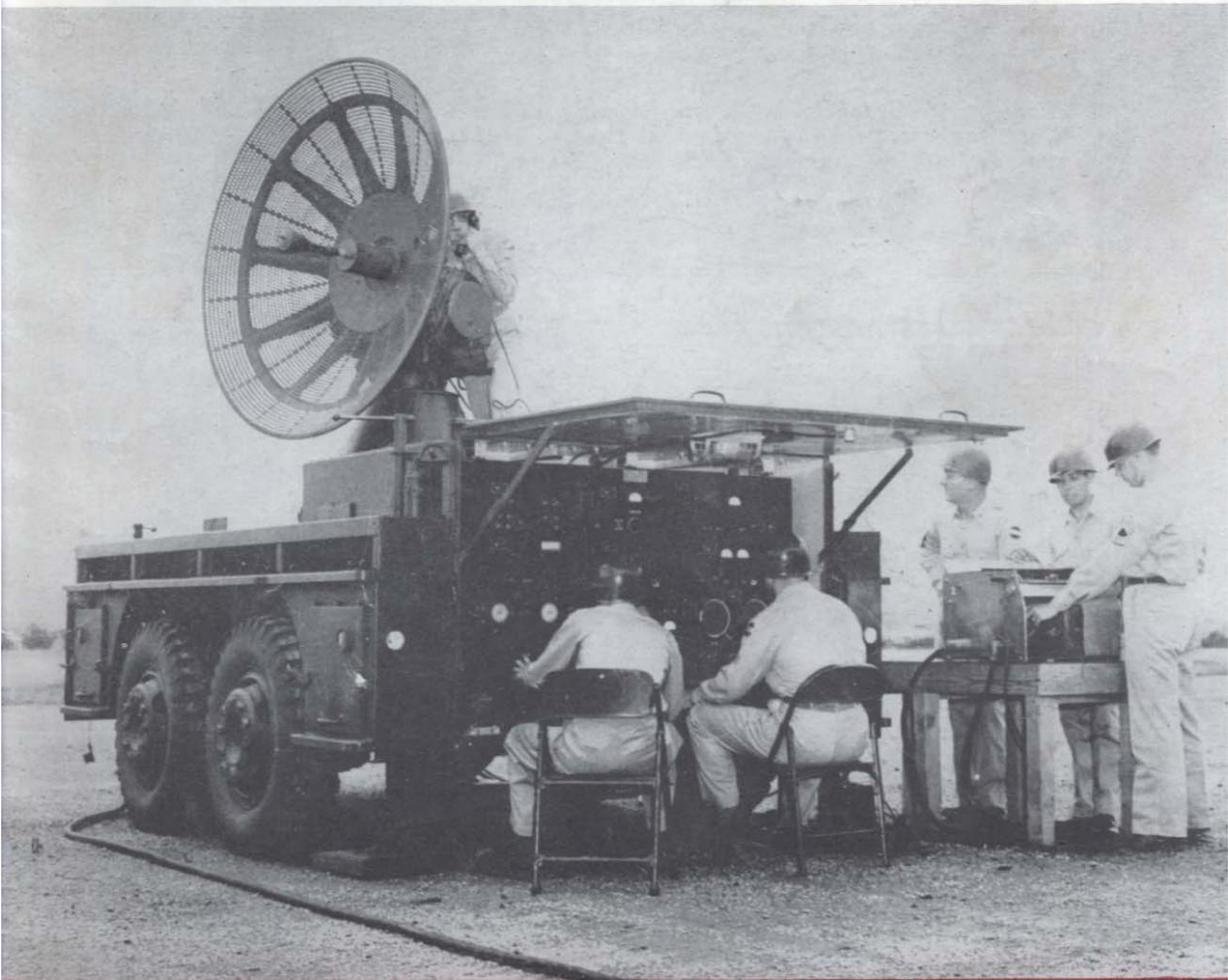


# The FIELD ARTILLERY JOURNAL



NOV.-DEC. 1948



## THE STORY

EISENHOWER

ALONE COULD TELL

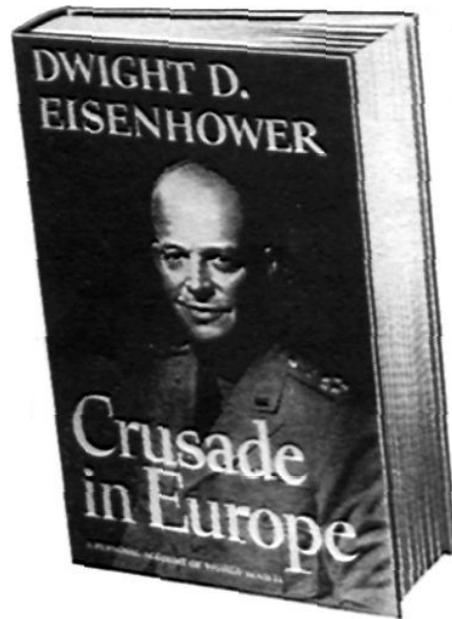


## CRUSADE IN EUROPE



By DWIGHT D. EISENHOWER

The Supreme Commander Reviews The  
Entire Drama of the European War



*Eisenhower's Great Book—its content only partially available elsewhere—tells with great frankness what happened on the topmost level of Allied Command. A detailed record of strategy and battle decisions.*

U. S. FIELD ARTILLERY ASSOCIATION

1218 Connecticut Avenue

\$5.00

Washington 6, D. C.



WINSTON S. CHURCHILL

## The Gathering Storm

"Of all the statesmen, diplomats, generals, admirals and politicians who figured in the history of the last quarter-century and are now marketing their reminiscences, Churchill is easily the most colorful, the most illustrious and the most literary. In 'The Gathering Storm' he seizes the almost unparalleled opportunity to describe a mighty drama from the triple vantage point of actor, co-author and critic . . . a rich, lucid, absorbing account of great events and persons, told by a master in the tradition of Froude, Macaulay and Gibbon."

*New Republic*

\$6.00



# BOOKS TO SOLVE YOUR CHRISTMAS PROBLEM

## CURRENT and CHOICE

### MILITARY . . .

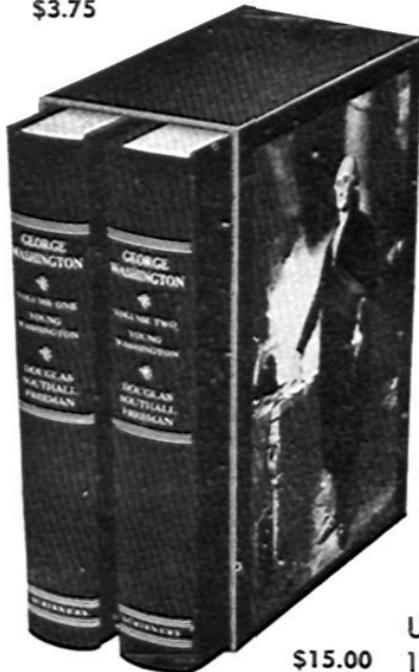
- Crusade in Europe  
By Gen. Dwight D. Eisenhower \$5.00
- The Stilwell Papers  
By Gen. Joseph Stilwell \$4.00
- War As I Knew It  
By Gen. George S. Patton, Jr. \$3.75
- The U. S. Army in World War II,  
Vols. I and II  
Historical Div., Dept. of  
the Army—each \$4.50
- The German Generals Talk  
By B. H. Liddell Hart \$4.00
- Psychological Warfare  
Persuade or Perish  
By Paul M. A. Lindeberger \$3.50
- By Wallace Carroll \$4.00



BY MEMBERS  
OVERSEAS PRESS  
CLUB OF AMERICA

Never in one book has so well-  
balanced and objective a pic-  
ture of the U.S.S.R. emerged.

\$3.75



### NON-FICTION . . .

- The Gathering Storm  
By Winston S. Churchill \$6.00
- George Washington  
By Douglas S. Freeman (2 vols.) \$15.00
- On Active Service in Peace and War  
By Henry L. Stimson \$5.00
- The Memoirs of Cordell Hull  
By Cordell Hull (2 vols.) \$10.50
- Road to Survival  
By William Vogt \$4.00
- Roosevelt and Hopkins  
By Robert E. Sherwood \$6.00
- Civilization on Trial  
By Arnold J. Toynbee \$3.50
- The Lincoln Papers  
Edited by David Mearns \$10.00
- As We See Russia  
By Members, Overseas Press Club  
of America \$3.75
- The West at Bay  
By Barbara Ward \$3.50
- MacArthur's Japan  
By Russell Brines \$3.50
- Pershing, General of the Armies  
By Col. Frederick Palmer \$4.50
- We Need Not Fail  
By Sumner Welles \$2.50

DOUGLAS  
S.  
FREEMAN'S

## GEORGE WASHINGTON

A careful, revealing, un-  
idealized portrait of the am-  
bitious young planter and com-  
mander of Virginia troops.

**SPLENDIDLY ILLUSTRATED**

U. S. FIELD ARTILLERY ASSOCIATION  
1218 Conn. Avenue, Washington 6, D. C.



## THE STILWELL PAPERS

EDITED BY  
THEODORE H. WHITE

A great leader's acid memoirs of war and politics  
in an arena of critical importance to us today.

## WAR AS I KNEW IT



BY  
GEN. GEORGE S.  
PATTON

"Historians and ex-  
perts, armchair and  
professional will  
find it required  
reading."

### FICTION . . .

- World War II*
- The Naked and the Dead  
By Norman Mailer \$4.00
- Stalingrad  
By Theodore Plietver \$3.00
- The Young Lions  
By Irwin Shaw \$3.95
- Guard of Honor  
By James G. Cozzens \$3.50
- The Crusaders  
By Stefan Hayn \$3.50
- Remembrance Rock  
By Carl Sandburg \$5.00
- Toward the Morning  
By Hervey Allen \$3.50

## A Christmas Message from our Association President



Christmas Greetings to the Field Artillery can be extended with great sincerity. The outstanding part they played in the late war had a profound bearing on its outcome. Christian life has been preserved. Fundamental values to our economic, social and spiritual life have survived the most sinister threat they had faced since the Dark Ages. To you who took part in that great struggle. It is a matter of gratification. To those who follow your footsteps there is tradition and pride of arm.

It is with good cheer that we can now enjoy the benefits flowing from the values we helped to preserve, and see our Nation do the same.

A handwritten signature in cursive script, reading "Ray McLean".

★ ★ ★ ★ ★  
 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.*

★

**The UNITED STATES FIELD ARTILLERY ASSOCIATION**

*Organized June 7, 1910*

*Honorary President*

**HARRY S. TRUMAN**

President of the United States

**LIEUTENANT GENERAL RAYMOND S. McLAIN, 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
- Brig. Gen. Edward J. McGaw
- Brig. Gen. Henry C. Evans
- Col. Charles H. Swartz
- Col. Jess Larson
- Col. John Lemp
- Lt. Col. Beverley E. Powell
- Lt. Col. Robert F. Cocklin

★

The Field Artillery Journal is not a medium for the dissemination of Department of the Army 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. 38 NOVEMBER-DECEMBER, 1948 NO. 6**

- Cover: Counterbattery radar set SCR-784, issued to FA observation batteries.

**ARTICLES**

The Field Artillery Observation Battalion .....	252
Light Over Babel, by Max Sherover .....	258
American Football—Trainer of Generals, by Brig. Gen. A. R. Harris, Ret. ...	262
More Data on Shooting Without Factors .....	267
The Wartime Information and Education Program, by Major I. Heymont, Inf .....	268
The Unbeatable Secret Weapon, by Melvin Goodman .....	274
An England - France Subway? by Frank W. Ball .....	276
Perimeters in Paragraphs, by Col. Conrad H. Lanza, Ret. ....	277

**ARTILLERY NOTES**

Association Medal Award .....	261
Here's a New Terrain Board, by Lt. Col. Joseph H. Harrison, FA .....	271

**OTHER FEATURES**

Annual Station List? .....	257
It Happened at Christmas, by Ralph Trowbridge .....	261
The Birth of the Pigskin, by Harold Helfer .....	266
Immediate Commissions Offered Qualified Veterans .....	266
The Beautiful Bungalow, by Harold Helfer .....	275
The Lieutenant Who Licked the Subs, by Jerome Kearful .....	286
Book Reviews .....	287
Books in Column, by Maj. N. L. Drummond, Jr. ....	294
Index of Titles and Authors .....	296

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, 1948, 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.

# The Field Artillery Observation Battalion

*Prepared in the Department of Observation, The Artillery School\**

THE success of our forces in World War II was due to a great many factors, one of which, and not the least, was the very efficient functioning of our Field Artillery. It has been rated better than that of any other army. The outstanding record of our corps artillery in counterbattery operations was due in large measure to the effectiveness of the field artillery observation battalions. Strangely enough, this great "target-getting" agency is relatively unknown to far too many artillerymen; its comparatively recent development and the small number of such units have not publicized its existence. The publication of new revised tables of organization provides an excellent opportunity to acquaint artillerymen with this battalion. It is the purpose of this article to review the history of the field artillery observation battalion, its use in World War II, and some of the combat lessons related to its employment. Also, to discuss the new tables of organization recently published, the missions of the battalion, and the techniques used by the principle elements of the battalion, namely: sound, flash, radar, meteorology, and survey.

## HISTORICAL BACKGROUND

The field artillery observation battalion was gradually developed during the period between the two World Wars. Two elements of the battalion, the sound- and flash-ranging components, were born out of the combat needs of World War I. All major powers engaged therein employed some

form of sound and flash ranging. The earliest flash units were provided by a special group of observation posts accurately located and connected by a common wire, so that simultaneous observations could be reported and a location made by intersection. This is essentially the same technique now used except suitable equipment is provided to especially trained observers. The early sound units consisted of a number of listening posts where men with stop watches listened for the sound of a hostile gun and reported the time of arrival of such sounds at each position. From this information the hostile gun could be located. These human listening posts were replaced by microphones and an automatic recording device. By the end of World War I there were about eighty sound sections in the Allied forces covering the entire front. The German side of the line was similarly covered, although there were somewhat fewer flash sections.

The American sound and flash sections were provided by especially trained engineer and coast artillery units. These units operated under the direct tactical command of G-2 of the United States Army. Following the war the Coast Artillery continued the development of techniques and equipment for sound ranging on artillery. In 1922 the Field Artillery initiated experiments in flash and sound ranging at Fort Bragg, North Carolina, using the 1st Observation Flash Battery which was organized on August 7 of that year. This battery later became "A" Battery of the First Field Artillery Observation Battalion. In 1927, at the request of the Chief of Field Artillery, responsibility for sound and flash ranging in the Army was assigned to the Field Artillery. In 1934 Headquarters Battery was formed and in 1939 "B" Battery was activated to complete the First Field Artillery Observation Battalion. This Battalion was authorized

a peace strength of fifteen officers and three hundred and fifty-three enlisted men. Thus, by 1939, the United States Army had one complete field artillery observation battalion. The Second Field Artillery Observation Battalion was formed in 1940. Four more battalions were formed in 1941. After Pearl Harbor, expansion continued until, by the end of hostilities, there were about twenty-five complete battalions.

## AFRICA AND EUROPE

The First Field Artillery Observation Battalion was among the first United States forces in action in North Africa. Observation battalions were employed very successfully in North Africa, Sicily, Italy (including the Anzio Beaches), Southern France, Normandy, Northern France, Luxemburg, Belgium (including the Battle of the Bulge), Holland, and wherever American forces fought in Germany. These units landed early in all major amphibious operations. The 13th and 17th Observation Battalions were scheduled to land on D+1 in the Normandy invasion. Strong resistance delayed landings, causing the 17th to land on D+2. One of the batteries of the 285th Field Artillery Observation Battalion was almost completely destroyed in the massacre at Malmedy. (FIELD ARTILLERY JOURNAL, February 1946). A sound platoon of Battery B, 14th Observation Battalion, while operating in an incomplete bridgehead, had its sound - ranging equipment destroyed during a German counterattack. The personnel of this platoon volunteered to join a tank-destroyer platoon in defending the village of Loisy, France, a vital link in the perimeter defense of the bridgehead. They fought in this role, despite several casualties, until later relieved by infantry.

Combat records show that a vast number of hostile batteries were located

---

\* Under the direction of Col. Mercer C. Walter, Director of the Department, the bulk of the writing of this article was carried by Maj. Charles A. Hearn, Supervisor of the Flash and Sound Section, with valuable assistance from Lt. Cols. Eugene M. Lee, John J. Kenney, and William E. Grubbs, and Maj. Raymond W. Millican, all members of the Department.

by sound ranging in all corps zones. The much smaller number of hostile batteries located by flash ranging was due to the effective use of defilade, cover, and flashless powder by the German artillery. However, an unbelievably large number of items of combat information were reported by flash observers. Flash ranging was used extensively for registration (both ground and high-burst) of our own artillery; this method of registration is one of the most accurate means available to the corps artillery.

While radar sections were not organic to observation battalions, some battalions received radar sets or had radar sections attached before the end of the war. Radar was employed successfully by the British for counter mortar purposes. American counter mortar radar sections had been trained and would have participated in the invasion of Japan. More than one observation battalion used radar in lieu of visual equipment to determine metro data, thus permitting operations when visibility was poor. The 15th Observation Battalion, operating in Italy, used an SCR-584 radar set for this purpose; they also used SCR-584 to locate hostile artillery and to adjust artillery fire. Brig. Gen. Edward S. Ott in an article on radar employment (FIELD ARTILLERY JOURNAL, August 1946) reports outstanding success in the use of the SCR-584 radar set to locate hostile artillery, adjust artillery fire, and to detect and locate various moving ground targets.

### PACIFIC OPERATIONS

The combat operations employed in the Pacific were different in many ways from those of Europe, principally because troops were not employed in mass until late in the war. In the initial island-to-island warfare, where difficult jungle terrain was often encountered, flash ranging was found impractical and was not attempted. Corps survey operations were also adversely affected by such terrain, and there was far less need for large-scale survey operations. On the other hand, sound ranging provided an excellent means of locating Japanese artillery and of adjusting our artillery. For these reasons, organic field artillery observation battalions were not employed, but special sound-

ranging platoons were formed by adding limited maintenance personnel and equipment to the normal T/O and E of a sound-ranging platoon.

Four of these separate platoons, the First, Second, Third, and Fourth Sound-Ranging Platoons, were organized in the latter part of 1943. They were used effectively from early 1944 until our forces landed in the Philippines. The First and Fourth Sound-Ranging Platoons landed on D+1 on Leyte, a normal procedure. Later these four sound platoons were absorbed by the 289th Field Artillery Observation Battalion, which had been sent to the Pacific Theater without sound and flash platoons. This Battalion operated in the Luzon campaign and performed some flash ranging by making provisional flash elements from the sound platoons. The 287th Field Artillery Observation Battalion also operated in the Philippines and on Okinawa. These and several other observation battalions were busy training for landings on the Japanese homeland when the Japanese surrendered.

### COMBAT LESSONS

While the overall results attained by most observation battalions were outstandingly successful, there are many persons who feel that even better results could have been achieved. Lack of combat experience on the part of some of the observation battalion commanders and, perhaps to a greater degree, lack of understanding by commanders and staff officers of the capabilities, limitations, and proper technique of employment of sound and flash elements, often decreased the efficiency of a battalion.

Results show that for the type of operation most often encountered in Europe, all elements of the observation battalion should be employed under centralized control. The letter batteries should be directly under the battalion headquarters, which in turn should operate directly under a single corps fire-direction center. When attachment to a division is necessary, a complete letter battery should be used instead of small provisional detachments of sound and flash units.

It was determined that, for the wide corps zones of European operations, the one organic field artillery observation

battalion (consisting of a headquarters and two observation batteries) could not provide adequate coverage by sound, flash, and survey elements. To overcome this difficulty it was common practice to attach an additional observation battalion, or part of a battalion, to the organic observation battalion. The new tables of organization and equipment provide for a third observation battery in the battalion. Under normal conditions, this will allow a single observation battalion adequately to cover its corps zone.

### NEW ORGANIZATION

New T/O&E's recently published for the field artillery observation battalion (6-75N, 6-76N, and 6-77N, all dated September 1948) provide for a number of important changes. Of vital interest is the addition of a third letter battery and of a counterbattery radar platoon to each letter battery. Other changes include the addition of personnel and equipment for the survey information center in headquarters battery. The aggregate strength of the battalion is increased from 449 to 836, largely accounted for by the addition of the radar platoons and the additional letter battery.

Headquarters and Headquarters Battery (16 Off, 5 WO, 182 EM) includes:

- Battalion Headquarters
- Bn Personnel Section
- Bn Service Platoon
- Medical Detachment
- Battery Headquarters
- Operations Platoon
  - Operations Section
  - Meteorological Section
- Topographic Platoon
  - Topographic Section
  - Survey Information Center
- Communication Platoon
- Maintenance Section

Each letter battery (8 Off, 1 WO, 202 EM) includes:

- Battery Headquarters
- Flash Platoon
  - Operations Section
  - Topographic Section
- Sound Platoon
  - Operations Section
  - Topographic Section

Radar Platoon  
 2 Operations Sections  
 Communication Platoon  
 Maintenance Section

The sound, flash, and radar platoons are the *observation* elements. The operations sections of the sound and flash platoons perform the sound and flash ranging. The topographic sections of these two platoons perform the necessary survey operations to locate accurately each microphone of the sound base and each of the four to six flash observation posts. Survey for the two radar positions of the battery will normally be performed by the sound or flash topographic sections, although equipment is available within the radar platoon for limited survey. The communication platoon establishes wire communication from battery headquarters to the sound and flash centrals and the radar positions. Extensive wire nets are required to provide separate field telephone lines from the sound and flash centrals to each microphone and observation post; in combat, this may require over sixty miles of field wire.

### MISSIONS

The six principal missions performed by the field artillery observation battalion are:

1. *Location of hostile artillery.* This mission is performed by sound, flash, and radar platoons.

2. *Adjustment and registration of friendly artillery.* Adjustments are made accurately by the use of sound, flash, and radar. Registrations are not made by sound ranging when other means are available. Registration by flash ranging is used extensively, since results by this method are extremely accurate. Registrations may also be made by radar with excellent results.

3. *Collection of information.* Collection of information (other than location of hostile artillery) is a duty of all personnel of the battalion. Flash observers provide most of the great mass of combat information reported by the battalion.

4. *Conduct and coordination of corps artillery survey operations.* The battalion survey officer coordinates the survey operations of the artillery with the corps. Plans for use of the organic survey parties in the observation battalion and

any attached topographic engineer parties must be coordinated with the survey plans of the divisions to avoid duplication of effort. A survey information center is maintained in continuous operation near battalion headquarters or the corps fire-direction center.

5. *Comparative calibration of friendly artillery.* The flash-ranging platoon performs this mission; the flash observation posts locate each round and the flash survey parties locate each piece.

6. *Provide ballistic meteorological data for friendly artillery (and for sound ranging).* Metro messages are provided by the meteorological section of headquarters battery.

### FIELD ARTILLERY SOUND RANGING

Sound ranging may be defined as the technique used to locate the source of the sound created when a gun fires or a shell bursts. To avoid a long and technical discussion of sound theory, a relatively simple explanation of sound-ranging technique is provided below. (FM 6-120 contains complete information about sound theory.)

