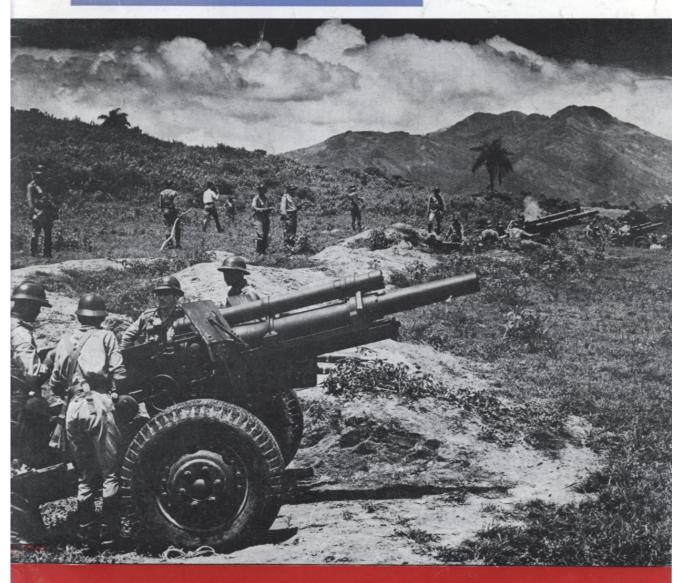
The FIELD ARTILLERY JOURNAL



NOV.-DEC. 1947



AIRBORNE ARTILLERY . . . page 348
By Brig, Gen. Wm. N. Gillmore

THE FIELD ARTILLERY JOURNAL

has the revolutionary **NEW INDOOR TARGET GUN**



Here is the first indoor target gun ever made that is actually accurate enough for serious indoor shooting. Not an air rifle, not a firearm, it is virtually as accurate as a fine rifle at ranges up to 30 feet. Yet so safe that the pellet will not break the skin if you hold your hand in front of the muzzle.

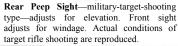
Real rifle quality in looks, too-as well as performance. Adjustable front

and rear sights (for windage and elevation)-all metal parts of fine blued steel-rugged stock of highly polished plastic.

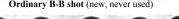
Packaged with a complete home shooting gallery, too. Every package includes a novel indoor target range-65 rounds of re-usable Johnson Micro-Match Precision Pellets — extra propulsion unit—shot-saver backstop. \$15.00

(Book discount does not apply.)

FINE RIFLE ACCURACY ideal for serious target competition

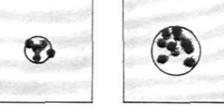




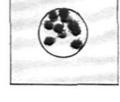




Johnson Micro-Match pellets (re-used many times) Another reason for the Johnson Indoor Target Gun's superb accuracy. Johnson Micro-Match Pellets are actual steel ball bearings-no flaws to cause "flyers". 65 with each gun.



5-shot group at 25 feet. 1/4 inch spread. Corresponds to a 3 inch group at 100 yards. Here is true rifle accuracy right in your own home.



10-shot group at 25 feet. 1/2 inch spread All firing by one operator, using sights, firing from bench rest, with elbow and forearm support.



40-shot group at 25 feet. spread: ½ inch, Vertical Horizontal: 9/16 inch. Here's proof this new gun gives you serious, indoor target practice.

THE FIELD ARTILLERY JOURNAL 1218 CONNECTICUT AVENUE WASHINCTON 6, D. C.

THE AUTHOR OF INSIDE EUROPE • INSIDE ASIA
INSIDE LATIN AMERICA

John Gunther

introduces America to Americans in his most important book





Here is the whole United States spread out before you by the man Raymond Swing has called "the world's foremost political reporter." John Gunther's eagerly awaited book on the U. S. is a giant state-by-state report of trends, issues and personalities in our own country. To gather material for INSIDE U.S.A. he visited every one of the forty-eight states and literally interviewed the United States on its own doorstep, asking such questions as these:

- What makes this community distinctive? What is it like?
- Who runs this town, this city, this state?
- What, basically, makes the U. S. behave as it does?

WILLIAM L. SHIRER says: "A magnificent book about our wondrous and fantastic land. Nothing like it has ever been published before . . . There is truth and a savage integrity and an adult approach to our problems that will not only thrill our citizens but drive them to think and take stock."

SINCLAIR LEWIS says: "The richest treasure-house of facts about America that has ever been published, and probably the most spirited and interesting."

CLIFTON FADIMAN calls INSIDE U.S.A. "by far the best of the *Inside* series . . . If any single book can tell us what it means to be an American citizen, this is it."

979 pages • 12 maps • charts \$5.00

THE FIELD ARTILLERY ASSOCIATION • 1218 CONNECTICUT AVENUE • WASHINGTON 6, D. C.



Season's Greetings to Ground Soldiers

ONCE AGAIN it is my happy privilege to extend to you every good wish for joy and prosperity during the holiday season and throughout the year to come. On this, the third Christmas since the cessation of hostilities of World War II, it is my fervent prayer that the peace which we are striving to maintain be a just and lasting one. I ask of you men in the Armed Forces, particularly the Ground Soldiers, scattered as you are throughout the world, that you do your utmost to perform your duties in a manner that will reflect only credit upon yourselves and the nation you represent. Let our hope be that our country will remain as strong as it is just, and that through its desire for justice for all mankind it will contribute to an everlasting peace throughout the world. During this Christmastide, and during all those to come, free men must have the right to exclaim, "Merry Christmas and a Happy New Year!"

General, U.S.A.

Jacob Mevers)

PUBLISHED BIMONTHLY 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.



Organized June 7, 1910

Honorary President
HARRY S. TRUMAN
President of the United States

LIEUTENANT GENERAL RAYMOND S. Mc-LAIN, President

MAJOR GENERAL CLIFT ANDRUS, Vice-President

COLONEL BRECKINRIDGE A. DAY, Secretary-Editor and Treasurer

EXECUTIVE COUNCIL

Lt. Gen. Raymond S. McLain Maj. Gen. Anthony C. McAuliffe Maj. Gen. Frank E. Lowe Brig. Gen. Harold R. Barker Brig. Gen. Edward S. Ott Col. Charles H. Swartz Col. Jess Larson Col. John Lemp Lt. Col. Robert B. Neely

 \star

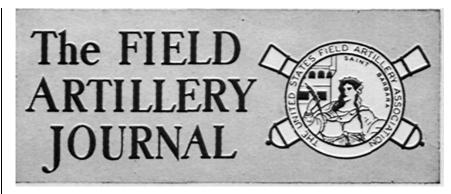
The Field Artillery Journal is not a medium for the dissemination of War Department doctrine or administrative directives. Contributors alone are responsible for opinions expressed and conclusions reached in published articles. Consistent with the objects of our Association, however. The Field Artillery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

COLONEL BRECKINRIDGE A. DAY Editor

MAJOR NELSON L. DRUMMOND, JR. Associate Editor

LENNA PEDIGO Business Manager





"Contributes to the Good of Our Country"

VOL. 37 NOVEMBER-DECEMBER, 1947

NO. 6

- Cover: Service Practice at VILA MILITAR. A Brazilian battery during training of the Brazilian Expeditionary Force in 1944 with now U. S. weapons. Photo from JBUSMC.
- Frontispiece: Christmas Greetings from the Commanding General, Army Ground Forces.

EDITORIAL	
On the Way	364
ARTICLES	
Good Neighbors, by Lt. Col. Walter J. Bryde, FA	340
The Lost Battalion of Mortain, by C. Donald Wire	
Jap "Naval" Defeat, by Harrison Forman	
Gunfire Support School, Amphibious Training Command, by Lt. Col. Samuel W.	
Horner II, FA	
Can We Modernize FA Fire Control? by Lt. Col. Leonard G. Robinson, Jr., FA	
Airborne Artillery, by Brig. Gen. William N. Gillmore, USA, with Foreword by Maj. Gen M. Gavin. USA	
Something New Has Been Added, by Capt. Edmund C. Murphy, FA	
Writing Is So Easyl by Jay Cassino	
Why Not the Group? by Col. Robert F. Hallock, FA	
Perimeters in Paragraphs, by Col. Conrad H. Lanza, Ret.	
AGF Potential Leaders Schools	
7.61	0.0
ARTILLERY NOTES	
The New Grasshopper—L-16	355
Dissenting Opinions	
The Artillery Brigade Headquarters, by Brig. Gen. C. E. Hart, USA	359
The Counterbattery Officer, by Col. H. P. Storke, GSC (FA)	360
Welcome to the Field Artillery	361
Items from The Artillery School	
Questions on the Six-piece Battery	368
Long-range Artillery	369
OTHER FEATURES	
Letters to the Editor	366
Multitude of Medals, by Fairfax Downey	
Of More Than Passing Interest	
Long Distance Camera	
Book Reviews	
Writing You're Reading	
For Heroism and Service.	
· · · · · · · · · · · · · · · · · · ·	001

*In view of the recent INTERAMERICAN CONFERENCE for the MAINTENANCE of CONTINENTAL PEACE and SECURITY, held in Rio de Janeiro, which our Association's Honorary President, Colonel Harry S. Truman. Field Artillery Reserve, attended in his capacity of PRESIDENT of the UNITED STATES, we feel we are most fortunate in being able to publish this timely article showing in a small way what is being done at a lower level to enhance Hemispheric Solidarity.

Published bimonthly by The United States Field Artillery Association. Publication office: 3110 Elm Avenue, Baltimore, Md. Editorial and executive offices: 1218 Connecticut Avenue, Washington 6, D. C. Address all communications for publication to the Washington office. Entered as second class matter August 20, 1929, at the post office at Baltimore, Md. Accepted for mailing at the special rate of postage provided in Sec. 1103. Act of October 3, 1917. Copyright, 1947, by The United States Field Artillery Association. Subscription rates: \$3.00 a year; foreign, \$3.50; single copies, 60 cents; additional single copies to subscribers, 50 cents. The Field Artillery Journal does not accept paid advertising. It does pay for original articles accepted, but unsolicited manuscripts must be accompanied by return postage if they are to be returned.



NEIGHBORS

Artillery Activities in the Joint Brazil United States Military Commission

By LIEUTENANT COLONEL WALTER J. BRYDE, FA

Prepared under the direction of Major General W. H. H. Morris, Jr., CG, US Army Section Ground, JBUSMC

S each day passes, the terms "Hemispheric Solidarity" "Hemispheric Defense" assume greater importance to statesmen, soldiers and citizens of the nations of the Americas. It might be of interest to consider one part of our program of military assistance to our sister republics and good neighbors to the south. It is the purpose of this article to discuss the background, organization, and, to some extent, the functioning of the Joint Brazil United States Military Commission, with emphasis on the U. S. Army Ground Section, and, in particular, the Artillery Training Unit. This organization is an example of how two great nations can collaborate and cooperate militarily for the common security.

Before considering the JBUSMC, it is logical to discuss Brazil briefly. Any discussion of Brazil requires continual use of superlatives. Few North Americans realize that Brazil is larger than the U. S., that it is the fourth largest country in the world, and that it occupies approximately half of the space of the South American continent. Strategically, it is closer to Europe and Africa via the Atlantic than any country in the western hemisphere, and it dominates the north-south lines of communication vital to the hemisphere. has population Brazil а approximately 45 million. It is extremely rich in natural resources, many types of which are indispensable to modern war.

Brazil and the United States have always enjoyed friendly relationships. The United States was the first nation to recognize the republic which was formed upon the dissolution of the empire. In both of our recent wars, Brazil has been an active participant. In World War I, the Brazilian Navy played an important role in the Mediterranean and the South Atlantic. The role of Brazil as a participant in World War II well known—particularly the participation of the Brazilian Expeditionary Force in the campaign in Italy and the joint Brazil-U. S. use and defense of the strategic base areas in northeastern Brazil. Brazil's continual desire to progress and modernize militarily is evidenced by the fact that a French military mission was in Brazil for many years before us, during the period when the French army was in the ascendency.

U. S. military collaboration began after the first World War with the arrival in Brazil of a U. S. Naval mission. Coast Artillery and Air missions followed and lasted until 1941. With the ever-increasing importance of our African - Mediterranean - Middle East supply lines, a U. S. Theater of War, USAFSA, (U. S. Army Forces South Atlantic) was established in 1942.

The Joint Brazil United States Military Commission came into being in October, 1942, and has continued with changes until the present time. During the War, U. S. Army training

teams under CG, USAFSA, but directed by the Military Attache in Rio de Janeiro, assisted in the training and preparation the Brazilian of Expeditionary Forces and other miscellaneous services for the Brazilian Army. During this period a large number of U. S. specialists of all the arms and services assisted in the actual training and embarkation of the Brazilian forces.

The present JBUSMC dates from the deactivation of USAFSA in the fall of 1945. By direction of the War Department, the Army Ground and Air Sections were established as separate commands, supervised by the Plans and Operations Division of the WDGS. It is emphasize that desired to Commission is "Joint" and consists of U. S. and Brazilian representatives of the army, air, and naval forces, the senior officer of each service being directly responsible to his respective department in Washington or Rio. In this, it is unique in comparison with the other U. S. Missions in Latin America, which operate under the supervision of the Commanding General, Caribbean Defense Command.

In brief, the general function of the U. S. Army Ground Section is to assist the Brazilian Army in its desire to attain U. S. standards of organization, training doctrines and operating methods, and to adopt U. S. equipment. The Artillery Training Unit, as well as the other units of the arms and services, is concerned with the augmentation of this general function as it applies to its specialty. However, since the wartime beginnings of U. S. assistance, many Brazilian officers have been trained in U. S. service schools. The availability



Orientation in observed-fire procedure being given to unit instructors, Vila Militar, using FA Trainer M3.

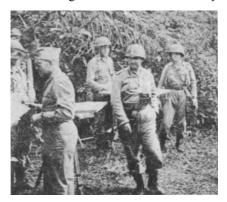
of this personnel—and others with combat experience with the U. S.-equipped Expeditionary Force in the campaigns in Italy—has facilitated the role of the U. S. Ground Section to the extent of advising and assisting on a higher level, particularly in the Brazilian Army schools, rather than engaging in unit training and instruction. The excellent work done by General Gamelin and the French Mission of the 20's and 30's makes the Artillery Unit role in particular more difficult in the "selling" of modern U. S. doctrines.

To conform to the Brazilian organization of one artillery arm and to keep in step with the trend in the U. S. Army, the Artillery Training Unit has been organized to include Field, Coast and Antiaircraft Artillery personnel. The organization consists of a lieutenant colonel (chief of Unit), one major (FA), one captain (FA), one major (CA), and one major (AA), with two sergeants assisting.

It is not intended to discuss the functioning of the Unit in detail, but rather to present some of the activities which are typical of Artillery Training Unit duties in Brazil. Contact is maintained with the General Staff and other departments of the War Ministry through Ground Section channels, and the Artillery Unit, as required, offers advice and assistance on matters pertaining to its arm.

Typical of the field activities of the Unit is the collaboration with and assistance given to service schools and U. S.-equipped units. Liaison is maintained with, and advice and assistance offered to, the Officers Advanced School (Combined Branch School) and the group of school troops that serve it, the Antiaircraft School and the Coast Artillery School. U. S. techniques and doctrines are used exclusively in these installations. The Unit assisted in the reorganization of the Officers Advanced School and the AA School along U. S. lines. Lectures and conferences are conducted occasionally on special topics, but actual instruction is not a U. S. function. Assistance in planning courses for units and schools is frequently given. In the Coast Artillery School, the existence of a previous U.S. mission has aided materially. U. S. doctrines were accepted and used in the Brazilian Coast Artillery before the existence of the JBUSMC. Plans are being formulated to reorganize the scope of this school in keeping with the lessons learned by experience in the recent war. U. S. artillery methods and technique are now taught at the Brazilian Military Academy where until recently French methods were in effect.

As with all armies of democratic nations, the cut-back to a peace-time budget imposes problems in training on the Brazilian Army. The utilization of simple, economic training aids is being emphasized. As a result of U. S. influence, many U. S.-type terrain boards, made in Brazil, are in use in schools and units throughout the country. The Artillery Training Unit has recently received a FA Trainer M-3, and this modern training aid is being utilized to orient key instructor personnel in the simplified new. observed-fire procedure. To facilitate the training of Antiaircraft Artillery in an anti-tank role, a firing range modeled along U.S. lines was established. A Unit-sponsored trip to Panama for the purpose of orienting key Brazilian CA and AA personnel on equipment and methods not now available in Brazil was recently completed. In this connection, a longrange program to continue sending Brazilian officers to U. S. service schools has been accomplished and the Unit makes recommendations and conducts briefings for Brazilian artillery personnel scheduled to attend. In the matter of instructional materials, liaison is maintained with U. S. service schools, and literature and training materials are obtained and distributed to Brazilian agencies. This brief summary



Fire-direction Center, School Troops Battalion, Officers' Advanced School, Vila Militar.



Demonstration of new observed-fire procedure, using FA Trainer M3.

of a few of the typical functions illustrates that the activities of the Artillery Training Unit are interesting and varied from a professional point of view.

A word as to Rio de Janeiro, itself, and the life of U. S. members of the Commission. The beauty of Rio de Janeiro is well known. It has been called, with reason, the most beautiful city in the world. The climate is agreeable the year round and most of the means of diversion found at U. S. coastal resorts are available. At present, Brazil, like all of the world, is undergoing a period of inflation and the cost of living is considerably higher than in the U. S. Aside from the lack of many conveniences which North Americans take for granted, life in Rio can be agreeable. The duty, in general. is very pleasant and interesting, and Brazilian military personnel are responsive, courteous and hospitable, and a pleasure to work with. A knowledge of Brazilian Portuguese is a virtual necessity.

With the continued collaboration and friendship between Brazil and the United States as an example, perhaps in the not-too-distant future Hemispheric Solidarity for Defense will be a truly effective means for maintaining world peace. The JBUSMC will continue to do its part in cementing firmer relations and assisting in bringing the armies and people of two great nations together.

THE LOST BATTALION OF MORTAIN

by C. DONALD WIRE*

Republished (slightly condensed) by courtesy of *Blue Book Magazine*

THE HAZE WAS THICK, almost impenetrable, a combination of raging battle-smoke and muggy weather. Out of it roared twelve C-47s, the same unarmed transports that in weeks previous had dropped the 101st Airborne Division into Normandy.

The twelve C-47s came in over target, a small hill just outside the French village of Mortain. It was 1625 hours, August 9, 1944. Only four hundred feet straight up separated the German AA batteries from those flat, parapack-studded bellies. Without a break in formation, and at a crawling 125 miles an hour, the twelve aircraft absorbed the punishment and made their drop. Seventy-two vari-colored parachutes blossomed in the air. With needed bundles critically ammunition and food drifting toward the ground, the flight of C-47s plunged into the deck, throttles fire-walled and engines reverberating with a roar of power that made the racket of cannon below sound like that of popguns. They weaved and turned at tree-top level, fought their way back out of Mortain. Twelve aircraft went in on the drop, and despite wings and cargo compartments torn by flak, and ruptured tanks spouting gasoline, twelve aircraft came out.

That action, the relief of the "Lost Battalion" in Mortain, was perhaps the most precisely executed and at the same time the least-planned operation ever flown by the Ninth Troop Carrier Command. Mortain wasn't anticipated. It was just another little French village, another clutter of debris on the long march to victory. It wasn't a Falaise Gap, or a Carentan or St. Lo, until that day in early August, when twelve aircraft and crews of the 440th Provisional Troop Carrier Group, commanded by Lt. Col. Neal, were alerted. In exactly thirty minutes the twelve C-47s greased down the runway and lifted into a formation of four V's, three ships in each V. Colonel Neal in Cock o' the Walk led the formation southeast across Britain.

In a tiny Royal Air Force theater at Ramsbury, Colonel Neal and his men had sat through a few minutes of briefing. Little information was available. Time was precious, a factor that prevented gathering the usual extensive data. Information on weather was what you yourself could see outside — low clouds, thick haze that restricted visibility and would make check-points difficult to find. Plenty of opposition was anticipated, but the positions of flak batteries were not known.

Mortain itself was a little French village lying in the path of the enemy attack. A dozen times it had been taken, lost, and retaken by the Allies. At present the city was in the hands of the Nazis, but a small hill just outside was occupied by a battalion of American artillery. This battalion had been ordered to hold at all costs, since the position they occupied commanded the roads through which enemy armor was moving. They were entirely surrounded, had been for days; and American forces, engaged in a bitter struggle, would not

be expected to reach them for some time. Food and water were low; ammunition and medical supplies virtually exhausted. The tiny Lost Battalion, with casualties mounting hourly, was doomed to annihilation unless vital supplies reached them immediately. There was only one road open to Mortain — through the air. It was a job neatly cut to specifications of Troop Carrier.

Now was the pay-off. Could twelve unarmed, unarmored transports, in full daylight, perform on a smaller scale the same tactical operation that was Mission Memphis of 7 June? Memphis was given the cover of the entire Eighth and Ninth Airforce Fighter commands, but in spite of perfect timing and coordination, losses throughout Troop Carrier were quite heavy, and damage to aircraft was extensive.

Each C-47 of the twelve participating in the mission had six parapacks slung under its belly: Food, ammunition, medical supplies, all packed in straw to lessen the impact of striking the ground. The assignment of the pilots was to get in, make a precision drop that would put every bundle right on that hill, and get out — if possible.

Landfall at France was at airstrip A-22, near Colleville on the Cherbourg Peninsula. Up from A-22 came a flight of planes that made Neal sit a little easier in his cockpit. A cover of sixteen P-47 Thunderbolts swarmed around the Skytrain formation. This cover was a little more than expected, and was undoubtedly partly responsible for the return of all ships. The small town of Marigny moved beneath the formation, and finally Colonel Neal spotted the railroad crossing outside of Folligny. From here the run-in to Mortain would be made, straight and unswerving, with all ships gradually letting down to four hundred feet over target. Course was southeast again.

The Thunderbolt cover peeled off and screamed into the German hot-spots that were opening up. Tracer and small arms sliced the air. Twenty- and forty-millimeter barked out from concealed gun-positions, and that hideous sound of flak tearing through airplane skin was heard by the pilots. Wings level and with no slightest deviation from course, the twelve C-47s dropped lower. Air

^{*}Mr. Wire was a pilot with the Troop Carrier Command in England. His first mission was for the drop over Normandy on D-day, which was followed by numerous others. He was shot down over the English Channel on D plus one, but fortunately was rescued.—ED.

speeds fell from 150 to 140, down to a limping 125 that made the ground stand still beneath them. The haze deepened to a dirty brown that was stifling.

Colonel Neal and his navigator, Captain Henderson, squinted into the glare of a low-hanging sun for the church steeple that would mark their target. This final check-point, given as a means to identify a hill that was part of thousands of hills, was in itself comical. If France has anything, it has church steeples. The cluttered streets of Mortain rushed beneath, and withering fire lifted into the air. It was seconds to the target, endless seconds stooging along at 125 miles an hour, with only four hundred feet of smoke-filled air below. At exactly 1625 hours, Colonel Neal spotted his church — minus the steeple.

The ground beneath had risen sharply. They were over the hill, over the dug-in, unconquerable Lost Battalion. Neal gave the drop signal, and his crew chief tripped the parapack salvo. Elements caught the green wink of a biscuit gun from *Cock o' the Walk's* astrodome and hit their salvo switches. Seventy-two parachutes, done in gay colors to identify the packs, swung down through the air. The last bundle to leave Neal's ship caught a direct hit from an ack-ack battery. It exploded into dust, throwing *Cock o' the Walk* over as if she had plunged into a sudden up-draft.

German gun batteries now had accurate range, and Neal knew it was get out or get licked. He took the formaation into the deck, into the scattered forests and green fields that were littered with shell-holes. Heavy machine-gun fire and small arms harassed them as they turned and twisted out of the target area. Any maneuver that would keep them flying was the right one, regardless of those who said you couldn't do it with a C-47. Gone was the neat formation, the straight and level flying. A pilot running into a hot spot would heel over 90 degrees and make a turn that would be sharp for a Piper Cub. They came out, all twelve of them, shot up and dripping 100 octane on the fields of Normandy. But they were still flying.

The Lost Battalion recovered every bundle dropped. They continued to

hold out against an attack that was steadily mounting in fury. A few days later contact was made by ground forces. Mortain was cleared of the enemy; Allied might poured through to stem the German assault.

There was nothing glamorous or sensational about the relief of Mortain by the 440th Provisional Troop Carrier Group. There were no official commendations, and the mission was soon forgotten in the heat of more spectacular operations, such as the airborne invasion of Southern France and Holland. Mortain was just another battle that had been turned, another milestone along a road that was rough and getting rougher.

After reading this story, written from the Troop Carrier Command viewpoint, it was interesting to check it with a First Army Artillery report of the same action. From this report it appeared probable the surrounded battalion was the 230th FA Bn, commanded by Lt. Col. L. D. Vieman. The identification was not positive, as there were certain discrepancies in the two accounts — the First Army report gave the date as 10 August and stated that half the dropped bundles were lost to the enemy. However, a subsequent letter from the author contains the positive statement that "the 230th was the intended target for that para-drop." He also comments on the way discrepancies appear in reports of minor actions - "Blame it on confusion following the heat of battle, or possibly the endless channels war information goes through before it is put once and for all on paper." Even for the operation here described, one of Mr. Wire's references gives the date as 7 August — as he remarks, "You can take your pick." At any rate, it is evident that the air supply drop to the 230th did take place and that it in the main accomplished its purpose, in that the battalion was enabled to hold

JAP "NAVAL" DEFEAT

By Harrison Forman

OME MONTHS before the end of the war the Japanese suffered a "naval" defeat at the hands of a community of Chinese farmers which cost them more face than the loss of an entire task force.

The Japanese had forbidden the villagers in the Pai Yang Tien Lake area (about fifty miles south of Peiping) to shoot any more of the wild ducks which yearly flock there in great numbers. The villages refused to heed the order; so the Japanese sent a fleet of specially-designed motorboats to police the shallow, marshlike lake.

For their duck-hunting the villagers had developed the "big-shoulder-fire-gun"—a ten-foot tube fired like a bazooka. The gun fired a scattering charge of about a pound of scrap. Hiding in the lakeshore's tall reeds, the villagers potted away at the passing motorboats; and when over thirty of these were sunk the Japanese got mad.

In the middle of the lake they built a huge fortified raft—a veritable battleship — bristling with machine guns and deck-cannon. Watchers in the crow's-nest atop a tall mast scanned the lakeshore with powerful binoculars. Should the slightest movement be detected in the reeds, the machine guns and cannon opened fire. Or, if out of range, then one of a fleet of armored launches standing by was immediately

dispatched to investigate.

The bazooka-sniping lakemen thereafter came out only at night. The "battleship's" searchlights tried in vain to find them in the reeds while charges of old nails, broken glass, scrap iron, and hot stones continued to splatter against the battleship's sides, giving the Jap crew no rest.

When the crops in the fields adjacent were harvested, thousands of villagers gathered one night and quietly opened the dikes, allowing the lake water to spill into the low-lying fields.

With the dawn the Japanese observed the water level dropping alarmingly. Hurriedly they stripped the battleship of its guns, equipment and personnel and scooted out through the lake's outlet toward Tientsin, before the draining water left the launches high and dry.

Before they left they set the battleship afire, which spectacle was viewed by thousands of villagers with tremendous glee. They lined the shores shouting, dancing and clapping their hands like pleased children. The day was declared an official holiday for the people of the whole Pai Yang Tien Lake area.

When the dikes were repaired, the lake filled up again, and the ducks returned.

And the villagers once again turned their bazookas to duck-hunting.



Destroyer FORREST B. ROYAL. This destroyer did some fine firing for Gunfire Support School.

With the Fleet...

GUNFIRE SUPPORT SCHOOL, AMPHIBIOUS TRAINING COMMAND, AMPHIBIOUS FORCE, U. S. ATLANTIC FLEET

by Lieutenant Colonel Samuel W. Horner, II, Field Artillery

NAVAL gunfire was a most effective weapon in all amphibious operations executed during the latter part of the recent war. It neutralized and destroyed shore targets prior to the landing of the ground forces. It furnished deep and close support for the ground forces while their organic artillery was afloat, and additional support, within the range limitations of the guns employed, when their organic artillery was ashore.

A terminology was developed in each theater to adjust naval gunfire. Since the war, there have been many conferences of representatives of the Army, the Navy, and the Air Force to develop a standard terminology for adjusting naval gunfire and artillery, and most of the differences have been resolved in the latest doctrine (Chief of Naval Operations Letter OP-34-pr, Serial 993P34 dated 11 July 1947, and a revision of War Department Training Circular 6, 1946, to be issued).

In 1946, two gunfire-support schools were established by the Chief of Naval Operations to teach the use of this important weapon to all services; one under Commander, Amphibious Force, U. S. Pacific Fleet, at Coronado, Calif., and the other under Commander, Amphibious Force, U. S. Atlantic Fleet at Little Creek (near Norfolk), Va.

The Gunfire Support School at Little Creek, Va. (with which the writer is associated as Senior Army Instructor) is supervised by the Commanding Officer, Amphibious Naval Training Unit, a subordinate echelon of the Amphibious Force, U. S. Atlantic Fleet. The officer in charge is a Naval officer. The instructor staff contains representatives of the Army, the Marine Corps, and the Navy.

Courses are described on Chart I.

The school is organized into two sections. One is the Gunfire Support Training Unit consisting of Naval officers, Marine officers, and Marine enlisted communication personnel. This unit conducts course A.9 and the gunfire support practices of fire-support ships and craft of the Atlantic Fleet at Bloodsworth Island (Maryland) Bombardment Range. The other section is the instructor group consisting of Navy, Marine, and Army officers who

conduct all courses except A.9.

