune time when authorities throughout the country are fighting for improvements in our mental institutions. *The Snake Pit* spotlights these deplorable conditions.

* * * * *

Though it failed to keep us up nights, Margery Sharp's *Britannia Mews* has brought joy to the hearts of the publishers. Her success with *Cluny Brown* enhanced our desire to further our acquaintance with Miss Sharp's work. In our humble opinion, Miss Sharp completely exhausted the heroine, Adelaide Culver, by working her at least a hundred pages too far. Again, what is our opinion against the experts? *Britannia Mews* was selected by the Book-of-the-

Month experts and while it is not now on the best-selling list, this distribution alone insured success for both author and publisher.

* * * * *

W. Somerset Maugham has come out with a new novel entitled *Then and Now*, which is already being distributed by the Literary Guild and enjoying good sales. At his best in a lively, naughty tale, Mr. Maugham's caustic humor and barbed quill are still as sharp as ever.

* * * * *

A glance at the crystal ball indicates some entertaining reading for the cold winter nights ahead. Some of the new titles that sound interesting are: *The Salem Frigate* by John Jennings; *The Miracle of the Bells*; Winston Churchill's *Victory*; *Blaze of Noon* and a new Jan Valtin book *Children of Yesterday*. These are but a few of the long list of titles scheduled for fall publication.

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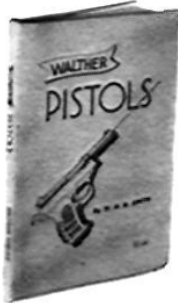
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Easy Does It—*Sometimes*

THE ARMY WRITER. By David Klein. 230 pp.; index; illustrated. Military Service Publishing Co. \$2.50.

"Most writers find their work desperately difficult, no matter how long they have been at it. . . ." These words appeared recently in *Time* magazine's review of Robert van Gelder's *Writers and Writing*, a collection of interviews with many world famous authors. Not quoted with a view to discouraging writers or writing, these words are aimed at those who believe, mistakenly, that facility with a pen is either the *gift* of a chosen few or something that can be learned in "three easy lessons" with *The Army Writer*, or other text. Neither is correct. Primarily, writing is just plain hard work.

On the other hand, David Klein has written a very splendid little book in *The Army Writer*. It can be of much help to soldier writers. And whether they like it or not, soldiers must do a lot of "pencil pushing." It's a highly important part of our business.

Particularly sensible and reassuring is Klein's plea that we soldiers have done with the "mysterious malady" that plagues so much Army writing. "At ease," says Klein—let's be "men" now and then, instead of always being "individuals" and "personnel." And right he is. Improved style as well as greater clarity certainly blesses the writer who forgets the fancy jargon.

Naturally, the book devotes considerable space to grammar. Dusty-dry in so many texts, Klein manages to avoid dullness. In fact, much of this section is entertaining reading. And truly outstanding are the final chapters which deal specifically with the soldier's writing problems — letters, training literature, directives, reports, etc. Included, incidentally, is some good down-to-earth practical advice for those who write professional articles, either for service journals or other publications. D. A.

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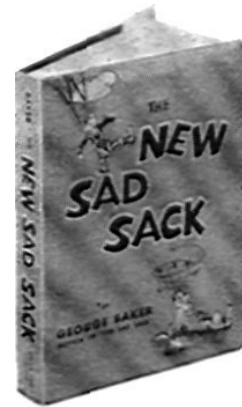
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