In Figure 1 the six black circles equally spaced along a straight line represent microphones suspended in a hole in the ground. Each microphone is connected by a field telephone line to a sound recording set at the sound central. The line of microphones is called a sound base. Two adjacent microphones such as  $M_1$  and  $M_2$  and the imaginary line between is called a subbase. The sound central is located a little behind

and near the center of the base. Located generally in front of microphones  $M_2$  and  $M_3$  respectively, at a distance of about two thousand yards, are the two sound outpost positions. Each outpost has an operator equipped with a field telephone and a push-button switch connected by field telephone line to the recorder at the sound central.

If a gun were fired in enemy territory on the right of the front, the sound, moving out in all directions, would soon reach outpost #1. The operator there would then press the switch causing the recording set and the microphones to become active (for technical reasons the equipment does not function continuously). As the sound wave reaches each microphone position an electrical impulse is created. A sound record is produced by the recorder. The sound record has thereon six generally straight lines, one for each microphone. The arrival of a sound wave at a microphone is indicated by a wave or break in the line corresponding to the particular microphone. A time scale (or time dots) along the edge of the record permits determination of arrival times to the nearest thousandth of a second. The difference in arrival times at adjacent microphones such as  $M_1$  and  $M_2$  is used in conjunction with special plotting equipment to construct a ray on a plotting board from the plotted position of a point halfway between the two microphones. Thus a ray may be drawn from the center of each of the five subbases. The intersection of these rays is the location of the sound source, except for the effect of wind, temperature, and a small plotting error called

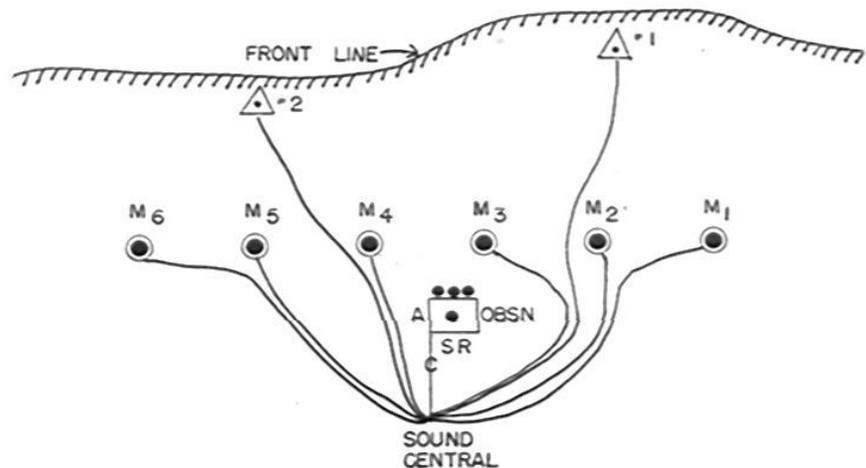


Figure 1.—Sound-ranging installation

the curvature correction. If corrections, readily determined from graphical charts, are applied to the time differences and a plot then made on a gridded chart, the coordinates may be determined. A special sound plotting board (M-1) and suitable correction charts are provided.

The two general types of sound installations may be referred to as "deliberate" and "hasty" bases. The "deliberate" base is the one usually employed. Six or more microphones at intervals of approximately 1,476 yards are placed at positions along a straight line, along the arc of a circle, or in an irregular pattern. The most common base is one of six microphones along a straight line. Such a base has many advantages over irregular bases. The location of each microphone of a "deliberate" base is precisely surveyed to an accuracy of one yard in two thousand. It normally requires from six to eight hours to install such a base, including necessary survey and wire communication. A "hasty" sound base may be installed in about forty minutes and consists of only four microphones and a minimum amount of interval survey. Such a base can provide adjustments of fire on targets located by the sound records of this base. The "hasty" type of installation provides only relative locations, *not* coordinates; fire must be adjusted immediately to be effective. The "hasty" base may be used effectively in a fluid situation. If operations stabilize, the base will be expanded to a deliberate type. In



**Sound Plotting Board M-1**

practice, the expansion of a base is continued until a full-scale base is completed to provide coverage throughout the hostile area in the assigned zone.

A sound base should be located as far forward as possible, but with sufficient distance (about 2000 yards) to allow the outpost operator to start the recording operation before the sound which he hears from a hostile artillery piece reaches any microphone. The azimuth of a base should be such that the perpendicular bisector passes through the center of suspected locations of hostile artillery or center of zone of observation. To satisfy these conditions, a base is often not parallel to the front

lines.

Under average conditions, using a "deliberate" base, sound ranging produces locations with an accuracy of from fifty to one hundred fifty yards at ranges up to fifteen thousand yards. Mountainous terrain may or may not materially affect operations, depending upon the relative locations of the base and sound source, and on the ground contours in the area under consideration. Abnormal battlefield noises—time-on-target missions, barrages, and preparations — tend to confuse interpretation of the sound record. High winds impair accuracy.

Sound ranging is most valuable because of its ability to locate artillery pieces hidden to visual observation. The use of smokeless propellants in daylight, flashless propellants at night, camouflage, and defilade by the enemy considerably reduces the efficacy of visual observation. Such observation is further hampered by poor visibility due to fog, haze, and darkness. Sound ranging is particularly effective in fog; the presence of fog normally indicates extremely low wind velocities. Sound ranging does not require visibility or "line of sight" to the target.

Sound ranging in World War II played a vital role on every major front. As an illustration of the effectiveness of sound ranging as a locating agency, the records of one corps artillery



**SOUND-RANGING CENTRAL**

**GR-8 Sound Recording Set at the left, plotting and correction equipment in the center, M-1 Plotting Board at the right.**

headquarters state that 13,327 locations of enemy artillery were made over a ten-month period, crediting locating agencies as follows:

Agency	Locations
Sound ranging .....	75.6%
Air OPs .....	9.8
Photo interpretation .....	6.4
Prisoners of war .....	1.3
Other .....	6.9

With regard to accuracy, figures from an observation battalion's unit journal show that a survey check of 443 locations indicated an average deviation from the reported coordinates of each location of only 84 meters. Past experience also indicates that on the average a sound location is likely to be more accurate than the degree of accuracy assigned to the location when it is reported. These and other combat reports underline the importance of sound ranging as a productive and accurate method of observation.

Sound ranging as explained here is accomplished by the sound-ranging platoon of each observation battery. The technique and equipment used is designed for counterbattery operations and should not be confused with infantry sound ranging. The infantry sound set is designed to locate mortars and small arms at ranges under about 3500 yards. The field artillery sound set normally provides artillery locations at ranges from about 3500 yards to 20,000 yards. The maximum range is limited only by the intensity of the sound.

### FLASH RANGING

Flash ranging may be defined as the technique used to locate points in the target area by visual means from two or more observation posts.

The primary mission of the flash platoon is to locate targets. In addition to this important task, it also collects combat information, conducts registrations and adjustments, and provides the means for comparative calibration of friendly artillery. There are two types of installations which may be used, the "deliberate" or long base and the "hasty" or short base.

The "deliberate" base is the most common type used. It consists of four or more observation posts, each accurately located and connected by separate field



### FLASH-RANGING CENTRAL

**Tactical installation, with M-5 Plotting Board in center, Flash Switchboard BD-70 in background.**

telephone lines to a special flash switchboard at the flash central. The observation posts are placed on prominent terrain features best suited to permit observation deep into hostile areas. Each observation post is manned continually by two men to provide surveillance twenty-four hours a day; sufficient personnel to provide necessary reliefs remain in a concealed position near each observation post. The flash-spotting instrument used at each observation post is a binocular 7½-power observing instrument. Horizontal and vertical angles may be measured to two-tenths of a mil. When in use these instruments are oriented on grid north so that horizontal angles read to targets are azimuths.

The special flash switchboard is so designed that observers signal the switchboard operator by pressing a small outpost switch which causes a light to glow on the panel of the switchboard. If all lights glow simultaneously it indicates that all observers saw the same flash of a hostile gun or a friendly shell burst. This assists the switchboard operator in directing the attention of all observers to the same target.

Each observer reports the azimuth, accuracy of reading, angle of site, and information regarding the target. As the switchboard operator receives and repeats each azimuth, it is set off on the

flash plotting board to the nearest one-half mil and a ray is drawn from the plotted position of each observation post (Fig. 2). The surface of the plotting board is gridded so that coordinates of the point of intersection of the rays may be read. Computers, using the measured range from the observation post to the target and the angle of site, determine the altitude of the target. Computations are made using two observation posts to verify accuracy. The coordinates, with estimated accuracy, altitude, and all information available about the target, are phoned to the battery headquarters; this information is then sent to battalion headquarters and to the corps artillery fire-direction center. Surprise fire may then be placed

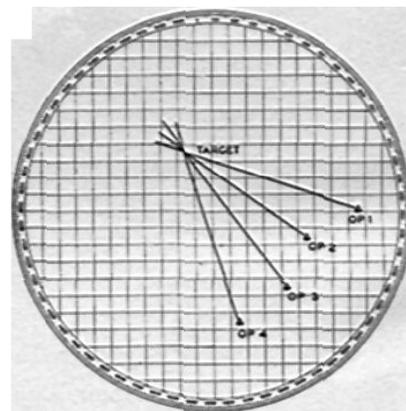


Figure 2.—Surface of flash spotting board.

on the target, or the flash team may adjust the fire.

It may require three to six hours to install the "deliberate" flash base to include the precise survey of each observation post and to establish field wire communication. However, hasty methods of survey such as the two-point or three-point resections (using graphical methods based on angles turned by the observers) may be used to locate the observation posts initially. Radio communication would be used until the wire net is completed. Graphical resection may be accomplished in a matter of minutes on the flash plotting board.

The "hasty" or short-base type of installation may be used in a fast-moving situation or when terrain or other factors make it impracticable to install a "deliberate" base. A flash platoon may provide two short-base teams. A short base consists of two observation posts established two to six hundred yards apart with a small plotting center located nearby; telephone communication is established between the three installations. No external survey control is required; the length of base is determined (to an accuracy of one in five hundred) and orientation is furnished the observing instruments. When the observation posts are intervisible (which is usually the case) each observer orients on the observing instrument of the other. For short-base operations, the spotting instruments are not oriented on grid north; they are given an instrument direction such that the 1600-mil line of direction is perpendicular to the base and extends towards the zone of observation (zero direction line is to the left along the base or base extended). This type of base may be installed in about thirty minutes. Two such bases may be installed initially and later expanded to form a long base.

In locating targets from the short base, the instrument direction of the right observer is subtracted from the instrument direction of the left observer. This small angle, the right observer's reading, and the length of base are three known parts of a triangle which may be solved with the military slide-rule to determine the range to the target from the left observation post. The target may then be reported by giving range and



**Flash Spotting Instrument M-2**

instrument direction from a known point, or its location with respect to base or check points may be announced. The flash short base provides an accurate means of locating targets relative to other points in the target area. It may also be used for the accurate adjustment of friendly fire on targets at ranges up to ten times the length of the base. Short-base intersections usually do not provide accurate grid coordinates. A short-base team may be attached to a firing battalion or may operate under control of the observation battery.

The "deliberate" type base was used a greater part of the time in combat and proved to be the most satisfactory. Flash locations from long bases are extremely reliable and most accurate since the intersections of rays from three or more observation posts determine the location. When only two rays are available, the location is considered unreliable since an inaccurate or false reading from either one of the observation posts will result in a large error. Such errors are avoided by using the third ray to confirm the accuracy of the other two.

Flash ranging played a vital role in the last war. It provided the greatest source of combat information to the corps artillery, a most accurate means of registration of friendly artillery, and many hostile battery locations. With improved techniques, it may be expected to play an equally important role in any future conflict.

*(To be continued)*

## ANNUAL STATION LIST?

Dear Editor:

Before the war, the December issue of the JOURNAL used to publish pretty complete station lists and unit rosters of the Field Artillery officers of the Regular Army. This was a big help in sending out Christmas cards. If security restrictions will permit the resumption of this service, I am sure that a lot of us who are now on the outside would like to know the present whereabouts of some of our old friends.

*Lt. Col., FA Res.*

☆

Dear Colonel:

Upon receipt of your letter of 8 October 1948, I immediately took up the question of publishing an annual station list and unit roster with Col. W. S. Nye. Col. Nye is at present chief of the FA Branch, Career Management Group, Personnel and Administrative Division of the General Staff, and is also a former editor of the FA JOURNAL, so that he is in the fortunate position of being able to view the question from both sides. The gist of his reply to my inquiry follows.

The publishing of such a list is not recommended, for the following reasons:

1. A complete list would take up too much JOURNAL space. When we used to publish such a list there were only about 1,600 FA officers; there are now between nine and ten thousand.

2. Addresses nowadays change so rapidly that many would be incorrect before the issue carrying them came off the press.

3. The list used to be a headache in many respects. Some members complained that it was not good use of JOURNAL space; others were unhappy because their names were misspelled, etc.

4. Some stations are on the Department of the Army's classified list, which would prevent the JOURNAL from publishing a complete list.

In view of the above, I concur with Colonel Nye's recommendation, and we have decided not to attempt to compile and publish such a list for the time being.

B. A. DAY

*Col., FA*

# LIGHT OVER BABEL

By Max Sherover

*Republished (slightly condensed) by courtesy of the Armored Cavalry Journal*

THE confusion of Babel exists! We live in a dark labyrinth divided into 2,756 language compartments subdivided into thousands of dialects. Let us try to turn on the light of understanding.

Language is *the* essential of human life. It is the "time-capsule" into which is compressed man's entire history—all his knowledge, his hopes and fears, his tragedies and joys, his failures and aspirations, his depravities and nobilities.

This attribute raises man above all other living creatures, enabling him to communicate his wants and thoughts through an organized, conventional medium which conveys his meaning to others within the same linguistic group. Without language, he would be on a level with the beasts who give vent to reactions by grunts, yelps, and other primitive sounds. Only man—through language—has a "time-binding" device by which he transmits the sum of his experiences, observations, and thinking to those who come after him.

But, unfortunately, this priceless gift of speech loses its greatest effectiveness because there is not one world-tongue. Mankind is pathetically separated by *thousands* of languages and dialects, each a veritable barrier to intergroup and international understanding. The New Testament thus far has had to be translated into 2,756 languages to carry the Gospel to the peoples of the world. Even the account of the Tower of Babel does not indicate such vast multiplicity of tongues. Yet there are that many

languages—"living languages"—spoken in the world today!

This bewildering figure need not frighten us. It really is not necessary to know all these languages to play an effective role in international affairs. Of this amazing total of tongues, about forty languages can serve every practical purpose. These forty were considered important by those charged with the linguistic problems of the strategy of World War II. Courses in them were made available to the armed forces. Actually, even this formidable figure of forty tongues could be reduced to about sixteen essential languages. These are indispensable to effective world-wide communication, propaganda, and the problems of political and military direction.

Of course, one can function adequately in this multilingual world, even without knowing all of these sixteen tongues:

English, French, Spanish, German, Italian, Portuguese, Russian, Swedish, Arabic, Chinese, Hindustani, Malay, Bengali, Persian, Japanese, Polish.

Occasionally some languages, not in this list, may be imperative for a special purpose. However, the minimum standard for an average person must be a bilingual status—a fluent conversational command of *two* languages, and possibly more. Well-educated people should be able to feel at home in four to six languages. Linguistic isolation behind one language is no longer practical.

To command, one must understand. To cooperate and obey, one must also understand. In teaching and learning there must be language communication between teacher and pupil; between officer and private, among allies and also between opponents. Modern war has impressed on the world the value of knowing even the enemy's language and culture. The postwar period with its distressing uncertainties and chaos accentuates our linguistic poverty. Language is a weapon in war, but it is an even more potent tool for peace.

For the first time in history, world leadership is the responsibility of a nation which seeks no self-aggrandisement, territorial expansion, or colonial possessions. Such a nation also should possess the indispensable attribute of guidance in a multilingual world. The citizens of such nation in mufti or uniform must be multilingual.

In bringing to our world-neighbors the gifts of peace, food and medicine, clothes and materials, machinery and the "know how" we must also be able to present these in the language of the recipient if we don't want the beneficiary (living in a world of distrust and fear) to look the gift horse in the mouth.

If you want to become effective, you should make up your mind to know at least one language *in addition* to a thorough knowledge of your mother tongue. Immediately you have done this, you have *doubled* your potential usefulness and, at the same time, you have enlarged your own mental horizon and your ability to understand other people.

Languages can be learned today without stress or strain. Our advanced knowledge of applied psychology and the modern scientific techniques in teaching have made the fluent conversational mastery of a foreign language child's play compared to the tedious and laborious frettings and worries with Greek and Latin or with the old-fashioned and outmoded academic approach to high school or college French or Spanish or German.

The prospective student might ask: Which language shall I learn? How long will it take? What use shall I put it to after I have learned it? He may also ask: Can I learn to speak a foreign language? How shall I learn? What method shall I use? How far shall I go into the language?

We shall now deal with these questions, as they are the main purpose of this article.

*What language shall I learn?* It does not really matter. You can learn any language you choose. Your choice should, of course, have a great deal to do with your background, your occupation, and the field in which you want to function. Specific advice as to choice is not possible here. Only general guides can be suggested. You will, of course, consult your colleagues and

---

Max Sherover is president of Lingusphone Institute, a world-wide organization which has thus far produced 29 language courses on phonograph records synchronized with textbooks; a method which has taught over one million students, is used by 14,000 schools and colleges throughout the world.

Mr. Sherover enjoys a wide reputation for being well-informed, not only on the subject of learning languages, but on the implications of the whole art of communication and semantics.

superiors. Also, in given situations, you may have no choice but to follow directives. In either case, the language chosen can be, and will be, learned by you. General Stilwell's knowledge of Chinese is proverbial. Thousands of Americans have proven that they can acquire an at-homeness in such exotic languages as Burmese, Swahili, Tagalog, Vissayan, Tamil, Korean, Bantu, etc. The number of Americans who have enviable facility in conversational French, Spanish, German, Greek, Turkish, Serbo-Croat, Czech, Russian, Norwegian, Danish, Finnish, Hungarian, etc. is considerable. Some of these tongues were learned under the war-stress of a "must," others as an avocation. Your choice will be made in response to a compelling need or a personal inclination.

*How long will it take?* The first day, after an hour's playful learning you will find yourself able to know the basic sounds, the vowels, consonants, and diphthongs and the alphabet of the "easier" languages — those having a romance or anglo-saxon background. The others will get you to this point in a few lessons. Step by step you will speak (if you learn by the Direct Conversational Method) an assortment of useful *sentences*, not single, isolated, unconnected words. You will be able to exchange the common greetings, phrases of thanks, and simple questions and answers. Each day, with each lesson, your knowledge will grow and expand. Gradually, you will find that words and phrases occurring in other sentences can be transposed and formed into new ones to be used in a new context.

*To what use shall I put the language?* As you go forward and get the "Sprachgefühl" (feel of the language) you will find fascination in its ever wider use. Your vocabulary will pile up, soon exceeding that of the poorly educated native. Not long after you will find yourself tuning in on the foreign radio station and experiencing an inner thrill and satisfaction at finding that strange meaningless jumble of sound thoroughly intelligible and meaningful. Here you need no further advice. You'll shop for magazines, newspapers, and books in that language. You'll attend its operas,

movies, and theatres (where possible). You'll invest in a dictionary. You'll converse with people who speak the language.

At this point you may find yourself an addict. You'll want to know more, and it will not hurt. Having overcome the mental hazard and fear of speaking in a foreign tongue your appetite may grow. "On your own," you'll reach out for still another language and become a language "collector" with the same zest as your friend, the philatelist, reaches out for every new stamp. Or, perhaps, you are the temperamental "specialist" and will stick to a chosen field: Romance, Scandinavian, Slavonic, Semitic, or some other branch of the linguistic family tree. Don't try Hittite, Phoenician, Aramaic, or Sanskrit unless you expect to retire to the ivory tower of philology or the study of "dead" tongues.

The use you will put your knowledge to will be governed by who you are, what you are, and where you are. Militarily, in private business, in travel, in the practice of your profession, in serving your cause, in social relationship, everywhere you will find this priceless asset bringing you satisfaction, joy, and reward.

*Can I learn to speak a foreign language?* The secret of language learning is that it *seems* more difficult than it actually is. If I have not already succeeded in convincing you that you can learn and you insist, "I can never learn a foreign language!" my answer must be: That is not true. You already speak a "foreign" language. You learned it as a child. When you arrived here as a "blessed event," I suspect you could not speak a word. No doubt you howled and made Dad walk the floor to assuage your protest at having come here sans clothes, sans luggage. The point is you knew no English at all—a language which for most foreigners (including this one, who never heard English spoken till the age of 14) is a most difficult language to learn. Its spelling, its Topsy-grown grammar, inconsistencies of usage, each rule having at least one exception, with its Anglicisms and Americanisms; with its ornate phrasing, its expressive beauty, and its virile slang which quickly manages to earn legitimacy; with its

wealth of dialect and localisms, with its free borrowing of words from every clime, with its genius for new word coinage—is it any wonder that foreigners deserve a medal for having ventured into this verbal labyrinth? And please know that millions of foreigners are eagerly coping with the intricacies and hurdles of English because they too must find their way into our thinking. For them, too, to understand us may well be a matter of life or death.

Yes, indeed, if you have learned to speak English you have already well served your linguistic apprenticeship. You can learn any language spoken by any member of the human race. They are generally easier. For one thing, none of them can boast a vocabulary of 600,000 words (Oxford Dictionary of the English Language). Their structure is generally logical, sometimes quite simple. Pronunciation in most of them is phonetic, orderly, and uniform.

But do not start out with the notion that you must become a perfectionist in the foreign language. By all means, make an occasional mistake. Laugh at the incongruity of a "faux pas" but don't make the same error twice. Mistakes are stepping stones in learning.

Don't add to the amusement of the foreigner, as the famished G.I. in Paris did, when he told the waiter: *Je suis femme* when what he really meant was *J'ai faim*; then wishing to light his cigarette asked for *Un omelette*, meaning *Un alumette*. Then there were the two boys on furlough in Paris, hungry and thirsty but knowing nary a word of French. Seated at a sidewalk cafe table, one overheard a request to the waiter by a guest at the adjoining table, "Un verre d'eau!" The Yank's good ear for languages caught this phrase perfectly. In his turn he demanded from the waiter, though not too precisely, "Verre d'eau!" When the two glasses were put down the Yanks stared, lifted their glasses, smelled, and finally ventured a sip. One turned to the other: "If I were not positive that this is verre d'eau I'd swear it was plain water." This language lesson was not lost on the Yanks. Soon they knew how to ask for other drinks with a verre d'eau on the side.

Even in World War I and in the postwar peace negotiations language

was a factor. Senator Robert La Follette headed an investigation to learn why some members of the Foreign Relations Committee needed so many "assistants," aides de camp, etc., many of whom turned out to be sons, nephews, in-laws, etc., all of whom seemed eager to journey to France on a comfortable junket. Questioning some of the prospective emissaries Senator La Follette casually asked one aspirant: "By the way, since you wish to go to France, do you speak French?" "Well, I can get along in French quite well with taxi-drivers, waiters, and hotel clerks," announced the respondent. La Follette ended that session by asking the victim, "Supposing there are no taxi-drivers, waiters, and hotel clerks at this conference in Versailles?"

*How shall I learn?* There are many ways by which people have tried to learn. We all know about the so-called "four-years-of-French student" whose number is legion and none of whom can sustain a conversation in French which any Frenchman would understand.