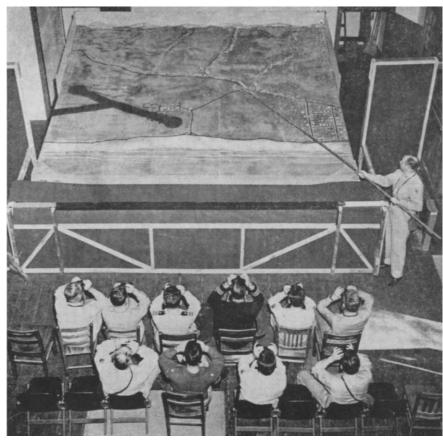
The length of a sub-course depends on the importance of the sub-course to the course in question. Sub-courses of interest to the Army are shown on Chart II, with the hours allotted to each.

The three Army instructors, all artillery officers, teach conduct of fire. One of these Army Instructors, who was the XXIV Corps Naval Gunfire Officer at the landings at Leyte and Okinawa, assists in the instruction in Planning and Execution of Naval Gunfire Support.

Conduct of fire is allotted six to sixtynine hours, depending on the course. In courses A.1, A.2, A.3, A.7, and A.10, students are given sufficient instruction to learn to adjust fire. In course A.5, only sufficient instruction is given to allow the students to see fire-support ships execute gunfire support. Other courses receive only the necessary instruction in conduct of fire to familiarize the students (Navy personnel) with the observer's problem in adjusting fire.

Change 2 to FM 6-40, WD, dated 20 February 1947 is used as a text. Sequence of instruction follows the Artillery School pattern except in familiarization courses:

Terrain Board used at Gunfire Support School. Board less terrain obtained from The Artillery School; terrain constructed locally.



			C	HAR'	ΤI		
Course No.	e Course	USN	Training Officer USMC USA	Î	Enlisted	Length of Course (Weeks)	Remarks:
A.1	Naval Gunfire Liaison Officers	20			13		2 courses per yr; USN Officers Lt or below.
A.2	Naval Gunfire Spotters			10		10½	2 courses per yr; USMC & USA FA Officers Capt and below
A.3	Naval Gunfire Assistant Spotters				10	10½	2 courses per yr; USMC & USA FA Sct Sgts
A.4	Shore Fire Control Party				127	8	2 courses per yr; USMC & USA communication personnel.
A.5	Division and Corps Naval Gunfire Officers			10		91/2	1 course per yr; USMC & USA FA Officers Major above.
A.6	Naval Gunnery Staff Officers		10			6	1 course per yr; USN & USMC Amph Staff officers (Gunnery).
A.7	Naval Gunfire Air Spotters		15			I-4* II-2	4 courses per yr; USA USN & USMC Aviatoes & Observers.
A.8	Ships Gunnery and CIC Officers	10				7 days	8 courses per yr; Gunnery and CIC Officers of Support Ships & Craft.
A.9	Fire Support Ship and Craft Indoctrination -	30 (2 ships 4 craft				1-4 days	Key Officers & men, Gunn, CIC, Nav, & Comm Depts.
A.10	Naval Gunfire Support	20				81/2	1 course per yr; USN ships Officers Lt or below.
A.11	Naval Reserve	20				2	USNR Officers with Gunnery background.
*I	Phase I—Naval Gunfire.	Phase II-	-Artillery	Fire.			



A naval Gunfire Liaison Officer does some spotting.

Devices Center, Office of Naval Research, will have these and many additional features.

Gunfire-support practices are of two types: The initial ones are conducted at the Antiaircraft Training Center at Dam Neck, Va., using three-inch fixed guns to fire at anchored targets. The final ones are conducted at Bloodsworth Island (Maryland) Bombardment Range, using five-inch spin stabilized rockets of landing ships, medium,

Students study a text assignment Conference of instructors and students to clarify procedures

Blackboard and terrain-board problems to practice procedures

A review and writ to determine success of instruction prior to actual firing

Gunfire-support practices (service practices).

The school has three terrain boards: a large one procured from the Artillery School and two smaller ones constructed locally. None of these boards is equipped to give time or illumination bursts. A gunfire-support trainer being constructed for this school at the Special

Five Field Artillery officers are on duty at the School:

Lt. Col. Samuel W. Horner, II Lt. Col. Robert J. Welsh

Major Max A. Morris

Major Joseph A. Ogle

Major Richard B. Kreutzer.

To these artillerymen we offer our apologies for omitting their names from our list, in the Mar-Apr issue, of those on school duty. — ED.

CHART II

Sub-course			Hours			
	A.2	A.3	A.4	A.5	A.7 Phase I	
Naval Gunfire Support in Amph Opns	4	4	4	4	4	
Amphibious Operations	9	9	7	9	5	
General Characteristics of Fire Support Ships and Support Craft	6	6	6	6	4	
Naval Ordnance and Gunnery	52*	16	7	52 [*]	6	
Naval Gunfire Communications	56	56	70	15	2	
Map and Aerial Photograph Reading	27	27	27	0	24	
Conduct of Fire	69	69	28	21	37	
Organization and Employment of Naval Gunfire Teams of the Landing Force	5	5	5	5	3	
Indoctrination aboard Fire Support Ships and Support Craft	12	12	12	12	12	
Organization and Employment of Air Support	6	6	2	6	2	
Planning Naval Gunfire Support	23	13	0	75	0	
Execution of Naval Gunfire Support	23	23	11	17	9	
The Radar Beacon	6	6	6	3	0	
The Combat Information Center	4	4	4	28	0	
Simulated Gunfire Support Drills	8	12	12	4	8	
Visit to Joint Operations Center on Amphibious Command Ship	4	4	4	4	0	
Sub-course		Hours				
	A.2	A.3	A.4	A.5	A.7	
					Phase II	
Organization and Employment of Field Artillery	0	0	2	0	63	
Conduct of Naval Gunfire Training	0	0	0	4	0	
Gunfire Support Qualification (NON-FIRING)	0	0	0	2	0	

*To be given at Gunnery Officers Ordnance School, USN Rec. Sta., Anacostia, D. C. Instructors are assigned to teach subjects for which their military backgrounds particularly qualify them.



The spotting section of a shore fire-control party, organized from students of the School.

rocket, and five-inch guns of destroyers and cruisers. The service practices of the artillery phase of the Naval Gunfire Air Spotters course are conducted at the Marine Corps Schools, Quantico, Va., for Marine students and at Fort Bragg, N. C., for Air Force students.

To date, students of seven courses have been trained to adjust fire using the new conduct-of-fire procedures. With a few exceptions, students were Navy, Marine, or Army personnel with no previous experience in conduct of fire. The instruction has been well received and the procedures taught were very effective in actual firing.

Experience of the writer in teaching conduct of fire at this gunfire-support school indicates that procedures as well as terminology used in adjusting naval gunfire and artillery fire should be standard, in order that artillery observers will be able to adjust naval gunfire and naval gunfire spotters will be able to adjust artillery fire.

The following letter reached us, unsolicited, shortly before going to press. As Colonel Tague is a member of the Staff and Faculty of the Gunfire Support School, U. S. Naval Amphibious Training Unit, at Coronado on the West Coast, it seems appropriate to publish the letter directly following Colonel Horner's article.—Ed.

Dear Editor:

It has long been one of the basic principles of teamwork on the field of

battle that the supported unit is furnished with liaison officers by each supporting unit. In the amphibious operation wherein a Fire Support Coordination Center (FSCC) is set up, liaison officers are there representing the three supporting arms — air, artillery, and naval gunfire.

The commander of the supported unit may not know all he should about the tools he has available to accomplish the mission assigned him. It follows then that the liaison officers who do know about their particular tools may have to sell the commander on the necessity for proper use of his tools. The better the salesman the more the support will manifest itself. It looks possible that some instances may arise where salesmanship may be lacking just because of a poor choice of liaison officers.

Who would make the best liaison officer and coordinator as far as Naval Gunfire is concerned? Based on my knowledge of another supporting arm — the Artillery — I should say that a Naval Officer makes the best coordinator. So at all troop levels of command there should be a good naval gunfire salesman. This means that at the Division FSCC there should be an Air Officer, an Artilleryman, and a Naval Officer in addition to the Division Artillery Commander, who is known as the Chief Coordinator. Each of the first three mentioned should be the head of his respective liaison section. In my opinion, a Commander in the Navy should head the Division Naval Gunfire Section and no troop officer should be included in the consist of this section.

> MARCUS TAGUE, Lt. Col., FA

CAN WE MODERNIZE F. A. FIRE CONTROL?

by Lieutenant Colonel Leonard G. Robinson, Jr., FA

OME BUCK ROGERS devotees tell us that the field artillery is far behind other arms in the application of new scientific developments to fire control. They are persistent in urging us to acknowledge our one glaring weakness and do something about it.

Everyone is aware, of course, of the magnificent progress recently made in the development of our weapons and in the technique of using them. As a matter of fact, our conventional weapons have attained such a degree of efficiency that only minor improvements may be expected, unless future research is pointed toward radical redesign.

It may well be profitable, however, for us to take stock of our means for determining the location of targets and for insuring that the guns are laid in such a manner that the projectiles will strike them. The fertile fields of radar and electronics, successfully adapted to fire control by the Navy, the seacoast artillery, and the antiaircraft artillery for several years, are still comparatively unexplored in the field artillery. This holds true also of automatic loading and ramming, data transmission, and remote control. The development of selfpropulsion affords a golden opportunity for the field artillery to make use of the free power thus provided and to incorporate these automatic features into a modern fire-control system.

The practical artilleryman will naturally ask some pointed questions. Which of these many gadgets can we use to advantage in bringing our methods up to date? Will such equipment simplify or complicate our problems? What will it cost in mobility? The answers to these and other questions are of vital importance in determining the extent of our need for modernization.

It can be assumed, I think, that the most urgent requirements in any improved method of fire control are (1) the elimination of errors, (2) the saving of time, and (3) the conservation of manpower.

There are today at least twelve individuals and many more voice relays involved in getting data from the observer to the gun. This means that there are at least twelve possible sources of error in getting one round out of the tube, assuming of course that survey data are accurate and the gun has been correctly laid. These are not always safe assumptions. Other errors can be attributed to the adjustment of fire. When the adjustments are registrations, the unobserved fires which follow will be affected.

The solution, then, appears to be automaticity, because human reaction time and errors due to mental and nervous stress are thereby reduced to a minimum.

In the following paragraphs are set forth some of the fire control devices, in use by other arms, which surely have practical application for field artillery use.

Gun Data Computers. Given the basic information of gun and target locations, such instruments would be capable of automatically applying corrections for all the factors which give rise to systematic errors, and of calculating the proper elevation and deflection for the guns. The machines would do this instantaneously and regardless accurately of charge, trajectory, or variations from standard conditions. They would eliminate all human errors resulting from manual computations. According to some antiaircraft artillerymen, the size and weight of a set of three data computers for use in the battalion fire-direction center would probably not be in excess of the capacity of an armored utility

Automatic Orienting System. With the present method of laying weapons, artillerymen must cope with

misidentified aiming points, errors in sighting, displacement of the sighting instruments, errors on the part of the aiming-circle operators, night-lighting of aiming posts, as well as the lengthy time required to put the posts out properly. An improved system would permit continuous orientation on a known azimuth indicated on the carriage itself, so that the gunner, by matching pointers, could lay, without reference to an aiming point, in the length of time it takes him to traverse to the correct azimuth after the carriage is halted.

Data Transmission and Remote Control Systems. As pointed out earlier, the great number of voice relays inherent in our present method gives rise to numerous possibilities of error. The elimination of voice relays from data transmission would reduce human errors enormously and would also reduce the time required for the transmission of fire commands. Add to this a device which would aim the gun automatically by remote control with data furnished by the computer, and the laying of the battery would, for all practical purposes, become instantaneous operation. The chief obstacle here might be the bulk of the machinery, particularly if a cable system were used. Technological advances in the near future, however, may overcome any objections on these grounds.

Automatic Loading, Ramming, and Fuze-setting. In a 240-mm howitzer section, it takes nine men merely to load and ram the projectile and to set the fuze. An exaggerated example has been taken to bring home forcibly the advantages of automatic devices in conserving manpower. There are other advantages to be gained in increased accuracy and speed by the elimination of irregular manual ramming and by increasing the rate of fire. The system could be designed to lift the ammunition from a tray beneath the breech, carry it to a spring-powered rammer, set the fuze, and close the breech. From an analysis of the weight of this type of equipment now in use by the Navy and the antiaircraft artillery, it is estimated that the additional weight for selfpropelled artillery could be kept to well within 10% of the gross weight of the weapon and its motor carriage.

Other Refinements. The ability to locate targets or to track moving ground targets by means of radar has obvious advantages. Radar location of ground targets is a must if our field artillery expects to maintain the lead position it won for itself during the war. Some progress is being made along these lines at present, but support for the program could be more enthusiastic than it has been.

An electronic means of establishing within the battalion fire-direction center the location of each observer would be another desirable step in bringing fire control in tune with the times. This might take the form of a transmitter or beacon carried by the observer which would cause his position to be indicated on a translucent firing chart. The effect of such a device would be to simplify conduct-of-fire enormously our procedure, to save ammunition, and to make the training of observers much simpler and less time-consuming. The problem of fire control would then be reduced to one of insuring that men are trained in the use and maintenance of the equipment.

To develop a modern fire-control system requires a tremendous amount of research, admittedly, but thanks to the other arms and services much of the basic research has already been done. It remains for us to integrate the various components into a coordinated system adaptable for field artillery use. More and more emphasis is being placed on analysis of the efficiency of our weapons. The manpower and materials required to produce, supply, and maintain various weapons are being weighed against their ability to accomplish their mission. The benefits in increased effectiveness of fire which will be derived from the application of the ideas set forth in this article can be no more than estimated until those ideas are put to the test. It is conceivable, for example, that without increasing the number of weapons we could double our fire power.

The last war was mainly fought and won with the weapons available at the beginning of the war. During the war an imposing array of improvements were developed, very few of which got into the fighting. If they are to be of any value to us, the weapons must be ready when the shooting starts.

FOREWORD by Major General James M. Gavin, Commander 82nd Airborne Division:

Airborne artillery has played a decisive part in every airborne assault in which this Division has participated. From the time the parachute artillery knocked out Tiger tanks of the Herman Goering Panzer Division in Sicily in the opening days of that battle until parachute artillery in the Nijmegen airhead in the fall of 1944 knocked the German antiairborne forces into a complete state of ineffectiveness, it has been an invaluable part of our airborne assault forces. So important was it in the minds of the infantry commanders that the regimental commander of a parachute assault regiment in Normandy, who also had worked with parachute artillery in Sicily, insisted that part of his infantry be left behind and he be permitted to take parachute artillery into that night landing. Two 75mm pack howitzers were landed shortly after midnight, the only artillery in the 82nd Airborne Division in the first 12 hours. It, as much as anything, made it possible to hold the key town of Ste Mere Eglise. A parachute artillery battalion was landed in Nijmegen, Holland, in the airborne assault on the afternoon of September 17, 1944, and was firing as a battalion in a short period of time. By dark, batteries were firing to all points of the compass. The arrival of glider artillery within the airhead the next day was welcomed with cheers, because every trooper had learned by that time how valuable artillery can be in an operation of this type.

Artillery in an airborne assault makes it possible for the attacker to keep hastily organized and committed enemy antiairborne forces from making a coordinated effort against the infantry of an airhead. Because of the chaos, the type of uncoordinated resistance initially encountered, good artillery can, with a proper use of ground reconnaissance forces, deny an enemy from making any coordinated attack in strength against an airhead for several days. These first several days are decisive in the final outcome in a battle for an airhead.

With lighter weapons, recoilless weapons, use of lighter materials, and improvements in the methods of aerial and airportable delivery, the probable employment of the artillery arm in future airborne assault is limited only by our imagination. It is certain to play a most important, and perhaps decisive, part in the coming battles for the airheads.



The PEGASUS. Fairchild Engine and Airplane Corp. Glider 105mm M3 battery prepared for inspection.

AIRBORNE ARTILLERY

By Brig. Gen. William N. Gillmore, USA

IRBORNE ARTILLERY, in the past, was any artillery transported by air. We now use a more precise definition. The term "Airborne" is now used only for those units especially trained and equipped for airborne assault, usually landed by parachute or glider. The term "Air Transported" is used for those troops and their equipment that can be transported by air and employed in a tactical role upon arrival. In this discussion, however, we will include "Airtransported Artillery" because of its close relation to "Airborne Artillery."

DISTINCTION AS TO TYPE

Airborne artillery is divided into two classifications, "Glider" and "Parachute," according to the method employed to put the artillery piece at the desired place at the proper time. Airtransported artillery is the same as any normal artillery; the materiel is simply capable of being air transported, and the personnel are trained in loading and lashing this materiel in cargo airplanes. All artillery of the present infantry

*General Gillmore commands the 82nd Airborne Division Artillery division can be loaded in our present standard cargo airplanes.

Glider artillery is trained and equipped to enter combat by glider. We now have in service the following gliders: CG 4a, 10a, 13a and 15a. The 4a and the 15a are quite similar. The 4a is the only United States glider that has been used in combat, so is the most familiar. Each of these gliders can carry the 75mm pack howitzer or the 105mm M3 howitzer (infantry cannon). As far as weight is concerned, they can also carry the standard 105mm M2 howitzer, but it is too wide for either glider. An Ordnance modification is possible to shorten its axle and it can then be carried in the glider. The 13a is a large glider and can carry all calibers up to the 105mm M2. The 10a is a huge affair and few have been manufactured. It is capable of carrying all caliber weapons to include the 155mm M1 howitzer.

The artillery pieces, prime movers, ammunition and other materiel are loaded and lashed inside the gliders, and in each ride parts of the howitzer crews. The glider may be towed by any type of multi-engined airplane. The



The PEGASUS. Fairchild Engine and Airplane Corp. C82 towing two CG 4a gliders.



Driving jeep out of CG 15 glider, facilitated by men raising the fail.

British use their bombers for this mission. Our Air Force used the C46 or C47 during the past war. Our present standard towplane is the C82. The tow can be either one or two gliders, depending on weight of cargo and distances involved. The tow rope is made of nylon, which, being flexible, eases the glider take-off. The tow rope connects the glider to the tow plane, and a device on both glider and tow plane allows either the glider pilot or tow-plane pilot to cut loose from the tow rope. In taking off in a glider there is no shock, only a feeling of sudden acceleration as the tow rope contracts from its initial stretch and starts to pull the glider forward. Gliders can land on fairly rough terrain and can quickly be brought to a stop by employing wheel brakes and pulling the nose of the glider into the ground, where it slides on skids provided for that purpose. The 4a and 15a have one basic fault that is being corrected in our new gliders: the loading and unloading must take place through the nose of the glider. In assault landings, in many instances, this was a great handicap, since it was not unusual for the glider to come to a stop with its front end resting against a stone fence, a tree or a house, making preparing for action with any speed an impossibility. Our new designs permit loading and unloading through the tail of the glider.

Parachute artillery is trained and equipped to enter combat by parachute. Each airplane is combat loaded, the

75mm howitzer section ready for loading, Note control lines tying complete load together.

82d Airborne Division



personnel and the equipment they are to employ on the ground being always loaded in the same airplane. Equipment is dropped from the airplane either through the door or the bomb-bay, and parachutes to the ground. Simultaneously with the dropping of the equipment. cannoneers and other artillery personnel jump. This places them in close proximity to their equipment, once on the ground. Materiel and supplies are dropped either in containers called "paracrates" or in prepared canvas containers. Cargo parachutes are made of rayon material and are varicolored for identification purposes. The personnel use a back parachute made of silk or nylon. Personnel parachutes are either white or a green and brown camouflage pattern.

WEAPONS

The weapon that each type of artillery employs is dependent, first, on the method available to transport the artillery from the airbase to the landing zone, and second, upon the prime mover available after the landing has been made. For the air-transported artillery any weapon we now have in the infantry division can be carried by our present standard cargo plane.

In the glider artillery the type weapon that can be transported depends upon the type of glider available. The CG 4a and 15a can each carry either the 75mm pack howitzer or the 105mm M3 (infantry cannon). The 13a can carry any caliber up to the 105mm howitzer, and the 10a can carry all weapons up to the 155mm howitzer. The present standard weapon for the glider artillery is the 105mm M3 for one battalion and the 75mm pack howitzer for the other.

Parachute artillery uses the standard 75mm pack howitzer. This weapon is employed for several reasons: (a) The howitzer breaks down into loads approximating 300 pounds and the standard cargo parachute is designed to carry loads approximating 300 pounds. (b) The size of the bomb-bays on our cargo planes is limited. (c) The means available to move the weapon after assembly on the ground are inadequate for heavier cannon. Our standard cargo planes during the war were the C47 and C46. Owing to the size of the bombbays neither airplane could drop the assembled howitzer. It was therefore necessary to break the howitzer down into nine loads, place these loads into prepared paracrates, and put the paracrates in the bomb racks of the airplane. There are six bomb racks on each of these airplanes; the remaining loads, termed "door" loads, are pushed out the door of the airplane as the paracrates in the bomb-bay are released.

Our present standard cargo airplane, the C82, has two methods of getting the paracrates out of the airplane. Both methods use the bomb-bay in the front part of the airplane. In the first method the paracrates are suspended on vertical girders which run from the floor of the airplane to the top of the fuselage. There is sufficient room to allow all the howitzer paracrates to be released through the bomb-bay. A second method also uses the bomb-bay, but in place of using the girders to suspend the load, the paracrates are suspended from a steel endless cable. Upon starting the cable in motion, each paracrate is carried in turn to a position over the bomb-bay, where a tripping device releases the paracrate from the cable and the load falls through the bombbay. The ejection takes but a matter of seconds. A third method of dropping has been employed experimentally with the C82. This method utilizes the rear door (this method will be discussed later).

For some time the British have dropped their light artillery completely assembled from their bombers. This method was developed by them because of their use of the bomber in airborne operations, the size of their bomb-bays making this possible. In this type of drop, the completely assembled gun is placed inside a prepared steel crate which has four standard parachutes attached, one on each corner. The gun and crate are placed in the bomb-bay of their heavy bombers and the gun is released the same as a bomb.

The howitzer loaded in a C82.

82d Airborne Division

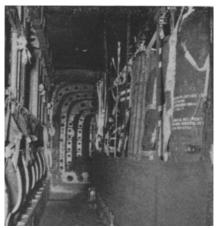


In any parachute drop there are but a few seconds available to get both personnel and materiel out of the airplane. Our present parachute technique provides that the airplane must be flying at a speed not in excess of 120mph. This speed limit is necessary, first because of the shock to the parachutist on the opening of his parachute, and second, because of the possibility of ripping the parachute on opening when the airplane is traveling at a higher rate of speed. An airplane traveling at 120mph will pass over a "Drop Zone" (DZ) one mile long in thirty seconds. Most DZs are shorter than one mile and the length of time available is directly proportional to the length of the DZ. Speed, then, is highly essential if the personnel and the material are to get out of the airplane in time to land on the selected DZ. If there is any sticking of the load or if any parachutist hesitates in the door, or gets caught in the door, some of the parachutists at the end of the stick will probably fall beyond the DZ.

So far only the methods of dropping or delivering the howitzer have been discussed. Radios, the nerve system of airborne and armored artillery units, are dropped successfully if the proper care is taken in the preparation for the drop. The present 619 with its wet cell and plastic case is more of a problem than the old favorite of the war, the 609. But even it can be dropped. There are no special paracrates manufactured for any equipment other than the howitzer and ammunition. Each type of radio brings

Paracrates loaded for monorail-system drop.

The PEGASUS. Fairchild Engine and Airplane Corp.



up its own problems for proper solution; padding and the ingenuity of the radio personnel will usually solve the problem. Switchboards, telephones and fire-direction equipment fall into the same category as radios. There is no set method of dropping. Each article's place in the bundle is the result of careful thought, experience, planning and arrangement.

Ammunition is dropped in two types of containers. The parachest (which carries only ammunition) carries 10 rounds of 75mm ammunition; the paracaisson carries 8 rounds of 75mm ammunition, an axle, a pair of wheels and a handle. The paracaisson is converted in a matter of minutes into a "caisson" which can carry ammunition or supplies. The prime mover is still man power, but it is much easier for the men to haul ammunition in the caisson than to carry it in their arms.

TRANSPORTATION

Transportation following the landing varies with the type of artillery. The transportation for air-transported artillery is exactly the same as that normally issued, since any artillery prime mover used by the infantry division can be loaded in the C82.

Glider artillery is faced with weight restrictions, which means that the prime mover is governed by the type of glider available. The only gliders now in service in sufficient numbers for a division artillery are the CG 4a and the CG 15a. These gliders can only carry the $\frac{1}{4}$ -ton 4 × 4 ("Jeep"). This vehicle must then serve as the prime mover for the glider artillery. The Jeep can pull the 75mm pack howitzer over very rough terrain. The 105mm M3, with its additional weight, presents a more difficult traction problem. When the pull is too tough, two Jeeps are hitched in tandem and with the use of manpower the M3 can in most cases be moved around. The 105mm M2 is a real test for the Jeep. The Jeep can pull the M2 over almost any type of road, but hauling it cross-country is another matter. Even when putting the Jeeps in a tandem hitch, there will still be the need for additional traction power to negotiate soft, muddy terrain. When it can be anticipated that the glider artillery will operate over soft terrain, the Weasel should be substituted for the Jeep as the prime mover. The Weasel can be carried in any of our gliders, and



The PEGASUS. Fairchild Engine and Airplane Corp. **Dropping paracrates through bomb-bay.**

it is a satisfactory prime mover for the 105mm M2 or M3. The only drawback to having the Weasel as the standard prime mover is its lack of ruggedness. The T/E prime mover for the glider artillery equipped with the 105mm M3 is the 1½-ton 6×6. This vehicle cannot be carried in the CG 4a or 15a. This results in two prime movers for the glider artillery, the Jeep to land by glider, and the 1½-ton to come by the land or sea tail.

Parachute artillery is not provided with motor transportation for the parachute phase of an assault. All of its motor transportation must come in by glider or the land tail, so that its prime mover initially is manpower. Web harness is provided for the gun crew, and it is moved from place to place by plain brute strength. Of course this type of prime mover is most unpopular with all cannoneers and any type of prime movers such as bullocks, horses or automobiles are quickly requisitioned, captured or acquired to serve as a substitute. The standard prime mover for the parachute artillery is the Jeep, and for kitchen and supply, standard 2½-ton trucks are provided, to arrive in the land or sea tail.

Airborne artillery battalions are allotted very little motor transportation, there being insufficient transportation to move any type battalion in one echelon. For example, in a parachute howitzer battery the total number of vehicles is 10 Jeeps. This lack of transportation requires the immediate attachment of additional transportation, once the airborne artillery is given a ground role.

Radio communication in both airtransported and glider artillery is similar to that in the infantry division, since



US Army Signal Corps
Assembling paracaisson.

the radio can get its power from a vehicle. In the parachute artillery the battery pack must be the primary power source. This requires a large reserve of batteries in the initial drop plus an assured re-supply until the arrival of the tail. Airborne artillery is not authorized the standard W110 wire, and must depend on the light W130 wire; this type of wire requires short lines. In both air-transported and glider artillery, wire is laid by motor vehicle. Parachute artillery, for the parachute assault phase, must lay all wire by hand. There is no wire reel provided to recover wire, which means slow hand recovery.

ORGANIZATION

The Airborne Division and Airborne Artillery Tables of Organization have been under revision for a considerable time, but the details of the new tables are not yet official. In general the artillery is to consist of three battalions of three batteries, each battery to consist of four pieces, with a fourth battalion to be attached when needed, for general support.

The present organization (used in all airborne divisions during the war) comprises in general a division artillery headquarters battery, two 75mm pack howitzer parachute battalions, one 75mm pack howitzer glider battalion, and one 105mm M3 glider battalion. The details of their organization and equipment will be found in the appropriate Tables of Organization and Equipment.

TRAINING

Training in airborne artillery, in matters of fire direction, communication, motors and gun drill, are identical with the infantry division artillery. There are certain types of

training which must of necessity be stressed more in the airborne artillery, and there are other types of training which are undertaken only in the airborne artillery.

Parachuting requires an athletic body, an active mind and a pair of strong legs. This requires a greater percentage of the drill week to be spent in physical exercise, to assure that each trooper is ready at all times for an airborne task. The airborne artilleryman must also be an expert in the use of the carbine. In many instances in the past the initial action of the airborne artillery has been an infantry fire fight. The airborne artilleryman must be proficient in map reading and the use of the compass, since past experience has shown that in many cases he may be dropped miles from the proper DZ, and be forced to find his way to his unit.

The initial specialized airborne training consists of a six-weeks' course at the Airborne School, where the individual is qualified as a Gliderist and a Parachutist. Proficiency in each of the qualifications must be maintained by constant practice and application. This is accomplished by mock-door training, practicing landing falls, and performing a parachute jump at least once each three months.

EMPLOYMENT

Parachute artillery drops simultaneously with the parachute infantry. This means, in many instances, a small-arms fire fight immediately upon landing, before the howitzers can be assembled to function as artillery. In some cases, a howitzer section may find itself dropped miles from its DZ. This forces the section to function as a completely independent unit until it can rejoin its battery. If the DZ has been well chosen, so as to be free from enemy forces, the following procedure is followed: As the troops are in the air, parachuting to the ground, they look around to see where the howitzer loads are landing. Colored parachutes are used for this purpose. Once having determined where the howitzer is going to land, the trooper looks after his own landing. On the ground he quickly removes his harness by means of a guick-release apparatus, gets his individual weapon ready, and starts on the double for the assembly area, which is the spot where the howitzer has

dropped. Each trooper is assigned a part of the howitzer to locate and bring to the assembly point of the howitzer. This point is determined by the heaviest load of the howitzer, which is the front trail. He does this on the double and in a short time the section has the howitzer assembled, A highly trained section can do this job in 5 minutes from the time the section starts its jump from the airplane until it is ready to fire. With the howitzer assembled the section gets into harness and hauls the howitzer to the battery assembly point. Once the battery is assembled, the battery executive moves the battery to its initial gun position, which has been selected by inspection of air photos. The radios are unpacked and the net opened. The forward observers, having jumped with the infantry, have in the meantime opened up their radios, and the battery is then ready to carry out fire missions.