I recall, on one of my business trips to Europe, running into an American tourist having great difficulty in conveying her wishes to a waiter in Cologne. Hearing the commotion I offered my help, which settled that misunderstanding. The lady assured me that the waiter's German was unintelligible and she really doubted whether he knew the language. She was quite certain about her faultless speech for she informed me that she knew her German grammar and had been lecturing on German literature at a mid-Western girls' college. I am sure she knew more of German grammar and literature than the Cologne waiter, but for conversation in German I know I would get on better with him, for even while she did speak German with me she reached for an English phrase or idiom in almost every sentence.

*How shall you learn?* There are better ways than the old reverse method of "grammar first—speech next or maybe"—here are some:

Gay lotharios can tell you that they have learned good "colloquial speech" from an "affaire d'amour," which is reputed to be a droll way of mastering a language. It might do for those who do not mind that their hearers can instantly detect the source of that linguistic

virtuosity. It suffers somewhat from reflecting the milieu in which it was acquired; the turn of phrase and idiom is apt to be too one-sided. It is not to be recommended.

A more practical way, in fact, the best way, is to live with a foreign family of fair educational status but one where the boarder or guest will not hear a word of English spoken. Thus, in being forced to maintain communication with every member of the household about almost every subject that comes up, he would, fairly rapidly, gain not only a rounded vocabulary but good acceptable speech patterns. While this method has been tried and tested and proven as the most effective, it is not practical for the majority of learners. It would make too great an inroad on the student's time, career, and pocketbook.

*How then shall I learn?* Learn the way you learned to speak your mother tongue—by listening. That is nature's way. We can hardly improve on that. You learned by hearing the language spoken. First you listened—then you spoke. You heard a phrase—a complete sentence. No one read a list of words from the dictionary to you. The sentence spoken denoted a situation or dramatized an action, the object spoken about was pointed to or handled. You heard, you saw, you understood, and you spoke. Not a word about grammar, about parsing or syntax, or parts of speech, rules, or exceptions was ever said by anyone to you while you were amassing your knowledge of the language. You spoke before you knew how to spell, you spoke before you could read or write. And most important, you did not learn by translation from one language into another, and there was no interpreter there to help you. Nor did anyone send you to the dictionary for definitions or meanings. You just imitated the rhythm and tone, the emphasis and accent and you grew up speaking the recognizable speech pattern of the environment and community in which you were reared. That is nature's method. Applied to the modern method of teaching it is called the Direct Method, the Conversational Method—auditory training by listening to a living speaker or a good phonograph record. Records have two

advantages: their speakers never tire and never get laryngitis.

In choosing a method you must make sure that you are not learning something you will have to unlearn and correct later on. It is just as easy to learn the right way as to make false starts. The method should be one that gives you a requisite amount of ear-training whereby you can *hear* foreign speech (without at the same time being exposed to listening to a word of English). Your auditory attention must not be distracted by a spoken or written translation while you are concentrating on listening to the foreign speaker. Listen patiently several times without moving your lips, without any attempt at imitation, or immediate repetition. Only after you have heard the selected part of the lesson over and over, and the sound has become implanted in your auditory memory, will you repeat and find that you do so without any kind of an accent. Your speech will be correct, your enunciation good, your imitation perfect because you have never heard it spoken otherwise.

You should not always listen to the same speaker. There must be several speakers, both male and female, with varying types of voices, for no two speakers sound exactly alike. In short, you must surround yourself with a foreign language environment by having the speakers available to you in the privacy of your study or your quarters; talking for you in a natural conversational manner (not declamatory, stagey, or professorial), the same as you would find such a group conversing when visiting with them.

Once you have mastered the conversational phase of the language, all other angles of it will come to you with rapidity. Spelling, grammar, reading, writing, composing, translating will be readily acquired with routine practice and frequent contact with the language.

And as your familiarity with the foreign tongue grows, you will make an interesting discovery. You will find that you are gaining a better grasp on your own language. By learning to articulate your ideas through another language medium, you will find that you become more discriminating in your

choice of words, structure of sentence, turn of phrase. You will then fall in love with words, associate them, explore their origins and interlingual relationships. You will see the world and understand its peoples through two avenues of understanding—your horizon will stretch, your personality will have become enlarged. You will be a two-, eventually a three-language, man. Thus, you will have most effectively multiplied your personality.

*How far should I go into the language?* That is really up to you. How far have you gone and how far are you going with English? You speak it, you read it, you listen to it. You go to plays, concerts, movies, games, and in all of these activities you use whatever you know of your own language. Do exactly the same with the newly learned tongue and go as far as you can according to your opportunities and needs. You are alive and, whether or not you are aware of it, you keep on learning; learning is living; the alert and the great do their learning consciously and purposively. They are not willing to wait for knowledge to come to them. They go out to meet it. The world belongs to them.

**ASSN. MEDAL AWARD**



On 17 November the Association Medal was awarded to Cadet Captain Austin T. Flagg, Class of 1949 of the College of William and Mary ROTC unit. Mr. Flagg was in the Army from February 1943 to January 1946, serving first with the 46th CA (155 GPF), and subsequently with the 101st ABn Div in France, Germany, and Austria.

# IT HAPPENED AT CHRISTMAS

By Ralph Trowbridge

**H**ERE'S a quiz that you may find interesting or surprising. It's all about forgotten Christmas events. Most people will find it hard to believe that so many important things could have happened in the merry holiday season.

There is a choice of three answers under each question. For every blank you fill correctly, give yourself 10 points. A score of 80 or better proves that you really know dates and data when it comes to the centuries-old record of the Yuletide.

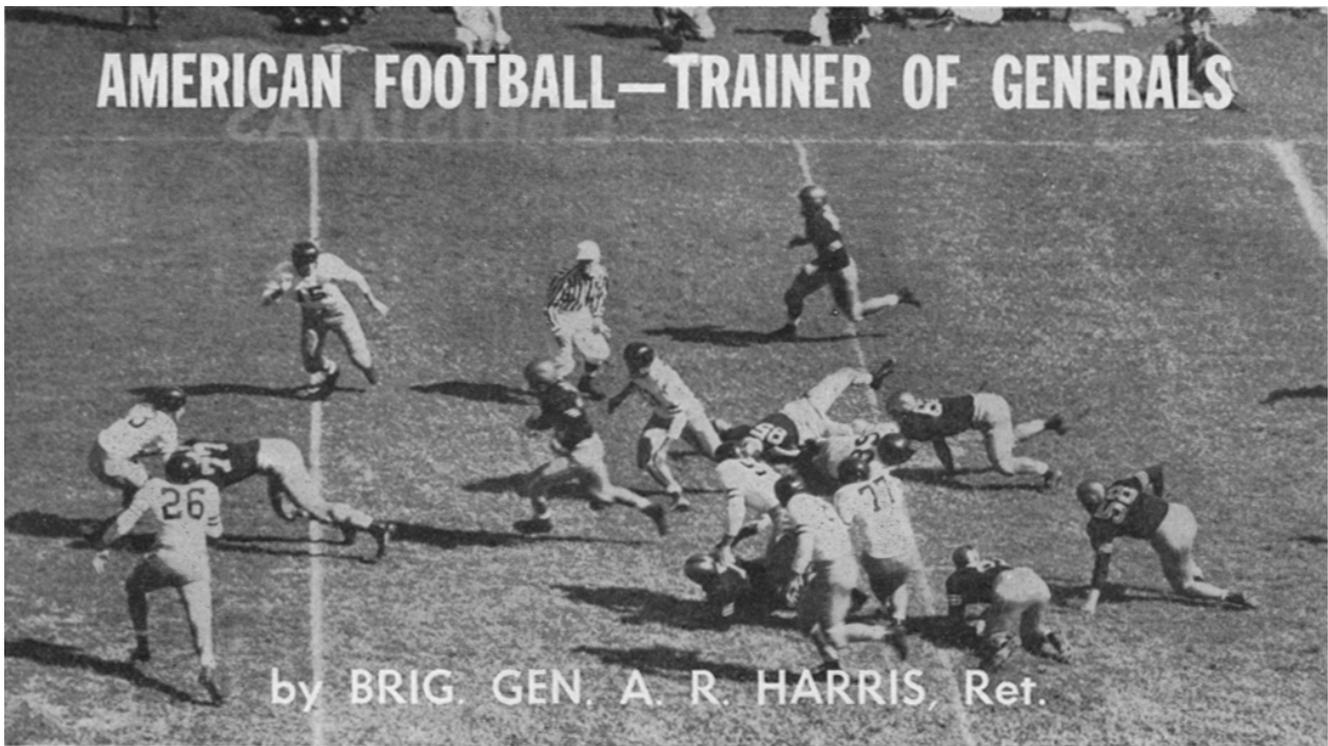
Answers are on page 270.

1. On the day before Christmas, 1844, the first trial of an important new invention was successfully carried out.
  - (a) Steam locomotive
  - (b) Telephone
  - (c) Telegraph
2. On Christmas Day, 1066, a victorious warrior was crowned King of England at Westminster.
  - (a) William the Conqueror
  - (b) Richard the Lion-Hearted
  - (c) Henry V
3. On Christmas Day, 1776, a famous general turned the tide of his military fortunes by crossing a river and making a surprise raid on the enemy.
  - (a) George Washington
  - (b) Duke of Wellington
  - (c) Frederick the Great
4. On Christmas morning, 1863, one of the most noted of all Victorian novelists was found dead in bed.
  - (a) Charles Dickens
  - (b) William M. Thackeray
  - (c) Sir Walter Scott
5. On Christmas Day, 1821, a well-known humanitarian was born.
  - (a) Florence Nightingale
  - (b) Edith Cavell
  - (c) Clara Barton
6. On Christmas Day, 1742, a great actor made his first appearance on the stage.
  - (a) Edwin Booth
  - (b) Coquelin
  - (c) David Garrick
7. On Christmas Eve, 1800, a world-famous European conqueror narrowly escaped assassination when a barrel of gunpowder was exploded in the path of his coach as he rode to the opera.
  - (a) Napoleon
  - (b) Duke of Marlborough
  - (c) Peter the Great
8. On the day before Christmas, 1814, the signing of the Treaty of Ghent restored peace between two warring countries.
  - (a) Great Britain and France
  - (b) Great Britain and the United States
  - (c) Great Britain and Spain
9. On Christmas Eve, 1851, a world-famous building caught fire and was partially destroyed.
  - (a) U. S. Capitol at Washington
  - (b) House of Parliament in London
  - (c) Kremlin at Moscow
10. On Christmas Day, 1214, a band of determined men so overawed an English king with their armed might that, within a year, he signed a paper granting them new freedom.
  - (a) The Emancipation Proclamation
  - (b) Magna Carta
  - (c) The Bill of Rights

**ILLUSTRATION CREDITS**

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

**U. S. Army: Cover, Frontispiece, 262**



AFTER the battle of Waterloo a saying became prevalent throughout England that "the battle of Waterloo was won on the playing fields of Eton." The implication was, of course, that the games played at Eton taught certain fundamental military virtues such as, for example, courage, determination, self-sacrifice, and physical fitness, which "paid off" later exceedingly well on the battlefields of Europe. So far as I know, no claim was ever advanced that any of the games played at Eton actually taught any basic strategical or tactical military lessons.

However, if in 1800 the young future officers of the British Army had played American football at Eton, that claim could have been made with all seriousness and, in fact, such would have been the case. This is because the tactics employed in our national game of football are exactly the same tactics which are employed by successful generals throughout the world today. Each individual play in football depends for its success on exactly the basic principles which govern battlefield tactics. Let us very briefly examine the fundamental "principles of war" and see how these same principles are used in every battle and in every football game.

Before enunciating any principles of war it must be admitted at the start that no two military experts agree in toto on just exactly of what the principles of war consist. War is not an exact science. It never can be reduced to a rule of thumb. However, there are certain basic principles which, if followed, it is universally admitted will produce good results, and which, if violated, it is also admitted will usually lead to disaster. The following list comprises most of the universally accepted principles, although some military experts argue that the list should be reduced and others claim it should be enlarged. Some claim also that certain of the following are doctrines and not basic principles.

We will not go into these refinements, but will list them all, because all military men pretty well agree that this list includes all the basic principles and doctrines underlying successful leadership in battle. Here they are:

1. The Objective
2. The Offensive
3. Concentrated Effort (or Mass)
4. Economy of Force
5. Movement
6. Simplicity
7. Surprise
8. Security

9. Unity of Command (in contrast to "Cooperation")

Now let us see just what each of the above items means. We will discuss each one briefly.

*The Objective.* In the military sense, the objective should answer the question, "Just what are we fighting this battle or this campaign for?", because there should, of course, be a good reason for every skirmish, every battle, and every campaign. Is the taking of a city the goal we are aiming at? "On to Richmond," "On to Paris," and "On to Berlin" have been slogans in past wars; did they mean anything? Only incidentally. The objective was always the destruction of the military power of the opposing force, or, stating the matter even more comprehensively, the "destruction of the enemy's will to resist." The capture of a city—unless it contributed materially to the real objective of the campaign—is just wasted effort. In the closing days of the last war General Eisenhower changed his direction from towards Berlin to towards the German "national redoubt" in the Bavarian Alps region, as he thought that would be where the remnants of the German Army would make their last stand. His objective was always the defeat of the German Army.

In football the objective of the team carrying the ball is, of course, to cross the opponent's goal line. Each play is designed towards this end. However, as simple as this objective sounds, there are many schools of thought on the subject. Some teams seem content with gains of 3 or 4 yards each play by using brute force, but find that scoring opportunities grow difficult the nearer they get to the goal line as the opponent's secondary defense closes in. Other teams try to score from the middle of the field forward, and will try the same play 2 or 3 times in a row, even when the gains are insignificant, but knowing that if everything clicks a score will result. Other teams plan several plays in a sequence, with each play designed for a special purpose and only the last one expected to score. Still other teams, especially those having strong reserves, do not attempt to score in the early part of the game, but attempt to wear down their opponents so that scoring will be easier in the latter stages. All of these methods are different approaches to the same problem—to cross the goal line—and just as in war, where every battle should be a part of a carefully planned campaign, so in football every play—which in reality has all the elements of a battle—should also be part of a strategical whole.

*The Offensive.* Every successful football coach knows that a good offense is the only way to win a football game. While his team must be strong on the defense, the coach well knows that his team cannot win by purely defensive tactics. His team must know how to take care of itself while the other side is "dishing it out," but the only way to win a football game is to score points, and that is only done by offensive action. Every man on the team must be indoctrinated with the offensive spirit or the team will invariably end up on the short end of the score. A team that is being constantly exhorted to "hold that line" has lost the initiative and is dancing to the other fellow's tune. On the other hand, a team with a well coordinated and strong offensive holds the initiative whenever it has the ball. It can strike in a dozen different places and in a score of different ways. A good defensive

team may hold down the score, but it takes a team with a good offensive to win games.

In the same way, no nation which trains its army to act constantly on the defensive can possibly win wars. This fact seems almost axiomatic, but it should be remembered that after World War I there was a very vociferous school of thought which advocated a strong defense in preference to a strong offense. It was this school of thought in France which directed the construction of the defensive Maginor Line, and was to a large measure responsible for the lack of initiative shown by the French in the early days of World War II. The Germans were much too sound in their military thinking to give much weight to this "defense doctrine," and, of course, the Americans never took it very seriously either. The "offense-minded" army believes in attacking whenever and wherever possible. Of course, there are times when, owing to war-weariness, lack of supplies, or offensives in other theaters or sectors, certain elements of an army must go on the defensive while awaiting more favorable opportunities. But all realize that this defensive is only temporary, and that the fight will be carried to the enemy just as soon as conditions permit. If battles are to be won, all members of fighting forces from the highest general to the lowest-ranking private must be indoctrinated with this spirit of the offense.

*Concentration of Effort (or Mass).* In an attack, all military history has shown that little progress will be made by simply pushing ahead with equal force all along the line. One point must be selected and overwhelming force applied at that particular point. The remainder of the front may have to be weakened to get this necessary concentration. But at the point selected all possible fire power and man power must be concentrated so that the attack, commonly called "main effort," will surely go through. Once having broken through the enemy line of resistance at some point, the remainder of the enemy's line can usually be mopped up by attacking it in flank or rear, a relatively simple matter and invariably much easier and less costly than a frontal attack. There were many

examples of this in the last war, but Patton's Third Army, in its breakthrough to the Rhine and then its sweep behind the Saar, is probably as pretty an illustration as there is in military history.

Exactly the same principle applies to football. All force must be concentrated at decisive points instead of uniformly all along the line. The opponents at the decisive points must be literally overwhelmed by superior force and numbers. The blocking backs, the running guard, and anyone else available must be hurled at the selected point in order to open the way and insure that the attack, in this case the ball carrier, goes through. The remainder of the line can make a token effort in the nature of a feint so as to hide the main effort. Usually, however, in well-drilled teams the remaining line players who cannot get into the primary attack have assignments such as taking care of the secondary defense, which are in reality pure concentration of effort: every man on the team has an assignment which, if successfully carried out, will assist in advancing the ball and maybe even in getting a touchdown.

*Economy of Force.* We will not spend much time on this topic as it is in reality a corollary of the principle just discussed. In order to mass your effort at some selected point you must necessarily weaken your forces at other points. This principle simply states that if in order to insure your attack you must be a spendthrift of your force at one point, you must, of necessity, be a miser with your forces at all other points. Your troops cannot be equally strong all along the line.

Every modern football coach knows this instinctively. His linemen do not push blindly ahead on every play. In fact, on certain plays one side of the line doesn't push forward at all, but suddenly disappears as a line altogether and emerges again in front of the main effort. This is economy of force in the highest degree. In fact, the football coach is way ahead of the general in the application of this doctrine.

*Movement.* This principle is so basic and so self-apparent that it is almost a waste of time to talk about it. It

means in essence that *maneuver* is just as important as *force*. In other words, a static defense will never win battles, and a head-on frontal attack—without maneuver—is not usually the thing to do. An army is like a man. It can defend itself in front, it is much weaker on its flanks, and practically defenseless in back. Movement is the doctrine which calls for attacking the enemy in his more defenseless points. The paratrooper is the latest military device to take advantage of this doctrine.

Football has gone through stages in its development in which the doctrine of movement was lost sight of. In the early days of the flying wedge, brute force controlled the day and maneuver was almost forgotten. But basic principles, however, will not down. It was soon discovered that a team which combined power and speed (i.e., ability to maneuver) could run circles around their heavier but slower opponents, and the balance between *mass* and *maneuver* was soon restored. The forward pass was a natural outcome of this conflict. It anti-dated the paratrooper by many years.

*Simplicity.* Complicated maneuvers seldom succeed on the battle field. Every movement is difficult when the enemy is shooting at you. Units are held up by hostile fire. Communications are destroyed. Directions become confused. Exact timing becomes impossible. Because of these and other complications, the successful general learned long ago that simple maneuvers and simple directives on the field of battle were great virtues, and that involved and complicated movements usually resulted in failures.

The same is true in football. You seldom see triple passes any longer. The successful team is usually one which has a few rather simple plays, which it has worked out in great detail by constant practice. Players are not given multiple missions but only one mission per play. But if each player accomplishes his mission successfully the result is a touchdown if the play is designed for that purpose, and if the play is basically sound.

*Surprise.* Surprise is a very important principle in all forms of competition, including, of course, war and football.

If the enemy knows where and when you are going to strike he can usually take preventive measures and smother your efforts. If, on the other hand, he is forced to spread his defenses very thin because he is in ignorance of your true intentions, he is at a great disadvantage. In warfare, surprise is admittedly so essential that it outweighs nearly all other considerations. Without surprise the attack on Pearl Harbor would have been a fiasco. It was so important, from the Jap point of view, that it outweighed all considerations of honor and national integrity. All of Hitler's initial attacks were surprise attacks and owed much of their early success to this doctrine. The landing in Normandy—the best-kept military secret in history—could not possibly have succeeded without the element of surprise. Of course, deception is part of this doctrine. It is one of the methods by which surprise is achieved or insured, or by which the results are magnified. The Greeks at Troy achieved surprise by deceiving the Trojans as to the real purpose of the Trojan horse. Surprise is not confined to grand strategy. It is an important part of every military conflict down to squads and even individual combat. Whenever the enemy can be induced to believe that a certain thing is going to happen and then is suddenly confronted with something entirely different, he is at a great disadvantage. This, of course, is the reason why surprise is sought for all along the line.

Football coaches have ever been alive to the possibilities of surprise. Calling signals was one of the earliest efforts to achieve this effect. Hidden-ball plays, delayed passes, sudden line shifts, etc., are all designed to confuse opponents, put them off balance, and get the jump on them. When teams are evenly matched, surprise may be the deciding factor, because it may produce that fraction of a second advantage which spells success. A football player can travel 8 or 9 yards a second. If he can persuade his opponent to take just one wrong step, if he can get the jump on him by just a fraction of a second, it may be all he needs to get the 2 or 3 yards advantage he needs to break through the defense. It is because of this that many forward-pass plays start

out as running plays and then suddenly switch, and vice versa. The football coach probably envies the general, who has many more opportunities for employing deception and achieving surprise that he has, but the successful coach has done very well with his opportunities. The T-formation owes its existence primarily to the fact that surprise can be obtained with it more readily than with any other formation.

*Security.* Security is just the opposite of surprise in that it comprises all those steps which a commander of a military organization, from the individual soldier to the supreme commander of an army, takes to insure against his being surprised. These steps include the use of aerial observation, radar, radio aides, advance, flank, and rear guards, outposts, and, last but not least, a well-organized intelligence service. By means of this latter service the military commander knows—even before the actual fighting begins—many things about the enemy. He knows his strength, his organization, his weapons, his methods of attack and defense, and his weaknesses—especially his weaknesses. He also knows pretty well all about his supply situation and his reserves. By studying all the above he can deduce the capabilities of and the plans open to the enemy and can frequently take the steps necessary to guard against them. He can also lay plans to take advantage of his weaknesses. As stated above, much of this can be learned before hostilities begin, but not all. The successful commander must be ever on the alert to prevent himself from being surprised or caught napping. This is especially true when he is on the defensive and has, even for a short time, lost the initiative. On the defensive the military commander must have outposts, he must be organized in depth, he must have reserves, and he must be always on the alert lest the enemy spring a surprise on him and catch him off balance or unprepared.

The football coach must do almost exactly the same things. The modern coach leaves to chance as little as possible. He has developed his own intelligence service. Prior to a game against any formidable opponent he scouts the

opposing team. He does this thoroughly and efficiently. He demands that his scouts bring back to him the most detailed and concise information. He wants to know how each guard, tackle, and end plays under various conditions. He wants to know how each play is run off *in detail*. He wants diagrams of all plays. He wants to know the ability of each player. He also wants to know the weakness of each player and of the team as a whole. In short, modern football coaches have developed intelligence systems that compare favorably, in design at least, with military intelligence systems. Also, on the playing field the coach must take every precaution against being surprised or caught napping. He must organize his defense in depth so that even though his first line is penetrated his secondary defense will stop the hostile advance. He must guard his rear areas against forward passes. He must organize his defense so that no sector is left unguarded, at least until the opponent's intentions have been thoroughly diagnosed. In fact, the military principle of security has been found by the football coaches, perhaps unconsciously, to apply to football with exactly the same force and ruthlessness as the generals have found it applies to all military operations.