The battalion FDC jumps at the same time as the firing batteries. It unpacks its equipment and moves out to the CP selected from air photos. Once in position it opens its radio net and establishes communication with its forward observers and batteries. When this is accomplished all batteries are registered on a common base point and the battalion FDC takes over control of the batteries. Once the registration on a common base point has been accomplished, a parachute artillery battalion functions much the same as the artillery of an infantry division, with the restrictions of no motor transport available for reconnaissance or to serve as prime movers, and a very limited initial supply of ammunition on hand plus the uncertainty of resupply by air.

In any airborne operation the number of infantry and artillery used is dependent upon the number of airplanes available. In both the Normandy and Holland assaults there were insufficient airplanes available to carry all the airborne units of the 82nd and 101st

Moving howitzer from DZ to firing position.

US Army Signal Corps



Airborne Divisions, so portions made the assault by sea. Similarly, the amount of ammunition dropped by an airborne artillery unit will depend on the number of airplanes allotted the artillery. Seldom, if ever, will sufficient airplanes be made available to drop all the ammunition desired.

The employment of glider artillery has varied. At times it has landed simultaneously with the parachute elements. When this has been done the result has been heavy casualties in both gliders and personnel. The slow-moving tow ship and its gliders, both while being towed and when free, present a juicy target for all types of antiaircraft fire. In some instances the landing zone



has been held by enemy troops. In this case the gliderman finds himself at a great disadvantage getting out of the glider and starting combat. Glider artillery should arrive only after the landing zone has been cleared and secured by the parachute troops.

To employ air-transported artillery, the first and primary requirement is an airfield. This type of operation should only be undertaken when the field has been cleared of enemy small-arms fire, and ground observation is denied the enemy. If the enemy retains observation on the airfield, artillery fire can render its use too costly.

MISSIONS

The primary mission of the airborne artillery is the same as that of any other artillery: "To assist the advance of the infantry by supporting fire and to neutralize or destroy targets dangerous to the supported arm." Following are some types of missions the airborne artillery will be called on to support:

- a. Seizing and holding terrain suitable for landing airplanes or gliders.
- b. Seizing and holding river and canal crossings or defiles.
- Seizing and holding key terrain in rear of organized beach defenses, in conjunction with landing operations.
- d. Establishing bridgeheads.
- e. Attacking a defended position in rear or flank, or landing within and attacking an organized perimeter defense.
- f. Seizing or destroying vital enemy supply and communication installations.
- g. Assisting ground operations by means of vertical envelopment and seizing of important terrain features and vital establishments.
- h. Creating confusion and acting as a diversion to the operations of the main force

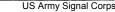
In the initial phases of any airborne operation the artillery battalion will be attached to an infantry regiment. division Control by artillery headquarters is usually regained when "Divarty" can establish communication after the landing is made. Following an assault landing, control will in many instances be decentralized down to the individual artillery section. regaining of control to the platoonbattery-battalion-divarty level in many cases will be a slow process. Airborne artillery must follow closely behind the infantry; there is no conventional "front," the enemy usually completely surrounding the airborne unit. The protection of the infantry must be utilized.

Ammunition is a most critical item. Resupply is initially by air. Each round is carefully conserved until needed. The first firing will often be direct fire. Batteries must be prepared to fire throughout a 6400-mil sector at all times.

CHARACTERISTICS

The outstanding characteristics of an airborne force are its strategic mobility and its ability to deliver ground attacks over great distances. These characteristics compel an enemy to disperse his forces in protecting localities of strategic importance, and to hold out large reserves to meet an anticipated airborne attack. Objectives are limited only by the operating range of available aircraft, number of aircraft available, and anticipated enemy resistance by air and on the ground. Airborne action produces an adverse effect on enemy morale.









82d Airborne Division

Less than 5 minutes later.

The occupation and destruction of vital points cause confusion and loss of coordinated action by the enemy.

An airborne force can land by day or night. Daylight operations are more accurate—night operations are less vulnerable. The most vulnerable period of an airborne assault is during descent and just after landing. This phase of the operation must be completed in the minimum length of time, and is accomplished by parachuting and releasing gliders from low altitudes, and prompt assembly (learned in training), once on the ground.

Owing to lack of antitank weapons, airborne troops are highly vulnerable to an armored attack. Plans must be made to land the weapons necessary for antitank fire by glider.

Airborne operations always require a large amount of planning. Ground reconnaissance is not feasible, so all plans must be based on aerial photos plus intelligence reports. The success or failure of an airborne operation may depend on last-minute intelligence information. Dispersion on landing is normal; this may be caused by poor navigational visibility, difficulties, nature of terrain, altitude of drop or inexperience of personnel involved. The problem of regaining control once the troops and equipment are on the ground is directly proportional to the degree of dispersion.

Plans for reinforcement and resupply must be an integral part of the assault plan. This is due to the limited amount of equipment and supplies that can be carried for the initial assault.

FUTURE DEVELOPMENTS

Future developments in airborne artillery are a bit difficult to foresee, but there are some experiments that are now

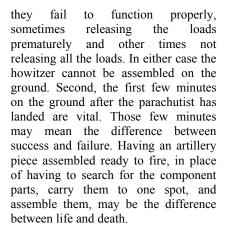


The PEGASUS. Fairchild Engine and Airplane Corp.

105mm M2 in a C82. A jeep is in front of the howitzer. Note rollers under platform.

going on that are almost certain to become standard practice within a short time

The C82 can have its rear doors removed without materially changing its flying characteristics. Using this means of exit from the airplane, it is possible to eliminate the necessity of breaking the 75mm pack howitzer into its various loads. The entire howitzer can leave the airplane in one load, with the howitzer crew following immediately. This will shorten the time required to prepare the howitzer for action, and eliminate the danger of lost or missing parts of the howitzer. The 75mm pack howitzer and the 105mm M2 howitzer have both been successfully dropped from the rear door of the C82, the 75mm using one 92-foot parachute and the 105mm using two of them. The Jeep has also been dropped in this manner. Without doubt the breaking down of the 75mm howitzer into loads will soon be discarded and the rear exit will become standard. This method is much preferred over the bundle method for several reasons. First, bomb releases are electrically operated, and at times



The possibility of substituting the 105mm M2 for the 75mm pack howitzer still remains a question of a prime mover after the weapon gets on the ground. Jeeps can haul the 105 M2, and they can be dropped. But a Jeep, despite its many rugged characteristics, is quite a delicate piece of machinery, and the landing shock renders a high percentage inoperative. A 105mm howitzer depending on manpower as a prime mover is immobile. From a prime-mover standpoint, the only certain method is to use the 75mm pack howitzer for all parachute assault missions.

Recoilless weapons are particularly adaptable to airborne operations. Recoilless 75mm guns can be fired as a battery with accurate results, and for certain types of operations offer a substitute for conventional artillery. Rocket weapons would be highly desirable in the airborne, but until their probable error approximates that of the 105 their use is precluded as a close-support weapon.

Parachutes are in particular need of development, so that equipment and personnel may parachute from the airplane at the highest speed of which the airplane is capable. Our present technique requires the airplane to slow to around 120 mph. The faster speed would make both personnel and the airplane less susceptible to antiaircraft fire

All-metal gliders are being manufactured and should soon be in the hands of the troops, and their rear door will be a great assistance in unloading. Powered gliders have been assembled using small motors and our standard gliders. Their use to assist in landing



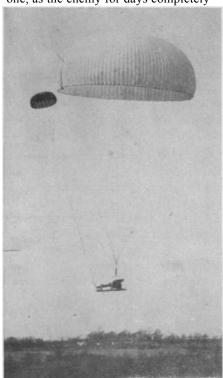
The PEGASUS. Fairchild Engine and Airplane Corp.

105mm M2 leaving the CR2 hulled out by ribbon chute. Main chutes not yet onen

has distinct possibilities. The most desirable method of landing any airplane is without forward motion. This eliminates prepared landing fields, with their long runways, and eliminates the dangers inherent in any high-speed landing. A glider capable of functioning as a helicopter on release from the tow plane would be a wonderful piece of airborne equipment.

Air-transported artillery with the materiel loaded inside a detachable fuselage is a development now underway. This would allow quick unloading of the airplane. Simply detach the fuselage and the airplane could then make a rapid turn-around to get another fuselage, which would be ready to attach, completely loaded. A possible development would be the combination of this fuselage with rotors which would allow it to function as a helicopter and make a slow vertical descent upon release.

Airborne artillery is the newest member of the artillery family. It was first used in World War II. Its effectiveness in the Normandy, Holland, Rhine and Philippine airborne assaults should be matters of pride for all artillerymen. Its employment at Bastogne, while not in an airborne role, closely approximated one, as the enemy for days completely



The PEGASUS. Fairchild Engine and Airplane Corp. 75mm howitzer dropping as a single load.

surrounded the Airborne Division, causing the artillery to cover a 6400-mil sector

Its future I believe is firm. Atomic warfare will not permit large concentrations of troops. The war of the future must be fought by airborne or air-transported

troops capable of fast and positive action. If used in the assault role, its mission will be to follow up the advantages gained by an atomic bombing; if used in the defensive role, to move and counter any offensive move by an aggressor force.

SOMETHING NEW HAS BEEN ADDED

By Captain Edmund C. Murphy, FA

N THESE DAYS of a dwindling ▲Army, the activation of a new organization is news indeed. The Field Artillery 504th Battalion (105mm, Truck Drawn) was activated on 15 January 1947 by the Commanding General, Antilles Department. Presently stationed at Losey Field, near Ponce, Puerto Rico, it is the first all Puerto Rican field artillery battalion in the peacetime Army. As such, it will take its place with the celebrated 65th Infantry to form a combat team.

Its strength for duty on activation day was 18 officers and 237 enlisted men. Owing to the shortage of field artillery officers in the Antilles Department at that time, a number of officers of other arms (Infantry, Coast Artillery, Cavalry, Military Police) were assigned to assist the fledgling battalion in its basic training. All the enlisted men had seen war service but only a few had been field artillerymen. In late May and early June, thirteen more field artillery officers joined the Battalion and the "borrowed" officers returned to their parent units.

The training situation of the 504th differs in at least one noteworthy way from that usually found in a newly activated field artillery battalion. Instead of an intensively prepared cadre of non-commissioned officers from an existing organization, training a large number of recruits, the 504th was composed entirely of prior service men who had enlisted in the Regular Army. However, only a handful had any field artillery training.

At first glance this might be deemed a serious drawback. In a short while, however, many advantages that were not at first apparent began to be felt. Most important was the definitely superior esprit of an all-volunteer outfit. As training progressed it became increasingly evident that the soldiers had the attitude of professionals anxious to master more and more of the skills of their trade, not the civilians in uniform in the anxious-to-get-it-overwith-and-go-home frame of mind of war days. Another very tangible advantage was that long periods of training on basic subjects were not needed. The artillery phases of training were not impeded or diluted by large doses of school of the soldier, interior guard, dismounted drill, military courtesy and kindred instruction which normally compose a great part of the early training of a new unit.

In the important field of housekeeping, the presence in the battalion of experienced supply sergeants, mess sergeants, cooks, mechanics and other key men has aided materially in the progress of training. With dependable men looking out for the "creature comforts," it is much easier for all hands to concentrate on training.

Training is going forward under a full head of steam with the immediate goal of providing four weeks' training to a group of Cuban field artillery officers during August. The entire battalion is confident that this task will be accomplished in a style that will bring credit to itself and to the United States Army. And the 504th is determined that it will be heard from again.

The New Grasshopper— L-16

Prepared in The Air Training Department, The Artillery School



 $T^{
m HE}$ L-16 AIRPLANE is being procured by the Air Force from the Aeronca Aircraft Corporation for issue to Army Ground Force and National Guard Units. Like the L-4, it is a light, two-place, high-wing, commercialtype, land airplane of elementary design. It has no flaps, no controllablepitch propeller and no other heavy accessories. The L-16 was not specifically designed for "grasshopper" service. It is practically a civilian emboding a few army model. modifications — a more powerful fuelinjection engine, more plexiglass for better visibility, and less of the interior trim which helps sell the civilian model. It is well to remember that the L-4 which performed yeoman service in combat was also one of these offthe-shelf airplanes.

The purpose of this article is to describe the L-16 — what it is like, how it flies, how it compares with the L-4. Veteran flight instructors of the Air Training Department, The Artillery School, conducted tests to estimate these characteristics, and to recommend procedures and flight handling of the airplane in Army Ground Forces work.

On the ground the L-16 seems quite sturdy and handsome. It has a fourcylinder horizontal-opposed fuelinjection 80-horsepower engine with a metal propeller and the usual Aeronca wing whose pronounced dihedral makes the airplane easily recognized in flight. A surprisingly roomy cockpit enables both pilot and observer to move around without much bending of legs and elbows. The plexiglass provides considerably better visibility in the same areas of the aerial sphere than the L-4. The blind spots below the fuselage, to the rear, and above the wings are the same. The observer faces forward.

Starting and Stopping the Engine. The fuel-injection engine requires a different starting procedure. In hot weather or when the engine is warm, it starts more quickly if priming pull-throughs are omitted. If the primer has been previously disengaged it can be used just as the engine catches. Stopping the engine is different also. The switch should be cut at 1500 RPM and the throttle opened immediately to overcome the tendency of the engine to continue firing. Because of fuel injection, there is no carburetor heat control.

On the Ground. The low cowling, the downward sloping nose and the high seat give the pilot better visibility in taxiing than is the case with the L-4. S-turns are unnecessary except when taxiing over unfamiliar ground. Of course taxiing on strange strips will

have to be done as carefully as ever. The radius of turn of the L-16 on the ground is not as short as that of the L-4. This seems especially true in a cross wind. The brakes are mechanical and can be applied full force with two people in the airplane. For solo flying, which is done from the front seat, there is a tendency for the airplane to nose over if the brakes are used too hard. A good way to avoid nosing over is to apply the brakes alternately with quick, light jabs.

On take-off, a pilot accustomed to the L-4 will immediately notice the torque correction required. characteristic goes with the additional 15 horsepower. It is nothing to be alarmed about. The L-16 takes off best if it is permitted to roll in 3-point position until the tail becomes noticeably lighter. The increased visibility which the pilot particularly if sitting on a seat-type parachute, allows him to see the ground ahead during the roll. Slight forward pressure after the tail starts up will bring the tail on up to take-off position. From there, the airplane will break ground quickly. Attempts to raise the tail prematurely add to the drag and lengthen the take-off run. The normal take-off run is slightly longer than that of the L-4.

In the Air. The L-16 climbs steeply after take-off without any tendency to "mush." The angle of climb is steeper than that of the L-4, although the low nose cowling may at first conceal the true angle. The torque correction is similar to that required in heavier airplanes. Right rudder must be used in climbs, left rudder in glides. In case the "pants-seat" warning escapes the pilot, a simple ball is included on the panel.

In a short time the pilot will become accustomed to flying with the nose down in level-flight attitude. Here again the visibility is excellent. It cruises at 2400 RPM, and it can be trimmed there to fly "hands and feet off."

The L-16 gives ample warning of an impending stall, and recovery is rapid with forward stick and throttle. In slow flight just above a stall the ailerons are effective. It spins smoothly and recovers quickly with normal recovery technique. Spins out of turns are enlightening. From a tight turn to the

right the L-16 spins easily over the top. The spin out of the bottom of a right turn is more difficult since torque must first be overcome. In a left turn the airplane will spin out of the bottom without any rudder pressure, the spin entry being sudden and positive. It will continue the spin as long as the stick is back. The spin over the top from a left turn requires a certain amount of forcing. It is apparent that the L-16 controls may be crossed easily if the pilot is not flying it correctly. This tendency is not overly dangerous providing the pilot recognizes this characteristic and knows exactly what he is doing before he attempts prolonged slow turns at low altitudes.

The twin-exhaust-stack arrangement of the L-16 produces an irregular engine-exhaust noise which definitely exceeds that of the L-4. Furthermore, abrupt movements of the throttle cause vibration in the engine, cowling, and windshield. Slow, smooth operation of the throttle reduces vibration considerably.

Short Field Landings and Takeoffs. The L-16 can make an excellent power approach at an indicated air speed of about 54 miles per hour with a throttle setting of 1400 RPM. At this speed and throttle setting the airplane has no tendency to "mush" and the rate of descent is approximately 500 feet per minute. The nose of the airplane is just slightly above level flight. Slips are good, especially those to the left, and recovery from slips is both easy and prompt. It is evident, however, that recovery from slipping turns to the right can produce a spin over the top if rudder and stick are not properly coordinated.

Since this airplane cruises at 90 miles per hour indicated, more time is required to attain slow flight than is required with the L-4. However, once slow flight has been established, the power approach characteristics are similar. Landings on the oleo gear are smooth and positive. There is little tendency to float unless excessive power is applied just before the landing. It is well to remember that the gear on this airplane is much stronger than the gear on the L-4. A longeron will often

give way in a hard landing before the gear gives.

In comparative air-strip work the L-4 can land closer to a barrier by approximately 75 feet, although the ground roll after touchdown is about the same for both airplanes. The take-off run of the L-4 is about 10 feet shorter, but the L-16 with its steeper angle of climb will clear a barrier as high (or higher) as any cleared by an L-4.

All in all, it is the opinion of the flight instructors that the L-16 is definitely superior to the L-4 in comfort and visibility. It is as stable as the L-4, and it climbs faster. Its torque characteristics are similar to those of heavier airplanes. Undoubtedly the L-16 will not be quite so forgiving of poor flying technique as the L-4. As with any new airplane, the pilot should fly the L-16 with respect until he has definitely obtained the feel of it.

Transition. It has often been said that

no pilot can be considered to know an airplane until he has flown it for 25 hours. Since the L-16 flies differently every pilot should be required to undergo a complete transition period. During this period he should practice coordination exercises, turns, stalls, normal spins, lazy-eights, and spins out of turns. Power approaches should be practiced at a safe altitude until the pilot is thoroughly familiar with the slow flight and power stall characteristics of the airplane. Actual power approaches and landings should commence on larger strips and work down to shorter ones. Nose-high turns from the base leg to the approach leg should be avoided. Slow flight should begin only after the airplane is definitely lined up with the strip on the final approach. If proper care is given to the transition training of pilots in the L-16, it will achieve the same if not better results than the L-4. It simply flies a little more like a heavy airplane.

TAS BOOK DEPARTMENT NOTICE

This notice relative to purchase of Restricted Publications by INDIVIDUALS from the Book Department, The Artillery School, is published for the information of all concerned:

Attention is directed to TM 38-405 as a guide for individuals who desire to purchase Instructors' Outlines, Problems, Writs, etc., or assembled packages of these publications, which have been classified as "Restricted," through the Book Department, The Artillery School.

Paragraph 10, TM 38-405, directs that an individual have his request certified as to the identity of the purchaser by his superior officer as follows: Regular Army officer, by his Commanding Officer or Adjutant; National Guard officer, by the Adjutant General of the state or a Regular Army officer instructor detailed with the National Guard; Reserve officer, by a Regular Army officer instructor detailed with the Organized Reserves; ROTC cadet, by a Regular Army officer instructor detailed with his unit; Enlisted man, by his immediate commanding officer; National Guard or Reserve enlisted man, by his immediate commanding officer, who will forward through his normal channels as indicated above.

Compliance will avoid unnecessary delay in filling orders for these materials.

Writing Is So Easy!

Republished by courtesy of the Army Information Digest

By Jay Cassino

IT'S so easy to be a writer. All you need is paper and a typewriter—and, in a pinch, you can do without the typewriter.

The ease with which one becomes an author is an anomaly of the trade of letters which has confused me throughout the 30-odd years during which I have tried to eke out a living by juggling words. Just think; no apprenticeship, no special training, not even a defined education; simply sit before a typewriter and start turning out deathless prose at twenty-five cents a word.

In the several past years of handling manuscripts, a preponderance of which came from PROs, I have been struck with the solemn and majestic thought that most authors are inspired and encouraged by the millions of illthoughtout, ill-written words printed each year by American journals. The miserable assemblage of verbiage that parades across my desk to the drum beat of requests that it be forwarded forthwith to the Saturday Evening Post, convinces me that most Army writers have no idea of how publications operate, what makes editors act like inhuman beings, what makes the whole machinery tick in transferring words from manuscripts to the printed page and putting them before the reading public.

Another conclusion I have reached. Exceedingly few Army writers have anything to say when they sit before their typewriters to tap out their prose. A purpose of this article is to help the Army writer determine whether he has something to say; because if he has not, he'd better try knitting.

If you really have something to say, you need not worry about your technical skill in juggling words. Editors do not buy words; they go into the market place to get ideas and facts. There are plenty of

JAY CASSINO is Chief of the Magazine and Book Unit, Public Relations Division, Department of the Army good rewrite men, experts in the wordjuggling art, on the staffs of magazines. For a modest stipend, they put the right adjectives in the right places. Every editor has his own stable of such writers. Generally he prefers that his writers string the words in their proper sequence for a most effective finished article. It's the idea that pays off, not the words.

The principal error of the embryo author is the feeling that his literary masterpiece merits nothing less than the top line in the table of contents, with a featured notice on the front cover of the class magazines. Fully 90 per cent of all the manuscripts I receive are accompanied by requests that they be submitted to the *Saturday Evening Post* or *Collier's*. There is no compromise. And heart-rending, indeed, are the complaints that follow publication in some lesser magazine, or in a service publication, or in a trade journal, or even in a house organ.

Only the other day I received a letter from a PRO in the Pacific. He had submitted a yarn that would have been acceptable to editors about three years ago, when the story was still news. At this late date, it never should have been submitted to any editor; but because we in the War Department Public Relations Division feel that every effort must be made to encourage the Army writers, the piece was sent to several editors. It came back to roost on my desk. Finally, I advised the author that his article was being sent to a free-distribution publication. Promptly came his letter. The piece would either appear in the Saturday Evening Post or it should not be published at all.

By the time I received this missive, the manuscript had been rejected by seven editors, which was not surprising. I returned it to the author with a kindlyworded note to the effect that the piece was well done but that I believed lack of timeliness militated against its acceptance. I could not, however,

repress the impulse also to call the writer's attention to the fact that the free-distribution magazine to which he objected demands high literary standards, is among the higher-paying publications, and has a circulation of nearly 2,000,000 — which puts it in a class above most of the "slicks."

The wise professional writer is not a bit choosy about who publishes his pieces. That's what gets him a yacht, a Chinese cook, and three divorced wives. Also, the wise professional writer does not tap out articles until he has queried the editors as to their interest in the subject about which he wishes to write.

The beginner rusheth in. He writes his article, or book, or story, and then wonders: Who'll print it? Even worse, he makes up his mind that the *Saturday Evening Post* is holding next week's make-up, waiting for just such a piece as he has turned out.

While the story is still in thought form, the professional slants it toward a definite market and queries that market. Failing acceptance, he reslants it for another and tries again. He puts the idea on paper, in some 300 words, and submits it to editors. Only after he has an acceptance, does he set himself to the task of writing.

There are some 2,500 markets where literary wares are sold. There are also many thousands of house organs that buy and print ideas, not words. Each is specialized; each has specific aims, and each has a definite pattern to follow in balancing its contents.

And that pattern is the source of rejection slips. It's what's known as the "balance" of contents — the definite, almost rigid apportioning of material within its pages to the various interests of the readers. Always there's just so much romance, so much travel, so much adventure, so much marine interest. And so little about the Army, except, of course, in service journals. These, some 64 of them, devote most of their contents to the armed services.

The wise author, therefore, thinks of his proposed article in terms of facts and ideas, rather than words. And he thinks in terms of freshness of facts, the timeliness of ideas. He knows that magazines schedule their contents from no less than four weeks to six months or more in advance of publication. Spot news, therefore, is never good magazine

material; not even for the news magazines. As a rule, anything which has appeared in newspapers is dead duck, so far as magazines are concerned. By the time an article fashioned around spot news can appear in print between covers, there will have been so many new developments, so many new stories to engage the public's interest, that the piece so laboriously and, yes, even brilliantly — developed has become so much old hat. Another good rule to remember is that, with the limited space which magazines can devote to things military, this field of writing is extremely competitive; and the field within which the Army writer operates is extremely restricted, mainly because he deals with things within his own purlieu. His information is bounded by his knowledge of things, by the military point of view, and by the limitations imposed upon him by Army Regulations. I have yet to meet the Army writer who drinks at the almost inexhaustible fountain of information which springs from the various government agencies and bureaus. A wealth of reference and source material is available to the author in the acres of documents and reports within the keeping of government offices. These are used freely by professional writers outside the Army, but almost never, to my knowledge, by Army officers who would be writers.

Yet, even within the limited purlieu of the Army officer, there is plenty of material for stories that will find space within the pages of specialized and trade magazines. The laundry officer can find many items of interest to editors of laundry journals; the PX man may have some novel ideas on merchandizing which the trade press will welcome. There are so many of these specialized magazines that every conceivable subject can find a market. And the Army benefits through the good-will generated among readers who realize what the Army is doing in the various fields.

I cannot emphasize too strongly the idea that the aim of public relations is to get information about the Army before the American public. That means that every Army message should reach the greatest possible number of people, to be effective. The means used to disseminate

the information is secondary in importance. Specific messages should be addressed to specific audiences. An article about a matter of interest primarily to military personnel should be printed in a military publication; one dealing with railroad problems does the most good when it reaches people interested in those problems — through the pages of a railway publication.

I would by far prefer to have a story printed in a house organ which reaches two and one-half million families than in a slick magazine which is read by less than one million. And I am not padding figures here to strengthen my argument. There is at least one house organ (published for the employes of an automobile manufacturer) with a circulation larger than that of most class or popular magazines. At least one freecirculation magazine, given away to shoppers in stores of a food chain, is read by more people than read any but perhaps a half dozen popular publications. If the purpose of the author is to have his stuff read, the format, price and slickness of paper of the publication do not matter. Getting the message across to the largest number of people you want to reach is the important thing. The public relations mission is accomplished — and, in the postwar Army, public relations is a concern of all of us.

Another basic fault of the writings of military personnel lies in the fact that knowledge and ideas circumscribed by their own limited knowledge of even Army affairs. Something outstanding is accomplished by a post or station. It comes to the attention of someone who concludes that here is a wonderful story — of course, for the Saturday Evening Post. He sits before his typewriter and pounds out 3,000 words. He then dispatches the manuscript to the Public Relations Division for clearance and submission to the Post editors. PRD finds the story could have been told in 100 words and is not a story at all, but only an incident in an article of far wider scope; one that would benefit the Army greatly. What to do? Well. generally, the piece is sent out to editors with a note that additional material for further development of the article is available, at the War Department. If the

editor is sufficiently intrigued, he assigns a writer. Eventually an article that started out of the officer's typewriter as "Antennae Guide Mosquitoes to Hosts" appears in the Reader's Digest as "The Love Life of a Mosquito," an entertaining pseudoscientific piece which combines all the work done on mosquito extermination, not only by the Quartermaster, but also by the Medical Corps, the Chemical Warfare Service and by half a dozen other government agencies and a score of colleges. The part the Army plays in the story is small but significant — and rich in public relations value. The original author fails to recognize his own work, which is only a paragraph now. But it was he who provided the idea and, I repeat, it's the idea that pays off in credit to the Army.

An article devoted to helping Army writers develop magazine material should not end without some advice. Here it is: Don't worry about the beauty of your prose; put the facts down on paper.

Don't attempt finished articles; as a rule editors prefer to have their own writers do them. What they want is an idea, and the facts to support it.

If all the facts are not available to you, send in what you have with your suggestions on how the story may be developed by the addition of other facts which PRD can gather more easily than you.

Let PRD decide which publications may be interested. PRD personnel are in touch with editors and usually know what they want. They also know which free-lance writers are interested in which subjects and are in good position to "sell" your idea.

Don't wait for inspiration; when you have something to say, write it — and send it in. Address your communication to Chief, Public Relations Division, War Department, Att: Chief, Magazine and Book Unit. PRD will worry about further development of your idea, and about placing it.

If you want to write for money, choose your market and slant your work to the particular editor. Don't aim at the "slicks;" there's plenty of pay-dirt in the trade magazines, in the specialized publications—and even in the service publications. Write! write!!! write!!!

DISSENTING OPINIONS

The two articles below were received as letters to the Editor, but were too long for inclusion on our "Letters" page. However, the JOURNAL, while taking no stand in regard to the opinions expressed, feels that in view of the combat experience of the writers these opinions are worthy of an airing, and should be provoking of interest among our readers; accordingly, the two letters are presented here as companion articles. General Hart was Artillery Officer of the First Army, Colonel Storke of II Corps.

The Artillery Brigade Headquarters By Brig. Gen. C. E. Hart, USA

I BELIEVE that the thoughts of the Artillery School on the subject of the use of a field artillery brigade headquarters, as stated in Artillerv Tactics in the July-August issue of the JOURNAL, are not based upon a complete digest of combat experience and, consequently, are not entirely sound. First Army effectively utilized a field artillery brigade headquarters throughout operations on the continent of Europe. And what is more it is the feeling of those presently in authority in First Army who were also with the command during combat that the brigade headquarters and headquarters battery will continue to have a definite role in future combat.

Let us reread the current doctrine in this regard with which the School differs. "Army artillery has for its principal mission distant interdiction and destruction fire, and reinforcement of the fire of corps artillery." In my opinion this doctrine is just as sound today as it was the day it was written. I am afraid that those who consider it outmoded have lost sight of the fact that an army commander has a zone of interest of much greater extent than that of a corps commander, in that he is interested in all portions of the army sector, not alone that of one or possibly two corps. Objectives of a strategic nature are frequently included in an army commander's overall plan, whereas a corps commander usually confines his planning almost entirely to the tactical aspects.

The tactical situation varies not only from week to week but more often from day to day and in many instances from hour to hour. It is neither feasible nor desirable to switch units of any type from one corps to another daily or even weekly if it can be avoided. Yet the tactical situation may have changed several times during the period, calling for the fire of the heavier weapons such as the 240mm howitzer, 8" gun (if we still have such, in view of its inaccuracy) and some form of rocket or guided missile of the shorter range variety. Regardless of the change in situation, which likely enough may be only momentary, corps commanders are naturally reluctant willingly to give up a unit not presently required, for fear that it may be needed a day or two later. If this be the case, how is the corps that suddenly runs into difficulty, after comparatively light resistance has been anticipated, going to secure promptly this type of heavy support which has been allotted previously to the corps making the main effort? Possibly fire could be shifted to the front desired by the corps to which these units had been previously attached; however, if position areas were not selected with this contingency in view, it could not be done.

The second point—and not the least by any means—is the deeper and wider zone of interest of an army commander. An historical example of this occurred during the continental operations of First Army. After the liquidation of the Bulge, the Army Commander became very interested in all of the Rhine River bridges in his sector. The 240mm howitzer and 8" gun units, then operating directly under the Army Commander through the 32d Field Artillery Brigade, were given priorities in the selection of position areas in order to be able, when within range, to neutralize (not destroy) these bridges. At this particular period corps commanders rightly had more immediate interests than those relatively distant bridges which might or might not eventually fall within their assigned sectors.

I believe, moreover, that if and when guided missiles with range capabilities up to approximately one hundred miles become organic in our ground forces, and the range capability of the 240mm howitzer and the range and accuracy of the 8" gun are improved, the field artillery brigade headquarters and headquarters battery will have even greater application and use than it did with First Army during World War II.

One of the principal factors contributing to the acclaimed success of the field artillery in the last war was its flexibility. The principle of flexibility should be emphasized to an even greater degree in the future. In this vein I desire to make it clear that the retention of the field artillery brigade does not imply that it should habitually be employed directly under army control. The brigade headquarters and heaquarters battery, with or without attached units, may and frequently will be attached to a corps or possibly its units divided between two or more corps, again depending upon the tactical situation. An historical example of this type of employment during the operations of First Army in Europe was the St. Lo breakthrough, late in July 1944. For this operation the 32d Field Artillery Brigade, together with all of the 240mm howitzer and 8" gun units present in the Army area, were attached to the VII Corps. The artillery plan called for the use of the Brigade Headquarters to control the semi-static heavier types of artillery, thereby releasing the VII Corps Artillery Headquarters to move through the gap with the remainder of the corps artillery units when feasible and desired.

The subject article further states in regard to the brigade that "neither the army artillery officer nor the field artillery

brigade commander have sufficient operations personnel and other means to function effectively as a tactical commander." It is felt that this statement is without basis in fact. As First Army Artillery Officer throughout the planning phase of the Normandy invasion, as well as for all operations on the continent, I can say without reservation that the 32d Field Artillery Brigade was used both efficiently and effectively under Army control the major portion of the time. Further, there were adequate operations personnel in both the Army Artillery Section and the Brigade Headquarters and Headquarters Battery to meet all requirements. Not unlike the combat T/O and E's of all field artillery units, those of the aforementioned require slight revisions in the light of the acquired experiences of World War II.

In conclusion, may I comment briefly on that portion of the subject article which deals with "Command of the Integrated Artillery." Initially it should be pointed out that an army artillery officer in combat is responsible to his commander for the staff work necessary to accomplish the efficient and effective tactical and technical employment of the artillery with the army, which under the integration plan will include both field and antiaircraft types of artillery. So what is applicable to division and corps artillery commanders in these respects is also applicable to army artillery officers. It is true that the overall requirement is quite complex and so it will continue to be until the officer personnel of these two important arms become thoroughly indoctrinated in all phases of both. From an operations standpoint, however, I believe that each artillery echelon army, corps and division — should have subsections to represent each of the two arms in their respective former operations sections.

The army artillery officer with the rank of major general should be solely a staff officer and should not under any circumstances command the army antiaircraft brigade as proposed in the subject article. It is felt that the soundest and most practical solution of the problem would be to have separate commanders with rank of brigadier general for the field artillery brigade

and for the antiaircraft brigade. The apportionment among an outstanding group of artillery officers well versed in the tactics and technique of both field and antiaircraft artillery to the various higher echelons of artillery, with general officer rank as follows:

Army group and army artillery officers—major general.

Corps and division (including armored divisions) artillery commanders—brigadier general.

Field artillery and antiaircraft brigade commanders — brigadier general.

will, in the opinion of this writer, go a long way toward the efficient and effective employment and the command and staff supervision of our "Integrated Artillery" in the future.

The Counterbattery Officer By Col. H. P. Storke, GCS (FA)

OUNTERBATTERY Operations.

There is no counterbattery officer in the U. S. Army. Counterbattery operations are a function of the operations section. Emphasis varies. If, conceivably, the enemy has no artillery, there are no counterbattery operations. On the other hand, if the corps command post is being shelled, everybody engages immediately in counterbattery operations."

As I reread the above excerpts from Artillery Tactics in the July-August issue of the JOURNAL, I became more and more confused. I cannot believe that a deemphasis of counterbattery has become field artillery policy. Yet the conclusion I keep arriving at is that, at best, the above words are carelessly chosen and will cause misunderstanding and result in a lack of training and research in a most vital artillery problem.

Perhaps this indicates another step in the direction of reducing our field artillery instruction to a more generalized plane at a time when greater and greater specialization seems to be normal SOP for just about every other line of endeavor in the world. Furthermore, we now talk of longer ranges for artillery, of diverse types of guided missiles, of more efficient explosives, of radar instruments to be developed, of Buck Rogers devices as yet undreamed. Already provided for are countermortar sections; somewhere along the line, presumably in corps artillery, there should be an expert who can properly direct and coordinate those sections to obtain the maximum good from them. Surely it is reasonable for us to think ahead to proper protective measures, to redouble our research, to improve our counterbattery methods, to educate our officers.

Yet I read and interpret the foregoing quotation — perhaps in an extreme way, but not illogically — as follows:

"There is no counterbattery officer in the U. S. Army." (*Possible* interpretation: We have no need for counterbattery instruction and advancement.)

"Counterbattery operations are a function of the operations section." (*Possible interpretation:* The S-3 simply shoots, in keeping with extant theories of push-button warfare.)

"Emphasis varies. If, conceivably, the enemy has no artillery, there are no counterbattery operations." (*Possible interpretation:* A reasonable statement, no doubt, but one could say with equal logic, "If, conceivably, there is no enemy, there can be no war and we have no need for a peacetime Army.")

"On the other hand, if the corps command post is being shelled, everybody engages immediately in counterbattery operations." (Possible interpretation: This I can only classify as an attempt to make light humor out of a very grim subject. As II Corps Artillery Officer, I had more-thanample experience with Corps CP counterbattery "experts," and realize too well the damaging confusion they can cause in their zeal to be of assistance. I recall once in Italy when positive reports of direction of fire following a tremendous explosion near a corps CP established enemy trajectories from four different directions, one of them from our rear. Later we were to prove that a U. S. demolition squad had merely set off a dud bomb and forgotten to notify us.)

As World War II started, our counterbattery procedure was in a nebulous, infantile state. Experiments and practice in North Africa, Sicily, and Italy

brought that procedure to the more or less stereotyped stage which was later to be employed with such good results in Northern Europe. The establishment of counterbattery technique, the setting up of counterbattery sections, the perfection of photo-interpretation, the education of our troops in passing back counterbattery information — all of those essentials were developed by continual intelligent experimentation and hard work during the early stages of the war. They didn't just happen. Why should such an important subject have been so neglected prior to the war? But that's water over the dam. God forbid, but the next war may come so quickly and with such impact that the necessary time to develop our processes will not be available. Therefore, we must prepare *now*.

I make no claim that a counterbattery officer is a strange and exotic animal who, alone in the world, has an ability which sets him apart in his mysterious specialty. Not at all. Any field

artilleryman can do a passable job as a counterbattery officer if he has to. But just as indisputable as the fact that every officer cannot by his nature become an excellent G-2 is the fact that every artillery officer cannot become an excellent counterbattery officer. And why consider counterbattery officers of lesser abilities? An excellent counterbattery officer must possess certain characteristics. To name a few: a well-rounded general artillery education; a technical knowledge of his own materiel and projectiles as well as those of the enemy, with a deep interest in and healthy, exploratory curiosity concerning both; an ability to handle statistics and detail without getting mired in inconsequential or irrelevant facts or guesses; a sound, practical judgment; and the long-suffering patience of a Job.

Perhaps the title "counterbattery officer" is an offensive one, for some reason. Well, let's not call our subject that. Let's call him an S-2, or something

else, maybe "target officer," or maybe "target-getting officer." But let's remember that we need a man who has certain necessary characteristics which differ from those of an average executive, or BC, or S-4. And let's continue to emphasize and develop counterbattery, so that all artillerymen will be exposed to and have had a chance to think on this subject, and have a chance to show or to decide for themselves whether or not they have the potentiality to become the excellent counterbattery officers we may need in the future. The duty is important enough to demand the use of the very best suited in that specialized field. Why take less than that? Why extemporize later?

When you need a counterbattery officer you really need him. Then, branch-immaterial experience or knowledge is irrelevant to the important issue — counterbattery experience and natural or school-produced counterbattery ability.

WELCOME TO THE FIELD ARTILLERY

The United States Field Artillery Association is proud to extend greetings and congratulations to each of the following named artillerymen on having recently been tendered commissions in the Regular Army.

This latest (and for the time being the last of any size) increment brings the total number of officers integrated into the Regular Establishments (USA and USAF) since the first increment in June, 1946, to approximately 28,000.

Lt. Col. Ford E. Allcorn (Capt.) Maj. Spofford E. Avery (1st Lt.) Capt. Clark H. Bachman (1st Lt.) Maj. John M. Barnum (Capt.) Lt. Col. Irvine F. Belser, Jr. (1st Lt.) Col. Gera'd N. Bench (Maj.) Maj. James A. Benford (Capt.) Lt. Col. Richard T. Benson (1st Lt.) Maj. Robert W. Blum (1st Lt.) Lt. Col. Joseph S. Bochnowski (Capt.) Col. Kenneth L. Booth (1st Lt.) 1st Lt. William H. Brinnon (1st Lt.) Maj. Robert C. Britt (1st Lt.) Lt. Col. Kenneth P. Burns (Capt.) Maj. William H. Byrd, Jr. (1st Lt.) Capt. William C. Carter (1st Lt.) Lt. Col. Carey A. Clark (Capt.) 1st Lt. Rodney J. Collins (1st Lt.) Maj. Kenneth Cooper (Capt.) Col. Harper B. Cowles (Capt.) Capt. Albert W. Crowell (Capt.) Lt. Col. Homer K. Curtis (Capt.) Lt. Col. Charles W. Dallon (Capt.) Lt. Col. John F. Day, Jr. (Capt.) 2d Lt. Ralph L. Denton (2d Lt.) Maj. Howard D. Dodge (Capt.) Lt. Col. Frank Duda (1st Lt.) Capt. Merrill B. Evans (1st Lt.) Lt. Col. Paul A. Fisher (1st Lt.) Capt. George W. Flager (1st Lt.) Capt. David E. Foster (1st Lt.) Capt. Gustav H. Franke (1st Lt.)

Capt. Edward R. Franks (1st Lt.) Maj. Oscar G. Goodhand, Jr. (Capt.) Capt. Kenneth G. Groom (1st Lt.) Col. Walter J. Haberer, Jr. (1st Lt.) Lt. Col. Thomas A. Harris (1st Lt.) Capt. David A. Hill, Jr. (1st Lt.) Maj. Rupert Ingram (Maj.) Capt. Harry R. Jackson (1st Lt.) Maj. Jesse D. Jackson (Capt.) Maj. Roland H. Jensen (1st Lt.) Lt. Col. Leo F. Johnson (1st Lt.) Maj. Evander F. Kelly, Jr. (Capt.) Capt. Clarence N. Kennedy (1st Lt.) 1st Lt. Herman E. Kessler, Jr. (1st Lt.) Capt. H. B. Kinsolving, 3d (1st Lt.) Maj. Wm. E. Kish (Capt.) Lt. Col. George W. Landis (Capt.) 1st Lt. Eugene M. Landrum, Jr. (1st Lt.) Maj. Charles E. Lawrence (1st Lt.) Col. John Lockett (Capt.) Lt. Col. John T. Lorenz (1st Lt.) Capt. David R. Lyon (1st Lt.) Lt. Col. Albert B. Marshall (1st Lt.) Lt. Col. John T. Marshall (Maj.) Maj. Norman E. Martin (Capt.) Capt. William P. Mattox (1st Lt.) Capt. Donald E. McArthur (1st Lt.) Capt. Gayle W. McFadden (Capt.) Maj. James D. McFarland (1st Lt.) Col. Royal E. McShea (Capt.) Lt. Col. Roland J. Meeker (1st Lt.) Lt. Col. Harry S. Messec (Capt.)

Lt. Col. George H. Nee, Jr. (1st Lt.) Capt. Donald M. Nethery (1st Lt.) Col. George V. Nunn (Capt.) Lt. Col. Walter B. O'Connor (Capt.) Lt. Col. Robert J. O'Donnell (Capt.) 1st Lt. Joseph J. O'Hare, Jr. (2d Lt.) Lt. Col. Mac D. Oliver, Jr. (1st Lt.) Maj. Bill W. Paden (1st Lt.) Lt. Col. Frank C. Paul (Maj.) Maj. David M. Ramsey (1st Lt.) Capt. Dan E. Riggs (1st Lt.) Col. James O. Ross (1st Lt.) Capt. Vernon R. Rottstedt (1st Lt.) Maj. Edward G. Ruth (1st Lt.) Col. L. M. Scarborough (Capt.) Maj. Willie L. Scott (1st Lt.) Lt. Col. Clifford M. Simmang (Capt.) Maj. John F. Stein (Capt.) 2d Lt. Howell F. Stewart (2d Lt.) Lt. Col. Clarence E. Stuart (1st Lt.) Capt. William G. Thomas, 3d (1st Lt.) 1st Lt. A. C. Thomson, Jr. (1st Lt.) Lt. Col. Mayo T. Tilghman (Maj.) Maj. Paul R. Wagner (1st Lt.) Capt. Arthur B. White (1st Lt.) Col. Stanley E. Whitmore (1st Lt.) Lt. Col. Webster Wilder, Jr. (Capt.) Col. Donald B. Wilson (Capt.) Capt. Darrell G. Wood (1st Lt.) Capt. John C. Wood, Jr. (1st Lt.)

Why Not the Group?

By Colonel Robert F. Hallock, FA

IN THE FALL OF 1943, having been Lin combat for about a month and thus feeling myself an old battlewise veteran. I wrote to a friend that "Flexibility of organization — groups and separate battalions non-organic, and shuffled like a pack of cards after each deal-is a worse threat to efficient operation than the German army. And such changes frequent." Apparently similar complaints from many sources continued and swelled into a chorus demanding some form of permanency organization in non-divisional artillery organizations.

These demands dwelled upon the alleged facts that separate battalions and groups with no permanent senior headquarters often failed to receive their appropriate shares of PX supplies, days in rest camps, and Bronze Stars; that these group and battalion commanders occasionally failed to receive wellwarranted promotions because no senior commander had a permanent interest in them; and that some group and battalion commanders weren't busted who should have been, for the same reason. They dwelled upon the difficulties of a battalion in accommodating itself to working under an unknown senior staff,

Since the termination of (and no doubt also during) the recent hostilities there has been much discussion, by artillery officers of various ranks, of the pros and cons of the "Group" organization, for non-divisional artillery, vs. the regiment. The majority of the talk we have heard has been ardently against the group, with the expressed criticisms falling more or less along the line of those indicated in Colonel Hallock's opening paragraphs. The JOURNAL publishes this article in the belief that the opinions of an experienced artillery colonel who favors the group are worthy of consideration.—ED.

new SOP's, new communication nets. Many of them, however, were based on relatively short periods of combat, and were written soon after combat, without time for mature reflection.

These demands have resulted in the proposal for the artillery division to replace the corps artillery, for this division to be commanded by a major general with a general staff and service troops, for the group to be replaced by the regiment, for the separately numbered battalions to be replaced by the 1st, 2d, 3d, and 4th battalions of the regiment. These proposals have been buttressed by appeals to tradition and sentiment, by comparison to infantry regiments and divisions, and by reference to the success of the artillery divisions and corps of the Red Army.

In November of 1944, the War Department published Circular 439. which said, in effect, "Separate battalions may be assigned to groups by the theater commander, or by a commander, higher and reassignments will be made anybody below the theater commander. Temporary detachments will be made as the situation demands." Here is the correct principle. How did it work? Few people even read it. No order in compliance with this circular ever reached the corps artillery to which I belonged. Good outfits had already learned to follow the principle stated, and apparently some were violating it and continued to do so. Should we abandon a correct principle because it was violated by some commanders?

What is the overall, outstanding characteristic of field artillery, the truly

fundamental basis which gives it its battle efficiency? Flexibility. Flexibility of weapons, flexibility of technique, flexibility of tactical employment, and, we hope, flexibility of thought. Weapons can attack any and all types of targets, fire can be concentrated in large masses or every cannon can fire at a different target, units can be massed to support the main effort of the attack or the defense and then redeployed rapidly to meet a changing situation. Any action which will, even in the slightest degree, handicap the exploitation of this flexibility or indicate the undesirability of employing it will be a serious mistake. It has been stated that these proposed changes will not handicap flexibility, but will produce units which are "flexible but not limber." Is this true? Yesterday I heard an experienced field officer say, "Well, when we get the old regiment back they won't be able to shuffle battalions all over the map the way they used to." Undoubtedly, the shuffling of battalions was overdone, but when the situation indicates that it should be done, nothing must cause a commander to hesitate to take such action.

Were the complaints of hardships and loss of efficiency due to the group organization in fact well grounded? Within my own experience. I believe the answer is "No." The groups I knew best, the 6th, 17th, 36th, 77th, 178th, seemed to have no great difficulty after first few weeks in combat (individuals formerly in those units will disagree). They were well organized, well trained, and well led by strong, capable commanders. Often, as the need arose, their battalions were detached for greater or less periods of time. There never arose any doubt in the mind of anyone concerning which battalions belonged to which group. The group commanders knew where battalions were, what they were doing, and how they were getting along. The battalions always gave a good account of themselves when they were detached, and came home with a "My, we're glad to be back" remark, usually preceded or followed by a message from their temporary commander commenting on the good work they had done. Sometimes their mail was delayed or they missed a visit from a USO troupe, but that seemed less important than stopping a

German attack or assuring the success of one of our offensives.

A newly attached unit should receive personal visits immediately from the commander to whom attached, and from the key members of his staff, to insure that there is no misunderstanding as to procedures, the situation, the unit's mission and its ability to execute it, and to ascertain the assistance needed from the senior headquarters. This became routine. My own statement quoted in the first paragraph lost all validity. Units slid quietly in and out of higher organizations without any fuss or difficulty. Cases of two corps artillery commanders collaborating recommendations for promotions and awards for members of units which had served under both of them were common. In one case a recommendation for a well-merited award for a battalion commander was initiated months after his departure from his organization when it had become apparent that he would not return.

An interesting point comes from some separate - battalion commanders, who say, in effect, "Why have either group or regiment? We can run our own outfits and our own shows without any colonels looking down the backs of our necks all the time. Our outfits get along all right. We can work for anybody and do a good job. Why delay the transaction of official business by inserting an unnecessary headquarters between us and the corps artillery headquarters or the division we are to reinforce?" I can't concur in this proposal, but it certainly casts grave doubts on the validity of the demand for a never-changing headquarters over separate battalions.

Tradition as a reason to re-establish the regiment in place of the group is a point which I do not take lightly. Customs and traditions based on years or centuries of recorded splendid achievement have a very tangible value which is often translated into terms of success on the battlefield. Yet no one has proposed that we revert to the old term "artillery company" in place of "artillery battery." I heard a very heated discourse from a battalion commander of the 6th Field Artillery Group in which he objected to destroying the glorious traditions and records of battlefield accomplishments of that fine organization by introducing this newfangled word "regiment"!

The comparison between the infantry regiment and the artillery group is invalid. With all its modern transportation and improved communication, infantry committed to battle is relatively fixed in position. To withdraw it and recommit it, or to give it a materially changed mission or direction, is extremely difficult. It simply does not have the technical or tactical flexibility inherent in field artillery, and there can be no direct comparison of the respective organizations.

Let us consider the proposed artillery division. Why did the Red Army use such an organization? Their weapons had a high degree of battlefield mobility. Their communication was poor, their staff work was of dubious efficiency, and as a result their ability to maneuver artillery fire effectively was lacking. They substituted the massing of units for the massing of fire, the maneuver of gun carriages for the maneuver of the trajectories. Surely it would be a backward step to follow their procedure.

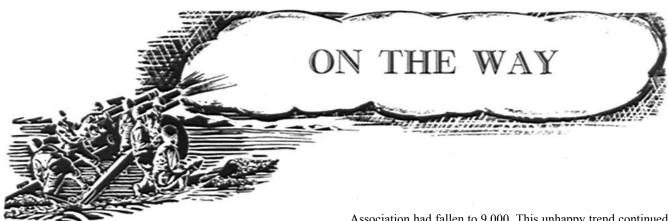
What is the artillery mission? To assist, to support, to reinforce, to ensure the success of the assault troops. Corps artillery does its best work based on liaison, on cooperation, on finding out what the divisions need and then giving them a bit more than that. Its plans are made in conferences with the supported commanders over coffee cups, its efficiency is proved only when the divisions are in the habit of asking for its help freely and often. It doesn't take the rank of a major general to make that work. I'd like to be a major general, too, but I'd rather win a battle. The relationship between the corps artillery commander and "his" division artillery commanders must be one of mutual trust and cooperation, and not one of commander and subordinate.

A general staff and service troops in the corps artillery? The corps artillery is a part of the "corps troops." There is a corps staff with an appropriate allocation of corps service troops provided to take care of the needs of the corps troops. Is the corps staff overworked? Are the service troops overloaded? Did they fall down on the job? Not to my knowledge, but if they

did in any cases, the provision of duplicate agencies is hardly the best solution.

Whether battalions of a group shall be numbered 1st Battalion, 101st Field Artillery Group; 2d Battalion, 101st Field Artillery Group, et cetera, or 258th Field Artillery Battalion, 991st Field Artillery Battalion, et cetera, doesn't seem particularly crucial. It is unfortunate to make two phrases grow where one grew before, but it is an old custom. The multiplicity of 1st Battalions may cause a bit of confusion. The possibility of the conversion of a group, after a bit of heavy fighting and maneuvering, into one consisting of three or four "2d Battalions" is contemplated with a lifted evebrow. Two undesirable features of the former plan seem to me to be important, however, although both are intangible. One is the resultant loss of identity of battalions with splendid combat records in World War II. The other is the implication of a loss of responsibility and independence of action and thought by the separatebattalion commander. The battalion commanders who wanted no group commanders around to interfere with their getting on with the war went too far, but they exemplified a spirit of energy, initiative, and willingness to accept responsibility which is a priceless ingredient of command, and which must be nurtured with great care.

It is my belief that until such time as new and radically different weapons are developed, new principles of war are discovered, or new functions of and leadership command are uncovered and prescribed, the artillery division and the artillery regiment with its 1st, 2d, 3d, and 4th Battalions should be placed quietly in the archives, to confuse the artilleryman no further, and that efforts should be concentrated on increasing knowledge of the proper employment of those units which General Patton had in mind when he said. "We won the war and it was largely won by the artillery. I think it is very important that you now record on paper what you did (not what you think you did) so that the artillery in the next war can start off where you stopped."



ITH THIS ISSUE a new Editor and Associate Editor take over The FIELD ARTILLERY JOURNAL. Fortunately the same action-tested staff remains to aid in achieving our objectives—getting out a JOURNAL of continuously improving interest and value, and maintaining an ever-increasing Association membership.

Such a change in regime for any magazine has usually in the past brought forth a carefully dusted version of the "Ave atque vale" editorial. We see here no hope of ringing great changes on the theme. A glance, however, reveals the inescapable problems created by the practically concurrent retirement of both the former Editor, Colonel DeVere Armstrong, and his Associate Editor, Major Robert F. Cocklin. With a certain degree of trepidation—diminishing we trust as experience is gained—the new editorship studies its inherited mission and prepares to get on with it.

As for the past—though the membership is well aware of the real debt owed to Colonel Armstrong and Major Cocklin-it seems well at this time to review the main elements therein. From its inception as the voice of the Field Artillery Association in 1911, the JOURNAL has grown through the generous and able efforts of many editors, marshaling the contributions and interest presented by a membership which may have varied in strength and degree of activity but never in loyalty. These artillerymen, with occasional and alwayswelcome help of those from other branches of our service, have met changing problems; they have maintained a magazine of unchanging integrity, of vital interest and of highest professional value. Colonel Armstrong and Major Cocklin, however, took over at a dangerously critical point in the JOURNAL'S career. At the close of 1945, hostilities had become a part of the past; inevitable reaction had set in and from a peak wartime strength of approximately 20,000, the

Association had fallen to 9,000. This unhappy trend continued to a low water mark of barely 5,000 in December 1946. The resultant alarming financial straits were recounted in an editorial of the recent July-August issue, which concluded that "... average monthly loss for the first six months of 1946 was over \$1,400... our Association's net worth was then melting away at a rate of something approaching 5% a month."

This situation forced drastic retrenching. Colonel Armstrong and Major Cocklin—although completely new to their jobs—maintained, by their foresight, enthusiasm, and utter disregard of "office hours," the high level of JOURNAL quality and gradually set in motion a program of economy and membership promotion. Its success is evidenced in the past eighteen months' progression from a \$1,400 monthly operating loss to the current status (aided by heavy book sales in response to our recent circular) of being almost out of the red.

That this has been achieved through fine teamwork of the JOURNAL'S entire staff, its contributors, and the Association membership as a whole, Colonel Armstrong has previously emphasized; nevertheless, we wish to extend him on behalf of the Field Artillery Association particular appreciation for his constant devotion to the Association's needs and his splendid leadership of the JOURNAL. On the occasion of his imminent assignment to foreign service, we regret losing the benefit of his sound judgment and able pen, while wishing him "clear observation and unlimited fire-power" in all future missions. Grateful appreciation likewise goes to Major Cocklin (now Lt. Col., FA-Reserve), whose organizational ability and promotional energy meant so much to the Association and are now applied nearby to the recently established National Guardsman magazine.

But the past is a highway to the future. In starting forward along the broad road which Colonel Armstrong and his staff built through the financial jungles to our rear, the present Editor and his Assistant have fortunately enjoyed the invaluable aid of Colonel Armstrong and Major Cocklin in putting out the September-October issue. The latter has continued his help on the November-December book section. The quality of these two JOURNALS will directly reflect their kind efforts, and thanks are hereby recorded.

With its own resources, however, the new regime hopes to carry the JOURNAL ahead, not only to the land of blue ink which already appears on the horizon, but to an increasing degree of vitality and variety in content (already initiated by prior regimes) to match the accelerated peacetime program of military training, scientific research, and tactical developments.

Whether or not the JOURNAL must continue without paid advertising, functioning through careful husbanding of resources obtained by subscriptions and book sales, the present editorship hopes to maintain the high level of professional quality which has come to be expected of this magazine and to expand the attractiveness of the fare within its covers.

In this day of troubled international affairs, preparedness in every phase of national defense is the keynote of security. The Field Artillery of the Army of the United States earned a substantial portion of the credit for final victory in World War II through its development of matchless fire-direction technique, through the courage, devotion and efficiency displayed by each component from Forward Observer back to Army Artillery Staff, and, above all, through the smooth coordination of the entire complex team. It would be sad if in the press of peacetime pursuits too large a proportion of this highly valued knowledge now in possession of Reserve and National Guard Artillerymen were allowed to become dormant. There is the corollative possibility that the years ahead might bring a greatly reduced regular establishment in which limited capabilities for experimentation and active field work could tend to force the professional artilleryman into a round of daily administrative duties, away from receptivity to new ideas and prompt adaptability to changes in tactics and technique to keep abreast of scientific research. The JOURNAL has been in the past and will strive constantly to be in the years ahead a connecting cord among the country's Artillerymen, a stimulus to all new ideas in our field, and a convenient, effective medium of exchange for them; above all, we wish to reach regularly each present and past member of the Field Artillery Association and the many new individuals who will join our Service during each succeeding year.

We realize that, in this great mission of keeping active the traditions of honor and efficiency which belong to the United States Field Artillery, the JOURNAL'S part is relatively small. To all officers and enlisted personnel of the Regular Army, Reserve, and National Guard falls the greater task of maintaining a high level of peacetime activity.

In furtherance of our mutual mission, the fibers which form the JOURNAL'S connective cord consist mainly of subscriptions. The greater their number, the more solidly can we serve to link all components and individuals, and with fuller finances be able to furnish each an increasingly better magazine.

During the past six months membership has been maintained generally at the level of 5,000; this is only a portion of the country's Artillerymen who can furnish interest and vitality to the Association and to whom the JOURNAL can give valuable aid in their military careers.