*Unity of Command (versus Cooperation)*. As warfare becomes more and more complicated and as it embraces more and more the total resources of a nation, the question of unity of command becomes more and more important. Alexander, Peter the Great, Napoleon, and most other great military leaders never had to give this question much consideration. Each one was the supreme military commander of his military organization and commanded everyone and everything in it. The thought probably never occurred to them that two friendly military commanders could possibly operate independently in the same theater of operations. But, where commanders were not so fortunate as to be sovereigns, complications sometimes developed. Where two allied armies tried to "cooperate" in a given theater of operations the results were frequently far from satisfactory. Witness the anguished remark of the

Duke of Wellington after such an attempt in his Peninsula campaign, when he muttered: "I will fight *for* the Spaniards again, but never *with* them." In fact, military history abounds in incidents of failures due entirely to the lack of a centralized command. One has only to remember World War I and the allied disappointments which grew out of three Allied Armies trying to "cooperate." It was only after Marshal Foch had been made Supreme Commander and the principle of *unity of command* introduced that the superior Allied strength was able to make itself felt. This principle—that team work can be secured under a single commander in any given theater better than when two or three commanders are operating independently—seems almost self-evident. Such is not the case however. National pride, service jealousies, and many other considerations tend to nullify the principle of unity of command. In our most recent war, unity of command was achieved in Europe between the British and ourselves with brilliant results. However, it was never achieved in the Pacific, even among our own forces. Actually, when Japan surrendered we had three independent forces operating in the Japanese theater—the Army, the Navy, and the Air Force Strategic Bombardment Command.

In respect to the principle of unity of command, football is much ahead of the military. No one, to my knowledge, has ever argued that there should be two quarterbacks calling signals. No one has ever advanced the theory that the backs should work independently from the line players. In football, the coach acts in a capacity analogous to that of the Joint Chiefs of Staff in our military forces. But he operates through one man only, the quarterback. The quarterback issues the orders. He is responsible for each play. No one questions his authority on the playing field, and when the quarterback calls a signal each player has his work mapped out. Each one has a special mission or assignment which has been carefully worked out beforehand by the coaching staff. The net result is perfect teamwork. There is not one plan for the backs and one plan for the line. There is

a single overall plan, which utilizes every man on the team for a specific task. If every man performs his assignment successfully, the play itself is a success.

In order to acquire the desired efficiency in teamwork, football teams do a lot of practicing. True, part of the time the line practices separately from the backs, but most of the time the team practices and scrimmages as a whole. It is only by practicing as a team that true teamwork is ever acquired. Truly our military planners have much to learn from football in respect to this very important principle of war.

It can be seen, from the above very limited discussion of the basic principles or doctrines of warfare, that every principle applies equally to football. In fact, every single football play is a miniature battle and its success or failure depends on exactly the same underlying factors. In no other game in the world does the comparison hold so true. Football is a great national asset, because the entire youth of the nation becomes indoctrinated with the correct principles of war at an early age. Practically all of our generals in this last war were in their younger days either football players or close students of the game. Some of them were even coaches at one time or another. When the time came for them to study the Principles of War, they found they already knew them by heart. When the time came for them to apply the principles on the battlefield they did it almost instinctively. In this last war our military leadership was of the highest order. Much of that sound leadership can be traced directly to the early lessons learned by practically all of our officers, and enlisted men too, on the American football fields.

American football teaches many military virtues in addition to the basic principles of warfare. It emphasizes the necessity for courage, determination, self-sacrifice, self-control, the need for clean living and hard work, and last but not least clean sportsmanship.

Just a few weeks before the Allied landings in Normandy the author had a conversation with the Russian Ambassador to Mexico, Mr. Constantin Oumanski. Mr. Oumanski was talking

about the approaching invasion and said: "The trouble with you Americans is that you don't *hate* enough. You can never fight hard campaigns against a tough enemy unless you actually hate him. Our men are taught to hate the Germans so much that all they want to do is to get a shot at them. They clamor for the opportunity." I replied to the Ambassador by stating that he would soon find out that our armies could probably do all right without too much hate. I told him about our national game of football, in which all our soldiers had been trained, where the players were accustomed to getting knocked all over the field, getting their noses bloodied, and in general getting half killed, but nevertheless never giving a thought to quitting or of giving anything but their very best. I told him that in football no one ever

hated anyone. In fact, all football players were carefully coached to avoid ever getting angry, as that would impair their mental facilities and their judgment. Finally, I predicted that once we landed in France—or wherever else we were going to land—he would not have much to complain about concerning our fighting abilities or our determination to win, even if we were not consumed by hate.

To me it seems that hate—though it may be dear to certain peoples—is something we can well do without. Football has helped us to fight the good fight without hating. It has done much in addition. It has taught practically every one of our fighting men—from the Supreme Commander to the lowest-ranking private—the basic principles of warfare. It's a great game. It's a national military asset. Long may it flourish.

## The Birth of the Pigskin

By Harold Helfer

**Y**OU'LL probably never guess what started the game of football as we know it today. A cannon—that's right—and a Revolutionary War cannon, at that.

The cannon was located at Rutgers University. It was a landmark of the school and everybody there was most proud of it. There was a story that the British had surrendered the cannon to George Washington personally.

Now not too far from Rutgers there was an up-and-coming institution of learning known as Princeton. There was quite a rivalry between the two schools, and the favorite pastime of the Princeton students was to go over to Rutgers in the dead of night and haul the cannon away. The loyal sons of Rutgers would go over to Princeton to reclaim their cannon, naturally, and some very wonderful fist battles took place.

In the year 1869 some Princeton students got together and decided that this time they were really going to fix up Rutgers' cannon—but good. They made up a huge slab of fresh cement, went over to Rutgers, hauled the cannon away, and stuck it in the cement.

The next morning, when the loss of their famous Revolutionary War weapon was discovered, the Rutgers students stormed over to Princeton—but this time they could not bring it back. It was too solidly entrenched.

The Rutgers campus seethed. Vengeance was demanded. Feeling ran high. Finally, the leaders of the two schools got together and decided that satisfaction could best be achieved if the two schools took out their high spirits on one another in the game of football.

Now in those days football was in its infancy, little more than a neighborhood game and confined almost entirely to kicking. And when on Nov. 13, 1869, each school putting 25 men in the field, Rutgers and Princeton began kicking the ball at each other it was history's first football game. Gradually, other schools began to play it and little by little it evolved into gridiron game we know today.

But, if it wasn't for this Revolutionary War cannon, there might never have been anything like a Rose Bowl and Knute Rockne might have been just another Norwegian.

### IMMEDIATE COMMISSIONS OFFERED QUALIFIED VETERANS

Qualified veterans of the Armed Forces who have completed two years of college can get immediate commissions as second lieutenants in the Officers' Reserve Corps under a plan recently announced by the Department of the Army. Successful applicants will be given two years' active duty with the Army. The new plan provides one of the simplest and easiest means for qualified young men to attain commissioned status ever offered by the Army. Qualified applicants, of whatever previous rank, will be given commissions immediately, followed by a 12-week course in a branch service school to prepare them for their responsibilities as an officer.

The offer is open to men between the ages of 19 and 32, who have had at least one year's active duty in any of the Armed Forces of the United States during the period December 7, 1941, and June 30, 1947. The educational requirements specify that the applicant must have completed two years at a nationally accredited college or university, and score at least 110 in the Army's General Classification Test. Applicants must pass a physical examination and be approved by a board of officers. These boards are located throughout the United States, at Army posts and stations and at U. S. Army recruiting district headquarters.

Because the policy of the Army is to encourage young men to complete their education, college students, or men scheduled to attend college at the time of expected entry on active duty, are not eligible.

U. S. Army recruiting stations will begin to receive applications at once. Men already in the Army will send their applications through military channels.

The new program is a portion of the Army's present drive to increase its officer personnel by 30,000 between now and June 1949.

☆☆☆☆

Former World War II Army officers who are physically fit and within the recently liberalized age-in-grade limits may volunteer for Reserve commissions and extended active duty fours of three years. Medical and Dental Corps officers may elect tours of one, two, or three years' duration. Applications are considered from lieutenants and captains who are under 47 years of age.

The Department of the Army points out that there are more than 500,000 trained officers in the United States who served during World War II, in addition to those now in the Reserve and National Guard, who may apply for immediate return to active duty.

All officers going on active duty who meet additional requirements will be given the opportunity to compete for Regular Army commissions.

In addition to the opportunity for active duty provided former World War II officers, the Army is continuing its Officer Candidate Schools for qualified civilians and outstanding men already in the Service: the ROTC program; and competitive examinations among men in the Service for West Point.

# MORE DATA ON SHOOTING WITHOUT FACTORS

*Prepared in the Department of Gunnery, The Artillery School*

THE article "Shooting Without Factors" by Capt. D. E. McArthur, which appeared in the Sept.-Oct. 1948 issue of the FIELD ARTILLERY JOURNAL, has assumed new importance to field artillerymen. The procedure described in the article is now the only method of conducting observed fire being taught at Fort Sill. Details of observer procedure, and necessary changes in fire-direction and firing-battery procedures will be covered in appropriate training literature now being prepared.

The purpose of these comments is to modify and amplify those portions of the article which have been affected by further developments and tests.

## OBSERVER'S INITIAL DATA

When the observer shifts from a previously located reference point to a new target, the shift is determined as follows:

(1)*Direction.* The deviation in mils from the reference point to the target is measured and the distance to the reference point is estimated. The correction in yards from the reference point to the OT line is then determined by use of the mil relation and the observer-reference point range. The direction correction is included in the initial fire request; for example: FROM BASE POINT, RIGHT (LEFT) (SO MUCH).

(2)*Range.* The observer estimates the distance along the OT line to his target from the point where the perpendicular line from the reference point intersects the OT line. This distance is the range correction and is included in the initial fire request as: ADD (DROP) (SO MUCH).

(3)*Accuracy.* The foregoing method will give accurate results for shifts of 400 mils or less and acceptable results for shifts up to 600 mils. For example, if the observer-reference point distance is

2000 yards and the deviation to a target measures 600 mils, the use of the mil relation results in a direction correction of 1200 ( $2 \times 600$ ) yards, as compared to the true correction of 1110 ( $2000 \times \sin 600$ ) yards. Similarly, the true distance along the OT line to the perpendicular is 1660 ( $2000 \times \cos 600$ ) yards. For greater shifts in direction, the direction error and the difficulty of estimating the distance to the intersection with the perpendicular increase rapidly.

Another method of designating the location of a target is by the use of polar coordinates. This method is particularly desirable in the case of large lateral shifts and short observing distances. If the observer's location is known, the fire-direction center plots the target on

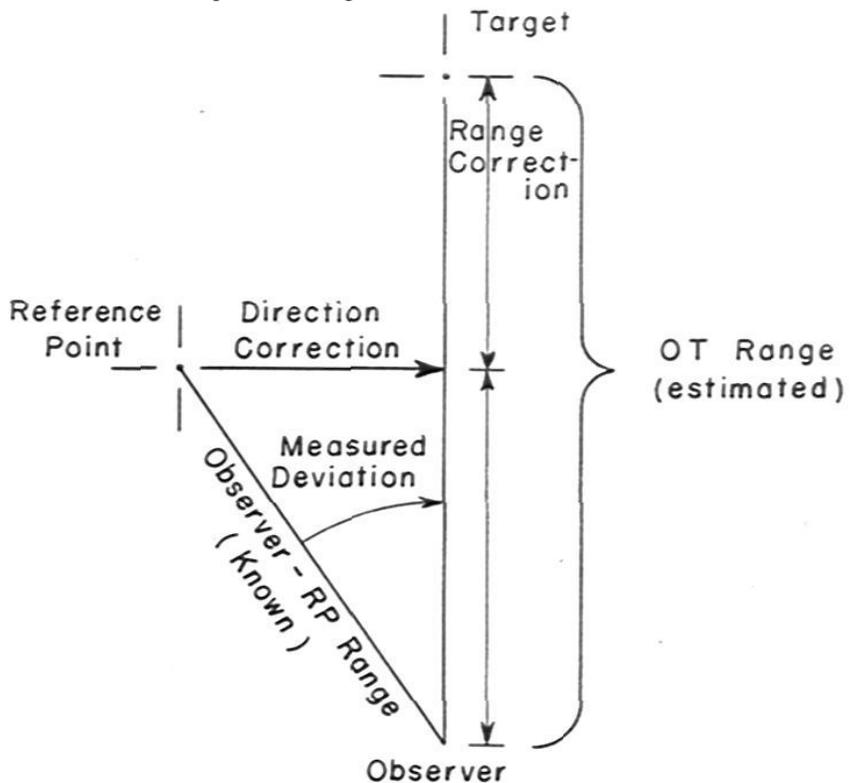
the azimuth and at the distance from the observer's location as reported by the observer. Example: The observer reports: FORWARD OBSERVER ABLE, FIRE MISSION, AZIMUTH 2000, OT RANGE 1000, MORTARS, WILL ADJUST. The fire-direction center constructs a ray from the observer's position at an azimuth of 2000 mils and plots the target on this ray at a distance of 1000 yards from the observer.

The observer's location may be determined as follows:

(1) Map coordinates of his location may be sent to the fire-direction center.

(2) The observer may measure the azimuth to a known point, or to a burst, and estimate the distance to same. The fire-direction center then backplots the observer on their chart according to these data.

(3) The azimuth is measured by the observer to at least two points whose chart location is known by the fire-direction center. His location is then determined by resection (FM 6-40, par. 246).



Determination of Initial Data

Other methods of designating the location of a target are: coordinates, geographic location, or marking volley. If the fire is to be adjusted by use of the target grid, the observer-target azimuth must always be included as part of the initial fire request.

#### PLACEMENT OF THE TARGET GRID

The target grid may be centered on *any* point in the target area, including a grid intersection, and may be moved at will between missions if necessary. The only requirement is that the target grid must cover the target to be fired upon, and if moved must be oriented on the observer's azimuth. The best place to center the target grid is where it will cover the greatest part of the target area. Thus, if the base point has been properly selected it should seldom be necessary to move the target grid.

#### PLACEMENT OF AIMING POSTS

If aiming posts cannot be set at a common deflection for any reason, the following procedure may be used: Those

pieces unable to align aiming posts on the common deflection will align them on any convenient even 100<sup>m</sup> deflection. This requires the gunner to carry a constant correction equal to the difference in the battery's common deflection and the deflection of the individual piece. An example follows:

Common battery deflection, aiming posts aligned	2800
No. 3's deflection, aiming posts aligned	2400
No. 3's constant correction	—400 <sup>m</sup>
Deflection command received	2520
Deflection No. 3 gunner uses	2120

The azimuth and micrometer rings on the panoramic sight are *not* adjusted or tampered with in any way.

#### FIRE-DIRECTION CENTER

No changes in the organization of the fire-direction center are necessary as a result of the implementation of the "target grid" system. The only additional equipment necessary is the target grid. The basic duties of fire-direction center personnel are unchanged.

#### AIR-OBSERVER MISSIONS

For this type of mission, the target grid is always oriented on the gun-target line. The air observer adjusts with respect to the gun-target line.

•

This new observed fire procedure has been subjected to exhaustive tests and study at The Artillery School, and has resulted in the following conclusions regarding its employment:

(1) It results in a very substantial saving of time and ammunition on area-type missions.

(2) It requires approximately the same overall time and slightly more ammunition in precision-type missions.

(3) It permits faster and more accurate massing of fires.

(4) It obtains the same accuracy as the present observer procedure (range-deflection bracketing).

(5) It results in a minimum saving of twenty-five percent in observer training time, which is a most important fact during an emergency.

# THE WARTIME INFORMATION AND EDUCATION PROGRAM

By Maj. I. Heymont, Inf.

**I**N EVALUATING the wartime Information and Education program one can only conclude that it was at best only a partial success. It achieved signal success in the fields of self-education, but failed to make the individual soldier understand why he was being called upon to risk his life in defense of his country. The program failed to instill within the individual the spirit and determination to want to close with the enemy because the foe represented a philosophy and way of life that had to be crushed at the risk of death.

A wartime army is a fighting machine composed primarily of civilians turned temporary soldiers. It must absorb large numbers of individual civilians and quickly

transform them into an efficient combat army. For that reason, the Information and Education program must be judged in terms of what it contributed to the transformation of a civilian into a soldier. In making this judgment, the factors that make a civilian soldier fight must be considered. Further, the general aspects of education required of and by the civilian soldier must also be examined.

The subject of what makes any soldier fight has filled many lengthy and learned volumes. However, it can be said in general that the factors, pride in the individual and his unit, feeling of unity with his comrades, profound belief in his cause, and fear of punishment, motivate the soldier in combat to varying degrees.

General E. Cooke, in his excellent book, "All But Me and Thee," points out that fear of punishment is the least effective motivating factor in making soldiers fight. In short order, the fear of battle usually transcends the fear of punishment. History is replete with examples of armies that failed when soldiers fought merely because of fear of punishment. Discipline based only on that factor will inevitably dissolve on the battlefield when the going becomes difficult or the trend is in favor of the enemy.

Proper leadership, and training that instills confidence in weapons and leadership, will in turn induce, in the individual, pride in himself and his unit. This pride, in turn, will generate the

*esprit de corps* that keeps men fighting even when at the near exhaustion point, or when the course of battle is running adversely. Yet all these factors, which can be called the military morale factors, are not completely sufficient in themselves.

Up to the past war the development of the factor of belief in cause was relatively neglected in favor of the purely military morale factors. During World War I there was no organized Information and Education program worth mentioning. It was only in the past conflict that the Armed Forces attempted to give a form of information training in an effort to develop a firm belief in cause. The primary purpose of this training was of course to develop more effective soldiers.

Combined with this quasi-political training, the Information and Education program also included a broad program of self-education through USAFI—the United States Armed Forces Institute. The program of self-education and off-duty group study was an outstanding success. The USAFI program accomplished a three-fold purpose. It helped the civilian soldier better himself educationally in preparation for civilian pursuits after leaving the service. From a military viewpoint the tangible and intangible skills learned through USAFI contributed to the making of better and more effective soldiers. Finally, it helped occupy the soldiers' leisure time in a worthwhile manner. This program was a tremendous aid to units stationed at remote and isolated areas. The over-all morale effect of the USAFI program cannot be overestimated.

The average soldier knew that he was in uniform only because one day he had received a letter that started, "Greetings . . ." From that point on he was caught in an inexorable machine that changed him into a soldier. His attitude towards the enemy, on induction, was quite simple. He hated the Japanese and looked upon them with contempt. It was easy to hate the Japanese. The Japs are different—they are Orientals and therefore mysterious and foreign. Too, the Japanese had started the war, as far as we were concerned, by a sneak attack. A sneak of any kind is always detestable to Americans.

The attitude towards the Germans was different. There are no racial differences; on the contrary, a strong percentage of our population is of German descent. While the Nazi excesses against the Jews, Poles, and others were naturally abhorrent to Americans, many were still convinced that to a large extent it was merely propaganda by anti-Nazis and Communists. For the most part the indignation that did exist was only academic in nature. Few understood the calculated planning that was behind the outward madness of the Nazis. The direct menace of Nazism and Fascism to our institutions was generally neither understood nor taken seriously.

Hatred of the Nazis, and understanding of German aims, were never really learned by the average American soldier until he was shot at. At that point he learned quickly to hate and see the menace—for the moment. This understanding was superficial and on an individual basis. It was a simple case of hate generated by the necessity to kill or be killed. The deeper menace of what the Wehrmacht represented was still not completely understood. It is the sad truth that, when the war and shooting had ended, too many soldiers were victims of the still living, but quiet, propaganda of Nazism. The short history of our occupation of Germany, as far as conduct of the troops is concerned, bears mute evidence of how little many of our troops understood of Germany's aims and methods. To some degree the same can also be said of our occupation forces in Japan.

The value and desirability of instilling within the American soldier belief in a cause has heretofore not been taken very seriously. The American Army has traditionally divorced itself from anything that smacked of politics or partisanship. In training, the emphasis has been exclusively on the military morale factors. History, though, has many examples where spirit helped conquer superiority in training and materiel. The willingness of an army to fight and suffer for its belief has frequently made the difference between success and defeat, capitulation or prolonged resistance. The fervent writings of Tom Paine were a not inconsiderable factor in maintaining the spirit of the Colonial

troops through many adversities. Paine, it might be said, ran a one-man Information and Education program. Without their deep belief in their cause, the Spanish Republican Armies would have collapsed much sooner before the better-trained troops and superiority in materiel available to General Franco. The Napoleonic armies went into battle with the spirit of *Liberté, Egalité, and Fraternité*, to spur them on. Regardless of the individual genius of Napoleon, there is little doubt that the spirit and fervor of his troops—the first real civilian non-professional army up to the time—was a considerable factor in his success.

Many of the factors that kept the recent Information and Education program from being a complete success were beyond the control of the Army. However, a good part of the blame for the complete lack of success does rest with the Army. The Army of course is not an instrument of social reform but it is a disciplined agency of education. As far as the wartime Information and Education program was concerned this discipline was too frequently lacking.

One of the principal factors that severely handicapped the Information and Education program was the inherent lack of interest of the average American soldier. The war, generally speaking, except for the actual fighting on foreign battlefields, did not have a crushing impact on Americans and American life. Fortunately we were spared the ravages of war in our homeland. The war was distant, and as a result too many were prone to accept pat answers as to why we were fighting.

It is also unfortunately true that the level of political thinking of the average soldier—or citizen for that matter—preceding and during World War II was not very high. Despite all their virtues, a good part of the American Army was more interested in reading what are popularly known as "Section 8" magazines than in reading material concerning the politics and economics of our war participation. The fault for this is again far beyond the Army. Fortunately for the United States, national politics does not immediately affect our daily existence as it does, for example, the residents of Europe. The United

States is a large and growing country, unsurrounded by neighbors with long heritages of rivalries and unrealized national ambitions. Up to now an American family, unlike its European counterpart, could expect to raise children without expecting a war each generation to physically upset the family equilibrium. Previously, our country had been able to afford the luxury of basking in relative isolation. In this period of rapid development of guided missiles and atomic weapons, it is problematical whether we can still afford the luxury of soldiers lulling themselves with Batman, Superman, etc.

Yet these handicaps of political immaturity and poor inherent interest cannot account for the lack of success of the indoctrination phase of the Information and Education program. A greater part of the blame for the failure must be placed directly with the division and smaller unit commanders who were not aware of the matter or intent of the program.

The Information and Education material prepared for troop use was ample and of superior quality. It was well prepared, and uniformly interesting if properly employed. With this material available it was not too great a difficulty for any unit to have a good Information and Education program. The catch was simple — too many commanders were not interested, and often even antagonistic to the whole program. Generally, though, they did support the USAFI correspondence course program because this phase took no great effort on the part of the unit, and did not take up any training time devoted to military subjects. The correspondence courses also received support because they tended to increase certain military skills required by almost every unit.

The Information and Education program was considered by many commanders to be a waste of time and even a hindrance to military training. The prescribed one or two hours for Information and Education training were usually given in all cases—because it was so ordered by higher headquarters. This hostile attitude was reflected in the instruction that actually reached the troops. Too often it was

poorly supervised, badly presented, and resulted in dull and ineffective training. In many units no concerted efforts were made to seek out qualified instructors and discussion leaders. When the school for training Information and Education instructors was established, too frequently the individuals "who could be spared" were those detailed to attend.

Some commanders were so deeply concerned with the fear of becoming involved in political issues that they insisted that the Information and Education program within their units be merely a recital of current events. While a knowledge of current events is essential, it is a far cry from being the principal goal of the Information and Education program. The excellent material provided by the War Department was just not vitalized at the level where it was meant to be effective. It can be said that the program was not carried out, even though the letter of the directives may have been complied with.