Our horizon, as members of the Field Artillery Association, should not be limited to our own arm. One of the most outstanding features of combat in World War II was the tremendous success gained in the Infantry-Artillery-Tank team when all members worked in close coordination, in contrast to the failure or small degree of gain generally achieved when their efforts were applied disjointedly. We hope to keep increasing the appeal and distribution of the JOURNAL to Infantry and Armored Force, and as much as possible to other arms and services, to keep Artillerymen in close touch with these other fields, and to help maintain the bonds which were forged so strongly on recent battlefields through Europe and among the islands of the Pacific.

These are the larger mileposts for the future. For the present we again urge consideration of the fact that new hands have taken over the JOURNAL. As unofficial slogan for the next several issues we submit those words which once adorned a saloon in Leadville, Colorado, in the lustier days when each customer toted through the swinging doors his own artillery on each hip. The sign on the wall was simple; we trust it was, and will still be, effective:

"DON'T SHOOT THE PIANO PLAYER, HE'S DOING THE BEST HE CAN."



FO or FDC

Dear Editor:

Although it may work out all right mathematically, I cannot help feeling that it would be a mistake to substitute the new method of observed fire reported in your pages for the forward-observer method tried and proven during the war.

For the FO with troops, shooting at close-in targets while himself under fire, anything which serves to increase the number of things he has to worry about is a step in the wrong direction. I say this out of experience in handling forward observers and in firing a mission or two as a combat liaison officer from a 105-howitzer direct-support battalion to an infantry battalion in Normandy and for a while thereafter.

The supreme virtue of the forward-observer methods used in more than 90 per cent of the firing in Europe was simplicity. The observer, whether an officer or enlisted man, needed only to report what he saw. Corrections to bring the rounds to the target were made in the Fire-Direction Center. That is where they should continue to be made. How much simpler it is to take a quick look and report what you saw than to have to worry about whether you are using the right S-factor and whether you should be bracketing for range or deflection!

The so-called battery commander's methods of shooting, such as small-T and large-T, presumably were devised to increase the accuracy of firing by observers a long distance from their targets. The procedure keeps the bursts on the observer-target line rather than the gun-target line for better observation at great distances. But our experience was one of much closer relationship between the ground observer and his target — in many instances less than a thousand yards. In such cases I feel it is

much simpler and just as accurate to "shoot-in" the gun-target line and adjust along it. The really important thing is the bracket.

The new method shifts the burden of correction from the FDC to the observer and makes him adjust along the observer-target line. I feel this imposes unnecessary hardships and indeed risk on the ground observer. On very close-in fires, as your first article pointed out, factors are constantly changing and thus impose a severe and unnecessary mental effort on the observer at the very time he is likely to be most harassed personally by the enemy.

Your article says the wartime FO methods are being retained for plane observers because they can see the G-T line and adjust along it. Let's keep them also for those for whom they were originally designed—the close-inshooting ground observer. supplant with the new system only the old battery commander's methods for under long-distance shooting observation conditions.

JOHN W. THOMPSON, JR., Capt., FA-Res.

Washington, D. C.

There have been quite a number of opponents of the so-called new method of fire adjustments, and they usually advance the arguments that the FO methods, as used in France and elsewhere, were so successful that they should not be abandoned, or that when the observer is close to the target it is simpler to adjust on the G-T line. Both methods were given exhaustive tests bebefore C2 to FM 6-40 was adopted. The main advantage of the adopted method (as was particularly brought out in training infantry and other non-artillery observers overseas) is that once the observer gets a BRACKET along the O-T line he is bound to get his target,

whereas as a result of an erroneous sensing on the G-T line he may go into effect nowhere near the target. This happened so many times in combat that fire-direction centers usually insisted on obtaining a bracket before fire for effect was delivered.—Ed.

EM Participation

Dear Editor:

Since reverting to inactive status, I have assisted some in the instruction of Reserve Field Artillery officers in Washington. THE FIELD ARTILLERY JOURNAL, which is tops in my estimation for keeping abreast of artillery developments, has been my most consistent source of instructional material.

However, I would like to see more articles contributed by enlisted artillerymen. Although a reservist, I had the honor of serving with a National Guard battalion during the war and have decided that the participation of the enlisted personnel in activities during peacetime was the greatest factor in the high morale of the Guard units.

LT. COL. RUSSELL L. RILEY, FA-Res. Fairfax, Va.

•—Splendid idea, but it cannot bear fruit unless and until EM sharpen their pencils and submit manuscripts, which will be gratefully received and carefully considered.—Ed.

PLEASE!

notify us when you change your address

You want to be sure to get your *Journal* promptly; we don't like having to pay return postage.

In war time, remember how many a medal Adorned folks from head to extremities pedal—

A cross on a colonel,

An order fraternal,

A badge on a boy scout for good deed diurnal? For valor, for skill or for just being rash, For calling hogs loudest or making good hash

One got decorated

And handsomely fêted,

Lord High This-or-That or the champion created. And even the shy, the retiring or skittish Wore fancy medallions for aiding the British.

That order on Junior looked almost imperial— The lad had been cited for eating his cereal.

And were the girls fond

Of medals they donned

As blossom-time queens or for being a blonde! To ribbons and hardware those babes were all partial When, as, and if annexed from somebody martial.

They glittered with wings

And anchors and things;

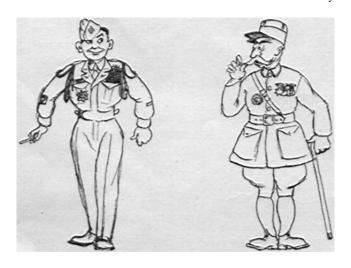
Insignia, emblems, and what not in strings.
Unfortunate men who would fain embrace lasses
Got stuck with a medal pin when they made passes.

In fact, come to speak

Of it, I am unique.

My like you'd not find searching week after week. I was minus a medal on chest, sleeve or hat Say! Shouldn't they give *me* a medal for *that?*

Fairfax Downey



MULTITUDE of MEDALS

(Cartoon by Maj. Gen. S. LeR. ("Red") Irwin)

GEN. GEORGE C. KENNEY, Commanding General, Strategic Air Command, tells this one.

I'd be much prouder of my collection of ribbons if I didn't keep remembering an experience during World War I.

While recuperating from wounds in a Vichy hospital in 1918, I was awed by a French officer who could hardly stand up under the weight of a chestful of medals.

"Did you win the battle of Verdun?" I asked.

"I was not een zat confleek," he answered.

"Well, where did you get all those decorations?" I asked.

Pointing with his index finger, he took me on a tour of his chest. "I got zees and zees and zees on a tour here een Fronce. I got zees large group here on a tour een Eetaly. I was awarded zees and zees on a colonial tour. I got zees on a tour een ze Balkeens. I got zees "

"What did you do to get them?" I cut in.

"You see zees particularly handsome one here," he said, pointing to a badge he wore over his pocket. It was the size and shape of a sunflower and glittered like the crown jewels.

"I was geeven zees one by meestake," he said. "I get all zee others because I have zees one."

Sometimes I look at my display and wonder?

(Copyright, 1947, New York Post Corp.)

ITEMS FROM THE ARTILLERY SCHOOL

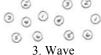
Prepared in the Department of Gunnery

QUESTIONS ON THE SIX-PIECE BATTERY

THE adoption of the six-piece battery for the artillery of the infantry division has brought up questions not answered in current field manuals. The following list of questions and answers compiled recently at The Artillery School clarify most moot points. The answers when approved will be incorporated in new training literature being written at The Artillery School.

1. What types of battery formations are best suited for 6-gun batteries?

Ans: 1. Star 2. Hexagon



3. wave



4. Inverted U



5. Staggered in Line

In most instances terrain will indicate the formation of the battery. Formations and variations similar to the above should be used during training to obtain flexibility within the battery.

2. In what order will the pieces be numbered within the 6-gun battery?

Ans: Counterclockwise for star, hex, or circular formations — or from right to left if on or nearly on line.

3. To what point in the position area will survey be carried?

Ans: The survey will be carried to the center of each battery, which will be marked with a stake. This stake is the chart location of the battery.

4. What piece should be the base piece?

Ans: The base piece is the piece nearest to the geometrical center of the battery (to be designated by the battery executive in each position).

5. With what pieces do we adjust?

Ans: 1. Base Piece (precision fire).

- a. The two pieces which most nearly bracket the line: battery center to target.
- b. The forward two pieces nearest the line from battery to target.
- 6. What commands are given from the FDC to designate the adjusting pieces?

Ans: 1. Base piece 1 Rd.

2. Platoon R Platoon L Platoon 1 Rd.

The executive selects the pieces to fire.

7. Do we try to shoot with an open sheaf or parallel sheaf?

Ans: We consider the parallel sheaf the standard for attack of area targets. The observer may order open sheaf, special corrections, or converged sheaf. These corrections are normally

accomplished by the executive at the battery.

8. What are the limitations on position area before standing corrections should be applied?

Ans: 105 How: 150 yds wide — 100 yards depth
155 How: 250 yds wide — 100 yards depth

These distances must be considered as a general rule. This applies to all except close-in missions.

9. Do we center our sheaf in area fire?

Ans: No. Corrections are made on the base piece, after the registration has been completed, to center the battery on the base point. No corrections for centering the sheaf will be necessary on subsequent targets.

10. What, if any, will be the SOP regarding application of special and standing corrections, i.e., responsibility of FDC or Battery Executive?

Ans: Normally it will be the responsibility of the battery executive; however, unusual cases may arise when the FDC may compute the corrections.

11. What will be the distance between flank bursts in an open sheaf?

Ans: 105 How: 150 yards 155 How: 250 yards

12. What will be the maximum depth between pieces in the position area?

Ans: Normally 100 yards. If greater, standing corrections should be applied.

13. What sort of communications will be used for control of the battery?

Ans: Telephone or PA-system control from executive to each piece.

14. Do we cover a zone of 200 yards firing five ranges with the six-gun battery in FFE?

Ans: No. During the adjustment, when firing a six-gun battery, a 100 yard bracket should be split before going into FFE. When FFE is given if only one battery is to fire, a 100-yard zone will be fired as follows:

- 1. Fire 2 volleys at the initial FFE range.
- 2. Add 50 yards, fire 2 volleys.
- 3. Drop 100 yards, fire 2 volleys.

This 100 yard zone fire will more effectively cover an area 200 yards in depth than our previous 200 yard zone firing 5 different ranges. It will also speed up the firing.

15. What will be our definition of Base Line?

Ans: Base line is the line from the battery center to Base Point.

☆

LONG-RANGE ARTILLERY

F interest to all artillerymen is a long-range artillery shoot which was conducted at Fort Sill, Oklahoma on 19 May 1947. The shoot necessitated firing across U. S. Highway 277 north of the post proper. Although numerous long-range shoots were conducted during combat, not very many artillerymen were involved or knew very many of the details involved or the results obtained. The Gunnery Department at The Artillery School is executing this type of mission under more controlled conditions than could be attained in combat, in order to bring to the attention of artillerymen the problems involved and the accuracies to be obtained in long-range artillery fire.

The purposes of the problem as presented at Fort Sill were (1) to demonstrate the different methods of

adjusting long-range artillery fire, and (2) to give the students practice in fire-direction using long-range artillery.

155mm Guns, M1, firing Sh HE, Fuze Quick, Supercharge, were in position near Lake Elmer Thomas. The South Arbuckle impact area was used, making the ranges approximately 20,500 yards.

The following types of observation were employed:

High-performance (P-80 jet-propelled) aircraft flying above 5000 feet over the *target* area at a speed of from 350 to 400 mph.

Flash base consisting of four OPs with observing ranges of 7000, 8700, 8000, and 10,600 yards.

Radar (SCR-784) with observing range of 9000 yards.

Air OP (L-4 aircraft) flying over the *position* area at approximately 800 feet.

The results of the check point registration were as follows:

High performance K of —60 yds/1000; (P80 JP) A/C Defl Corr of L10 Flash Base K of --- 59 yds/1000; Defl Corr of L10 (center of impact) K of -52 yds/1000; Radar (center of impact) Defl Corr of L2 Organic air OP Unable to identify (L-4 A/C)and adjust fire on proper target. slight ground haze prevented long-range observation.

Aside from facts and figures, there were difficulties encountered that were not anticipated and of course difficulties that were anticipated.

This problem required the closing of the air lane over the Fort Sill Military Reservation, and aircraft flying in the vicinity of the Reservation were notified of the use of jet propelled aircraft. As a further precaution, airsentinels were posted to watch for planes which had not received notice of the closing of the air lanes. These sentinels were connected directly to the OP-Gun lines so firing could be stopped immediately.

To allow the students to observe the results of firing, the fire-direction centers were near the impact area, making communication a major problem.

The value of metro corrections was evident at the beginning of the checkpoint registration. At short ranges metro corrections are not considered when fire can be observed. The registration was begun without applying metro corrections and the first round was almost beyond the maximum range allowed by safety limits.

The highlight of the shoot was the superior manner in which the P-80 pilots adjusted artillery fire. All rounds fired were observed and the speed and accuracy in which sensings and subsequent corrections were given would make many artillery officers take a back seat. The pilots operated from Tinker Field. Oklahoma City. Oklahoma, and had seen the target area only from the air and from photos used for briefing. The target was the hull of a medium tank.

The pilots were veterans of the war in the ETO, where they flew P-51 aircraft on high-performance missions.

Conclusions:

Jet-propelled (P-80) aircraft are highly suitable for adjustmest of artillery fire.

Air OPs (L-4 A/C) are not suitable for long-range observation unless visibility is exceptionally good.

Radar has not been perfected to the point of being accurate enough for precision registrations to determine corrections to be used for subsequent firing.

All reconnaissance pilots should be trained to adjust artillery fire, since high-performance aircraft would normally be the method of adjusting long-range artillery fire when observation by flash observers and/or organic air OPs is impossible.

This problem will be conducted twice yearly; once for the Officers' Basic Class and once for the Officers' Advanced Class.



"Warmonger" is what Mr. Andrei Vishinsky recently labelled this JOURNAL — grouping us with former Secretary Byrnes, Secretary Forrestal, Secretary Harriman, and other notables — for publishing (Sept-Oct, 1947) a humorously satirical piece by Colonel Christiancy Pickett called Something Happening at Skromptsk, the actual target of which was the bureaucratic snafu sometimes all too evident in our own Army.

Philately Note. AGF has recommended issuance of a series of postage stamps commemorating outstanding events in the histories of selected AGF units of the Regular Army and civilian components.

EM of NC to USMA. Provision has been made for the admission of forty qualified enlisted men of the National Guard to the United States Military Academy 1 July, 1948. This is the first time in five years that enlisted men of the National Guard have had this opportunity, since it was necessary that the appointments allotted by law to Regular Army and National Guard enlisted men be combined and opened to enlisted men in the Army of the United States during World War II. The last group of National Guard candidates selected to become cadets received their appointments effective 1 July, 1942.

New ROTC Manuals. Distribution of the first of four 850-page volumes of ROTC textbooks being published by the Army for junior and senior ROTC students has begun. The manuals, furnished without cost for use of ROTC students, will consist of one volume for the Junior ROTC and three volumes for ROTC ground and air students in colleges. The first text published is Volume One of the senior manual series.

Pentagon Switchboard. Pentagon Building telephone operators now answer "This is National Defense" instead

OF MORE THAN PASSING INTEREST

of "This is War Department." The Pentagon number will continue to be REpublic 6700, and will serve the Secretary of Defense, the National Security Council, the National Resources Board, the Army, and the Air Force.

Intensified Training of Linguists.

The Department of the Army has announced the establishment of a broad program to train selected military personnel in foreign languages and in pertinent aspects of foreign countries. Languages in which training will be given include Russian, Japanese, Chinese, Turkish, Greek, Persian, Arabic, Korean, Spanish, Portuguese, and French. The list may be augmented periodically to meet specific needs.

ICAF Courses for NG and ORC. A series of six two-weeks courses are to be conducted, in various cities, by members of the faculty of the Industrial College of the Armed Forces for selected NG and ORC officers. One course will be held each month, starting 12 Jan 1948.

MIS Commissions. War Department Circular 208, 1947, offers opportunities for commissions in the Counter Intelligence. Persons without previous military service, to merit commissions, must possess technical knowledge or skills closely related to Military Intelligence work.

Intelligence Training for ROTC Students. ROTC students who volunteer for such study will be trained at five universities in the purposes and methods of military intelligence. The schools are: Universities of Missouri,

Illinois, Nebraska, Wyoming, and Michigan State Agricultural and Applied Sciencies College. The principal aims of the program are: (1) To indoctrinate the selected personnel with the purposes and methods of military intelligence, and (2) to screen from such personnel those having aptitudes, capabilities, or inclination toward military intelligence, which would permit further training and development after graduation.

Artillery Center Briefs . . . Col Garrison B. Coverdale has replaced Col Norman J. McMahon as G-4 of TAC. Col McMahon goes to Los Angeles, Calif., for duty with the NG. . . . Col Arthur E. Solem has replaced Col Alfred E. Kastner as Director, Dept of Extension Courses, TAS. This Dept has grown from a staff of three in April, 1946, when it was activated, to about fifty, and is still growing. Col Kastner goes to the ETO. . . . Col Robert F. Hallock, formerly Director, Dept of Combined Arms, goes to Governors Island as Artillery Officer, First Army. His successor is Col Parmer W. Edwards, CAC. . . . Col Stanley R. Mickelsen, CAC, has replaced Col Thomas E. deShazo as Assistant Commandant, TAS. Col deShazo has received orders for duty overseas. . . . The 501st Photo Interpreter Team, comprising 2 officers and 5 EM, was activated at TAC on 1 Oct, 1947. Most departments of the School use this team in connection with instruction in reading and interpreting aerial photographs. ... The 81st FA Bn has been reactivated at TAC, where it is attached to the 18th FA Bn, under command of Lt Col John S. Benson. This outfit was born in June, 1917 as the 23d Cav, becoming the 81st FA in Nov. It served overseas in WW I and again in WW II, in the latter being at various times assigned to the First, Third, and Ninth Armies.

HANG ONTO YOUR TERMINAL LEAVE BONDS

The Secretary of the Treasury has announced that banks and other financial institutions acting as official paying agents for the Treasury will cash Armed Forces Terminal Leave Bonds at their full face amount plus accrued interest at 2½% from the date of the bond to the last of the month

in which payment is made (but not beyond maturity). As the bonds will be thus cashed without any fee or other cost to the holder, there is no need for him to cash his bond any place at a discount or to pay a fee of any kind for its cashing. Holders not in immediate need of cash should hold their bonds as long as possible because they will continue to draw interest at 2½% until maturity and can be cashed immediately upon request

at any authorized financial institution, of which there are about 16,000 — one can be found in almost any community.

The Secretary also cautioned stores and others against accepting these bonds in payment for merchandise because they are not transferable, and authorized paying agents of the Treasury will not redeem the bonds for anyone except the person whose name is inscribed on the bond



PERIMETERS in PARAGRAPIS



By Col. Conrad H. Lanza, Ret.

THE GENERAL SITUATION

Prepared by a widely-known military scholar and writer, PERIMETERS IN PARAGRAPHS is a recurring feature dealing with the military, political and economic realities in world affairs. Whereas an understanding of these realities is deemed essential to the American soldier, it is emphasized that PERIMETERS IN PARAGRAPHS reflects the opinions of the author, alone. This installment covers the period 16 August-15 October 1947.—Editor.

DEMOCRACY, COMMUNISM, AND AUTHORITY

FOR OVER a century and a half, Americans have lived under the same Constitution. They are convinced that it is the best in the world. They have willingly seconded efforts to impose similar governments on vanquished nations by force and on allied nations by peaceful pressure.

This policy, though applied with the best intentions, is not working satisfactorily. As an illustration consider China. For several years past, the United States has sought to induce that country to organize a real democratic government. Chinese understand what democracy is, and some prefer it. To the great mass of Chinese, democracy is something they have never had, know nothing about, and don't want. They simply can't understand why the United States harps on that subject, and they resent it.

For centuries, Chinese, Turks, Russians, and most of the Latin-American countries have lived under a government by Authority. The Authority was charged with adjusting the nation to the changing needs of peace and war. It maintained law and order, operated lines of communication, ran the post office, and performed other useful services. In return the people accepted reasonable taxation and military service. Who at the time was the Authority was frequently of secondary importance. Thus China has thrived under both local and foreign Authorities, as has Greece.

Nations having government by Authority are capable of distinguishing whether the Authority is satisfactory or not. Russia, China, Turkey, Latin-American and other states having governments by Authority have repeatedly overthrown them when, through incompetence, overtaxation, injustice, and the like, they had lost the allegiance of their people. In most countries having governments by Authority the people are not prepared to exercise a discriminating franchise and determine directly problems as to tariffs, laws, and the complicated matters of modern life. They do not desire to take the initiative, but prefer to leave that to the Authority. Provided the Authority rules honestly and justly, and permits freedom to the people under the laws of the country, a large part of the world prefers this form of government. Efforts of the United States to install democracies, and of Russia to install communism, arouse opposition. This opposition may be forced "Underground" activities, but it is there and is a military factor which may become of major importance.

The argument that because democracy under the American Constitution has had outstanding success other nations should be happy to adopt a similar constitution is wishful

thinking, rather than sound argument. To prove that if a policy succeeds in one country it would do so elsewhere, it is show that necessary to circumstances in the states compared are the same. If Chinese were exactly like Americans, and if China in all respects resembled the United States, the argument would be sound. But circumstances alter cases. Chinese do not resemble Americans and China is vastly different from the United States. It does not follow that what is suitable for Americans in America would be suitable for Chinese in China, nor does the converse of this proposition, which would be equally true if conditions were absolutely alike in both countries. Neither does it follow that if communism is suitable for Russians in Russia it would be equally suitable for other nations which have had an entirely different culture and don't want communism.

Freedom for the individual, security to life and property, and honesty and justice in governing are always demanded and sought after. Those qualities are not exclusively found in either democracy or communism. Where those qualities do exist, it is an unnecessary annoyance to a nation to insist on a change in the form of their government. Such insistence is bound to arouse opposition and to unfavorably against the interfering Power in the event of war. If the people are satisfied with a government by Authority—and a large part of the world is so satisfied—it is better not to seek to force a change of government, provided the existing government assures freedom of the individual and is administered honestly and justly.

A SLOGAN

Thirty years ago, in 1917, the United States adopted the slogan To Make the World Safe for Democracy. It sounded good, seemed appropriate, was eagerly accepted, and at the time nobody questioned it. Much less was there a suspicion that it might some day provoke a conflict. No definition of that slogan by proper authority has been found; perhaps there wasn't any, for it was only a slogan and not at the time the enunciation of a policy. It was a reason for the United States entering World War I. It was thought it would appeal to citizens, and it did. They interpreted it to mean that if the United States did not enter the war, Germany and Austria-Hungary would win it. As these were not rated as democratic states, it was assumed that a victory by them would be a blow against democracy and a threat to the United States. So we entered the war and tipped the scales for the Allies. Thereupon the monarchical government of Germany was overthrown and Austria-Hungary was broken up into a number of states, all of which became democracies. It was assumed that democracies were by their nature peace-loving states who never would start a war. Americans were so sure that this was so that in 1928 the United States signed a pact with 56 other nations abolishing war. How futile that was is now clear. Germany had accepted the Democracy forced on her at the end of World War I, although she preferred a government by Authority and reverted to that form of government as soon as she could. Notwithstanding evidence that democracies imposed upon vanquished nations did not necessarily lead to peace, but might lead to war, the United States has stuck to what has become a policy of forcing vanguished nations to adopt democracy and of encouraging it among other nations as a condition for receiving loans and economic aid.

The old slogan of 1917, To Make the World Safe for Democracy, met no contrary ideology after World War I. After World War II it has become confronted with the opposing ideology backed by Russia, To Make the World Safe for Communism. This situation has become a threat to the peace of the world; can it not be solved without war?

Neither democracy nor communism is necessarily a threat to the other. Great Britain is now engaged in organizing what has been described in the press as a communistic government. It is doing it honestly and justly, confiscating property for national use only after payment to former owners. None of the freedoms of the individual are being interfered with. Opinions differ as to the advisability of the British change of government, but that is their business. as there is neither effort nor intention of imposing the new British system upon other nations. British communism is not a threat to the peace of the world.

Russian communism differs from the British form in that it allows no expression of opposition. Furthermore, it is spreading and seeking to impose its type of communism upon other nations who don't want it. That is the feature of Russian communism which the world fears, and it does constitute a threat to the peace of the world. It is the same kind of threat as the attempt of the Mohammedans centuries ago to impose their ideology by the sword throughout the world. A solution to this danger is not yet in sight.

THE MARSHALL PLAN

On 22 September, the Paris Conference of the west European nations completed their task of determining the economic needs of their respective countries and the aid required from the United States. It covers a recommended program to be carried out from the present time through 1951. Including the current year, it is a five-year plan. The main points are:

- Increase of food production to somewhat more than pre-war levels.
- 2. Increase of coal production to 5% more than pre-war level.
- 3. Increase of electric production to 40% more than pre-war level.
- 4. Increase of oil-refining production to 250% more than pre-war level.
- 5. Increase of steel production to 20% more than pre-war level.

- 6. Increase of local transportation to 25% more than pre-war level.
- 7. Restoration of ocean fleets to prewar level.
- 8. Maximum use of local capital.

The capital required for the above projects needs United States aid to the extent of \$19.33 billions from the Government, plus \$3.11 billions from the International Bank, the latter amount presumably to be a loan. No provision is made for repayment of the \$19.33 billions requested from the U. S. Government. The latter is requested to be furnished as follows:

During	1948	\$7.12 billions
_	1949	5.46
	1950	3.95
	1951	2.80
Total		19.33

The foregoing proposed expenditures of American funds await authority of the Congress to grant appropriations to cover them. The argument presented to the American people is that if the funds are not granted, western Europe will be on a starvation basis. That would lead to a spread of communism, and the turning of Europe towards Russian Communism. Such an advance of communism is considered a manifest danger in that it would result in all Europe becoming hostile to American ideals. To obviate that happening, it is believed to be cheaper and politically more desirable to furnish the foregoing requested funds, prevent starvation, and keep western Europe outside of Russian Communism. This program has met opposition from Russia as expressed by the newly formed Communist Information Bureau, and as recognized by our State Department in its communique of 8 October. The State Department accepts this situation.

CHINA

THE NATURE OF A CHINESE WAR

Civil wars in China are not new. There have been such wars for centuries. They occur between the Ins or the Government, and the Outs, **Bandits** and. named recently, Communists. If the latter win they become the Ins. By custom the defeated leaders are allowed to retire after seizing available public funds, and usually withdraw to a foreign city where no questions are asked as to how they had become wealthy. Present refuge is Hong Kong, sole foreign city remaining in China. It assures a useful public service impartially to both sides in the current civil war. There is no movement at this time for the transfer of Hong Kong to Chinese control.

Chinese armies are better fed, clothed, and paid than the average Chinese. If troops are not paid from appropriations by a central authority, they levy taxes on neighboring communities. These are assessed against merchandise found in transit and in towns. If taxes are not paid property is seized. Troops always take care of themselves regardless of the inhabitants. If the country in which the troops are quartered has been scorched by war, and/or is enduring a famine, troops move to another area. To the Chinese people not in the military service the enormous armies engaged in the present civil war are a disaster.

The Kuomintang until recently has paid its troops in part by appropriations, partly reimbursed from loans from the United States. From the Chinese point of view this method is almost ideal, especially where the United States furnishes material, weapons, and ammunition without charge. Notwithstanding American assistance, Kuomintang armies have looted and taxed their own people to an astonishing degree.

The communists support their armies mostly by direct local taxation. Their charges have usually been less than those of the Kuomintang. The main reasons are that the communist armies do not exceed about a third of the numbers in the Kuomintang armies, and that the funds they collect appear to be

honestly disbursed, which it is alleged is far from being the case among the Kuomintang. As it costs materially less to support a communist garrison, communities often favor them.

To justify the maintenance of large armies there must be an enemy, otherwise the armies might be demobilized and valuable jobs lost. Chinese armies rarely seek to destroy the enemy, for should such an unhappy event occur jobs might disappear. To avoid that calamity attacks are seldom pushed too far. The winner discontinues the battle in time to afford the enemy an opportunity to withdraw. Pursuits are uncommon; if made, they are at a leisurely rate. Thus the enemy can run away to fight another day; this insures that the war, and of course the jobs, continue. Bartles are fought, but not too often. They convince higher authority and allies furnishing loans and equipment that it is absolutely necessary to support those armies, and even provide for larger forces and more jobs. To help this worthy cause it is normal to grossly exaggerate the importance of encounters with the enemy, the casualties, and the amounts of materiel

The peculiar nature of a Chinese civil war makes it improbable that the present war will stop through direct agreement between the contending parties, or by an outright victory by one side or the other. Neither side is at the moment interested in either of these solutions. It might be possible to start a third party to disarm both the Kuomintang and the communists. In view of the large military forces in the field, no Chinese third party could hope to overcome them without foreign assistance, and that is not now available.

CHINESE AGREEMENTS

An agreement, be it a treaty, a contract, or a promise, does not have the same signification to the Chinese as to Americans and Europeans. Western laws are based upon Christian principles which prohibit taking life or property without due process of law and prohibit giving of false testimony. Contracts are enforceable at law, and treaties are

considered an especially binding kind of contract. Chinese laws are based on Oriental religions—Confucianism, Taoism, and Buddhism. These three agree in considering the Universe as immortal, but everything in it as continually changing. No man foresees the future. Consequently, the Chinese do not wish to bind themselves by agreement which will extend to a distant date during which circumstances may change. To the Chinese mind to do so would lack common sense. They simply not comprehend having a constitution or other agreement which binds indefinitely for the future. To the Chinese a constitution such as that of the United States, which was written over a century and a half ago and is still in use, is incomprehensible. They consider that anything written that far back must certainly be inappropriate at this time. To carry on under such an ancient law is to the Chinese intellectually unpardonable.

When Chinese sign an agreement, as for example a treaty to end a war or to secure some immediate advantage, they do it with a mental reservation to reject it as soon as it becomes inconvenient. Such action is considered not dishonest but the proper thing to do. Disregard of agreements, including treaties, on account of changed circumstances, unilaterally determined, is normal throughout the Orient, and considered perfectly proper.* The Western practice of keeping an agreement regardless of circumstances is to Chinese proof of a lack of ordinary intelligence. Chinese consider their standards more practical and superior to those of the West. Chinese are opportunists. They will make an agreement and keep it if it provides for something to be done immediately. They will not willingly make an agreement for a long period or an indefinite one.

As circumstances always change, no Chinese agreement is worth much. Thus

^{*}A recent example is the demand of Egypt to the United Nations to void their 1936 Treaty with the British, which was to run for 20 years. This provided for British forces being located in Egypt and the Sudan. Egypt unilaterally decided that the treaty is no longer convenient and considers that ample reason to denounce it.

the Cease Fire agreement negotiated by General Marshall at the beginning of 1946 was openly disregarded within a few months. At the conclusion of the Russo-Japanese war in Manchukuo was restored to China, although she had done nothing to help oust the Russians. In return China granted to Japan certain concessions. Once installed in Manchukuo, the concession privileges were openly violated on the unilaterally determined decision that it was no longer desirable to recognize them. This was one of the alleged reasons given by Japan for the occupation of Manchukuo.

The Chinese peculiarity as to agreements being non-binding on unilateral decision is a major obstacle to concluding a peace between the Kuomintang and the communists. Each side, being Chinese, understands that whatever agreement might be made, it would be disregarded by the other side the instant it believed that it would gain thereby. The solution to this situation is the same as given above: a third party if strong enough might enforce some kind of peace on both warring factions. As no such party is in sight no agreement is probable.

CHINESE POLITICAL SITUATION

On 24 August, Lieut. General Albert C. Wedemeyer completed the investigation of economic, political, military, and social conditions in China which he had been directed to make. His report at date of writing had not been released. But the General made a statement of which the main points were:

- The Chinese people passionately desire peace, but do not know how to bring it about.
- There is much defeatism among Chinese, with a seeking of outside help instead of doing something themselves.
- 3. China possesses most of the phyical resources needed for rehabilitation.
- 4. The communists, if truly patriotic, would cease fighting, and resort to peaceful means.
- The Kuomintang should remove incompetent and/or corrupt officials in national, provincial, and municipal offices.

In statements made later, General Wedemeyer has expressed confidence

in Generalissimo Chiang Kai-shek, leader of the Kuomintang party, but not in his subordinates. The Kuomintang Government did not accept this statement in the spirit in which it was made. They were hurt at its frankness and resented it. On 2 September, the Chinese Premier Chang announced that China would neither change her domestic nor her foreign policy as a result of the Wedemeyer mission. Two weeks later, on 16 September, the Chinese Vice-President, Dr. Sun Fo, stated that

"The results of Wedemeyer's report to President Truman will tell China whether it would be better for her to side with the United States or Russia."

China has a constitution, adopted on 25 December 1945. The principal reason for this constitution seems to have been to induce the United States to grant a large loan. This having failed to materialize, nobody is paying much attention to the constitution. Among other things it provided for a National Assembly of 2,972 members to be elected on 21 October, with a view to convening on 25 December. A State Council is supervising the election. Results to date are that 642 seats. reserved for communists, are not to be filled. Another 165 seats, reserved for communities throughout Chinese Southeast Asia, are also not to be filled. The remaining 2,165 seats are reserved for the Kuomintang and allied parties and are to be elected. The election has been postponed until 21 November.

On 27 September, Chinese leaders at Nanking announced that at the peace settlement with Japan they would ask for cession to China of the Ryuku Islands, or at least some of them. It was explained that if the United States could not see its way clear to granting China aid, it would have to consider a shift in policy toward Russia. Up to 15 October, when this account closed, the United States had offered no encouragement to the Kuomintang Government; neither had Russia, as far as known, responded to the Chinese feeler.

MILITARY OPERATIONS

The Central Sector. The situation on 15 August was that three Kuomintang armies were seeking to clear Shantung

of communists. One army was moving south from Tsinan, another west from Tsingtao, and the third, coming from the south, had arrived at Weihsien. Note that a Chinese army is really a corps, normally with three divisions. Divisions should have some 10,000 combat troops, but many were below strength. The communists had about 30,000 men. They were under command of General Liu Po-cheng, one-eyed and very active. Finding himself outnumbered and about to be encircled, he decided to march by night to a new theater of operations. Dividing his force into two columns, each having about two weak divisions, he moved southwest and without being detected crossed the Yellow River near Tenghsien. The east column then marched towards Nanking, and the west column towards Hankow. The failure of the Kuomintang to detect this march in time is explained by their report that the local inhabitants failed to turn in information. Liu found about 10,000 more communists in the area through which he marched and brought his forces up to about 40,000.

The area in Anhwei and Honan in which Liu now found himself was almost denuded of Kuomintang forces. He met little opposition, and collected a lot of food, supplies, and taxes. The right of his west column reached Loyang on 28 August, having covered 350 miles in about 14 days, an average of 25 miles a day. The main body of this column arrived on 4 September on a line 50 miles northeast from Hankow. A detachment left in his tear a few days later secured the Kuomintang Ordnance Depot at Liuan. This was the base for the Kuomintang troops in Shantung, and its loss affected their operations. At the same time General Liu captured much ammunition and many weapons, and was able to re-outfit his command. Finding no large-size forces nearby, Liu dispersed his command into numerous small bodies which operated throughout Honan and Anhwei.

The weather being good, the crops harvested, and food available, the Communists commenced a series of raids throughout Shansi, Shensi, and the area south from Peiping. The Kuomintang reaction was the same as on previous occasions — garrisoning "key" points and waiting. As reported in the preceding installment of PERIMETERS,

the Kuomintang High Command had issued a general order directing a general offensive against the enemy in lieu of the passive defense of "key" points. However, there hasn't been any general offensive. The Kuomintang withdrew its forces at Suchow. variously reported as three to six divisions, to establish a defensive front along the Yangtze River. These reinforced divisions were withdrawing one division each from Shantung and Nanking. The Navy was ordered to support the Army and prevent a hostile crossing of the Yangtze. To date there has been no evidence that General Liu has had any desire to cross that river.

In the meantime the Kuomintang army which had been at Tsinan, finding itself unopposed, marched south and succeeded in temporarily clearing the Tsinan and Nanking RR. As on previous occasions, a geographical objective was selected, instead of going after Liu's troops. The success was short lived. Liu was reinforced by communist troops coming from Shansi and Shensi. At the beginning of October he launched four raids against the T & N RR south of Tsinan, between defended key points, and effectively stopped traffic. One of the raiding columns, after completing its assigned demolitions, continued on to the vicinity of Lake Hungtze, where a base was established for collecting taxes and supplies from Kiangsu Province.

Of the three Kuomintang armies which had been operating against General Liu in Shantung none was shifted to operate against him. As already noted, only a single division was detached to watch in the direction in which Liu had gone. There was no attempt to pursue.

The army at Weihsien moved away from Liu to attack Chefoo. By 23 August, its advance was at Changi, meeting only light opposition. As the United States had trained a Chinese amphibious force at the Tsingtao Naval School, it was urgently desired to give these new forces some practice, and Chefoo seemed to be a suitable objective. As this was judged to be a too difficult mission for green troops, a primary objective was selected. On 26

August a 10-hour naval and air shelling and bombing was directed Shihkiuso, 60 miles west of Tsingtao, after which the amphibious forces, numbering two divisions, were landed. It took three days to land 20,000 troops. The troops advanced six miles inland; there is no evidence that any enemy was present. On 30 August, a new landing was made in Tingtze Bay 50 miles east of Tsingtao, while the Chinese army based on Tsingtao was at Kaomi. 40 miles to the west, unable to overcome communist resistance beyond. Having had its practice, the amphibious force was next landed at the end of September west of Chefoo, while the ground troops from Weihsien advanced overland. The communists did not defend the city and on 1 October withdrew. A few days later Weihaiwei was evacuated.

The result of the operations during the two months covered by this report is that the Kuomintang has succeeded in partly clearing Shantung. This is a rich province having grain, coal, cotton, tobacco, and industries. As it can pay large taxes, both sides have desired to control it. At the close of this report, the Chinese order of battle shows that 78 "key" points in Shantung are garrisoned by Kuomintang troops and 30 by communists; the latter also control most of the country. As against these Kuomintang gains, the communists have reoccupied most of the provinces of Honan and Anhwei.

The Manchuria Sector. In mid-August the Kuomintang had a reported 11 armies of about 33 divisions holding the key points along the railroad from Peiping through Mukden to Changchung, with also some detached posts east of the railroad within Manchuria. Troops were supplied by water transportation to Hulutao, thence by rail to Mukden, beyond which point the railroad had been largely destroyed. Supply to points beyond was partly by air and was irregular and unsatisfactory. Total strength was about 300,000 combat troops. General Chen Cheng assumed command on 31 August. He had been assigned particularly with a view to suppressing corruption in his new command, stated to be unusually extensive.

The communists, according to Kuomintang reports, were supposed to

have some 250,000 troops under General Lin Piao, whose CP is beyond Harbin. His advance forces were besieging Changchun, garrisoned by the 1st Kuomintang Army, two and onethird divisions. The main force of communists was north and east of Changchun. There was reliable information that a communist offensive would take place toward the end of September. Nothing was done about this other than to dig more defenses. On 18 September numerous communist raids secure began, presumably to identifications. Two communist divisions appeared next day west of Hulutao and started operations to capture that base. By 26 September, the RR south of Hulutao had been cut: by the 30th Lienshan was taken. This is the junction point of the branch line from Hulutao to the main Tientsin and Mukden RR, and its loss resulted in the Kuomintang being restricted to air transportation for replacements and supplies for its Manchuria troops.

A strong communist force which had marched west of Changchun on 5 October captured Kaiyuan on the South Manchuria RR. At the same time another force moving east around Changchung arrived at Sifeng. Kirin, occupied by the Kuomintang, was besieged. Wherever the S M RR was reached troops began to carry off rails and burn ties, which would indicate that there was no intention to hold this territory permanently.

The communists who had cut off Hulutao moved northeast and by 8 October had seized the railroad north of Yingkow, eliminating a possible Kuomintang detour line of supply. On 11 October, communists from the Kaiyuan area commenced an attack against Tiehling, garrisoned by the 6th Kuomintang Army reinforced by twothirds of a division from the 1st Army. Latest reports from Manchuria, dated 12 October, indicate that a severe battle is in progress at Tiehling ("Iron Ridge") with results in doubt. The climax of the communist offensive had not yet been reached. Its mission appears to be to wear out the Kuomintang and gradually reduce its forces to impotence through losses and impossibility of replacing them.

GREECE

THE POLITICAL SITUATION

On 23 August, the United States, accepting the findings of the report of the United Nations' Balkan Commission, officially accused the governments of Albania, Yugoslavia, and Bulgaria with hostile actions against Greece. It was charged that the three states named had been supporting the guerrillas operating against the lawful Greek government. This charge is at date of writing before the United Nations for appropriate action.

United States aid to Greece is becoming effective. From 1 September, the Greek forces-air, ground, and sea-were all to receive American rations at an estimated cost of over \$3,000,000 per month. The Director of U. S. aid to Greece is Mr. Dwight P. Griswold. He has signed contracts with the Greeks to construct, or reconstruct, about 2,000 miles of motor roads. Work started in September, and will be mostly in the northern part of the state. Lack of roads has been a major handicap to military operations against guerrillas, as it has made it impossible to concentrate troops quickly. Americans have also arranged to reconstruct the airfields at Ioannina, Larissa, Kozane, Salonika, and Kavalla. These will have steelplank runways and be operatable in all weathers. The Athens airfield will be improved. This work is to be completed by 1 December this year, and will enable effective fighter support to operations in north Greece. Fighter and light bombing planes are the types of planes needed against the guerrillas, the only enemy in the field. There are no suitable targets for heavy bombing, and the airfields are not at this time being extended to handle such planes.

MILITARY OPERATIONS

Last issue this column gave a brief account of a guerrilla offensive against Ioannina. It is now known that the approximately 4,000 guerrillas taking part in that operation had been assembled, trained, and equipped near Bitolj in Yugoslavia. They then proceeded by marching into Albania to near Leskovic, where they arrived by 9 July. The next two days were devoted to

a rest, and on 12 July these troops crossed the frontier. As previously explained, although the attack was a surprise, it failed.

The guerrilla leader is General Markos Vafthiadis. On 16 August he issued a General Order announcing that he had assumed command of Free Greece, without, however, stating where his headquarters were. It seems that he had hoped to capture some fairly important town which would be suitable for a capital; this to date he has failed to accomplish. This General Order appears to be in compliance with a directive issued to General Vafthiadis last June from a so-called Greek Democratic Executive Committee. This provided for establishing a rival Greek state in opposition to the one based on Athens, to be effective as soon as it was possible to occupy permanently some section of Greece. Pending this the Committee established itself at Valona in Albania.

After the guerrilla defeat in July near Ioannina, there was a decrease of activity, pending reorganization of the defeated troops in Albania, Yugoslavia, and Bulgaria. On 23 August, after resting and re-equipping, numerous raids were made across the frontier into Greece by bands not exceeding about two companies (400 men) in any one place. Those from Bulgaria interrupted the Salonika and Istanbul RR, seized by force 100 young men to be impressed into the guerrilla military service, burnt several villages, and looted generally. Some of these guerrillas did not speak Greek, but used the Bulgar language. Raiders from Yugoslavia operated north of Salonika. All raiders withdrew without waiting for combat with the Greek troops that were rushed forward to threatened points. Greek intelligence reports state that the raiders returning into Yugoslavia were attacked by anti-Tito forces said to be operating in south Yugoslavia. This report has not been confirmed. It is known, however, that there is considerable opposition within Yugoslavia to its present government, including armed bands of Crusaders.

On 13 September, the Greek III Corps started a round-up of guerrillas in the mountains northwest of Salonika. Amnesty was promised to those who

surrendered. At this date the combined guerrilla strength was estimated as 20,000 men, including 6,000 recruits, mostly impressed during raids and only partially trained. These guerrillas hold about a 150-mile stretch of mountains just inside the frontier, not over 30 miles deep. Main difficulty in defeating or destroying the guerrillas is finding them, as the area controlled by them is large enough to enable them to avoid combat. If too hard pressed the guerrillas retire across the frontier. To stop this practice it will be necessary to seal the frontier by occupying all points of passage, to prevent munitions and supplies being forwarded to guerrillas in Greece, and to prevent guerrillas from escaping when about to be surrounded. To accomplish such an operation would require about five divisions. The Greeks have five divisions, but the Greek command has not yet undertaken such an operation, largely because political pressure has forced the immobilization substantial forces to garrison particular towns having no military importance. leaving only a reduced number of troops available for field operations. To meet this situation, Greece applied to the United States for authority to increase the Regular Army, now authorized at 130,000 men, to 200,000. To make all of these troops available for the field an additional 70,000 National Guards are to be raised, to whom will be left the garrisoning of towns and villages to protect the inhabitants against guerrilla raids. Approval of this program was announced on 20 September. In the meantime the present Regulars are receiving American motor transportation and weapons.

The United States has a military mission in Greece. It is headed by Major General Livesay. This officer, together with the King of Greece, made an inspection tour of forward areas during the latter part of September.

The III Corps reported that in about a week it had cleared the mountains around Phlorina. It seems that quite a number of guerrillas, by going south, escaped the net prepared for them, for they appeared at numerous

places, some of which were less than 40 miles from Athens. There were no substantial results from the amnesty offer, though it had been widely promulgated. On 7 October, mobilization began for the first increment of 10,000 men for the new National Guard.

As discussed in the preceding installment, the Dutch started offensive operations, with about three divisions, against the Indonesians on the night 20/21 July. The mission was to seize the productive areas of Java and Sumatra. so as to insure that the valuable native products pass through Dutch hands. This would insure a profit to the Dutch with which they could secure dollars for their needs in the Netherlands. On 1 August, the United Nations Security Council issued a cease-and-desist order to cease fire pending an investigation by the United Nations. The Dutch High Command issued instructions to comply with this order after the objectives of the war had been reached, and provided there was no further opposition. The Indonesians issued an order to cease fire and also to cease operations. Their

COMMENTS

American control within Greece is beginning to show results. Much preliminary work is necessary to establish lines of communication, provide an effective air force, and train and equip ground troops. Until this is

INDONESIA

troops were directed to stand by wherever they happened to be. This situation resulted in the Dutch bypassing Indonesian forces to advance to their assigned objectives. These were duly reached, leaving a certain number of Indonesian troops in rear of Dutch forward lines. Neither Dutch nor Indonesians had trust in the other, and neither made any effort to carry out the United Nations' order. Since the Dutch secured what they were after — key points and areas through which the rich Indonesia trade had to pass—they made no further attempt to advance. The Indonesians, lacking armor, artillery, and a competent air force, were unable to counterattack. The Dutch thereupon mopping-up operations against the by-passed Indonesians on the ground that this was necessary to accomplished, which may not be until next spring, no decisive campaign can be fought. To make this successful, as long as the states of Albania, Yugoslavia, and Bulgaria offer a refuge to the guerrillas, the Greek north frontier will have to be sealed.

their own security. This has led to a certain amount of minor fighting, which is still going on. The Indonesians have succeeded in demolishing a considerable number of processing centers. In central Java, sugar refineries, tobacco factories, etc., are reported as 70% inoperative.

The Dutch are seizing available resources. They are shipped only in Dutch ships and sold throughout the world. The Dutch claim that a part of the profits is assigned for use of the Indonesians. To stop this trade the Indonesians are sabotaging railroads, establishing road blocks, burning warehouses, etc. As this report closes the Dutch are attempting to organize a puppet state over those parts of Java and Sumatra that are within their lines. The United Nations is still investigating.

THE PETROPOLIS TREATY

At the Brazilian resort of Petropolis an important conference was held in the latter half of August. The members of the conference were the United States, represented by General Marshall, and all Latin-American states.

Some Latin-American states desired to take advantage of the occasion to secure economic aid from the United States. General Marshall explained that although this would be considered at a later date, at this time the United States was committed to aid to Europe under the Plan which bore his name, and would not now undertake aid to other regions. The conference thereupon concentrated on drafting a treaty providing for All-American military defense. This task was completed on 30 August. The Treaty provides:

- There shall never be any more wars between American states. Differences arising are to be settled by peaceful negotiations.
- 2. An armed attack against an American state shall be considered as an attack against all the American states. On request of a

- state attacked, each of the other states will individually determine what measures it should take in fulfillment of the principle of continental solidarity.
- 3. The area included in par. 2 is defined. This includes Greenland but not Iceland.
- 4. In case of war between two or more American states [notwithstanding par. 1 above], the other states will seek to bring it to a stop.

The Treaty is to become effective upon ratification by two-thirds of the American states.

On 9 September, the Russian Deputy Foreign Minister made the following statement regarding the Petropolis Treaty:

"The question is organically bound up with the whole scope of policy pursued by the American countries led by the United States.

"When one speaks of defending one's self, it would be interesting to know against whom one is to defend one's self. It is not stated clearly. [Treaty does not mention any special attacker.] Very often it happens that, when one speaks of defending one's self, one is preparing to attack."

The Treaty does not require specific military action by any American state. It does provide for consultation, but it is not a military alliance. By implication in case any American state is attacked, the other states would be expected to take appropriate action, including the furnishing of military assistance. The extent of this, if any, is left open by the Treaty to the judgment of the individual states. Canada, Newfoundland, and Denmark (as owner of Greenland) are included in the areas protected by the Petropolis Treaty, although these three states are not signatories, nor did they take part in the conference.

A special provision in the Treaty applies to controversies between an American and a foreign state not involving armed attack. This section seems to apply to efforts by a foreign state to promulgate and assist communist doctrines within American territory. In

this case the American states are to consult with each other as to

"the measures which should be taken for the common defense and for the maintenance of peace and security of the continent."

A controversy has arisen between Brazil and Chile as against Russia, the two American states alleging improper communist activity sponsored by Russia or one of its satellite states within their territory, and further alleging hostile Russian publications against their dignity as independent nations.

As this account closes, the provisions of the Petropolis Treaty have not yet been applied. It should be noted that this Treaty has not been ratified by the U. S. Senate. However, it is probable that the preliminary steps required by the Treaty — consultation between American states—will be carried out.

ARMY GROUND FORCES POTENTIAL LEADERS SCHOOLS

URING the last four months the Army Ground Forces' new Potential Leaders Schools, with classes at the four training divisions at Forts Dix, Ord, Jackson and Knox, have graduated approximately five hundred selected recruits. Newly assigned quotas to this school indicate that ground force combat units will soon be receiving more than 1,000 graduates from the leadership school each six weeks.

This new school is the first of its kind in Army history. For many years the Army has conducted technical and administrative schools, but never before has it conducted a school with the primary function of instilling in the enlisted man the elements of military leadership.

From the crucible of battle in wartime the Army has learned the importance of developing leaders among its non-commissioned personnel. A concerted effort is now being made to select potential leaders early in their military career, instruct them in the elements of leadership, and aid them in developing a leader's attributes.

Experience with troops in the field shows that leadership can be developed in a soldier who possesses certain prerequisites if he is given progressive training in the subject and diligently applies the principles he has learned.

The Ninth Infantry Training Division at Fort Dix, the Fourth Infantry Training Division at Fort Ord, the Fifth Infantry Training Division at Fort Jackson, and the Third Armored Training Division at Fort Knox are all conducting leadership schools. The courses are of six weeks' duration and include a variety of military subjects peculiar to the leadership field, with

emphasis placed on practical training in "How to do it." The student is progressively taught the basic elements of military leadership, then how to develop these qualities in himself, and is mentally prepared to assume the role of leader when the opportunity presents itself.

The student body for the school comes mainly from men new to the Army. They are required to have completed basic training, to pass a physical fitness test, to have an AGCT score of 90 or above, to have a desire to attend the school, and to appear to possess potential leadership ability.

The latent qualities required in men who are to attend the school are character, alertness, intelligence, personal pride and ambition. Preference is given to men who have enlisted in the Army for a three-year period. In addition to those selected in the above manner, all men who have been chosen to attend Officer Candidate School will first be sent to the Potential Leaders School.

The instruction at the new school is divided into four school departments. The Athletic Department, which gives instruction in the physical attributes of leadership: alertness, physical fitness, courage. The Leadership which acquaints Department, student with the basic elements of military leadership, i.e., the qualities of a leader, how to develop these qualities, and the duties and responsibilities of a military leader. The Department of Methods of Instruction, which develops in the student the all-important element of military leadership—the ability to instruct others, and the Tactical Department, which gives the student opportunity for the practical application

of leadership technique while in school.

The student is observed and rated in and out of class, and a rigid demerit system is maintained to keep the student informed of his progress and to weed out those students not measuring up to the standards of the school.

After the student completes the six weeks of formal training in leadership technique at the school he must then practice in the field the principles he has learned. It is in the field that he gains the experience essential to a development of his qualities as a leader through observation, self-analysis, and hard work. The elements that he must work to develop so that he may qualify as a military leader are character, ability to instruct, ability to lead others, and a knowledge of men.

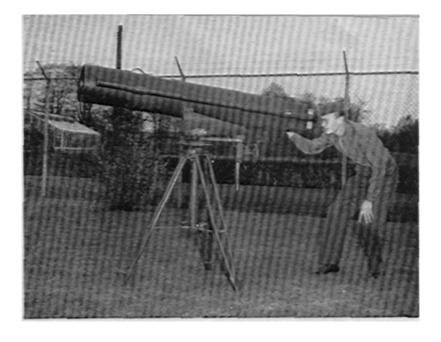
The Potential Leaders classes throughout the country will soon be graduating over a thousand men at the end of each six-week term. Officers in the field will be appointed to observe the work of these graduates and report on the progress that they make. Reports to date indicate that the men are proving the worth of the training they have received at the school.

It is elementary to state that the Army needs leaders, just as every phase of our business and social life needs leaders. It is for this reason that the intensified training young men are receiving in the Potential Leaders Schools may be farreaching in our nation's welfare. The Army will reap the advantages of developing young men into leaders while they are in the military service, and civilian enterprise will profit by the return of these trained men to civilian life.

History shows that the Army has developed leadership in many men who later became outstanding civilian leaders. Sixteen presidents of the United States spent some of their years as commissioned or non-commissioned officers in the military service. It would take a book to list all the personages in our military, political and economic history who have this experience. Perhaps many young men now enrolled in Potential Leaders School will develop into great American leadersand it may be that much of their success can be credited directly to the training they received in this new Army school.

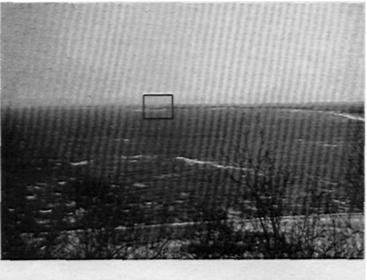
LONG DISTANCE CAMERA

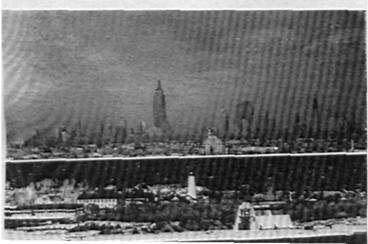
Republished by courtesy of "Signals"



AMONG the enemy equipment captured during the Allied surge across France was a "Long Tom" German camera that had been used by the Nazis to photograph gun emplacements and invasion preparations along the British channel coast, from the French shore.

This telescopic camera was brought to the United States and modified at the Signal Corps Photographic Laboratories,





Fort Monmouth, New Jersey. Recently on exhibition at the Army Signal Association Convention and Exhibition, the equipment is capable of startling long-distance performance.

From the point "X" on the map, near Atlantic Highlands, a photograph, upper left, was made with a $4" \times 5"$ Speed Graphic, using ordinary high speed panchromatic film. The camera was focused on the New York skyline, directly across

Sandy Hook, 4.1 miles distant, Coney Island, 12 miles, and the Empire State Building, 25 miles away. As shown in the rectangle, Fort Hancock and Sandy Hook are dimly visible. Nothing whatever of New York is discernible.

With the FK 3m camera set at f/25, 1½ seconds, using a dense red filter and a 120" focal length lens and an ordinary infra-red plate, the photo at lower left resulted. Fort Hancock is brought into the foreground; the Half-Moon Hotel at Coney Island is just to the right and above the tower at the Fort; the entire Manhattan skyline is lifted above the horizon and is sharply in view.

The altered German camera is shown above; its size can be measured by comparison with the soldier.





Battle Leadership

MEN AGAINST FIRE. The Problem of Battle Command in Future War. By S. L. A. Marshall. 215 pp. The Infantry Journal and William Morrow & Company. \$2.75.

By Maj. Gen. H. W. Blakeley, USA, Ret.

This is a book about "certain physical and psychological aspects of the problem of command in minor tactics." Col. Marshall, as a historian in the Pacific Theater and later as Chief Historian of the European Theater, has, of course, an established reputation as a recorder of campaigns. In this book, he turns to the lessons to be learned from the battlefield experience of the last war. He has written a sound, thoughtful and thought-provoking book.

Incidentally, the professional soldier who skips this book because he notes on the jacket that the author is a newspaper man now returned to civilian life will be making a mistake. The willingness of some professional writers who were temporary soldiers (or who at least wore a uniform) to make their manuscripts saleable by "revealing" the stupidity, incompetence and irresponsibility of the military leaders who somehow achieved a victory makes such an attitude understandable, but it emphatically does not apply to Col. Marshall or his book. Some young Regulars, who have been bewildered and hurt by the adjectives applied to them in some books and articles, will enjoy this quotation from Col. Marshall's foreword: "No combat commander from the regular establishment ever put a stone in my path. In the overwhelming majority, they were willing and eager to assist in the search for battlefield truth, even when the facts hurt. No one group was more helpful than the younger battalion and regimental commanders, and staff officers, only a few years out of the United States Military Academy. I

cannot help but reflect on these things when I read the criticisms of captious individuals who are ever ready to condemn the West Point system on one frivolous ground or another instead of inquiring into its ability to build steadfast character into young manhood, which is the main issue."

One of Col. Marshall's principal points is that we need, in battle, more

You can't give a man a finer gift than the history of the unit he served with during the war. We have complete stocks. Write for details and prices.

and better fire from infantry weapons. On the basis of post-combat mass interviews with four hundred infantry companies, Col. Marshall and his assistants established that, on the average, only 15 per cent of the men had fired their weapons during a given engagement. In the best showings, only one man in four had made some use of his fire power. With no exceptions, says Col. Marshall, the commanders had not been trained to interest themselves in this problem. Some experienced soldiers will certainly not see eye to eye with the author in his ideas as to the causes and cures for this situation, but they will find themselves thinking, and perhaps along new lines.

The chapters on "why men fight" and "the aggressive will" are excellent. He notes regretfully that "they have destroyed the name and tradition of old and honored regiments with the stroke of a pen, for convenience's sake." He has no sympathy for those who would "reform the army." In fact, he says, "It is my belief that there is no more hurtful

doctrine put before our people today than that the Army should duplicate the arrangements which obtain within the civil society, slavishly imitating the latter's comforts, social customs, and ideas of the regulating of justice, and insisting on no higher standards of personal responsibility for its people."

Patton's Army

LUCKY FORWARD. By Col. Robert S. Allen. 402 pp., index and glossary. Vanguard Press. \$5.00.