In another war our initial superiority in materiel and production facilities may not tip the balance in our favor as it has done previously in the past two wars. The terror and horror of the next war will require complete mental as well as physical preparedness. The training of our forces must continue to stress the military moral factors, yet at the same time emphasis must also be given to mental preparation. Every soldier must clearly understand why he is fighting and what issues are at stake. The training must be so effective that each soldier will understand the necessity and will be willing to fight to the bitter end, regardless of how terrible the struggle might be.

The initial attack in the next war will undoubtedly be a tactical surprise and cause devastating destruction. In addition to trying to paralyze our means to wage war, the enemy will also try to paralyze our will to fight. This phase will undoubtedly precede any actual hostilities. Our mobilization and training period will be extremely short in comparison with the equivalent periods that preceded the last two conflicts. If war should come, our mobilization plans must ensure quick mental, as well as military and

industrial, preparation. These plans must be based on previous war and peacetime experience. The gamble can not be taken that there will be sufficient time to improvise and start from scratch.

Based on the experiences of World War II several courses of action are indicated. Continuation of the present Army Troop Information Program and USAFI are both excellent steps in the proper direction. Measures must be taken to insure that the Troop Information Program does not degenerate into a mere current events digest. Despite the possible criticism of minority groups, the Armed Forces should present forthright analyses of present trends and events. A well-trained soldier must know what is behind single events and their probable effect on the welfare and policy of the nation.

The Army, and the Officer Corps particularly, must learn to appreciate the importance of belief in a cause and its influence on producing fully effective soldiers. The various service schools could well emphasize this factor in their different courses. The service schools in their curricula could also provide some instructions as to why we fight as well as how to fight.

If these and other measures are not taken, then the mistakes of the past may well be repeated. In the next war full superiority in spirit and will to fight, as well as superiority in men, materiel, and military training, may be necessary in order to triumph.

---

#### ANSWERS TO

##### "IT HAPPENED AT CHRISTMAS"

1. (c) Telegraph (between Baltimore and Washington)
2. (a) William the Conqueror
3. (a) George Washington (he defeated the Hessians at the Battle of Trenton)
4. (b) William M. Thackeray
5. (c) Clara Barton
6. (c) David Garrick
7. (a) Napoleon
8. (b) Great Britain and the United States
9. (a) U. S. Capitol at Washington
10. (b) Magna Carta (granted by King John to the Barons of England)

# HERE'S A NEW TERRAIN BOARD

By Lt. Col. Joseph H. Harrison, FA

*Prepared in the Department of Gunnery, The Artillery School*

**M**ANY TERRAIN BOARDS have been built by many people. They have been of all sizes and shapes. Some have been simple, others have been very complex. All of them, however, have been built for the purpose of providing the field artilleryman a means of learning how to shoot under conditions as realistic as possible without actually going onto the firing range for service practice. The value of terrain boards for this purpose is generally recognized throughout the service and requires no further elaboration.

In the observed-fire course, The Artillery School includes considerable time on terrain boards, particularly in the early phases of the course when instruction on procedure and sensing is needed. The terrain boards referred to are permanently installed boards, fourteen feet square, operated by a crew of one or two men who walk around under the board, setting deflections and ranges and pumping out the smoke puffs at the appropriate places. These are fine boards. They are accurate, and probably as realistic in their appearance to the observer as it is practicable to make them. Unless a unit is blessed with adequate space, however, it is not practical to have a board of such size; still, each unit has a need for such a training device, which in the past has resulted in the development of all the various and sundry terrain-board designs.

As a recommended solution to this problem of providing terrain boards for all units, a new design was developed at The Artillery School, using a combination of what were considered to be the best ideas on the subject that had come to the School's attention. Some ideas came from Reserve units, some

from the Marines, and still others from an idea that was sent in from The Infantry School.

The outcome has been the development of a portable, easily-moved, but sturdy smoke-puff terrain board (Figs. 1 and 2), whose dimensions when erected are 6 feet by 6 feet. The board requires only one operator, who is directly in rear. The observer should be seated about twenty feet from the front of the board. This means that a room approximately 30 feet long and 10 feet wide would provide ample space for the operation of this board. Although it does not occupy much space, it is still large enough that the terrain depicted presents a realistic panorama, and its size is sufficient to prevent all targets from being "G-2d" after firing only a few problems. It can be set on a medium-sized desk or table, or preferably on saw-horses.

Bursts are represented by small puffs of grey smoke which are generated by squeezing a rubber bulb, causing air to pass through two inter-connected bottles, one containing hydrochloric acid and the other ammonia. When properly squeezed by the operator, the "bursts" appear surprisingly realistic to the observer. Excellent practical instruction in sensing is provided. This smoke generating apparatus is a part of the *range beam* (Fig. 2 and Fig. 3).

The board is built to a scale of 6 inches equals 100 yards; thus, the terrain represented is equal to an area 1,200 yards square. The battery is theoretically 4,000 yards from the target area, and by placing the observer at varying distances from the board, his OT distance can be changed; thus, with the observer 20 feet from the board, his OT distance is 4,000 yards. At 12 feet from the board, his OT distance is 2,400 yards. Factors are figured exactly as in actual firing, and—to answer the question that is sure to come to your mind—yes, the factors do hold up in all parts of the board. If the observer figures his factors correctly, his shots will stay on the line. If he does not figure them correctly, he will have trouble, just as he would if he were firing on the ground.

The angle T between the observer and the battery can be changed at will from zero to 1800 mils, with the guns

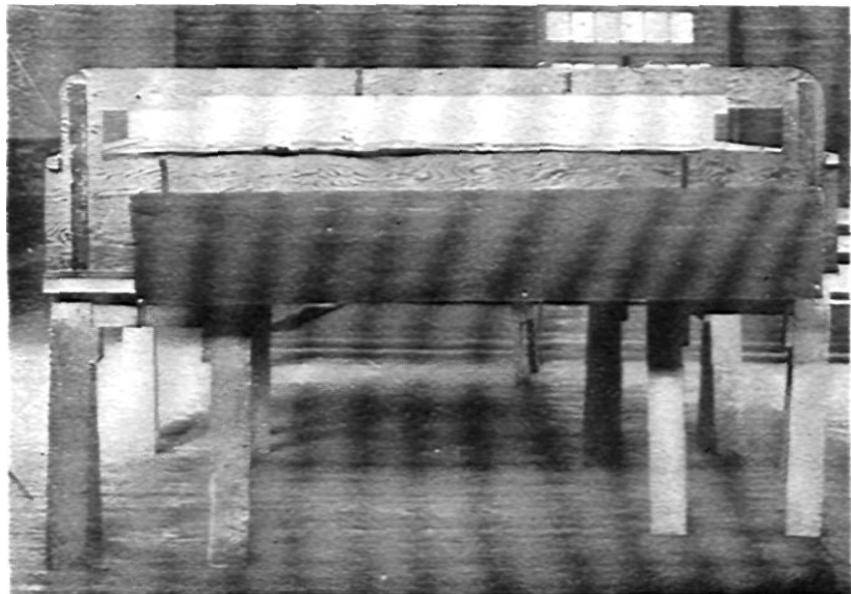


Figure 1.—Terrain Board: Front View

on either side of the observer; therefore, almost any type of problem can be fired on the board.

As mentioned above, only one operator is required and no particular skill is necessary in order to operate the board satisfactorily. Anyone who has any knowledge at all of what we are trying to do can operate the board very nicely with just a little instruction and a few practice problems. In order that the observer does not obtain data on the gun-target line, or the position of his burst, which he would not have in actual

firing, the operator should be screened from the observer. This can be done by draping GI blankets, or any other convenient material in such a fashion that the operator cannot be seen. The method of screening will, of course, vary from place to place, depending on the type of room in which the board is installed, but will present no problem to the using unit.

For shipment or for moving, the board folds to a size of 6 feet by 3 feet. It can be carried from room to room or from town to town very

easily, and set up by two men in a few minutes. No nails are required to set it up or take it down. All parts fit snugly. Where one part must be fixed firmly to another, wooden dowels are provided which do the job nicely and eliminate the necessity of using hammer and nails.

One limitation of this board, which is present in varying degrees in all terrain boards, is the fact that a sensing obtained by an observer will not agree with that obtained by an onlooker seated only a few feet from him, because

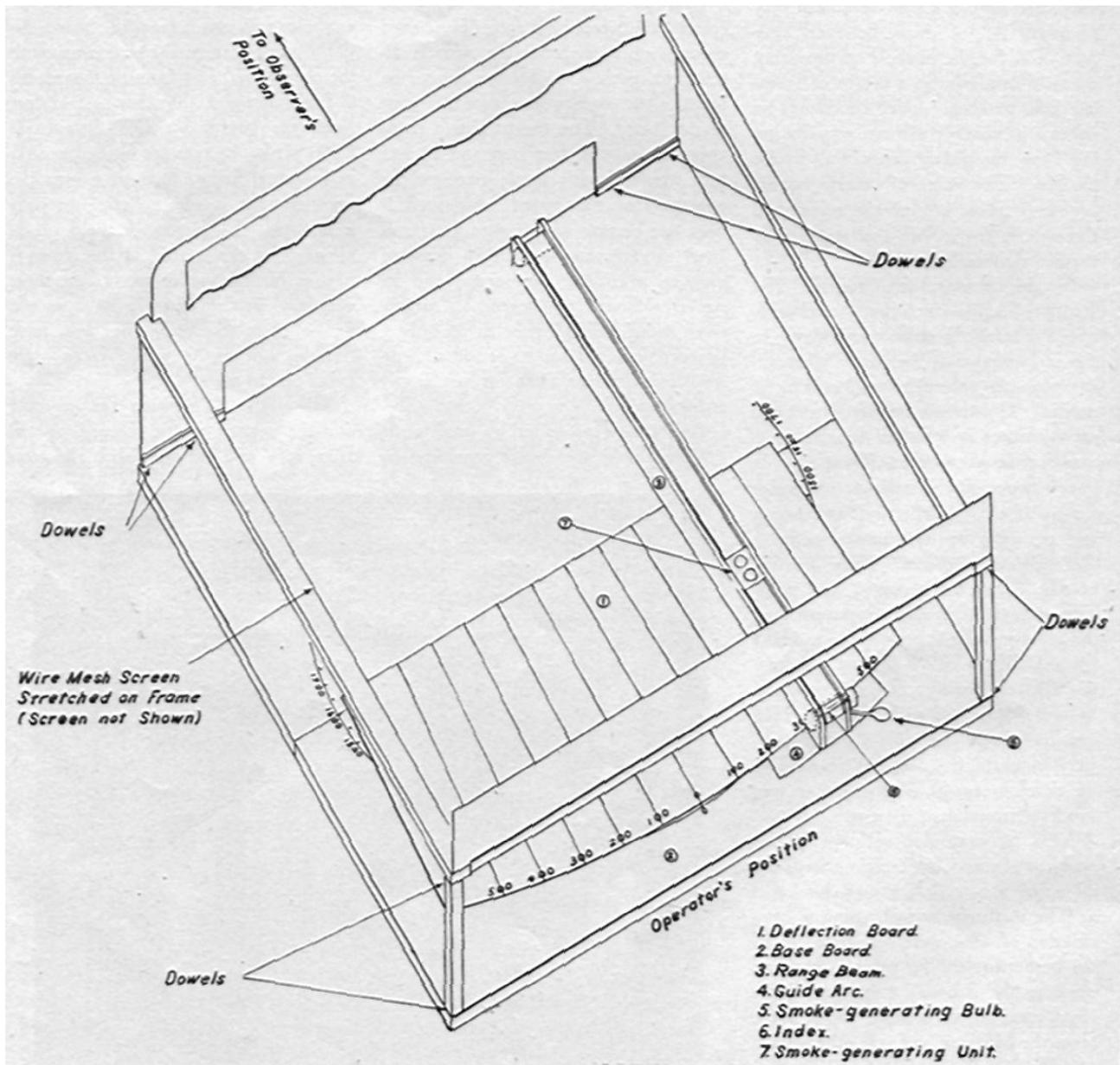


Figure 2.—Terrain Board: Schematic View from Top Left Rear

of the difference in the angle at which they are looking at the burst. For this reason, best results are obtained with groups limited to eight to ten people.

For those of you who are really interested in the design plans and construction details of this terrain board, a photo showing the various parts is reproduced here with a few descriptive comments pertaining to each (Fig. 3). Numbers below refer to the corresponding numbers in the illustration:

1. *Front Screen*—made of canvas, to prevent the student-observer from seeing the position and movement of the operating parts of the board during a problem.

2. *Front Piece*—made from ¼-inch plywood, forms the front of the board, and has a narrow slot through which the observer sees the terrain. It fits snugly to the *base board* by means of wooden dowels.

3. *Mil Scale*—made from ⅛-inch tempered masonite. It can be slid to any position across the *front piece* and is for use by those student-observers who find that eye strain results from the use of binoculars at such short distances. Separate mil scales must be made for each observing distance desired. The mil scale shown is for OT distance of 4,000 yards (20 ft.).

4. *Terrain Screen*—made from wire-mesh screening, sprayed a dark green, and crumpled to produce hills, ridges, valleys, etc. Dimensions are 6 feet × 6 feet. Slopes slightly upward from front to rear to increase observer's visibility.

5. *Back Panorama*—a landscape scene painted on upson board which is mounted on a wooden frame. This fits inside the frame of the *terrain screen* and keeps same taut. It provides a realistic background for the *terrain screen*.

6. *Base Board*—made from ¼-inch plywood mounted on a sturdy frame with dimensions 6 feet × 6 feet. It is hinged so that it folds for packing to a size of 3 feet × 6 feet. A pivot point is constructed in the middle of the *base board* on which the *deflection board* (No. 7) pivots. It also is inscribed with an arc of 3600<sup>m</sup> on which the *deflection board* is oriented for setting off the desired target offset.

7. *Deflection Board*—made from ¼-inch tempered masonite and graduated in both yards and mils, with guide lines for lining up the *range beam* (No. 8) on the true gun-target line. Pivots over the center of the *base board*, to represent changing gun positions and target offsets.

8. *Range Beam*—constructed from wood, sloping slightly upward to the

rear to conform to the slope of the *terrain screen*. It is built so that the smoke-generating bottles are moved on an endless belt anywhere along the *range beam*. Range graduations every 25 yards are provided.

9. *Guide Arc*—made from ¼-inch plywood and cut with the same arc as the *deflection board*. It is actually a part of and is attached permanently to the *range beam*. When fitted snugly to the rear edge of the *deflection board*, it places the *range beam* in its proper position, so that ranges desired are accurately represented.

10. *Rear Terrain Supports*—made from wood, with dowels on either end which fix the *terrain screen* with respect to the *base board*.

Army Field Forces Board No. 1 has completed service tests of a Field Artillery Training Aids Kit which contains this terrain board and has recommended that it be standardized. The Director of Logistics, GSUSA, has forwarded this recommendation to the Chief of Ordnance for appropriate action.

Anyone interested in the construction of one of these terrain boards can obtain detailed drawings and specifications from the Book Department, The Artillery School, Ft. Sill, Oklahoma, at a nominal cost.

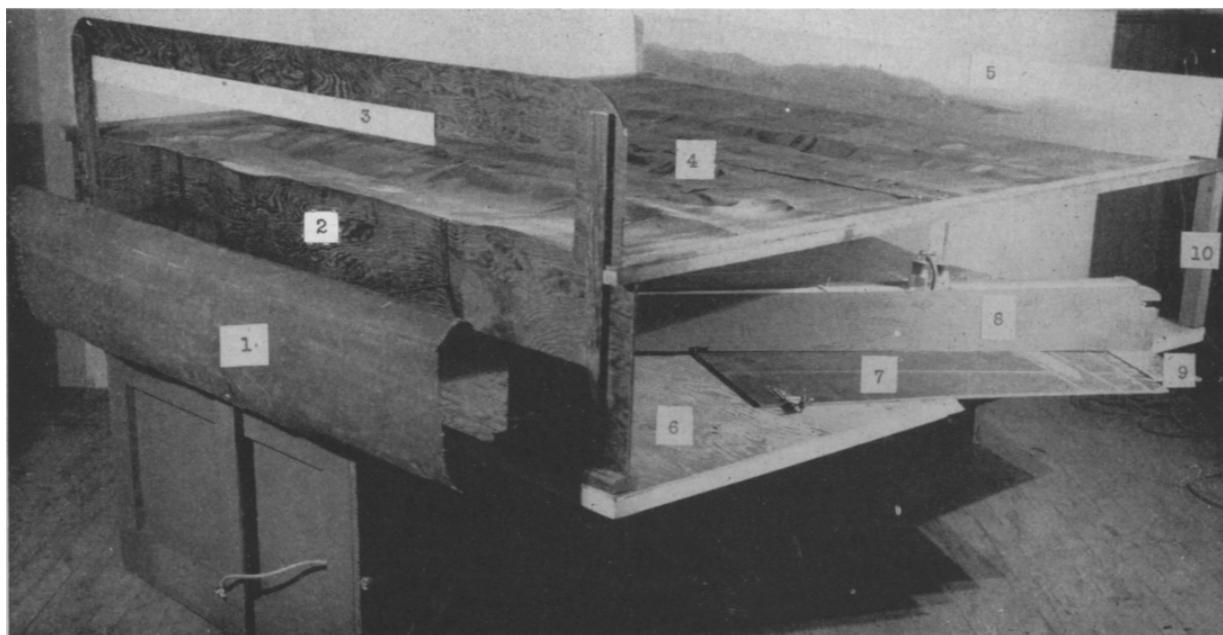


Figure 3.—Terrain Board: Component Parts

# *The* **UNBEATABLE SECRET WEAPON**

By Melvin Goodman

**T**WO important military events, which shaped American history, were affected by a "secret weapon" that did not involve science or years of research. This is in contradiction to the idea that all secret weapons deal with atom bombs and guided missiles. This historic secret weapon enabled the United States to purchase the Louisiana Territory from Napoleon Bonaparte, and caused the Civil War to be prolonged.

The strategic island of Santo Domingo, in the Caribbean, was the scene of the first successful test of the weapon. Napoleon, realizing the necessity of controlling this island to give him free access to the Louisiana Territory, sent thirty thousand troops to clear the way. The situation looked hopeless for the small band of Islanders who planned to block the Little Corporal's drive. But they were commanded by the resourceful Toussaint L'Ouverture, who did not allow the overwhelming odds to frighten him into submission. L'Ouverture came up with the weapon that proved more powerful than gunpowder ... insomnia! Refusing to fight in the day time, the natives continually made surprise attacks on the French camps at night. This unorthodox method of warfare played havoc with the fighting strength of the French troops. After walking many miles during the day trying to locate the natives, they looked forward to a good night's sleep. But in the midst of French yawns and cries of fatigue, L'Ouverture went on the attack. These attacks were continued nightly for several weeks and so cut into the sleep of the trained soldiery of France that only five thousand of the original thirty thousand ever returned to their native country. The weakness of the human body without adequate rest was thus turned into a most effective weapon of war.

Napoleon's troops paid highly for their loss of sleep and became easy victims for the natives and the prevalent fever, once fatigue set in. After this disastrous experience with American sleeplessness, Napoleon initiated negotiations with President Thomas Jefferson for the sale of the Louisiana Territory.

Sleep for a soldier is almost as important as his gun, for lacking either one, he is useless on the battlefield. Fatigue makes perception, memory, and reason less keen, ready, and accurate. Endurance of any sort is weakened tremendously and soldiers cannot perform tasks demanding exact motor coordination. Soldiers have proven their ability to live on the barest minimum of food over a long period of time without any fatal effects. But L'Ouverture showed the world that sleep starvation was deadly.

Of increasing concern to modern field commanders is fatigue of the mind or emotional fatigue. This form of weariness is recognized as exceedingly harmful because it alters glandular activities of the body and makes it difficult to obtain relaxation for the restoration of well-being. To combat emotional fatigue is an extremely delicate problem, for the soldier's mind, and not his body, is the seat of the difficulty. But a method to offset it was illustrated by officers in training camps during World War I. When soldiers were on a forced march and seemed to be at the lowest point in mental spirit, an officer came along and spoke a few cheerful remarks. The regimental band then broke out in a stirring march, and without rest, the men became noticeably refreshed and continued marching for many more miles.

This method of uplifting the emotional attitude or morale of soldiers was used also to good advantage in World War II. Entertainment groups could be found wherever American

soldiers were fighting. From the jungles of the South Pacific to the Rhine River in Germany, theatrical troupes put on shows for the soldiers in an effort to raise their morale. The success of these entertainers was attested to by the commendations that they received from theater commanders in all parts of the globe.

But of still greater consequence in World War II was the problem of physical fatigue, against the deadening effects of which singers, dancers, and motion pictures could hardly fight. Rest camps were established behind the lines to allow the weary fighting men an opportunity to regain their strength. Commanders realized that protracted loss of sleep results in less control of emotions. Pessimism replaces cheerfulness, and irritability increases until ideas of persecution are aroused. The personality of a first-class soldier is thus completely altered, with sleep the best cure.

Sleep, as a weapon of war, is an ace in the hands of an army that realizes its importance. Scientists have yet to find a complete substitute for it. In World War I, German scientists conducted some experiments along these lines. With the established fact in mind that lactic acid accumulation in the body is the prime cause for fatigue, these scientists gave their soldiers sodium phosphates before long marches. It was done on the theory that this chemical would offset lactic acid and make the German soldiers fatigue-resistant. But experience proved that the phosphates did not cause the lactic acid to disappear completely and only served as a temporary stimulant.

Sleep as a remedy for fatigue is unchallengeable. In the Civil War, Confederate General Stonewall Jackson understood this fact although he had not done any research on the matter. He only knew his men and how to get the most from them. General Jackson was responsible for strengthening the South's resistance and prolonging the war by sheer practical reasoning and common sense.

When the fate of the Confederate army lay in the balance in 1862, General Robert E. Lee dispatched a hurried call to General Jackson for assistance. But the Union forces under General

Pope were confident that aid from Jackson was impossible. Jackson's forces were stationed 120 miles from the all-important Manassas Junction; in 1862, this 120 miles was comparable to 1,120 miles today, as the movement of Jackson's forces through the Blue Ridge Mountains would have to be by foot. Jackson's soldiers were battle weary and in the worst possible condition for an extended march; their uniforms were ragged and many of them did not have shoes. However, General Jackson broke camp and gave the order for the march to Manassas. But Jackson did not take this unprecedented step before formulating a plan to combat fatigue. After marching for fixed periods, he ordered his men to lie flat on the ground and relax for a few minutes. In this manner, Jackson marched his troops forty miles a day and reached Manassas in three days, to bring about Lee's outstanding victory of "Second Manassas."

The human muscle machine has been found to be one of the most efficient machines in the world, provided it is well taken care of. Modern steam engines have an average efficiency of fifteen percent, while Diesel engines give back as high as thirty-five percent of productive mechanical energy. But the trained human body that receives its necessary rest may have a muscular efficiency of more than forty percent! Thus when General Jackson's troops arrived at Manassas after marching almost continuously for three days, they were still fit for fighting, owing to the periodic rests that were imposed.

The time that a soldier should spend sleeping depends essentially upon the type of activity in which he is engaged. But on all accounts, sleep is necessary to restore the fatigued functions of the body and to produce mental freshness. Stonewall Jackson and Toussaint L'Ouverture proved conclusively what an important military weapon sleep can be. Contrary to Mark Twain's admonition not to go to bed, "because so many people die there," military leaders today understand the tremendous importance of sleep. A soldier stands a better chance of living and the army's ability to win battles is increased tenfold by those few hours valuably spent sleeping.

# THE BEAUTIFUL BUNGALOW

By Harold Helfer

IT HAPPENED something over three years ago now, but I still think I'm just about the luckiest Marine that ever put on a pair of dungarees.

Shortly after the Okinawa invasion, a bunch of us guys took over a house in a little village not far from the sea. There was just something about the house that appealed to us. For one thing, it looked a little sturdier than most of the others and it seemed to have been given better care by its former inhabitants. You might even say, compared to the other down-at-the-heels wooden crates that passed for homes, that this particular house had a certain amount of class.

Of course, the pungent acidic odor of saki and goats permeated every foot of the house and there was enough filth and dust strewn about to annoy even the least fastidious souls on Tobacco Road. But we all pitched in right away, dusting and mopping and hauling irredeemable furniture and articles to a bonfire, and soon we had our place spic and span. We labored all day and then, in the evening, we stepped back and examined the results. We almost swallowed our Adam's apples in pride. There was no doubt about it—we were the proudest landlords on Okinawa.

I remember Sgt. Elmer Wexler said it almost reminded him of home in Connecticut and he began drawing on the ground with a stick plans of a house he was hoping to build for himself and his bride when he got back. We listened contentedly, puffing on our pipes or drawing peacefully on our cigarettes.

When our house was selected by the CO for Ernie Pyle and other civilian correspondents to put up in, we didn't complain that it would mean considerably more crowded quarters. After all, it was but proper and fitting, we reasoned pridefully, that our house should be selected for such a signal honor. Whenever we ran into somebody we knew somewhere else, we invariably brought him around to look at our house and we usually elicited from him the remark that we did have the nicest-looking place in those parts.

Then one day we got word that our outfit was moving to another spot on the island. We were heartbroken. It just seemed awful that we'd have to leave our wonderful little house. But orders are orders, so we gathered up our possessions and put our packs on our backs and, with a last fond farewell look over our shoulders, we moved on.

That evening we were bivouacking in a forest. It wasn't a bad set-up. We weren't likely to get as many Jap plane raids and the woods were green and fresh-looking. We put up our tent and soon we were comfortably situated. But still we couldn't get our house near the sea off our minds.

The next morning Elmer Wexler said to me, "Say, you and I have an assignment that's taking us back to the beach. The CO says we can spend the night there if we want to." Our eyes met in profound understanding. We were thinking, of course, how wonderful it would be to take in our house again.

Well, it looked just as we'd left it. And, yet, in a way, it didn't. Civilian government personnel had moved in. Of course, they had arranged their gear differently in the house than we had ours . . . and, well, there was just a difference about it, that was all. Neither Elmer and I wanted to admit it to each other, though.

When the civilian government people learned that we had occupied the house previously, they invited us to spend the night there with them. Elmer and I looked at each other. We both hesitated.

The sun already was giving signs of going down and it was a long trek to our new place in the forest. "Well, what do you say, Elmer?" I said. "Here's our chance to spend another night in our old shack." "I don't know," Elmer said, thoughtfully. "Maybe we ought to get back to our outfit." "I guess you're right," I said. So we shifted our carbines and trudged off into the deepening shadows.

The next day we learned that a Jap plane had scored a direct hit on the bungalow and eight of the people inside had been killed.

# AN ENGLAND-FRANCE SUBWAY?

By Frank W. Ball

WILL trains one day run under the English Channel? Will automobiles and trucks some time flit through an artificially lighted, ventilated, and heated subway, running beside the iron monster?

In the minds of various engineers, business men, militarists, and statesmen, a sub-channel tunnel has been "on order" for nearly a century and a half. The subject has continued to bob up at infrequent intervals through the decades. It has just been revived after dozing for many years. British-French talks on such a tunnel are being had now, and two members of Parliament have been appointed by England to again delve into this old, old subject. Napoleon heard such a proposal from an engineer named Matthieu in the early days of the nineteenth century. The torch was picked up by Thome de Gamond shortly thereafter. He appealed to British officialdom for more than twenty years without success. Others followed him in their enthusiasm, but always it was "no soap."

The American Civil War had just drawn to a close when Sir John Hawkshaw, a noted British engineer, got subchannel tunnel enthusiasm up to a high pitch. So strong did public sentiment become that reluctant statesmen were forced to bow to the will of the people, and a pretended "high-ball" signal was given. Both the governments of England and France joined in the permission—France with enthusiasm; England reluctantly—in 1872. Hawkshaw moved quickly to get things underway; but English governmental hesitancy and bungling delayed him ten years — this after forming two driving companies; one in England, the other in France. Boring finally began—from Sangette, France, and from a point near Dover, England.

A 7-foot preliminary bore was cut through the cheeselike clay beneath the channel for more than a mile from

either shore. And the entire world became excited following press reports of progress made daily and painting great pictures of the day when trains would streak off under the channel from England to France and vice versa.

Then just as suddenly as enthusiasm reached its crescendo, hysteria blanketed the Isles. Led by militarists, the propaganda that England was being opened to invasion spread like a giant cloud across the land.

England appointed investigating committees and stopped driving. French ardor waned and her sand hogs took an extended furlough. Vainly tunnel advocates pointed out that friendly France would never want to invade England; that any enemy essaying to invade England through a subway could be drowned en masse, and that with the aid of France, the sub-channel route would bolster England's military strength and location, rather than make them perilous. Nevertheless, driving ceased in 1882 and the holes were sealed.

In 1887, William E. Gladstone, the noted English statesman, appealed stirringly for a reopening of the project. And the London TIMES attacked him for his effort.

The subject was reopened in 1916—by militarists, who believed such a tunnel would help in defeating Germany. English statesmen were again slow to act. The last serious appeal was made in 1924, but Prime Minister Ramsay MacDonald announced that his government had again turned thumbs down. A committee appointed five years later to again delve into the channel-tunnel subject gave little effort to the matter and no action was taken. In 1934 the last mention, other than the present one, was officially made. But this time it didn't reach the paper stage.

Now again, nearly a century and a half after the first proposal was voiced, English-French commissions are at work on plans for a modern channel subway. Present plans call for a tube

about 28 miles long from Cape Griz Nez in France to Folkstone, England, lying under an average of 50 feet of earth beneath the channel floor. The depth of the water above it would run from 16 to 200 feet. Modern warfare has again forced the subject into consideration.

The cost of such a subway, large enough for two railroad tracks and twolane automobile traffic, is estimated at \$200,000,000. The route proposed is straight. Former proposed routes were curved to some extent.

The construction of such a tunnel is a minor engineering feat as compared to many other accomplishments. The Panama Canal cost more than twice as much and was many times more difficult to build. The Colorado river aqueduct in southern California cost \$220,000, 000. The Alcan Highway cost \$125,000,000. Many engineering feats far more difficult and expensive have been accomplished. California has a tunnel driven 25 miles through solid rock.

Many believe that had the attempt of Sir John Hawkshaw, or his successors in the endeavor, succeeded, there would have been no Dunkirk, no D-Day, no H-Hour. The history of today would be entirely different, and many now sleeping on foreign soil would be alive in Europe and America.

Many refuse to believe the subject unimportant. France, with her gold supply and England with her resourcefulness, men, and material, should be able to complete the job. And the worth of such a tunnel clearly warrants its building. It is hardly likely that nothing will be done to forward this important link between two friendly countries in the years that lie ahead. The selfishness of shippers, the fear of militarists, and the blundering of statesmen will eventually be overcome by the wisdom of men. Some day the sand hogs will again go out to sea. Some day Englishmen will go down to the London station to entrain for Paris, and some day the citizens of gay Parea will board trains for a jaunt into the Isles. And some day English and European mainland tourists will pass each other beneath the angry waters of the historic Channel.



# PERIMETERS in PARAGRAPHS



By Col. Conrad H. Lanza, Ret.

## RUSSIA AND THE WESTERN POWERS

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 1 September, 31 October 1948.

### INTRODUCTION

**A**NXIETY, uncertainty, and fear of a World War III are among all nations. Hatred between nations is growing rapidly. In the United States, dislike of Russia and Stalin already exceeds any similar feelings ever had in the past against Germany and Hitler.

Never in history has propaganda been so prolific and prominent. It is promulgated by speech, by radio, in writing. Both Russia and the Western Powers proclaim themselves as the sole representatives and champions of freedom. Yet freedom is slowly disappearing as new restrictions are imposed by governments in fear of a new war.

### PSYCHOLOGICAL CONSIDERATIONS

Few consider psychological differences between East and West which gravely influence the general situation between Russia and the Western Powers. Two of these will be discussed.

*Sanctity of Treaties and Agreements.* Oriental philosophies teach as an elementary principle that future events are contingent and usually unpredictable. Consequently, long-term agreements which can not be readily abandoned, if the facts or events turn out to be different from what had been expected, will not voluntarily be

undertaken. If circumstances force a long-term agreement there is always a mental reservation that if circumstances should change the agreement may be denounced or disregarded. No moral stigma attaches to such action, which Orientals consider to be entirely proper and justified.

That statement applies to Russia. It is only necessary to consider the long list of treaties which our State Department has published as broken by Russia. An example is the declaration of Mr. V. M. Molotov, then as now Russian Foreign Minister, when on 5 April, 1945, he denounced the treaty of neutrality with Japan, stating:

**"Since that time [13 April, 1941, when the treaty had been signed for a 5-year period] the situation has radically changed."**

That the *situation has changed* is a sufficient justification, for Oriental philosophies, for denouncing, or disregarding, treaties and agreements. A crisis always changes a situation, and when, at the very time Western nations would expect an ally or friendly nation to stand by a solemnly signed treaty, an Eastern nation is liable to do something entirely different.

Oriental nations see nothing wrong in disregarding treaties. On their part they do not understand the Western ideal of complying with engagements freely entered into, within the life of the engagement, regardless of changes in the situation. They consider such fidelity to an old signature as indicating a lack of common sense, which they should not be expected to approve of or to follow.

Not all treaties will necessarily be denounced. Some may remain advantageous for long periods and will be complied with. In other cases, a

desire to denounce may be prevented by the weak military situation of the nation involved—for example: Egypt, which desires to denounce its 1936 20-year treaty with Great Britain regarding the Sudan, is militarily impotent to do so. A strong nation, like Russia, does not hesitate to disregard treaties whenever it considers some benefit might thereby arise. It is useless to remonstrate. Oriental philosophies justify such action.

*Fatalism.* Another Oriental doctrine which applies to Russia is fatalism—that what is destined to happen will happen, in spite of anything which human beings can do. Men and nations are both held subject to that rule. As a corollary it follows that, since men and nations are ruled by destiny regardless of their acts, anything is justified to aid destiny to accomplish its predetermined decision. No man or nation, in doing so, if good deserves praise; or bad, blame. Nothing can prevent destiny. The guide for men and nations is to disregard ideas of right or wrong, morality or immorality, virtue or vice, but to act towards destiny's aim. This doctrine profoundly affects preparations for a World War III.

Naturally the \$64 question is how can man or nation know in advance what destiny has decided about such a war and particularly its outcome. This is no problem at all from Russia's point of view, for the answer is in the writings of Marx.

Marx's philosophy is a form of fatalism. It teaches that everything happens according to the economic laws which it expounds—for example, that capitalism is bound to cause wars, which ultimately will result in the disappearance of capitalism and the triumph of communism. As long as capitalist

states remain, war between them and the communist states will occur until the latter liquidate the capitalists. Only the date is not given.

Marx's philosophy is rigidly enforced within Russia. It is true that since Marx's time Lenin and Stalin have added to his principles by writing and in speech. So far as this writer has noted, neither ever changed anything in Marx's works. These remain the basic doctrine of Russian Communism. Since Marx predicted war between Russia (communist state) and the Western Powers (capitalist states), followers of Marx are sincerely and firmly convinced that there just has to be such a war. Speeches by Premier Stalin plainly point to that.

For those believing this doctrine, the only sensible thing to do is to go along with destiny and prepare for that war, in order to make it as short and complete as possible. Protestations from Western Powers that they are not planning a war and do not want one are time wasted. Even assuming that such explanations are accepted as honestly made, the Marxian reply is that those who believe there need be no war obviously haven't studied Marx, and simply don't know what they are talking about.

*Comments.* East and West have different philosophies. It is of little value to argue with an Oriental without understanding his point of view, which may be as strange to us as our views appear to him.

Orientalists do not comprehend why they should be blamed for violating treaties when their rules for the game entitle them to do so, and on unilateral decision. Followers of Marx will not admit that a war between the Western Powers and Russia can be avoided, in view of Marx's lengthy explanation of why this has to come.

What is needed to correct this unfortunate misunderstanding between nations is the right kind of propaganda. This should seek to explain, as regards a World War III, that Marx's philosophy is full of errors. His predictions of things to come have not been accurate as to the 100 years since he wrote. They are no more likely to be 100% accurate as to the next 100 years.

Disregard of the sanctity of treaties need not necessarily bring on war. It simply demands prudence in making

treaties. But Marx's predictions of things to come, if allowed to be accepted by Russia without being denied, is dangerous. Russian leaders thoroughly satisfied that Marx is absolutely correct as to World War III will continue to prepare for it, and may well launch it when ready.

What is required is to get the truth across that Marx is not an infallible prophet.

### GERMANY

The Western Powers have agreed, as to their zones, to reconsider previous agreements as to the dismantling of German industrial plants. It is now considered inadvisable to destroy all industries as originally intended. To do so prevents Germany from paying for food and other necessities which must be imported. This has resulted in the United States having to advance the money to pay for necessities, at the expense of its taxpayers, with little chance that this country will ever be reimbursed.

It is now thought best to permit a reasonable amount of industry, sufficient not only to permit Germany to earn credits to pay for its needs but also to produce goods badly required elsewhere in western Europe. German industry is increasing and is now estimated to be about 70% of its pre-war level. However, neighboring states are well above their pre-war standards.

On 18 October the foreign trade of all three western zones was combined. Such action had previously been taken regarding monetary credits and banking organizations. These acts are in line with the announced intention of organizing a single west German state with one central government. Preparations for this are to be completed by December, with the possibility that the first German state since the end of the war may commence to function by the beginning of 1949.

Russia continues to vigorously object to the proposed new west German state. On its part it has proceeded to organize the Russian zone into a Soviet communist state, with a picked staff of German communists in charge. This is greatly resented by the majority of Germans residing in the Russian zone. Considerable unrest and anti-Russian activity is reported from there. To meet

that situation, Russia has organized a "police" force of communist Germans. This is equipped with considerable artillery and armor and is to maintain the proposed Soviet German state after withdrawal of Russian troops. It is now stated that this will take place by 1 January, 1949, less detachments in the Russian section of Berlin and its line of communications back to Russia. Total strength of the "police" force is reported as 400,000.

The Allied air lift by the British and Americans into Berlin has been consolidated into a single command for greater efficiency. This operation has established a record for air transportation never previously reached. In view of the fact that the approaching winter will result in more non-flying days, a greater intensification of air traffic on days when flying is possible has been desirable. To accomplish this, airfields in the western sectors of Berlin are being enlarged and a large new field is to open in December. The number of Allied transport planes in use has been increased by details from the US Navy. The Germans have offered to furnish ex-officers as pilots, with crews, for this operation, which is largely for the benefit of 2,000,000 and more German citizens residing in the west Berlin sectors. This offer has not been acted on.

*The Berlin Dispute.* This vexing problem started on 20 March, 1948, when the Russian representative on the Allied Control Council at Berlin walked out. This left the other members—the United States, Great Britain, and France—to get along as well as they could. They did not immediately undertake independent action. Not until June, when it appeared extremely unlikely that cooperation could be had from Russia, was the provisional erection of a German state, composed of the three western zones, provided for.

In the meantime, Russia on 30 March commenced a system of harassing interferences on ground traffic which had heretofore moved peacefully from western Germany to Berlin, and by which the Allied forces in Berlin were normally supplied and the civilian population provided with food, fuel, and other

necessities. By a gradual succession of interferences the Russians had by the end of June brought about a complete ground blockade of the western sectors of Berlin. This led to the Western Powers initiating the now-famous air lift.

In July Russia presented a further objection. It now claimed that the only right which the Western Powers had to occupy parts of Berlin was to enable them to participate, and cooperate with Russia, in the Allied Control Council. Since there no longer was any cooperation, the right to occupy parts of Berlin had expired. The Western Powers declined to admit this view point. On 30 July, stating that a dangerous situation had arisen, they proposed that their ambassadors at Moscow meet with Russian representatives and seek a peaceful solution.

### MILITARY OPERATIONS

*The Central Theater* (south of the Yellow River line). Notwithstanding an ambitious plan issued in April last, directing the Government forces to assume the offensive, and drive the communists north of the Yellow River, the Government has shown no initiative and has undertaken no offensive.

At the beginning of September, the Government held in Shantung three garrisoned cities. Tsinan, the capital, was held by some 50,000 troops under General Wang Yao-wu, who was also Governor. Smaller forces held Tsingtao (also held by US Marines as an American training station) and Cheefoo.

The local communist commander was General Chen Yi. He started an attack on Tsinan on 17 September, with the 9th, 11th, and Pohai armies from the east; and the 3rd, 8th, and 10th from the southwest (Chinese armies correspond to our corps, and normally have 3 divisions). In all he had perhaps 90,000 men.

General Wang had known about the communists to the southwest, which he had estimated as 30,000 men. He also knew about the enemy to the east, but had no estimate of its strength. His closest supporting force was the 2nd Army Group, with nearest elements 200 miles to the south. Tsinan is an ancient city with three lines of walls and moats,

This led to a series of conferences in Moscow, starting on 2 August. On the 30th of that month it was agreed that the four Powers would instruct their respective commanding generals in Berlin to immediately confer together and arrange for lifting Russian restrictions on transportation into Berlin. At the date this would be effective, the Western Powers agreed to withdraw their own money from circulation in Berlin in favor of Russian money to be exchanged at an agreed rate.

The four commanding generals duly convened as ordered on 31 August. Their conference broke down on 7 September. The reason for disagreement was that the Russian commander proposed new restrictions to apply to air traffic, declined to consider Russian interferences with ground transportation

## CHINA

which had been strengthened by pill boxes and barbed wire. Otherwise there were no preparations for defense, although the communists had been operating within 6 miles of his command for the past 6 months. Wang considered his duty as limited to repairing the Tientsin & Nanking RR whenever it was interrupted by communist raids.

The communists started the investment on 20 September with an artillery preparation. Next day, General Wu, commanding the 84th Government Division on the SW front, deserted to the enemy with part of his command, which joined in the communist attack. Through the gap so formed Tsinan was entered and after a street and house battle surrendered on the 25th. General Wang was killed in action. Following this the Government troops at Chefoo surrendered to the enemy on 11 October, thereby clearing Shantung, less Tsingtao, of Government forces.

The 2nd Army Group, alarmed over the quick fall of Tsinan, believed that the enemy would soon attack Tungshan (Suchow on some maps). Lieut. General Chiu Chin-chuan in command immediately moved his CP from that town 100 miles west to Shangkiu. His three armies were posted along the Lung Hai RR, with the same orders as Wang had had for the T & N RR—repair damage from raids. Chiu decided his line

imposed prior to 18 June, and insisted that the control of money within all sectors of Berlin be exclusively under Russian jurisdiction, instead of being administered by a joint 4-power council as proposed by the Western Powers.

Negotiations in Moscow commenced again. They were fruitless. So was a reference of this dispute to the United Nations in session at Paris.

As this account closes, no solution has been arrived at. The Western Powers have offered to negotiate any question, provided Russia first lifts the ground blockade of Berlin. Russia's counterproposal is that she is prepared to lift the Berlin blockade, provided the Western Powers first accept the Russian solution as to currency circulation in Berlin.

was too long, and ordered his 16th Army from the Chenghsien area and the 5th from the Kaifeng area to march east to Tungshan. While so doing the 5th Army received a dropped message from a friendly plane that the enemy, stated as 15 divisions, was approaching from the west (this may have been the following 16th Army). Without other verification the 5th Army reversed its march, and found no enemy. However, the 75th Division of this army, and parts of the two other divisions, took this occasion to desert to the communists with all their arms and equipment. The abandoned areas of Chenghsien and Kaifeng were occupied by the communists on 22 and 25 October. The Army Group commander now expressed the opinion that unless the United States came to his aid the communists could not be beaten. With that mentality, he probably won't try.

*The North Theater.* The Government commander is General Fu Tso-yi, stationed at Peiping. His troops are reported as the best in the Government service. While energetic he has so far limited himself to repulsing the enemy, who continues to have the initiative.

On 26 September a communist force of 40,000 men was discovered 10 miles east and south of Kweisui, capital of Suiyuan. This is a great wool center

and economically important. Major General Claire L. Chennault, USA, Ret., operates an air line in China with American pilots (retired or reserve officers), and got the wool out. The communist move threatened to stop all this. General Fu ordered troops who were garrisoned at Paotow, 100 miles to the west, to abandon that post, and proceed to Kweisui. That movement was successfully completed by 23 October, when communists occupied Paotow, also a wool center.

Towards the middle of October, another communist force attacked a Government garrison at Yangku (Taiyuan on some maps), about 225 air miles SW of Peiping and under General Fu's command. The communists either captured the air fields by which Yangku was supplied, or else brought them under artillery fire so they couldn't be used. General Fu thereupon started a column south from Peiping to relieve the siege of Yangku. It had not arrived at the end of October, when this report closed.

Just at this time a serious situation developed in Manchuria (see below). It seemed that unless strong additional forces could be despatched without delay to north of Tientsin, the enemy might sweep down the coast of the Gulf of Chihli and capture Tientsin. With three enemy forces—northeast, northwest, and southwest—on the offensive, the situation was critical. It seemed probable that the communists might occupy Peiping and all of north China. The American and British consulates recommended to their respective nationals to leave without unnecessary delay.

In view of this crisis President Chiang Kai-shek flew from Nanking to Peiping on 29 October for a conference. What was determined is as yet unknown.

*The Manchurian Theater.* The following campaign deserves careful military attention. At the beginning of September, General Lei Li-huang, commanding the Manchurian Army Group, had the following forces: At Changchun, 6 divisions, 35,000 men, below normal strength and on ½ rations; at Mukden, 20 divisions, 200,000 men, plus 100,000 service troops; at Chihnsien, 8 divisions, 40,000 men; at Hulutao, 8 divisions, 50,000 men; a total

of 42 divisions, 325,000 men, plus 100,000 service troops.

Changchun and Mukden were encircled by minor bodies of the enemy and supplies were flown in from the air base at Chihnsien. That base had rail communications with Tientsin, but this was so frequently interrupted by enemy raids that greater dependence was placed on the Hulutao base, which received supplies by sea. All troops were short of transportation, but an arsenal at Mukden was functioning, furnishing ammunition.

At the same date the communist commander, General Lin Piao, had concentrated 4 armies (12 divisions) in Jehol. Minor forces observed and furnished intelligence. The total communist strength was given by Government sources as 120,000 men. However, the strength of the units identified only adds up to 80,000 or 5,000 combat troops per division, plus another 5,000 corps troops per Army of 3 divisions, on an average. The communists had the initiative—strategically and tactically.

General Lin started operations on 11 September, after the harvest, which assured ample food supplies throughout the intended area of operations. He determined to attack Chihnsien with his entire force, which would give him a numerical superiority of 3 to 2. He expected that if Chihnsien were taken the air lift to Changchun and Mukden would become impracticable and the large garrisons located there might surrender without a fight.