By Colonel W. S. Nye

A professional journalist who served in the G-2 Division of Third Army has written a history of that unit which begins during the Louisiana maneuver period and ends with V-E Day. The book has received some sneers from reviewers who fail to discern that despite the author's vehemence and bitterness he has produced a solid, coherent contribution to recent history. There will be some individuals who will have apoplexy if they read "Lucky Forward," because Allen takes some exceedingly vicious swings at people he doesn't like. But to balance that, he has been generous in his praise of staff members of Lucky Forward who in ordinary histories would not have received the recognition they deserve. Even the NCOs at the Army CP get some merited pats on the back.

The book tells in detail how the Army headquarters is made up and how it functions in the field. In this it is more informative than many military texts. Allen describes in particular the war room where the situation maps were kept posted and briefing of staff and commanders took place.

The story of the campaign is in chronological order, is clear and uninvolved. In a work of this length no effort is made to describe more than the general

actions of the component corps and divisions. There is no attempt to enliven the account by including small-unit experiences, no effort to be quaint or inject homely touches concerning some mythical GI. But it is lively and vigorous enough. Patton himself would make it that way even were the writing less skillful. He dominates every scene. His actual vocabulary is suggested more accurately than has been customarythough here Allen understandably tones the language down a bit. Any contribution to Patten lore is timely. One of the deepest satisfactions experienced by "old soldiers" is when they get together and swap legends about famous Army characters they have known. Patton was one of our greatest fighting commanders. He was also a professional "character," and as such he should be carefully cherished. We in the Army must foster our characters and make sure that we have a new crop always coming along. They are a contribution to morale.

Lucky Forward naturally contains

higher headquarters on occasions when his divisions appeared to be headed toward spectacular victories or at least a lightly opposed advance. The claim, however, which Allen makes, that SHAEF did all these things through unworthy motives or because of stupid bungling, will not be accepted by those who have a broader viewpoint and knowledge. There is evidence (mostly conversations with staff members) that 12th Army Group and SHAEF felt that Third Army had to be restrained at times because of fear that Patton might outrun his supplies or overextend the ability of Supreme Headquarters to support him in case the Germans decided to pinch off his exposed forces. Perhaps that would never have happened—obviously Patton did not think so; but the higher responsible leaders did at the time.

Though Allen describes antagonism between Patton and his superiors, "Lucky" was actually held in high esteem by 12th Army Group, according to members of Group staff. They testify

FOR CHRISTMAS GIVE BOOKS

some highly controversial materialdepending on your viewpoint. This reader has not had opportunity to check Allen's statements against other sources, but insofar as they tell what happened and to the extent of my personal recollection they are accurate. As to his reasons for what happened, particularly where he ascribes motives to various highly-placed individuals, he may go astray. At any rate he offers no evidence to support these allegations, except inference. For example, Allen charges that SHAEF ordered Patton to halt at Argentan when he could have closed the Falaise Gap. Members of the Third Army who were on the spot were absolutely confident then that they could close the gap, and Allen's bitterness in his book reflects accurately how they felt about it at the time. Similarly there is no doubt that Third Army was starved for gasoline, fuel oil, and other supplies a few weeks later when Patton's columns were in full cry after the routed Germans. It can further be established that Allen is correct in his statements that Patton was held back time and time again on orders from that they could always rely on cheerful, quick compliance with orders by Third Army, and that this was in pleasant contrast to their dealings with certain other headquarters.

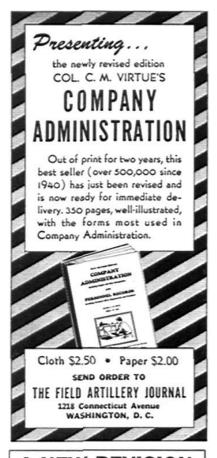
Allen devotes considerable space, but not too much, to the logistical problems encountered, and how they were solved. Com Z comes in for some abuse which even if deserved seems a pity at this time. After all, we won the war, and despite some supply failures the achievements of Com Z were on a vast scale, too.

One doesn't have to be a veteran of Third Army to get an inward thrill over Allen's passages extolling that army's mighty accomplishments. No need for members of other armies to fret because their efforts are made to seem puny in comparison. There was honor and glory enough for us all; and in this book Third Army's story is naturally played up. In recounting Lucky's victories, Allen has told no more than the truth, for they were indeed magnificent. The author has told all this with the dash and skill of a trained writer; and we can only hope that First. Seventh,

CURRENT and CHOICE				
MILITARY				
Men Against Fire by S. L. A. Marshall	\$2.75			
Lucky Forward By Robert S. Allen	\$5.00			
Company Commander By Charles B. MacDonald	\$3.00			
Dark December By Robert Merriam	\$3.00			
Yank: The GI Story of the War By Yank Staff	\$5.00			
The Soldiers' Album By DuPuy and Bregstein	\$5.00			
The War Reports By Marshell, King and Arnold	\$7.50			
The Strange Alliance By John R. Deane	\$3.75			
Marshall: Citizen Soldier By William Frye	\$3.75			
	•			
NON-FICTION				
Speaking Frankly				
By James F. Byrnes Adversary in the House	\$3.50			
By Irving Stone	\$3.00			
Inside U.S.A. By John Gunther	\$5.00			
A Study of History By Arnold J. Toynbee	\$5.00			
Three Came Home By Agnes Newton Keith	\$3.00			
Together By Katherine T. Marshall	\$3.50			
Peace of Mind By Joshua Liebman	\$2.50			
Human Destiny By Pierre Lecomte de Nouy	\$3.50			
Home Country By Ernie Pyle	\$3.75			
FICTION				
Silver Nutmeg By Norah Lofts	\$3.00			
House Divided By Ben Arnos Williams	\$5.00			
The Moneyman By Thomas B. Costain	\$3.00			
Prince of Fores By Samuel Shallonbarger	\$3.00			
The General By C. S. Forester	\$2.50			
Gentlemen's Agreement By Laura Hobson	\$2.75			
The Vixens	•			
By Frank Yerby ———	\$2.75			
U. S. FIELD ARTILLERY ASS	SN.			

1218 Connecticut Avenue

Washington 6, D. C.





and Ninth Armies will fare equally well at the hands of their chroniclers. Let the professional historian refrain from criticizing Allen's book as not being authoritative because it isn't annotated in the approved style, or because it departs from the traditional stuffed-shirt style of historical writing. War is full of emphasis, and it has got to be described that way. The histories will never tell it all, not even the "official" tomes, which after all may be only one version, synthetically produced.

Biography of Debs

ADVERSARY IN THE HOUSE. By Irving Stone. 432 pp. Doubleday & Co. \$3.00.

By Lt. Col. Robert F. Cocklin, FA-Res.

Irving Stone has already established himself as the master of the biography in novel form. *Immortal Wife, Sailor on Horseback* and *Lust for Life* are three of his best known works in this field. This time, Mr. Stone has again chosen the biographical novel as his medium and

he was well aware of the insecure and abused working conditions under which these men labored. His early efforts in their behalf met not only heated opposition from the railroads but lethargy on the part of the firemen themselves. They were reluctant to engage in any activity which might jeopardize their railroad jobs. Against insurmountable such seemingly obstacles, Debs worked tirelessly to introduce his reforms. He left his job, worked night and day, traveled uncountable miles, and as a result lost the only girl he ever loved. Finally, through the sheer strength of his character he got the union started.

Later, strikes brought down the wrath of the railroads and public around his head and undid much of the good work which he had started. He was damned in the public prints and subsequently jailed on a nebulous charge of obstructing the mails when history shows that he had specifically ordered that the mail cars be permitted to go through. However, in

FOR CHRISTMAS GIVE BOOKS

for his subject, one of America's early labor martyrs—Eugene V. Debs.

The life of Mr. Debs lends itself very well to this type of biography. It was colorful, emotional and singularly devoid of routine. Though he is best remembered as an early labor organizer and socialist leader, the author chooses to emphasize Debs, the man, and puts his efforts on behalf of labor and socialism in their proper perspective against the backdrop of his daily life.

Gene Debs was born with several traits that were to mark him as outstanding among his fellow men — kindness, industry, singleness of purpose and a burning passion for social reform. A man possessed of such characteristics does not often lead a very happy and normal life and Debs was no exception. He was often disappointed, heartbroken and lonely, but his overwhelming belief in his convictions led him right back into difficulty again and again.

The first major labor activity in which Debs became involved was the Brotherhood of Railway Firemen, which he literally organized himself. Having spent some time as a fireman, those days of bloody strikes, he was unable to exercise any control over the men. Here, Mr. Stone clearly points up Debs' opposition to strikes which he both disliked and distrusted.

From his labor work, Debs wandered into socialism and again found himself in deep trouble. As a perennial candidate for the Presidency on the Socialist ticket, Debs gained nationwide fame although allied with a losing cause. His outspoken resistance to participation in World War I by the United States netted him a still longer term in the prison at Atlanta.

The projects with which Debs became connected were unique in their difficulties. Invariably, they required money when none was to be had; strong support was needed when it was sadly lacking; time after time he went into debt to pursue his convictions, not to mention the two jail terms as a result of them.

Certainly such a life as this provides the biographer with a wealth of good material. However, the artistry of Mr. Stone brings out the highlights that make this an outstanding portrait where a less skillful writer might smudge the picture. The threads of his work with labor and socialism are the strings which tie Debs to history. They make a far more interesting piece when woven into the pattern of the life of Debs, the man. Mr. Stone's story is cut from the whole cloth.

Small-bore Rifle Shooting

RIMFIRE RIFLEMAN. By Lieutenant Commander Edwards Brown, Jr., USNR. 320 pages. Military Service Publishing Co. (A National Rifle Association Library Book.) \$4.00 By Colonel Joseph I. Greene, Ret.

Rimfire Rifleman is packed with information on small-bore rifle shooting. It is of special interest to the newcomer to the game, but contains so much useful data that it also has much value to the experienced small-boreman.

The first third of the book is a story of two neighboring families who gain acquaintance and friendship through the fact that one family interests the other in small-bore shooting. It is an entertaining story, somewhat too obviously loaded with conversational shooting

Diary of Monty's Chief

OPERATION VICTORY. By Major General Sir Francis de Guingand, K.B.E., C.B., D.S.O. Charles Scribner's Sons. 488 pp. 53 sketch maps. \$3.75.

By Maj. Gen. H. W. Blakeley, USA, Ret.

This is an honest, lucid, dignified book. These wartime memoirs of Field Marshal Montgomery's chief of staff live up to his fine reputation among senior American officers. On the jacket of the book are quoted the opinions of Generals Eisenhower, Bradley and Bedell Smith. They could hardly be more laudatory.

In spite of the implication of the title page as quoted above, Gen. de Guingand carries his story back to 1937. Since it is largely a very personal story it is unfortunate that he didn't devote a page or two to his earlier life by way of background. Unless the reader has an appropriate reference work available he only knows that "I was too young to have served in the 1914-18 war," and

FOR CHRISTMAS GIVE BOOKS

information to be first-rate narrative, but nevertheless amusing.

The rest of Rimfire Rifleman is two hundred pages crammed with clearlypresented and well-illustrated dope on every small-bore aspect. Its inclusiveness is best shown by listing the sections: Glossary, Safety, Ranges, Rifles, Rifle Associations, Optics, Spotting Scope, Sight Adjustment, Chambers, Bore, Headspace, Bedding the Rifle, Care of Ammunition, Rifle, Interior Ballistics, Exterior Ballistics, Accuracy, Accessories, Positions, Facts About the Champs, Dewar Team Scores, Small-Bore Rifle Records, Small-Bore Championships, Wind Doping, Killing Power, Range Estimation, Game, Cooking Game, Basic Library, and

This breakdown makes it apparent that *Rimfire Rifleman* is actually an encyclopedia or *World Almanac* of that branch of the shooting sport, full of necessary and complete information. The book is also well and clearly printed and durably bound to meet the continual thumbing it is bound to get from its owners, young and old.

that information appears in a footnote almost at the end of the book. A picture of the author and a note on how to pronounce his name wouldn't have been amiss either.

More seriously, the first part of the book may not be of direct interest to the average American reader except for two points. The first is the British Army's difficulties in getting tactical air support because of their separate air force setup, a situation that we may be getting into. The second is the author's experiences in Greece in 1941, experiences that appear to lend themselves to some current lessons.

The publishers have not, as far as I know, advertised this book as "an answer to Ingersoll," but a section in the latter part of the book is exactly that. It's an effective one. Two other notable chapters are one on Montgomery and one on "The Press in War."

Gen. de Guingand, who was apparently known to his friends as "Freddie," has some good stories to tell. One of them will have a familiar sound to American officers who have found themselves in similar situations. He was



JAMES F. BYRNES

Former Secretary of State candidly reviews our early efforts at building the peace.

Taken from his own shorthand notes, compiled during those memorable conferences at Yalta, Moscow, Paris and London, SPEAKING FRANKLY provides a rich background for the understanding of the world situation today.

☆

SPEAKING FRANKLY

by James F. Byrnes

One of the most timely and important books of this or any other year

☆

"Its disclosures of Big Three politics on the highest level make exciting reading . . . disclosures with which the book is packed . . . There is a profile of Viacheslav M. Molotov which is easily the best and clearest appraisal of that dour, dismal man which has yet been written . . . Historians will study this book carefully for a long time; it is clearly the most important source yet available on the central diplomatic problem of our time."

—JOSEPH BARNES

N. Y. Herald Tribune Book Review

\$3.50

Order from

U. S. FIELD ARTILLERY ASSOCIATION 1218 CONNECTICUT AVENUE WASHINGTON 6, D. C.

THIS IS IT

the simple, honest report on war by an infantryman — the best soldier-writing to come out of World War II—



COMPANY COMMANDER

BY CHARLES B. MACDONALD

Charles B. MacDonald came to the 2d Infantry Division as a replacement company commander in September, 1944— and stayed with an infantry company (with time out for a wound and evacuation) for the rest of the was. COMPANY COMMANDER is his story—and by the time you've finished it, the men of Company I and Company G will be friends, and winter warfare an old experience of your own. But MacDonald can tell about his own story. In his preface, he says...

"The characters in this story are not pretty characters. They are not even heroic, if lack of fear is a requisite for heroism. They are cold, dirty, rough, frightened, miserable characters: Gls, Johnny Doughboys, dogfaces, footsloggers, poor bloody infantry, or as they like to call themselves, combat infantrymen. But they win wars.

"They are men from Companies I and G, 23rd Infantry, but they might be men from Companies A and K. 16th Infantry, or they might be men from Companies C and E. 254th Infantry. For their stories are relatively the same. Some may have fought the Germans longer than others, or some may have fought the Germans less. For all it was an eternity.

"The characters in my story are not fictional, and any similarity between them and persons living or dead is intentional, and some of them are dead.

"...I am not the hero of my story.

"The heroes are the men from Companies I and G—the lead scouts, the riflemen, the machine-gunners, the messengers, the mortarmen. Companies I and G are also called rifle companies . . . and when you call a company a rifle company, you are speaking of the men who actually FIGHT wars."

\$3.00

Order From

U. S. FIELD ARTILLERY ASSOCIATION 1218 Connecticut Ave., Wash. 6, D. C.

summoned one night into the presence of Gen. Auchinleck, at that time Commander-in-Chief in the Middle East. Here is de Guingand's account of what happened:

"He looked up from his desk and said: 'Freddie, I want you to take over Director of Military Intelligence.' This was a shattering thing for a lieutenant-colonel with no previous Intelligence experience to be told. When I recovered my breath I replied: 'But I have never done anything of that sort before, sir.' 'Excellent,' said the Auk, 'that's just why I have chosen you, you'll do it all right. I want you to take over at once. Good night.'"

Rifle Company in Action

COMPANY COMMANDER. By Charles B. MacDonald. 278 pages. Infantry Journal Press. \$3.00.

By Kenneth C. Parker

The inarticulate combat rifleman has at last found someone from among his own ranks to speak for him, for this book was not written by a war correspondent, a poet, a cartoonist, nor when they could get liquor, and of the taking of German women, who mostly were willing. In some cases, one wonders if the soldier characters involved, no doubt now settled in a respectable civilian life, might not sue for libel.

There is no attempt at fine writing. The book is a rapidly paced, direct and graphic account, which, although it concerns bizarre, ironic and sometimes insane situations, is all the same absolutely true as to fact and as to the attitudes and feelings of the men in battle.

The story needed telling. It will promote a better understanding of what combat men went through and it will make an important distinction in the minds of many readers between the riflemen's lot and others who served in the infantry.

It's main virtue is its description of what ruthless, fear-laden, exhausting war is like, and what it does to the nervous system of the men who are engaged. For emotional impact, your

FOR CHRISTMAS GIVE BOOKS

a rear echelon staff officer. It was written by a man who took part in the fight himself, albeit as a rifle company commander.

Most riflemen have a special affection for a good combat company commander. Nonetheless, the Captain must be classified in the rifleman's mind as another member of the vast army of men behind him. MacDonald has the grace and honesty throughout this work to make no pretense of heroics and to give full credit to the riflemen of his command. He frankly admired and loved them, and constantly worried over their welfare.

In telling of his experiences with Companies I and G of the 23rd Infantry during the campaigns in Germany, including the Ardennes, MacDonald writes easily, vividly and honestly. The latter characteristic makes the book a valuable contribution to our war literature. MacDonald freely admits his personal inner struggle against fear, which at times almost overcame him. He tells of war atrocities committed by his men, and why. He relates of the drunken conduct of some of his men,

reviewer, who happened to be a "rear echelon" light machine gunner in Europe, hasn't read anything like it since "The Red Badge of Courage." The principal difference is that there is enough material in MacDonald's account for 100 or more "Red Badges."

Red Aims in U.S.

AMERICAN COMMUNISM. By James Oneal and G. A. Werner. 374 pp. Appendices. Index. E. P. Dutton & Co. \$5.00.

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

Twenty years ago Mr. Oneal published a detailed and authoritative study of American communism. This new work, which is double the size of the earlier one, brings the story up to date. It also repeats that earlier material, which has well stood the test of time.

Among developments of these two decades were the expulsion of the Trotskyists, emergence of the party here into active political effort, "dissolution" of the Comintern, and its bit-by-bit "revival." The authors clearly show that despite the twists and turns of the "party line," the changes in

methods and (on the surface) even of beliefs, the communist aim remains ever the same. The one goal is the disintegration of American social and political life, so that the communists can take control during the ensuing chaos. In this documented collection of historical facts and analysis of history, there is a powerful indictment of communism and its objective in America.

Wartime Construction

AMERICAN MIRACLE. By Van Rensselaer Sill. 301 pages. Illustrations. The Odyssey Press. \$4.00.

By Col. C. L. Hall, CE

This is the story of our war construction around the world. The first part, or nearly three fourths of the book, is devoted to a description of the methods used in war construction and of the localities where these methods were used. This is presumably Mr. Sill's portion of the work. It is written in the informal style usually found in technical works for the edification of laymen, a

Far East and South

THE REVOLT OF ASIA. By Robert Payne. 305 pages, index. John Day. \$3.50.

BATTLE FOR THE HEMISPHERE. By Edward Tomlinson. 250 pages, index. Scribners. \$3.50.

By Richard Cordon McCloskey

Robert Payne has written an extraordinarily fine book on the sociological convulsion that is shaking half the people of the world. He believes that the Asiatic Century has begun, and that the successful revolution in Indonesia is "the greatest single event in human history." "The decisions of the next few years will determine the course of history, which is no longer being controlled by the western powers ... the future will not be made in Washington, New York, London, or Moscow—it will be made in millions of village councils throughout Asia."

The book is largely written around the personalities that are at the moment

FOR CHRISTMAS GIVE BOOKS

style so often maddening to men with a scientific education. But Mr. Sill, in spite of his breezy style, has included a great deal of very useful information, not readily found elsewhere and of absorbing interest to any one interested in our last war effort. One of the best chapters in the first part is the account of the construction of the Big Inch and Little Inch pipelines. This extraordinary construction effort is described in language giving almost the mental effect of a stereoscopic photograph. The author has done a good job.

The second part of the book is the same old collection of ghost written chapters by government officials with which we have all been long familiar. Some of the statistics are conveniently arranged. Except for these, a trained reader could almost have dictated the entire part. The quarter of the book containing this pitiless literature must be taken as the price to be paid for the first three quarters.

The hero of the book is the American contractor. No one who recognizes what he did during the four years of war will begrudge him his distinction. He earned it.

determining the course of the Asiatic revolt. Payne's acute analysis of men like Nehru in India, the late Pedro Abed in the Philippines, Mao Tse-tung in China and Soetan Shjarir in Indonesia help make clear many of the obscure points in Asiatic politics and policies. Some readers may object to his minimizing the Communist threat (both national and foreign) and others to his castigation of our policy of upholding certain reactionary elements, but he puts enough of both the red and the black cards on the table to let the reader choose his own hands. Regardless of the quarrels over details that one may have with Payne, no one can deny the validity of his central theme: that the Asiatics are the coming power of the world. His book is enlightening, thought provoking, and carries a very clear warning that we cannot meet the Asiatic challenge with old and outworn policies. This book belongs on the same shelf with Chiang's speeches, Nehru's The Discovery of India, and other books of the type.

Turning from the Far East to the Latin Americas, we find Edward Tomlinson



A superb new story of action and romance by the author who gave you THE BLACK ROSE...

■ Charles VII was king . . . The French courtiers were adroit conspirators, but the real power behind the throne was the king's mistress. Agnes Sorel. Into this tapestry of royal splendor came a new figure — Jacques Coeur, financial wizard, a commoner who rose to be the king's Moneyman, and whose life reached a climax in one of history's most dramatic murder trials. But not before he had carried on the work begun by Jeanne d'Arc, as his despised "bombards" succeeded in a single campaign against Rouen where a century of knighthood had failed in driving the English bowmen from the territory of France. "A story of rich romance, of high intrigue."-Book-of-the-Month Club News.

THE Moneyman by THOMAS B. COSTAIN \$3.00

FIELD ARTILLERY ASS'N.
1218 Connecticut Avenue
Washington 6, D. C.

"AT LAST, THE FACTUAL STORY OF THE BULGE"

"This book explodes myths, and explains surprise and victory . . . Genesis of the battle, its strategical plans, tactical execution, and effect upon the European campaign described and analyzed in a volume which may be the final word upon the subject and certainly is the most brilliantly penetrating we have . . . It is history of the best . . . lucid and understandable . . . Captain Merriam, employing thousands of documents and interviews with hundreds of participants from generals to privates on both sides, tells the entire story with clarity that remarkable." — N. Y. Herald \$3.00 Tribune Book Review



Order From
U. S. FIELD ARTILLERY ASSOCIATION
1218 Connecticut Avenue
Washington, D. C.

rightly concerned over the fascist and communist penetration in those countries. His book contains nothing that any follower of Latin American affairs didn't know long ago, but it has the value of summarizing many questions for the casual reader. He emphasizes equally the fascist and communist threats. when most observers are more inclined emphasize the fascist, for that is the more indigenous ideology, therefore more easily nurtured. His suggestions for combating these two types of totalitarianism are sound and sensible. A handy book for a quick brush up on Latin American affairs.

The Meeting of East and West

RICHER BY ASIA. Edmond Taylor. 432 pages. Houghton Mifflin. \$3.75.

ALEXANDER THE GREAT. C. A. Robinson, Jr. 252 pages. Index. \$3.75. By Richard Gordon McCloskey

These two books go curiously hand in hand in their themes (but not in their execution). Mr. Taylor deals with the the only basis upon which we will have a lasting peace—but Mr. Taylor does little to develop it logically or coherently. His prose is not, as the publishers would have you believe, "vivid," or "exalted," and its "profundity" does not remind me of Henry Adams. The book may be "profoundly sincere," but not by any stretch of the imagination is it "profoundly important thinking." Pass this one up unless you served in the CBI theater and are particularly interested in a recreation of the Delhi mess—or in seeing how a man of 35 discovers for the first time one of the major facts of life.

Mr. Robinson has done an excellent job in his life of Alexander. Harold Lamb, W. W. Tarn, Arthur Weigall and other biographers might quarrel with some of his biographical interpretations, but I hope that most of them would agree that this book presents amazingly well the debt that the world owes Alexander for perpetuating Greek culture, and for implementing the idea that all men can become brothers.

"The dramatic fact about Alexander is that, while conquering the world, at the

FOR CHRISTMAS GIVE BOOKS

impact of the East on a Western mind; and Mr. Robinson that of a great Western personality on the East.

Mr. Taylor has rediscovered the fact that not in pacts and armaments, but in the hearts and minds of men, lies the solution of the world's disease. He follows a noble group of discoverers, numbering amongst its members Aristotle and Christ, Henry Wallace and Ghandi. Men have been saying the same thing since Plug the Ugly heaved a stone at Mug the Unready and hit Jug the Philosophic by mistake (it was Plug who made the remark just before he died from a counterblow by Mug, delivered while Plug was bending over and rifling Jug's loincloth).

That understanding and loving our brothers is the core of the religious and philosophic thought of mankind through the ages is a very obvious fact. That Mr. Taylor has contributed anything new to the thought is much less obvious. "Love thy brother as thyself" sums up Mr. Taylor's thesis in considerably fewer words than those of his contained on 432 pages. The thesis is sound—in fact, it is

cost of countless lives, he could nevertheless conceive the idea of the brotherhood of man. Dramatic it is, but not surprising, for his entire career as king exhibits a vivid capacity for growth and development and a keen determination to organize as well as conquer. . . . From the idea of the brotherhood of man under fatherhood of God, Alexander was led . . . to the idea of the fusion of races . . . Alexander's goal was a new and better world . . what makes him live today and marks him as perhaps the most important European in history is that he set the course which Western man has followed ever since."

Mr. Robinson gives a rather full account of Alexander's army, the strategy and the tactics of his chief battles. The only fault in this excellent book is the lack of maps. The endpaper maps show his empire and his travels, but in order to follow the battles clearly, maps are desperately needed.

This book is very emphatically a necessity for any student of military history.

Only Yesterday

THIS IS PEARL—The United States and Japan, 1941. By Walter Millis. 384 pages, 4 maps. Morrow. \$4.00. By Richard Cordon McCloskey

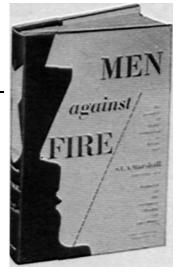
Christmas week of 1940 was the last peacetime Christmas the United States was to have for a long time. The rest of the world was at war, but we went on our way oblivious to all signs and portents of the Rome-Berlin-Tokyo pact. Walter Millis starts his informal and interesting account of our last year of peace with this Christmas week, and follows the events of 1941 in Japan and America.

His analysis is largely of the human interest in the inexorable march toward war. He handles the actions of the American and Japanese leaders with the informality of a novelist. He criticizes, points out the errors of judgment and the temporizing of American policy, and emphasizes the audacity of the Japanese. He writes with a firm sure hand, and while he makes no pretence of writing a definitive history, his account is

Future peace for this world requires our intelligent action. What we do cannot be well directed unless we understand the implications of our acts. That includes their effect upon local populations as well as upon our own people. It therefore behooves us to be well aware of the histories of all major groups, at least.

Carl Brockelmann, just before the last war, clearly and concisely traced the rise and development of the Islamic peoples—all those whom to Mohammed is the true prophet of Allah and to whom the Koran is the law. This he was well qualified to do, as one of the greatest authorities in this field. In organizing his material he tried to serve the needs of students: hence over half the book is devoted to the Turkish Caliphate and the Islamic countries in the 18th and 19th centuries. To this original material his translators have added a review of events in 1939-1947.

Net results of these efforts is the production of a volume which should be on all lists of required reading for officers. It illuminates peoples who may



A BOOK WHICH EVERY LEADER AND SOLDIER OWES IT TO HIMSELF TO READ ----

MEN AGAINST FIRE

By COL. S. L. A. MARSHALL

MEN AGAINST FIRE is an astounding and startling book. In it he analyzes our battle weaknesses and relates them to the problem of future war, weaknesses in use of available fire power, in leadership, in our emphasis on training, in our actual tactics.

Colonel Marshall, who developed the method of on-the-spot interviews for writing and substantiating military history, personally observed the disparity between our claim of military strength and the hard facts of combat—notably he witnessed personally the evidence that at most only 25% of the men in combat units did any firing of their weapons.

\$2.75

U. S. Field Artillery Assn. 1218 Conn. Ave. Washington 6, D. C.

FOR CHRISTMAS GIVE BOOKS

particularly absorbing in these days of rather similar stress. *This is Pearl* is a sharp reminder that we were caught short once before, and that we should not be caught napping again.

Important Today

HISTORY OF THE ISLAMIC PEOPLES. By Carl Brockelmann; translated by John Carmichael and Moshe Perlmann. 524 pp.; chronological table; bibliography; index. G. P. Putnam's Sons. \$6.00.

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

World War II emphasized to our people how important it was to know the history, customs, and manners of many groups which had generally been mere legends to most of us. The end of hostilities has not lessened that need: political vacuums or near-vacuums exist on many of the fringes of the Russian empire as well as in western Europe. The greatest of these, aside from China, is probably in the new twin States of India and Pakistan, where Hindu, Moslem, and Sikh are so at each other's throats as to make foreign infiltration highly inviting.

well be quite to the fore in the event of further military operations.

Arctic Adventure

WE LIVE IN THE ARCTIC. By Constance and Harmon Helmericks. 329 pp.; photographs; endpaper maps. Little, Brown & Co. \$4.00. By Col. John E. Coleman, FA-Res.

Last winter *Life* magazine published a sizeable account of the Helmericks' experiences in the far north. It was fascinating. Now we have a fuller narrative, detailing the experiences of these outdoors-lovers from Arizona.