The first operation was to attack an advanced post covering Chihnsien from the north at Ihsien, 40 miles away, with the 1st, 7th, and 9th Armies. Nothing being done by the Government to relieve Ihsien, it fell on the 20th. General Lin moved south and on the 23rd arrived before Chihnsien. Here he was joined by his 4th Army. This had detoured around Chihnsien and arrived from the south. Its mission had been to contain the Government force at Hulutao. However, the latter failed to move, and the 4th Army, while watching Hulutao, joined in the attack on Chihnsien. Chihnsien held out until 14 October, when it surrendered. It furnished the communists with large quantities of supplies, much of it American.

In the meantime President Chiang Kai-shek, alarmed over the situation and the prospective loss of Chihnsien, which he had himself designated as the most important center in China, flew to Mukden on 2 October, and conferred with General Lei. As they saw the situation they judged, probably correctly, that the enemy had concentrated the major portion of his forces around Chihnsien, and consequently must be weak elsewhere in Manchuria.

They were worried about Changchun. The air lift had already been stopped by the operations at Chihnsien, which had made it impossible to use the air fields. There was probably no enemy near Changchun except observation forces. It was decided to abandon Changchun and have the garrison move south, join the Mukden garrison, and together fall upon the rear of the enemy at some point north of Chihnsien. President Chiang thereupon flew back to Nanking.

The Army Group issued orders as follows, all movements to start not later than 5 October:

- a. Lieut. General Tu Yung-min, commanding at Mukden, would proceed with his main body of 12 divisions to Changwu, 75 miles northwest from Mukden, but only 50 miles from the outposts. Changwu was supposed to be (apparently an error) the CP of General Lin, enemy commander, on his line of communications, and also a good position to cover the withdrawal of the Changchun garrison.
- b. Since no supplies were now arriving, 5 divisions at Mukden were detached to seize and hold Yingkow, a port, and there establish a new base. Yingkow is 100 miles SSW of Mukden but only 60 miles from the outpost line.
- c. General Cheng Tung-kuo, commanding at Changchun, was to evacuate that place and march south to the line Changwu—Mukden.
- d. Three divisions were to remain at Mukden.

No opposition was met to the movements on Changwu and Yingkow, and those places were occupied respectively

on 11 and 10 October. The seizure of Changwu did not result in the enemy's abandoning his siege of Chihhsien. Changwu was over a 100 miles away and General Lin ignored the Government action.

General Cheng ordered his 60th Army to march south from Changchun, to be followed in turn by the 7th Army. The commanding general of the 60th Army objected to this plan. He represented that his men were just above starvation level; he had no transportation; there was little ammunition; the proposed march involved 130 miles through hostile territory. When General Cheng refused to change the order, the 60th Army deserted in mass and joined the communists. The latter, reinforced by the 60th Army, thereupon on the 11th attacked the 7th Army. After some fighting the 7th Army surrendered on the 18th. One of the divisions of the 7th Army was General Stilwell's 38th, equipped with American arms and supplies. General Lin's estimate that Changchun would surrender if Chihhsien fell (as it did on the 14th) had been quickly realized. Once more the communists had captured a vast quantity of arms and supplies.

The loss of Chihhsien, and bad news from Changchun, led President Chiang Kai-shek to again fly to Mukden. He arrived in the evening of 15 October, and conferred once more with General Lei. A new plan was decided upon. Although Changchun had not yet surrendered, it was written off as a loss. It was decided to order the 12 divisions at Changwu, the 5 at Yingkow, and the 8 at Hulutao all to march on Chihhsien and recapture that place. With 25 divisions against 12 success could be presumed and, with Chihhsien firmly held, Mukden could be supplied. Necessary orders were issued, and next day President Chiang flew back to Nanking.

If the three Government forces directed on Chihhsien from different directions had all arrived on the battlefield on the same date and hour, and had really fought, the destruction of the weaker enemy might have been expected. To accomplish this type of maneuver requires a competent staff, careful coordination and timing, and trained troops, all of which requirements were wanting.

The three Government columns marched independently. The Yingkow column, with 70 miles to go, arrived in 4 days on the 20th. They found General Lin and his communist armies south of Chihhsien in a position of readiness, but were unable to locate the other two Government columns. Afraid to remain so close to the enemy alone, they abandoned their mission and returned to Yingkow. The Hulutao troops, with only 20 miles to go, had waited to see what would happen. Learning that the communists were in strength on their side of Chihhsien, and that the Yingkow column had returned to its base, they decided it was useless to carry out their orders and did nothing.

When General Lin observed that the Hulutao and Yingkow columns were not going to attack, he faced his 12 communist divisions towards the north, and proceeded to a meeting engagement with the Government column coming south from Changwu. This occurred on 26 October on the line Pehchen—Kowpangtze, which is 40 to 45 miles northwest from Chihhsien. A 3-day battle followed, of which no details are yet known. The result however was that the Government forces were annihilated. It is reasonably safe to assume that many surrendered, and probably joined the communists. None are reported as having escaped.

In view of this disaster, General Lei decided to evacuate Mukden at once. He sent his troops remaining there—about 2 divisions—south towards Yingkow, and himself fled by air, through the facilities of General Chennault's planes. On 31 October, weak communist forces, who had been in observation, arrived in Mukden. The arsenal was found undestroyed.

Thus General Lin Piao, with 12 communist divisions, had, within a space of 7 weeks, destroyed 26 Government divisions totaling about 195,000 men, and had captured Chihhsien, Changchun, and Mukden, all important supply centers. All the arms, munitions, and supplies pertaining to the 26 divisions and 3 bases, much of which was American, were captured. Many of the Government troops taken must be presumed as joining the communist army, as preferable to remaining prisoners.

The Government now holds in Manchuria Hulutao and Yingkow, each with about 8 divisions. Yingkow as a port usually closes by December on account of ice; Hulutao is an all-year port. There no longer seems to be any need for a port in Manchuria, as there is nothing left to supply, and the 16 divisions now there are badly needed in the north China theater. Whether transportation can be found to withdraw them has not yet been determined.

### COMMENTS

During 1948, Government forces have showed a lack of initiative and an absence of desire to fight. Their Intelligence Service has been bad. Strategy has been to defend selected large cities, supposed to be key points.

Three years ago the communists had less than a 100,000 poorly equipped and trained men, against 4,000,000 Government troops. Now the communists have increased to over 1,000,000, while the Government strength has declined. The latter has ceased to publish strength returns, so that their present strength is unknown. It may, throughout communist territory, now be substantially inferior.

The communists have developed good leadership. They have efficient armies which can and will fight. The days of guerrilla warfare, of the hit-and-run type, have passed. Regardless of opinions about communism, General Lin Piao's recent campaign in Manchuria was excellent and was conducted according to proper strategical principles. His victories have opened the way for a new operation which will eliminate Government troops throughout North China.

That possibility must be expected. The local citizens seem so certain that the Chiang Kai-shek Kuomintang Government will be unable to hold north China that those who can are fleeing. Those who can not escape have about made up their minds that communism is coming and that they will have to go along with it. They consider that, unfortunate as this may be, it might well turn out to be preferable to an endless war, which is ruining their country.

At date of writing the tendency is for a division of China into communist

(north) and Government (south), with the Yellow River line as the boundary between the two. To provide for this, the Communists have about completed arrangements for declaring a new north China state, independent of the Chiang Kai-shek Government. It must be presumed that this new state will demand belligerent rights, and possibly diplomatic recognition, from Russia. It may receive either or both.

The Yellow River line happens to be a natural boundary between north and south China. Those two parts differ from one another as to food (rice and vegetables in south, wheat and meat in north); lines of communication (canals in south, roads in north); trees (nearly non-existent in north); language; and in many other respects.

### GENERAL SITUATION

The entire area is in ferment. In French and Dutch territories there is an intense desire for independence, where connection with communism is due to a promise to aid in securing independence, and not to any preference for communist ideologies. The natives might have favored democracy had they received aid from democratic states. However, they haven't and they have turned toward communism as the only other possible direction.

It is by no means certain that independence would bring tranquillity. Burma was given complete independence in January 1948. Nevertheless an armed communist rebellion is in progress in that country. The United States' grant of independence to the Philippines has not resulted in eliminating the Hukbalahap communist insurrection. It is quite possible that if France and the Netherlands give independence to their Asiatic colonists, the latter might be unable to maintain peace.

Siam is the most peaceful area in southeast Asia. Perhaps for this reason it appears to be a major center for propagation of communism, under direction of an unusually large Russian embassy.

Throughout this vast, densely populated, and much troubled area, full of

Such a division of China would only be temporary. The communists have already announced their plan to conquer all of south China. Under present conditions, they are more likely to accomplish that than is the Government to reconquer north China.

With the United States backing south China, to which it has long been intimately connected, while Russia backs north China, a dangerous and delicate situation has arisen. This will be increased if the communist victories in Manchuria and north China lead to an increase of communist activity in India and in Southeast Asia. That is likely to happen, and will cause new complications and dangers.

The remedy to this unfavorable situation is to create in south China an army which will fight. Furnishing funds

and supplies to the south China Kuomintang Government has been tried for 16 years. During that long period, no Chinese army was ever organized which would fight either Japanese or communists; this notwithstanding an enormous superiority in numbers, up to at least through 1947. Supplies and funds indeed disappeared; military success never appeared; and it just isn't in sight now.

Whether this lack of results has been due to corruption, general incompetence or both is presently besides the question. What China needs promptly, and needs badly, is an efficient army which will fight. Action, not administrative help, is required, and this will have to come from outside China.

If China is not saved, but falls to communism, all of Asia is likely to follow.

## SOUTHEAST ASIA

wealth, and the home of rubber, rice, tin, oil, spices, and other products needed by many nations, agitators are preaching communism. Where independence does not exist, they charge the United States as being against freedom. They allege that the French and Dutch armies which prevent independence are supported by American supplies and funds. These agitators represent Russia as the home of the free, and in favor of immediate independence for Indo-China and Indonesia, with separation respectively from French and Dutch control. They represent that the United States is arming Japan for an attack against Russia and maintenance of the colonial systems.

This propaganda is making progress. If the natives of southeast Asia turn toward communism it will not be out of love for its ideals but to obtain the help which is not forthcoming from democracies. The agitators have taken advantage of this situation. Their own objective is to create chaos rather than converts to communism. As previously explained in *Perimeters*, the widely prevalent idea that communism thrives among ignorant and impoverished peoples is not supported by the evidence. There is no record of any poor or impoverished nation voluntarily adopting communism. Where this has happened, it has been brought about and is maintained by force.

In creating chaos, the agitators particularly desire to prevent the Western Powers from receiving rubber, tin, and other valuable products from southeast Asia. They seek to create a hatred for the West, whom they misrepresent at every opportunity. False promises are promulgated as to the wonderful future the natives will have, once the white races are driven out of the Orient. The mass of natives does not have sufficient learning to recognize the falsity of doctrines presented. They are very poor, have little or nothing to lose, and believe that any change is better than existing conditions. The arguments presented are ably explained. Together with a stirring desire for independence and for functioning in the world on an equality with other nations, they form a strong urge for action.

The spread of communism in China has resulted in improved liaison between the communists of China and those in southeast Asia. The recent really great communist victories in China will surely result in an increase of confidence throughout southeast Asia in the ultimate spread of communism throughout the whole world.

Southeast Asia is ripe for further communist gains. It is a major military problem, which can not be safely neglected. The general situation is much more grave than official communiques

admit. There is a possibility that China, southeast Asia, and India in turn will be transferred to behind the Iron Curtain, unless quick measures are taken to prevent it.

Some information as to separate countries, based on strongly censored despatches, follow.

### BURMA

A civil war between the White Communists and Independent Parties (in liaison with Russia) and the Red Communists and Socialists (not in liaison with Russia and forming the recognized government) exists. The White Communist leader is Than Tun, whose CP is at Pyinmana. He controls a large part of central Burma and has cut communications between the Government capital at Rangoon and Mandalay and districts to the north. The head of the Government is Thakin Nu.

At the beginning of September a third party appeared in the field. This was an alliance of Karens, Shans, and Chins occupying the high ground along the eastern border. These hill peoples are non-Burmese, speaking a different language. During the war with Japan, Burmese collaborated with the Japanese, but the hill peoples did not. During 1946, the hill peoples, not wishing to be subject to the Burmese about to be freed of the British rule, commenced a provisional organization. They secured arms and ammunition, apparently by purchase from Siam, and have now taken the field. On 2 September they seized Moulmein, an important port, and established a covering post at Thaton, 50 miles to the north.

On 6 September, the Government made certain concessions to the hill peoples, the nature of these being yet undisclosed. But in return the Government secured use of the port of Moulmein. The hill peoples had furnished 7 battalions of infantry to the regular army. When the revolution broke out at the beginning of August, these battalions were on garrison duty in the Irrawaddy valley along with Burmese troops. Enough of the latter revolted so as to leave the hill battalions numerically superior to Government forces. This enabled the hill battalions to abandon the posts, march away to their own country, and take part in the September operation.

A very strong censorship has prevented reception of news as to the three-cornered civil war.

Great Britain is furnishing Burma with arms and munitions and with military technical advice, under the provisions of the Anglo-Burma Defense Agreement, effective as of date of independence last January. No troops are being furnished.

There is no evidence that the White Communists are receiving either munitions or funds from exterior sources. The Burma Government alleges that the rebels are receiving advice from an unnamed foreign power.

### MALAYA

The rebellion in this country is by Chinese communists, in liaison with the communists in China. The local communists are opposed by a majority of the Chinese population, which favors the Kuomintang Party in China, and are also opposed by the Malay population, who don't like Chinese.

The communists are divided into small bands who live in the jungle and raid as opportunity affords. The jungle contains sufficient food trees and plants so that subsistence is not a problem. Arms were originally obtained from drops by Allied planes during the war with Japan. The British appear to have stopped new importations and the communist ammunition supply appears to be diminishing.

The Government estimates it may take a year or more to locate all the bands and exterminate them. Progress is being made. With the arrival of new troops protection is being given to plantations, and the production of rubber and tin is being maintained.

Best results against the communists are reported by the Ferret Force. This is a new organization, also of small bands, headed by a major general. The tactical unit is a group, consisting of a headquarters and 4 teams. A team consists of 11 soldiers, British, Malay, Gurkha, or mixed, with a leader selected for his knowledge of the country. To each team is attached a Chinese interpreter, a radio man, and several Dyaks from Borneo, who are reported to have the same tracking abilities as our own Apache scouts. The Air Force co-operates by locating enemy camps.

### INDO-CHINA

No change is reported since last report. The French with 100,000 troops control the large cities through a puppet government. The Viet Nam controls the greater part of the country. Economic conditions are bad.

### INDONESIA

A new Communist rebellion has arisen in Java. Its originator is a little-known individual named Muso, who fled Java in 1928, after he had unsuccessfully endeavored to organize a communist revolt against the Dutch. He at that time made good his escape to Moscow, and has remained in Russia until this year. He was by profession a school teacher and is now 50 years old.

Early this year Muso came into contact with another Javanese, Dr. Suripno, an intelligent man who was in Moscow as a diplomatic representative of the Indonesian Republic, whose capital is at Jogjakarta. This Republic has refused to join with the Dutch in their newly organized efforts to erect an Indonesian state united with the Netherlands. Complete independence is demanded. Suripno is reported to have negotiated a treaty with Russia on behalf of the Indonesian Republic, but what was agreed to is unknown.

Early in August a large delegation of Russians arrived at Bangkok, ostensibly for duty at the Russian embassy. With them were Muso and Suripno. These two were detached and secretly forwarded to Java by air, where they arrived on 12 August. Muso went to work, and worked fast.

No effort was made at first to arrest Muso, as it was not realized what he was about. He wrote a series of articles which appeared in the local press, wherein he advocated communist leadership as the only practicable means of preventing imperialistic capitalist penetration. He started a Popular Front movement. On 20 August he announced his program. This required the Indonesian Republic, headed by Prime Minister Mohammed Hatta, which had an armistice with the Dutch, to break political relations with them. He demanded a Popular Front government with communists holding the important ministries, and an exchange of consuls with Russia as prescribed in the

treaty which Dr. Suripno had brought back.

By the 29th Muso had his Popular Front fairly well organized. The Socialist and Labor Parties had joined. Together they controlled about 100 votes out of 500 members in Parliament. The Republican and Moslem parties, representing 400 votes, declined to associate themselves with this new Front, and remained loyal to the Hatta Government.

Finding Jogjakarta not too friendly, Muso moved to Madioen, a provincial capital about 80 miles distant and the third largest city in Java. Here he excited the people by expounding Russian ideals and slogans. He was joined by former Prime Minister Amir Sjarifoeddin, who revealed that he had really been a communist secretly since 1935. According to his own speeches, Sjarifoeddin is very anti-American.

To maintain peace, the Republican and Moslem parties now offered Muso's new party a proportionate representation—about 20%—in the Cabinet, but expressed an unwillingness to adopt communist ideals.

On 18 September hostilities started by Muso and his sympathizers seizing Madioen and Magelang. His preliminary work had been so good that he rallied to

the Red flag about 6,000 troops who had been recruited in West Java but were stationed in the East; some guerrillas who had been fighting the Dutch; and soldiers who had been sent home discharged from the Jogjakarta army by reason of ineptitude or doubtful loyalty. In all, Muso may have had about 10,000 armed men, with which he made his initial seizures with a loss of only 2 killed and 4 wounded.

President Sockarno of the Indonesian Republic acted promptly. On the day of the revolt he declared martial law, and ordered the army to destroy the Muso movement, which he strongly condemned as Moscow-inspired and pure communism. The Jogjakarta army had just completed a reorganization, which had reduced its numbers to about 60,000 men, by weeding out undesirable elements. Muso proclaimed his intention of giving land free to farmers; the confiscation of industries; the setting up of People's Courts; and the overthrow of the Republican government. Allegiance to the principles of Marx was broadcast.

Initial military contact between the forces of Muso and the Republic came on 20 September near Soerakarta, which is about half way between Jogjakarta and Madioen. The Republicans won and on the 23rd were closing in on Madioen,

starting a three-prong attack. Strong resistance was encountered by these forces, and also by a detached force which had been sent toward Magelang. Muso and his People's Courts summarily put to death such anti-communists as they found within their lines.

Under strong continuous attacks, the Republicans reached the edge of Madioen by 30 September. Muso thereupon abandoned the town and with whatever troops remained to him withdrew to the high ground to the south and east. On 9 October he defeated a Republican force near Tjepoe, an important oil center. He was supposed to have 5,000 troops at this time.

Developments since that date have been concealed by censorship, but as this account closes, the Republicans have announced that Muso had been killed in action.

## PHILIPPINES

Little change has been noted since the previous report. The Government attack on the Hukbalahaps in central Luzon has been intensified, with the government using both artillery and planes. Details are undisclosed. Some American soldiers have been casualties through accidental penetration into combat zones.

## GREECE

balance its national budget, American aid has been essential. Consequently the American mission's directives are fairly well complied with.

### MILITARY OPERATIONS

The main body of communists held a fortified position about Mt. Vitsi, which is in front of the point where the frontiers of Albania, Yugoslavia, and Greece meet. Their supplies and replacements are believed to come from those two states, both having communist governments.

According to Greek Intelligence reports, the communists were at first estimated as 3,000 bandits, who had withdrawn through Albania from the Mt. Grammos area, which fell into Greek hands as the result of Operation CROWN, completed on 20 August. Although the Greek enemy are designated officially as "bandits," they

are well trained, organized, and equipped. The withdrawal to Mt. Vitsi had been unforeseen, and had consequently not been interfered with. It is a strong position, had been previously prepared for defense, and has good communications to the communist rear areas.

The communist commander, "General" Markos Vafiades, has his CP at Pyl on the south side of Lake Prespa (Prespansko on some maps). At the beginning of September he had received 3,000 replacements from Albania and 2,000 others from his training center near Belgrade, all trained and equipped. Assuming that the Greek estimate of 3,000 might have been correct, the communist force was now 8,000. There is reason to believe it was more than that.

Confronting the communist main body was the II Greek Corps under

### GENERAL SITUATION

On 1 September the communists were more numerous and occupied about as much territory as they had a year earlier. This despite military operations which had been intended to eliminate them as a major fighting force. The Greek Government was, on its part, better organized, had more troops, and the latter were better equipped with American equipment. Operating under their own officers, they were nevertheless closely supervised by an American mission.

The American mission has a twofold objective: from a military point of view it has sought to direct operations to destroy the communists; from an economical point of view it seeks to put Greece on a sound financial basis. As Greece alone has been unable to overcome the communists, and cannot

Lieutenant General Stylianos Kitrilakis. Divisions in line from left to right were the 15th, 1st, and 11th.

On 16 September the communists attacked the 15th Division, by striking towards Kastoria in a night attack. The 15th Division was surprised, gave way, and was driven back for a communist gain of 5 miles—large for mountain areas. The communists, estimated as 6,000 combat troops, were also exhausted by this attack, and did not renew it until the night of 19/20 September. This time the Greeks were not surprised, but they initially lost more ground. After daylight a counterattack was launched on a 10-mile front. This recaptured the ground lost during the preceding night and part of the terrain lost on the 16th. For the 5-day battle, communist losses, as reported by Greece, were 456 killed, 123 prisoners, and an undetermined number of wounded. Their own losses were not given. No serious fighting occurred thereafter up to the end of October.

On 30 September Greece filed an official request at the US Embassy at Athens for more assistance to strengthen her forces to meet an enemy

who was receiving constant aid from Russian satellite states. The next day President Truman, in his report on aid to Greece for the 3rd quarter of this year, stated:

**"Although internal security has not yet been fully restored, the Greek forces have been provided the means of carrying the guerrilla campaign to a successful conclusion, and the outlook for the early reduction of this problem to police proportions is promising."**

As these lines are written the United States has the Greek request under consideration. In the meantime the war is at a stalemate, with communist detached bandits operating over wide areas through central and south Greece, all aided by efficient 5th Columns.

*Comments.* *Perimeters* has previously reported that failure to win a decisive victory against the communists during the 1948 summer campaign was likely to have an adverse effect upon Greek morale and American reputation. Greece is weary of war, which has now lasted 8 years on her territory. The country has counted on suppression of the communist menace during this year

through American help and American direction. Now 1948 is drawing to a close with no substantial change in the military situation. To the Greeks this is very discouraging, for they have had two summers to destroy a relatively small communist force. The opposition to the United States now claims it would be better to have peace with the communists rather than to go on indefinitely in the present manner. A dangerous situation has arisen which will require close attention.

There is little chance of accomplishing anything before next April. Usually about 1 November winter sets in in the north Greek mountains, with considerable snow. During the 1940-1941 winter, operations were conducted in the vicinity of Mt. Vitsi between Greeks and Italians. Rough country, deep snows, lack of roads and shelter, and bitter cold resulted in neither side accomplishing much.

This is all very disheartening to the Greek people. Indicating the gravity of the situation, the Government on 29 October proclaimed martial law throughout Greece.

## PALESTINE

### THE TRUCE

A United Nations truce, effective as of 18 July, was supposed to prevail. It was supervised by Count Folke Bernadotte, a Swedish statesman, as Mediator. He had instructions to seek a permanent settlement between Israel (Jews) and Arabs.

A violation of the truce had occurred on the very day it had started. Israel forces had seized three undefended Arab villages about 12 miles south of Haifa, expelled about 8,000 inhabitants, and burned the villages. Israel explained that it could not tolerate Arabs living close to the main Tel Aviv and Haifa road.