After "Bud" finished his service with the Army Engineers he bought a tent, built a canoe, and with his wife struck out for the outskirts of civilization. Although both had wintered in Alaska, neither had had experience with the true arctic or with being completely on his own for an extended period away from other people. But each had the advantage of being an outdoorsman, accustomed to hunting, fishing, and camping, and of being fond of that sort of life.

(Continued on page 390)

Christmas is Coming!



Red ribbons, mistletoe and bayberry candles. . . . The spicy scent of spruce, pine and fir. . . . The crunch of crisp snow. . . . The flicker of hearthfires and the sound of carols floating on the clear winter air. . . . Why, Christmas is coming! And this year—as adults search their hearts for the true meaning of the glorious words "Peace on Earth, Goodwill to Men"—children's hearts spin, as they always have and always will, to the wondrous thrill of P-R-E-S-E-N-T-S. What lasts longer or brings more pleasure for less money than a good book? . . . Merry Christmas, and may your book shelves brim over!

S. L. A.

PRIZE PLUMS

MERRY CHRISTMAS! Illustrated by Natasha Simkhovich. Knopf. (all ages) \$2.00.

Santa's pack sags under a gold mine of 12 stories, 14 poems and 8 carols for Christmas. Some are old favorites, others welcome strangers, and all are illustrated in quaint old-world style. To add that the songs have music, the type is clear and the pages large heaps riches on a colorful collection essential in schools and homes.

WHY THE CHIMES RANG and other stories. Written by Raymond M. Alden. Pictures by Evelyn Copelman. Bobbs-Merrill. (8-up) \$2.00

Why the Chimes Rang should be added to Dickens' Christmas Carol and the immortal Night Before Christmas as required seasonal reading. Pedro's gift to the church, which sent the chimes pealing, is a simple tale of heartcatching beauty. Its high standards are well maintained by the other ten stories which contain the idealism and freshness of make-believe at its best.

BLUE RIBBON WINNER

MISS HICKORY. Written by Carolyn S. Bailey. Lithographs by Ruth Gannett. Viking. (8-12) \$2.50.

A hickory nut head and the body of an apple tree twig was no handicap to tart-tongued Miss Hickory but even her doughty soul quailed at facing the New Hampshire winter alone. Crow proved kindly, so Robin's nest became her home and the woods and field folk her neighbors. Too stiff-necked and proud to witness the annual Christmas Eve miracle in the barn, she eventually achieved one of Nature's beautiful miracles herself. An unusual story, awarded this year's Newbery medal "for the most distinguished contribution to American literature for children."

CHOICE AND CHARMING

READ WITH ME. Written by Charlotte Krum. Pictures by Pauline Adams. Children's Press, Inc. (4-7) \$1.00.

Recognizing the reader response of children who love to echo nursery rhymes, Miss Krum polished up a new idea for their Mother Goose world. "You read the

LARGE print, I'll read the small. And so together we'll read it all" runs the selfexplanatory introduction. Repetition of words, lilting rhymes and



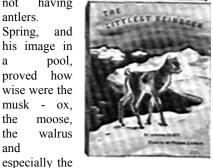
gay drawings enhance the participation pleasure of a refreshing book. (See cut)

THE LITTLEST REINDEER. Written by Johanna DeWitt. Pictures by Phoebe Erickson. Children's Press, Inc. (5-8) \$1.00

At the arctic circle, tears freeze into icicle chains so the littlest reindeer ran south where he could cry properly over

not having antlers. Spring, and his image in pool, proved how wise were the musk - ox, the moose. the walrus

and



snow bird who said "Sometimes you have to wait for something worth having." Beguiling pictures on each page place this charmer in the read-itagain class. (See cut)

WRITTEN IN SAND. By John Ewers. Pictures by Avery Johnson. Dutton. (8-up) \$2.50.

Reminiscent of Kipling, this collection of Australian folk stories is unusually good with a fine glossary and superb drawings to enhance its intrinsic charm.

TOPS FOR TEENS

FRIDAY'S CHILD. Written by Janet Lambert. Dutton. (12-16) \$2.25.

That this Army wife has written another winner comes as no surprise. Author of the popular Penny Parrish and Candy Kane books, Mrs. Lambert adds a seguel to Just Jenifer. In this book, General Jordan's large and lively family are stationed on Governor's Island (Mrs. Lambert's home now), and we are treated to a swiftly paced, gay and tender story. Hops at West Point . . . plays in New York. . . . Girls, stop shoving!

MARTHA, DAUGHTER OF VIRGINIA. By Marguerite Vance. Pictures by Nedda Walker. Dutton. Jr. Lit. Guild Selection. (10-14) \$2.50.

Martha Washington's nickname "Patsy" suited the tiny impetuous child who was equally at home in the saddle, the ball room and the kitchen. Ending as Patsy becomes First Lady, vitality and warmth are keynotes breathing life into history's sober facts.

DANGER TOWINDWARD. Armstrong Sperry. Winston. (12-up) \$2.50.

Generously gifted as artist and writer, Mr. Sperry bows to none when he writes of the sea. Aboard a whaling ship, Hugh Dewar seeks his inheritance, though had he the Scots' "second sight" he might have preferred Nantucket to the perils of his adventurous voyage. For more fine reading, Storm Canvas and his recent Rain Forest are strongly recommended.

KIT OF DANGER COVE. Written by H. R. Langdale. Pictures by Christine Price. Dutton. (12-16) \$2.50.

Cape Cod in the early 19th century harbored the factory where master blowers created the exquisite Sandwich Glass. Here Kit worked and dreamed of buying his own boat and solving the mystery of Danger Cove. History sneaks up unawares while adventure and mystery keep boys from skipping one line.

WRITING YOU'RE READING

By Lt. Col. Robert F. Cocklin, FA-Res.

Thumbnail sketches from the fall reading list . . .

Far and away the most widely discussed book this season is Speaking Frankly (\$3.50) by James F. Byrnes. In this book, Mr. Byrnes candidly recounts his experiences in our efforts to secure world peace. While he reveals little that is startling or new, his writings are rich in background material on the negotiations for peace up to the time he relinquished his post as Secretary of State to General Marshall. As the chief architect of our postwar foreign policy, Mr. Byrnes began his work at the Yalta Conference in 1945 and concluded it with the Paris Peace Conference in October of last year. In addition to the official records available to him, he has added a great amount of detail from his personal shorthand notes made at these various momentous gatherings. Speaking Frankly should be required reading for every American if our foreign policy is to be understood. James F. Byrnes has served his country well since he began his public career as a member of Congress in 1911. Not the least of his service, by any means, is Speaking Frankly—a key to understanding the current impasse in worldwide peace negotiations.

* * * * *

Frances Parkinson Keyes is a leading exponent of good, clean fiction. Contrary to present day trends, she always manages to tell a charming and interesting story without resorting to obscenity or sex. Her latest book, Came a Cavalier (\$3.00), is certain to rate among the best of this year's fiction. It is the story of Constance Galt, an American Red Cross girl in World War I, who marries a French Cavalry officer. The story spans both World Wars and is set in Normandy. Mrs. Keyes has written a thoroughly entertaining tale and perhaps the only criticism that could justly be made is of her penchant for detail which clutters up the plot without paying its own way.

* * * * *

The Saxon Charm (\$2.75) by Fredric Wakeman will undoubtedly equal if not surpass Came a Cavalier in popularity although the two books are as different as night and day. Mr. Wakeman scored heavily on his first novel The Hucksters and, if for no other reason, he is assured a wide audience for this, his second novel. Mr.

satire heavily loaded with amoral characters and situations. In The Saxon Charm, he describes the plight of a successful young novelist turned playwright who becomes enmeshed with Matt Saxon, theater impressario deluxe. The egotistic Saxon is as proficient at talking people out of their shirts as he is in bearding females in his den, but at the moment his batting average in producing hits is zero. He leads the playwright into debauchery from which he emerges just in time to save his marriage, the play, and this book which almost gets out of hand. The Saxon Charm is supposed to have some basis in fact just as The Hucksters did. However, I suspect that the characters depicted therein must be somewhat out of the ordinary, else

* * * * *

life expectancy in the theater business would

not reach forty. Mr. Wakeman is a skilled

storyteller, his characterizations are excellent

and he writes in a brisk, easy manner. While

his choice of subject matter to date may be

debatable, there is no denying that he is a

very promising young author.

If you are interested in the innermost workings of Congress, read *Confessions of a Congressman* (\$3.50) by ex-Representative Jerry Voorhis. This distinguished gentleman from California served in the House for a matter of ten years and during that time was recognized publicly by the press as being the "outstanding legislator" and the "hardest working member of Congress." Unfortunately his book reads too much like the Congressional Record to be of wide interest.

* * * * *

With characteristic forthrightness, Admiral William F. "Bull" Halsey has plunged into the war memoirs field. In Admiral Halsey's Story (\$4.00) he reports his experiences as the fighting leader of our navy in the Pacific War. The Admiral is well-endowed with all the attributes of a first-rate fighting man. His courage, daring, skill and determination have made him one of our best-known and loved military leaders. These same ingredients lend sparkle to his memoirs. Admiral Halsev's Story fills a definite void in the overall picture of the Pacific war and at the same time provides a few evenings of fine entertainment.

* * * * *

John Tebbel has written a fascinating history of the creation of a great American fortune in *The Marshall Fields* (\$3.75). This is the saga of the famous Chicago merchant, the store that stands as his monument, and his heirs who now have use of his tremendous fortune. It is a story peculiarly American in flavor and business know-how.

The latter part, which is devoted to Marshall Field III, is a most informative and interesting profile.

* * * * *

In addition to his fame as a gourmet and First Lord of Cafe Society, Lucius Beebe has attained some renown as one of our foremost railroad historians. It would seem that such widely divergent pursuits would scarcely be in character. However, you have only to see his latest book, Mixed Train Daily (\$12.75), to accord him a full measure of credit as an outstanding connoisseur of American railroading. Mixed Train Daily is really a collector's item. It is a remarkable history of the country's shortline railroads, both past and present, and is pointed up with over 300 excellent photographs taken by the author and his associate, C. M. Clegg, Jr. The stories of these by-road trainlines are absolutely fascinating. You need not be a railroad fan to enjoy this excellent work.

* * * * *

Louis Bromfield is undoubtedly one of America's most prolific authors. To date he has written 22 books of widely varying degrees of worth. His most recent, *Colorado* (\$2.50), ranks somewhere below the middle. Actually it is little more than a high-class Western. The inclusion of a few unorthodox sub-plots raises it above the level of the run-of-the-mill frontier tales. If you like your fiction corn-fed, *Colorado* is your dish.

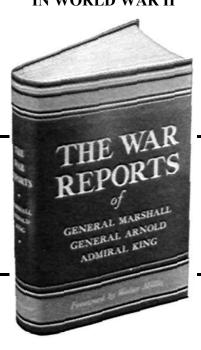
* * * * *

For an unusual piece of Americana, let us recommend Cleveland Amory's *The Proper Bostonians* (\$4.50). Boston's First Family Society has been the background for numerous stories and jokes, but here, for the first time, is a distinguished and entertaining study of this group. Alive with personalities and anecdotes, *The Proper Bostonians is excellent fare*.

* * * * *

For those dissatisfied with their present lot in life, may we suggest a perusal of Martin Panzer's Raise Your Sights (\$3.00). This book is termed "A guide to the higher income brackets." It's a different type of selfhelp book designed for those who are ambitious to attain top executive or professional positions. The author's life reveals that he started from scratch and made the grade, thereby providing the proof of his reviewer's pudding. This cursory examination of the text stems not from any disinterest in the higher income brackets but merely from the conviction that it is more meritorious to do it the hard way, which only goes to prove that eccentricity (to say the least) is a decided advantage in the reviewing business.

A COMPLETE HISTORY OF AMERICA'S PART IN WORLD WAR II



THE WAR REPORTS

of

- GENERAL MARSHALL
- GENERAL ARNOLD
- ADMIRAL KING

In addition to the nine reports from America's wartime military leaders, this one volume contains a selection of official diagrams, maps, charts and photographs.

A Complete Reference Book That Belongs in Your Library.

\$7.50

U. S. FIELD ARTILLERY ASSN. 1218 Connecticut Avenue Washington 6, D. C.

BOOK REVIEWS

(Continued from page 387)

Those things and their common sense carried them through.

In summer they went up the Yukon and the Koyukuk Rivers, and through the fall up the Alatna to where the Kutuk joins. There, remote from whites, Indians, and Eskimos, they built their $12' \times 14'$ (inside dimensions) cabin, which was to be their winter home.

Having only a less-than-minimum supply of "civilized" food with them, they lived almost entirely on the country. Fish, rabbits, moose, bear, and other meats were their principal fare. They learned to handle themselves and their surroundings "the hard way," sometimes proving but as often disproving the adages that govern most of the far-northern whites. Keen and close observers of nature, they have much of interest and value to tell those who may go to the roof of the world in either a military capacity or some other. And ever, through their pages, the reader can vicariously live a winter far from his usual haunts.

Horse and Rider

RIDING AND SCHOOLING HORSES, by Brig. Gen. Harry D. Chamberlin, 200 pp., 61 illust. Armored Cavalry Journal Press. \$4.00.

General Chamberlin's profusely illustrated volume will be of great interest and value to the occasional horseman as well as the serious student of equitation. This noted cavalryman's rich background of horsemanship during more than 25 years of Army life included two World Wars, courses at the leading European cavalry schools, outstanding success in many Olympics and other international competition, and instructorships at Fort Riley and West Point. His easy, able writing and effective photographs cover succinctly all important elements of individual horsemanship, in language which is nontechnical yet authoritative.

Since this is a practical handbook, a proper minimum of space is devoted to the past development of riding techniques, but along with the book's valuable hints and keen analysis comes a pervading sense of the splendid, longlived traditions of military horsemen.

Praised throughout the Service

The ARMY WIFE

What She Ought to Know About the Customs of the Service and Managing an Army Household

By NANCY SHEA



HE way the wife of an Army officer meets the expectations of the Service affects not only her own happiness, but also considerably influences her husband's career. This readable and informative picture of Army life from the woman's viewpoint shows what she may expect from the Service and what the Service expects of her.

"Not merely a handbook on etiquette, but a warmhearted discussion of the problems faced. Authoritative, human, the only one of its kind in existence."—*Army Times*.

"An accurate picture of Army life and a valuable guide for the uninitiated Army woman to follow." — Elizabeth A. Helmick (wife of Maj. Gen. Eli A. Helmick, Ret.).

"At last, the book we have all been waiting for, for so many years! It covers the problems of Army life from every angle." — Eleanor P. Arnold (wife of General of the Army H. H. Arnold).

\$2.50



For Heroism and Service



OAK LEAF CLUSTER TO DISTINGUISHED SERVICE MEDAL

General THOMAS T. HANDY served with distinction as Deputy Chief of Staff, United States Army, from 22 October 1944 to 31 August 1947, a period which spanned crucial offensives against Germany and Japan, redeployment to the Pacific, demobilization and the concurrent organization of occupation forces and the postwar Army. In a position demanding the utmost in judgment, character, leadership and soldierly skill, General Handy performed with a brilliance that was reflected in the successful execution of the grave and difficult missions assigned the Army during this period.

Lieutenant General RAYMOND S. McLAIN distinguished himself in the performance of exceptionally meritorious

service in a position of great responsibility from October 15, 1944, to May 8, 1945, as Commanding General XIX Corps. Under his aggressive and determined leadership, his Corps in a series of successful operations advanced from the Roer River across the Rhine and thence to the Weser River. The rapidity of its advance east of the Rhine in conjunction with other commands prevented the escape of the enemy from the Ruhr. His brilliant direction of the XIX Corps was a material contribution to the success of our forces.

LEGION OF MERIT

Col. JOHN E. COLEMAN Lt. Col. JONATHAN O. SEAMAN

SILVER STAR

Col. C. P. LYNCH

BRONZE STAR

Maj. LEMUEL C. DOWNS

Maj. NELSON L. DRUMMOND, JR.

Maj. ROBERT PENNELL

ILLUSTRATION CREDITS

(If not listed, unsigned illustrations are from authors, by the Journal staff, or from special sources. Reference numbers are pages.)

U. S. Navy: 344, 345, 346.

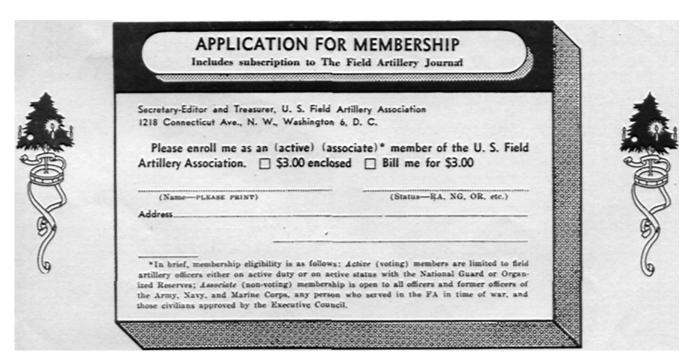
TAS: 355.

JDUSMC: Cover, 340, 341.

Signal Corps: 379, and where indicated in "Airborne Artillery."

82d ABn Div: where indicated in "Airborne Artillery."

The Pegasus. Fairchild Engine and Airplane Corp: where indicated in "Airborne Artillery."



VOLUME XXXVII (1947) INDEX OF TITLES Ry Fairfax Do

A COLD WAR	220	By Fairrax Downey
By Bernard M. BaruchAGF POTENTIAL LEADERS' SCHOOLS		NEW CHIEF OF THE NATIONAL GUARD
AIRBORNE ARMIES OF THE FUTURE		NEW PROMOTION BILL
By Maj. Gen. James M. Gavin, USA AIRBORNE ARTILLERY	178	NOTES ON U. S. MILITARY POLICY By Hoffman Nickerson 22
By Brig. Gen. William N. Gillmore, USA		By Hoffman Nickerson
AIRBOŘNE ARTILLERY FOREWORD By Maj. Gen. James M. Gavin, USA	249	ORITHARIES (Mai Gen Wm I Snow and Brig Gen C P George) 113
AIRBORNE SURVEY		OF MORE THAN PASSING INTEREST 29. 109. 167. 237. 297. 370
By 1st Lt. John V. McNally, PA		OFFICER PROCUREMENT 234 OF MORE THAN PASSING INTEREST 29, 109, 167, 237, 297, 370 ONE CAR. FORD, TOURING, MODEL T. COMPLETELY UNAUTHORIZED
ARMOR AND MOBILITY By Col. Hayden A. Sears, Cav	300	ORIGINS OF THE FIELD ARTH LERY ASSOCIATION
ARTILLERY INSIGNIA		By Maj. Gen. William J. Snow
ARTILLERY INTEGRATION		OUT OF THE PAST—FIELD ARTILLERY SONG (1936 Revision)
By General Jacob L. Devers		By Fairfax Downey 29 PERIMETERS IN PARAGRAPHS
ARTILLERY MISCELLANY ARTILLERY SCHOOL'S OPINION ARTILLERY TACTICS ARTILLERY USES FOR THE BOAD, PLOTTING, M-10		By Col. Conrad H. Lanza, Ret
ARTILLERY TACTICS	242	POM FALLS SHORT BY LL Col. Robert F. Cocklin, FA
ARTILLERY USES FOR THE BOAD. PLOTTING, M-10 By Lt. Col. F. P. Foley, USMC	160	By Lt. Col. Robert F. Cocklin, FA
By Lt. Col. E. P. Foley, USMCARTILLERY WITH AN ARMY IN EUROPE	100	PRINCIPLES OF PACK TRANSPORT BY CARL Harry E. Ruhsam, FA. 1 PSYCHOLOGICAL WARFARE—1864
By Brig. Gen. Charles E. Hart, USA	25	PSYCHOLOGICAL WARFARE—1864
ASSEMBLY LINE INSTRUCTION By Col. Ralph R. Mace, FA	168	By George S. Burkhardt 22 QUESTION AND ANSWER 15
AS WE MERGE		RESERVE OFFICERS MEET 22 RUSSIAN ARTILLERY—1941-1945
By Col. Harry P. Storke, FA	114	RUSSIAN ARTILLERY—1941-1945
A TRIBŪTE AND Å CHALLENGE BY General Jonathan M. Wainwright, Ret. BOOK REVIEWS CAN WE MODERNIZE FA FIRE CONTROL! BY Lt. Col. Leonard G. Robinson, Jr., FA.	240	By Lt. Col. H. G. de Watteville, CBE. Late RA
BOOK REVIEWS	64, 136, 200, 262, 329, 380	SIMPLIFIED OBSERVED-FIRE PROCEDURE
CAN WE MODERNIZE FA FIRE CONTROL!		SOME ŠURVEY SOP'S USED IN THE ETO
		By Capt. G. R. Bishop. FA-Res
By Col. Paul V. Kane, FA. COMMUNICATION NEEDS A FACE LIFTING	280	By Col. Christiancy Pickett, FA
COMMUNICATION NEEDS A FACE LIFTING		
By Col. Ralph R. Mace, FA COUNTER-MORTAR RADAR	218	By Capt. Edmand C. Murphy, FA
By Lt. Col. L. M. Orman, CAC	88	
DIGEST OF NEW OBSERVED FIRE PROCEDURE		By Commander J. H. Unwin, D.S.C., R.N
By Lt. Col. W. E. Barker, FA	83	THE AKMED FORCES STAFF COLLEGE Ry Col. Paul Weyrauch, FA
THE ADTH LEDV DDICADE HEADOLIADTEDS		THE ARMED FORCES STAFF COLLEGE
By Brig. Gen. C. E. Hart, USA		THE ARTILLERY BRIGADE HEADQUARTERS
THE COUNTERBATTERY OFFICER		
By Col. H. P. Storke, GSC (FA). DIVISION ASSOCIATION NOTICES		THE ARTILLERY SCHOOL By Col. Thomas E. deShazo, FA
EDITORIALS		THE BRIDGE THAT WASN'T THERE
By Col. DeVere P. Armstrong, FA Honoring Artilleryman	112	By Lt. Edwin Hartrich
Is Open Country Ahead?		By Col. Elliott R. Thorpe, Inf
Is Open Country Ahead? It's Your Association	36	THE COMMAND AND STAFF COLLEGE
Keeping in Focus By the Editors		THE COUNTERBATTERY OFFICER By Col. H. P. Storke, GSC (FA) 36
EMPIRE IN TRANSITION		By Col. H. P. Storke, GSC (FA). 36 THE EDITOR TALKS ABOUT LIFE INSURANCE. 115
By Col. Paul W. Caraway, Inf EXTENSION COURSES OF THE ARTILLERY SCHOOL		
EXTENSION COURSES OF THE ARTILLERY SCHOOL		11
FLASH!—OUR SECRET WEAPON By Maj. W. A. Solf, JAG	170	By Lt. Col. Wheeler G. Merriam, Cav
FOR HÉROISM AND SERVICE GERMANY TWO YEARS AFTER V-E DAY	391	THE INDUSTRIAL COLLEGE OF THE ARMED FORCES
GERMANY TWO YEARS AFTER V-E DAY By Col. W. S. Nye, FA	154	THE LOST BATTALION OF MORTAIN By C. Donald Wire
GOING TO SCHOOL	92	THE NATIONAL WAR COLLEGE
GOOD NEIGHBORS		THE NÁTIONAL WAR COLLEGE By Col. Richard J. Wener, Inf. 10 THE NEW ARMY EXTENSION COURSES
By Lt. Col. Walter J. Bryde, FA	340	By Col. A. E. Kastner, FA
By Lt. Col. Samuel W. Horner II, FA		THE NEW GRASSHOPPER—L-16
By Lt. Col. Samuel W. Horner II, FA. HISTORIC WORDS		THE NEW NATIONAL CHARD
INTANGIBLE FACTORS IN COMBAT By Lt. Gen. Raymond S. McLain, USA ITEMS FROM THE ARTILLERY SCHOOL	110	By Maj. Gen. Butler B. Miltonberger
ITEMS FROM THE ARTILLERY SCHOOL	110	By Maj. Robert B. McBane
Questions on the Six-piece Battery		THE ROPENIC PART PHIZE
Long-range Artillery		THE "SEEING EYE" FUZE BY Frank A Zupa
By M. Hoyle	6	By Roland W. Charies
IT'S YOUR MOVE. PARTNER		THE UNIT'S THE THING
By Rosalee G. Porter	/8	By Maj. Gen. Orlando Ward. USA
By Harrison Forman LEADING THE AMERICAN SOLDIER		TIMT EXPERIMENTAL LINIT
LEADING THE AMERICAN SOLDIER		By Sgt. Wm. N. Jayme 2 WELCOME TO THE FIELD ARTILLERY 35, 238, 36
By Maj. Gen. Maxwell D. Taylor, USA LEARNING WHAT HIT US		WELCOME 10 THE FIELD AKTILLERY
By Maj. Gen. John A. Crane, Ret	286	WHAT'S YOUR ARTILLERY IQ!
LIAISON OFFICER—THE ONE-ARMED PAPER HANGER By Capt. Henry P. Walker, FA		By Capt. Henry P. Walker, FA
LONG DISTANCE CAMERA	379	WHY NOT THE GROUP! By Col. Robert F. Hallock, FA
LONG-RANGE ARTILLERY		WITH THE BIG "A" IN EUROPE
LONG-RANGE ARTILLERY MAILING LIST—THE ARTILLERY SCHOOL MANY ARTILLERYMEN STUDY AND TEACH		By Ned Verfason 1 WRITING IS SO EASY
MINUTES OF THE ANNUAL MEETING	93	By Jay Cassino. 35
MORE ON THE NEW OBSERVED-FIRE PROCEDURE		WRITING YOU'RE READING By Lt. Col. R. F. Cocklin, FA-Res
MULTITUDE OF MEDALS		By Lt. Col. R. F. Cocklin, FA-Res
	INDEX OF	AUTHORS
Andaman Cal D E		
Anderson, Col. R. E	214	Mace, Col. Ralph R., FA. 168, 21 McBane, Maj. Robert B. 30
Armstrong, Col. Devere F., FA.		McLain, Lt. Gen. Raymond S., USA
Barker, Lt. Col. W. E., FA	83	McNally, 1st Lt. John V., FA
Baruch, Bernard M	230	Merriam, Lt. Col. Wheeler G., Cav
Bryde, Lt. Col. Walter J., FA		Murphy, Capt. Edmund C. FA
Burkhardt, George S Caraway, Col. Paul W., Inf		Nickerson, Hoffman. 220
Caraway, Col. Paul W., Inf		Nye. Col. W. S., FA
Charles, Roland W		Pickett, Col. Christiancy, FA
Cocklin, Lt. Col. Robert F., FA-Res Crane, Maj. Gen. John A., Rtd	276	Porter, Rosalee G
deShazo, Col. Thomas E., FA		Ruhsam, Capt. Harry E., FA
Devers, General Jacob L., USA	303	Sears, Col. Hayden A., Cav
de Watteville, Lt. Col. H. G., CBE, Late RA	175	Snow, Maj. Gen. William J
Downey, FairfaxFarman, Harrison	290, 367	Self, Maj. W. A., JAG
Foley, Lt. Col. E. P., USMC	160	Storke, Čol. Harry P., FA
Gavin, Maj. Gen. James M., USA	178, 348	Throne Col Elliott R Inf
Gillmore, Brig. Gen. William N., USA Hallock, Col. Robert F., FA		Triplett, 1st Lt. Blythe C., FA. 299 Unwin, Commander J. H., D.S.C., RN. 233
Hart, Brig. Gen. Charles E., USA	25, 359	Verfason, Ned
Hartrich, Lt. Edwin		Wainwright, General Jonathan M., Ret. 24
Horner, Lt. Col. Samuel W. II, FA		Walker, Capt. Henry P., FA
Jayme, Sgt. Wm. N		Werner, Col. Richard J., Inf
Kane, Col. Paul V., FA		Weyrauch, Col. Paul, FA
Kastner, Col. A. E., FA		Wire, C. Donald 34
Lanza, Col. Conrad H., Ret	44, 124, 184, 253, 315, 371	Zupa, Frank A

BOOKS MAKE IDEAL CHRISTMAS GIFTS!

THE FIELD ARTILLERY ASSOCIATION MAKES AVAILABLE TO ITS MEMBERS THE FINEST BOOK SERVICE ANYWHERE. FOR CHRISTMAS GIFTS OR YOUR OWN READING PLEASURE, ORDER YOUR BOOKS THROUGH YOUR ASSOCIATION NOW!

1 VALL BOOKS ARE AVAILABLE

Books on military or scientific subjects . . . fiction or nonfiction . . . books for adults or children. <u>If the book is in</u> print we can get it.

- 2 √ CONVENIENCE AND SAVINGS
 Buy all your books through us, regardiess of the publishers.
 Do your purchasing with one check, no bills to worry about. Members get a discount too! See coupon.
- 3 √ WE SHIP BOOKS ANYWHERE
 We ship to all theatres of operation, and orders from any part of the globe are shipped immediately, either overseas or to friends and family back home.

4 √ GIFT BOOKS & BOOKS for GIFTS

Let as help solve your gift problems. Books are welcome gifts for all occasions.

5 √IMMEDIATE DELIVERY SERVICE

All book orders are processed the day they arrive. Books in stock are mailed that same day, others are shipped immediately from the publisher to you!

6 √ADVISORY LISTS PREPARED

We will be happy to prepare a list of available books on any specified subject for you. Drop us a line if you have a book problem.

CLIP THIS COUPON FOR CONVENIENT ORDERING

U. S. FIELD ARTILLERY ASSOCIATION 1218 Connecticut Avenue Washington 6, D. C.	ORDERS OF \$2.50 OR MORE 10% DISCOUNT ORDERS OF \$15.00 OR MORE 15% DISCOUNT		
ENCLOSED \$ FOR THE FOLLOWING:			
	Name		
	Address		
	City	State	