After investigation, Count Bernadotte on 13 September disapproved the destruction of the villages and the excuse for doing so. He ordered Israel to readmit the 8,000 expelled Arabs and to rebuild their homes at Israel's expense.

Israel disregarded the foregoing order. Four days later one of its official

cars, with soldiers in Israel uniform therein, blocked Count Bernadotte's car in daylight in Jerusalem, and in the presence of passers-by killed him and his adjutant—a French colonel.

The Israel government disavowed that crime and promised to bring the assassins to justice. However, up to 31 October, six weeks later, no one had been brought to justice. Privately, Jewish statements were made that any foreign official who sought to prevent Israel from occupying all of Palestine could expect the same fate.

### MILITARY OPERATIONS

On 15 October, in violation of the truce, Israel started an offensive in south Palestine, ostensibly to open a way for convoys to Jewish settlements in Negeb. First attacks were against the Egyptian-held road junctions near El Faluja and El Menshiye, some 10 miles ESE from El Majdal, also Egyptian. By 21 October the Egyptians, numbering several hundred infantry, had been driven back to high ground south of the

RJs. On the same date other Israel forces drove about 1,400 Egyptian infantry out of Bir es Seba (Beersheba on some maps) and captured Kaukaba and Beit Shima, 6 miles east from El Majdal. All Israel attacks were by night in bright moonlight in open desert, and were supported by air bombing. Only minor follow-up attacks were by day. This Israel success separated the Egyptians from the Trans-Jordan Arabs at Jerusalem. During this operation no attention was given to United Nations orders to cease fire.

The next operation was to separate the Syrians and Lebanese in the north from the Trans-Jordan Arabs also. On the night 22/23 October, Israel charged that Lebanon Arabs had violated the truce by seizing high ground near Menarah, in the NE corner of Palestine. The United Nations were not permitted to verify this alleged attack, and Israel refused to obey a United Nations order to cease fire, although the Arabs obeyed and that night withdrew their

lines. This ended the firing at this point, and the next night the Arabs returned to their positions.

The main Arab force in the north consisted of about 5,000 infantry holding high ground parallel to the south border of Lebanon and about 5 miles south thereof. They had held this when the truce had been declared. The commander was General Fawsi el Kawukji. On 28 October the United Nations notified Israel that no attack on this force would be permitted as the terms of the truce specifically forbade retaliatory operations.

Notwithstanding, Israel launched an attack during the night 28/29 October. The plan was to destroy the Arabs by a double envelopment. One attack was to proceed east against Tarshiha, and the other west against hill 2690, 5 miles east from Sa'sa. The two attacks were to meet at Sa'sa, through which all Arab lines of retreat passed. The plan failed

as the Arabs retreated at once and cleared Sa'sa before the Israel columns arrived. The United Nations issued its customary order to cease fire early on the 29th. This was disregarded until 31 October, by which date the Arabs had evacuated Israel territory in this area.

*Comments.*—Israel now has a disciplined army capable of short offensives. It undertakes these without regard to United Nations orders or truces.

The Arab League has been demonstrated to be ineffective as a military alliance. The members have not acted in unison. The strongest Arab force is that of Trans-Jordan and Iraq, which holds a central position covering Jerusalem. It did not go to the help of the Egyptians in the south, nor of the Lebanese and Syrians in the north, when these were attacked. It now finds itself isolated and confronting a

superior Israel force whose flanks have been made reasonably secure.

The Arabs are poor. They have no industries and cannot buy war supplies as the Western Powers won't sell them anything. There is little Arab transportation, which makes it impossible to supply troops any distance from their bases. On the other hand Israel has ample funds and with the sea open can and has imported large quantities of war supplies and transportation.

Israel does not intend to compromise about Palestine, by accepting a partition of that country. It wants all of it, with all Arabs expelled regardless of refugee problems which thereby must arise. Israel's claims now extend to include all of Trans-Jordan. What happens to the Arab inhabitants, who exceed in numbers Jews already in Palestine, and those expected, is to be left to the United Nations.

## The Lieutenant Who Licked the Subs

By Jerome Kearful

Because a young lieutenant had been a yachtsman as a civilian, Intelligence of the AEF licked the German submarine menace in World War II. Here is the way the lieutenant solved a problem to which the Allies had vainly sought an answer for two years.

One day in October, 1917, a grizzled Frenchman who was serving as a field guard near Chaumont, France, watched with astounded incredulity as a giant German Zeppelin drifted in slowly over the tree tops and came to rest on the ground. Scarcely crediting his eyesight, the old man approached and captured the big gas bag and its crew.

The Zeppelin that had landed near Chaumont was the L-49. It had exhausted its fuel supply fighting a storm encountered returning from a raid on London. The giant now lay, a helpless prisoner, on a field in France.

American Headquarters were near Chaumont, and officers and men were

soon on the scene. One of the first interests was to try to locate the secret papers and documents that had been carried on the German airship. The prisoners were carefully searched, but not a thing of importance was discovered. What had they done with their papers?

American officers felt sure they had not been burned, since the dirigible was hydrogen-inflated and flame would have been disastrous. Then, retracing the course the Zeppelin had taken from the coast, scraps of paper were found scattered over a considerable area. The Germans had torn up their papers as their ship drifted earthwards.

Several men collected twenty-two sackfuls of these scraps. That night, an Intelligence group started work on a series of jigsaw puzzles. But nothing seemed to fit together. There was a mountain of small scraps of paper, and none of them made sense.

A young staff lieutenant joined the puzzlers. The first thing that came to his eye was a piece of bluish paper that looked like water. The lieutenant had been a yachtsman, and he recognized the coastline of the Danish islands, where he had done much sailing. He persuaded the others to pick out any scraps that looked like parts of a map so that he could try to fit them together.

Soon there took form a submarine code map! When it was completed, it formed a guide to all German U-boats operating in German waters, the North Sea, and French and British waters. For two years the Allies had been employing every device in an effort to obtain such a map.

From then on, the submarine menace was definitely licked. Almost immediately, shipping losses declined greatly, and record numbers of the undersea foe were destroyed. A yachtsman's experience played an important part in winning World War II!

— And what better thing at  
Christmastide than to be a  
giver of Books? — YE  
FIELD ARTILLERY  
JOURNAL, 1948.



### **Eisenhower's War**

*CRUSADE IN EUROPE.* By Dwight D. Eisenhower. 559 pages, photographs, maps. Doubleday. \$5.00.

By Colonel R Ernest Dupuy

"War is waged in three elements but there is no separate land, air or naval war. Unless all assets in all elements are efficiently combined and co-ordinated against a properly selected, common objective, their maximum potential power cannot be realized. Physical targets may be separated by the breadth of a continent or an ocean, but their destruction must contribute in maximum degree to the furtherance of the combined plan of operation."

Thus General of the Army Dwight D. Eisenhower in his narration of the Allied campaigns he commanded — world-shaking campaigns which ended with the destruction of German military might in the West. This was his strategical and tactical policy, and this book is his story of how he carried out that policy in three great amphibious operations on two continents, then swept Western Europe.

The very scope of the book has necessitated drastic paring of detail, so that it becomes at times a compendium. All in all, however, it swings along at easy, readable pace.

The Supreme Commander has set down his hopes and fears, as well as the obstacles placed in his path by clashing nationalities and personalities. One gets a very vivid impression of the colossal task involved in welding an integrated command.

Some, but not all the many moot points and controversial events which politics and nationalistic differences exploded in front of Eisenhower, from Africa to the bank of the Elbe, are clarified. For instance, he explains very fully the so-called "Darlan incident" in Algeria. The facts were that French

Generals Mast and Bethouart sold Giraud to both Ambassador Murphy and "Ike" as the man to electrify the French Army in Africa. They were wrong; the French would not obey Giraud. When it was found that Darlan could be used to produce a "cease fire" order transforming North Africa from an occupied enemy country to status of ally, Eisenhower rightly so used him.

Most illuminating is the statement that the late President Roosevelt, at Casablanca, continually referred to French North African problems in terms of compulsion. "It was necessary," says the author, "to remind him that from the outset we had operated under policies requiring us to gain and use an ally."

While Eisenhower had nothing to do with the Anzio operation — he was on his way to Europe when his concurrence was sought — he felt and stated that it was a risky venture. Churchill was all for it, and he had his way.

The Patton "slapping" incident in Sicily, when stout-hearted "Georgie" struck a shell-shocked soldier in belief he was a malingerer, is discussed. Eisenhower did reprimand Patton. "Beetle" Smith, his belligerent Chief of Staff, did pull a boner and quibble in his later statement to the press that no reprimand was issued. Smith ten minutes later "ruefully regretted" his error. The mishandling of the incident public relations-wise proved that in dealing with the press, as the author somewhat naively remarks, "we plainly had to be right the first time."

The press—meaning war correspondents—is mentioned several times. The author tells of his well-placed confidence in his "quasi staff officers" when, a month ahead of time, he revealed the Sicily invasion plans. On the other hand he is silent with reference to the stupid slapping of an iron curtain on those correspondents when the

German Ardennes counter-offensive started. The ensuing forty-eight-hour hiatus, when any and all information, even in confidence, was refused the correspondents while our press was being fed by the German radio, led to such panic in the United States that Major General Ray W. Barker, SHAEF G-1, was rushed by air to Washington in a hush-hush trip to explain to a War Department set into a tizzy by the clamor of the American people.

A bit of confidence in the correspondents at this time might have saved much trouble. Silent too is the Supreme Commander on the muddled reasoning leading to the Kennedy incident, when the Associated Press correspondent broke his word and issued the story on the Rheims surrender prior to authorization. How one could dream of refusing to the American and British people instant news that their war was won is a mystery. The blame for that decision, however, lies with our respective government heads and not with "Ike," who had his orders.

Of the Ardennes battle itself Eisenhower writes in forthright soldierly language. One must hope that his lucid narrative will settle once and for all time the nationalistic differences aroused before the fight was won, as well as the Monday - morning quarterbacking on what might have been.

"We remained on the offensive," states "Ike," "and weakened ourselves where necessary to maintain those offensives. This plan gave the German opportunity to launch his attack against a weak portion of our lines. If giving him that chance is to be condemned by historians, their condemnation should be directed at me alone."

Unremitting pressure was placed on the Supreme Commander to appoint a

"It is magnificent!  
Nowhere in fiction can  
one find moments more  
vivid, emotions more  
poignant. Nowhere is the  
past more magnificently  
and poetically alive."

—CHICAGO TRIBUNE

## Remembrance Rock by CARL SANDBURG

• "In the grand manner his story sweeps through the chronicle of America, holding in its astonishing grasp as heroes and heroines the people of this perpetually young republic . . ."—

*New York Times*

• "It is Carl Sandburg's evocation of the meaning of America . . . a novel with roots deep in the soil of the American past, and finds in it sure faith in the changing future . . . This is historical romance with a new accent, the strong bass of Carl Sandburg."—*New York Herald Tribune*.

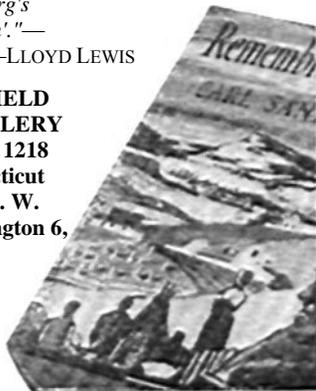
• "It is of epic stature, heroic in concept and execution . . . Readers who enjoy a good story will thank him for this memorable expression of the American spirit."—

*Philadelphia Inquirer*

*An Immediate Best-seller on publication!  
"As a work of art  
'Remembrance Rock'  
stunds beside  
Sandburg's  
'Lincoln'."*—

—LLOYD LEWIS

U. S. FIELD  
ARTILLERY  
ASSN., 1218  
Connecticut  
Ave., N. W.  
Washington 6,  
D. C.  
\$5.00



British "deputy" as ground-force commander. This pressure reached all the way up to the British Chiefs of Staff, fomented by Fleet Street and a clique of pro-Monty fans in the War Office. While Eisenhower does not say so, this nationalistic friction, from the very moment that the 12th Army Group sprang into being, must have become almost unbearable. General Marshall's support was most welcome.

The greatest double envelopment in all military history, with the prongs of Simpson's U. S. Ninth Army and Hodges' U. S. First Army closing on all that was left of Nazi ground forces in the encirclement of the Ruhr, was no spur of the moment affair. It was envisaged from the beginning of Overlord planning. This, of course, takes away no iota of glory from Omar Bradley and his 12th Army Group in the tactical implementation of the plan, from the time the Remagen Bridge seizure proved that fortune favors the brave.

Out of the book pop interesting vignettes of F.D.R., Churchill, the difficult de Gaulle, prima donna Montgomery and his smooth Chief of Staff, Freddie de Guingand, swashbuckling warrior Patton, and a host of lesser lights. Marshall, for whom Eisenhower shows actual reverence, stands in a niche of his own.

Winston Churchill's clash with the author when "Ike" presented Stalin with his final plan — through General Dean's Military Mission in Moscow — on March 28, 1945, is interesting reading. The "P. M." complained to Washington that Eisenhower had "changed his plan," as both Churchill and the British Chiefs of Staff practically breathed down the Supreme Commander's neck. Churchill wanted Montgomery thrown forward in desperate attempt to reach Berlin before the Russians. Ike felt that Berlin was no longer an important objective; that the Allies had already agreed on the British and American occupation zones; that the thing to do now was "to divide and destroy the German forces," and that he was within his authority in communicating direct with Stalin. The US Chiefs of Staff promptly upheld his hand.

In his final chapter on Russia, the author gives his impressions of the

people and particularly of Marshall Zhukov, with whom he had struck up warm friendship. He explains plainly the difference between Western and Russian concepts of military efficiency. He is convinced that the Western Allies should have stood on the Elbe as occupation limit, and blames our "political heads" for the Yalta Agreement which surrendered so much to Russia.

Good maps, well-chosen photographs and excellent typography are assets. The front end-sheet brings nostalgic memories of the SHAEF secret war room, as we knew it before D-Day. *Crusade in Europe* is a "must" in every military man's library. It is unfortunate that it still leaves room for argument upon many relatively minor incidents in one of the two greatest campaigns of history (MacArthur in the Pacific is, of course, the other). As instance of omission can be mentioned the 200-mile mass movement of General John C. H. Lee's S.O.S. from Normandy to Paris immediately upon its liberation. According to "Beetle" Smith at the time, this move was without SHAEF authorization. Certainly it contributed mightily to the acute gasoline shortage just when our combat forces were knocking at the Siegfried Line.

Finally, one cannot pass over President Truman's remark to "Ike" when riding with the Supreme Commander and General Bradley in Germany after the Potsdam Conference. Out of a clear sky, says Eisenhower, the President turned to him and said: "General, there is nothing that you may want that I won't try to help you get. That definitely and specifically includes the presidency in 1948!"

### The Other Side

*THE GERMAN GENERALS TALK.* By B. H. Liddell Hart. 300 pp. Index. William Morrow & Co. \$4.00.

By Col Conrad H Lanza, Ret

This is a reportorial account of interviews, or talks, between the author and a number of leading German generals who were prisoners of war. Germans are usually talkers. The war being over the German generals were probably glad to have a military man

enliven their captivity by discussions of their campaigns.

Captain Liddell Hart is a veteran military writer and commentator, able to discuss military campaigns, leadership and logistics with an analytical eye. The generals told him a lot, and what they said forms the substance of the book. This is not a history. There is no connected story about any important operation of the great war, but there are many authoritative statements which cast a light upon past events. It will be more valuable to a military student familiar with the general situation than to the cursory reader.

In evaluating the statements of the German generals, allowances must be made for the fact that they had considerable time to think things over. They were in confinement and some were threatened with possible trial for conduct contrary to the laws of war. Under those circumstances the generals naturally sought to place their own acts in the best possible light. None admitted making any errors or having committed anything wrong. They all spoke from memory as their official records were not available to them. This type of evidence can not be ignored but it is of secondary value.

The talks agree in alleging that when German operations failed to turn out well the fault was Hitler's, who is now dead and whose point of view is not available. Practically every German disaster is charged as having been exclusively the fault of Hitler, owing to his having disregarded advice given to him by the experienced German generals — that is, "experienced" according to their own personal opinions. The generals admitted, however, that Hitler acted against "experienced" views in his campaigns in Norway, France and during the first part of the war with Russia, where he won hands down. The evidence fails to show that the advice of the "experienced" German generals was more often right than Hitler was.

Hitler had a great deal of initiative. He accepted advice — quite liberally from front-line generals but less often from the swivel-chair type. Hitler had studied tactics and strategy and could apply what he had learned. Some of his generals probably knew more but they

lacked initiative and boldness; these were the ones generally opposed to the Fuehrer. One of the marvels of World War II is that Hitler, in spite of an unusually poor education, had the ability to conduct a war which had been planned almost entirely by himself, and keep it going against the United Nations for nearly six years. Neither the German generals of World War I nor those of World War II can show any such record.

Liddell Hart's book is most interesting reading and a valuable contribution to the historical record.

### Arms and the Woman

*EISENHOWER WAS MY BOSS.* By Kay Summersby, Captain, WAC, AUS. Edited by Michael Kearns. 302 pages, photographs. Prentice-Hall. \$2.75.

By Colonel R Ernest Dupuy

Woman's place in war was pretty definitely established by World War II. Of all the nations involved, the United States, it seems, was the only one which did not recognize her as a combatant. Russian women fought. British women manned antiaircraft guns. The American's place was administrative—nurse or WAC, WAVE, Marine or WASP. They got under fire. For that matter American female war correspondents in the West actually saw front-line fighting, witnessed the filth and horror of combat.

But for one small group of women a unique experience was in store; these were the WAC's actually engaged in administrative work on the Supreme Commander's personal staff in the A.E.F. They were, in consequence, completely in touch with the most secret plans and operations of AFHQ and SHAEF. There were Mattie Pinette, Nana Rae, Sue Serafin, Margaret Chick and Kay Summersby. There was also Ruth Briggs, coldly efficient like her boss, Lieutenant General W. Bedell Smith, the Chief of Staff, who would later follow him to Moscow. And there was Sally Bagby, General Carl A. Spaatz's secretary.

Some of these women were at the Rheims surrender. Nana Rae went to Berlin for the Russian ratification next day and actually typed the documents.



Portrait photograph by Karsh. Ottawa

## A great American statesman tells the story of his long, distinguished public service

"It is wonderful to have the verdict of a statesman and gentleman who really knows what he is talking about; one feels that here is the true beginning of the verdict of history."

— ROBERT E. SHERWOOD

"There can be only one other set of personal memoirs out of this War, written in English, that will be in the same class with them, and those, of course, are Churchill's. These are tops for this country, I have no doubt."

— WALTER LIPPMANN

\$5.00

2 Volumes Boxed • Autographed \$15.00

By HENRY L. STIMSON  
and McGEORGE BUNDY

ON

## Active Service

IN PEACE AND WAR

Order from

U. S. FIELD ARTILLERY ASSOCIATION

1218 Conn. Ave. Washington 6, D. C.

## WHAT ABOUT US?

**Is Civilization doomed?**

**Can the Marshall Plan unite Europe?**

**Must history repeat itself?**

**Can Russia and the West live in peace?**

**How can we survive?**

Questions of desperate urgency for us all are here illuminated by one of the most brilliant minds of our age—or any age—in a book whose vital subject matter and easy, informal style make it of immediate, constructive importance to you.

**ARNOLD J.  
TOYNBEE'S**

**NEW BOOK**

## Civilization On Trial

**By the author of  
A STUDY OF HISTORY  
Just Published—\$3.50**

Kay Summersby and Sally Bagby were there for the ride. This maxed it for Kay, who had seen the Rheims ceremony, and who, of all these girls, was perhaps closest to General Eisenhower — first as chauffeur, then as secretary.

So Kay has written a book, a feminine version of the Supreme Headquarters *vie intime*, already described by Captain Harry Butcher, U.S.N.R. It is not history; it was not intended as such. But as a sidelight into what happened at SHAEF and before that at AFHQ, it is interesting. The great and the near-great who swarmed in and out of General Eisenhower's command post came into Kay's ken and she tells what she thinks of them. She drove Churchill. She drove the late President Roosevelt at Casablanca—much to the annoyance of the Secret Service. She had picnic lunch with the President along the road. For this reviewer's taste, there is too much of the indiscretions of "Ike's" famous Scottie, Telek. But that was his reaction also to "Butch's" book: Winston Churchill and Telek sharing space.

But the book has its dramatic moments. Describing the fateful decision which put the airborne divisions up and launched the great armada for the Normandy invasion, she becomes lyric:

"The night was lovely, clear and filled with stars.

"Aircraft took off near by, climbing up to join the massive formations gathering in every direction. Their blinker signals winked ominously.

"Then they started off for Normandy.

"General Eisenhower turned, shoulders sagging, the loneliest man in the world."

### Washington Without Pedestal

*GEORGE WASHINGTON, A Biography, Vols. I and II, Young Washington, by Douglas Southall Freeman. 549 and 464 pp., Charles Scribner's Sons. \$15.*

By Dr. Louis Morton

The publication of these two volumes marks the beginning of a new six-volume life of George Washington, to be completed in 1952. It is an important event, not only for the greatness of the subject but for the distinction of its author as well. Douglas Southall Freeman is well known to military readers and to those interested in military history. His studies on the Civil War (*Robert E. Lee* in 4 vols. and *Lee's Lieutenants* in 3 vols.) have covered the subject so exhaustively as to leave little for other writers to say. The present biography, like the author's earlier work, is planned along monumental lines. When completed it will be the longest life of Washington ever written.

Freeman's two volumes cover the years of Washington's education and early military career. They end with the year 1758, when Washington had reached his 28th birthday. At that time he resigned his commission in the Virginia Regiment, leaving behind him, he believed, his military career. Before him was his marriage and the pleasant prospect of life as a Virginia planter, landholder, and slave-owner. From 1758 until 1775, when he was made commander of the Continental Army, Washington gave slight attention to military affairs.

Freeman covers fully Washington's ancestry and presents a fresh picture of many members of his family which will

surprise the patriotic antiquarian. His great-grandfather was a forthright, rude, and aggressive man who was thrice married, not an unusual accomplishment in the Colonies. Washington's father emerges as a vacillating person. The reader will be delighted with the portrait of his mother, Mary Ball Washington, a disagreeable but strong woman who became a widow when George was only eleven years old. Washington respected her, but kept away from her as much as possible. The chief influence on young George's character came from his half-brother, Lawrence, a polished and accomplished man who left George his estate, Mount Vernon. Much space is given to the Fairfax family, proprietors of the Northern Neck, whose members were wealthy and influential and had much to do with advancing the career of young Washington.

Freeman soon found that to write about Washington he had to write about Virginia also. The period of Washington's youth (1740-1752) has not been as fully treated as have earlier and later periods in Virginia history. Freeman devotes over 100 pages to a description of Virginia society during these years. The setting is the Northern Neck, that region between the Rappahannock and Potomac Rivers, which was dominated by wealthy planters and characterized by an economy based upon the growth of tobacco and a labor system based upon slavery.

The present volume contains a full account of the campaigns against the Indians on the frontier and against the French. The story of Washington's career as a surveyor and as a soldier is told in great detail. Freeman's reputation as a military historian is enhanced by these volumes. No detail is too unimportant to escape his attention—the weather, terrain, geography, and military characteristics of the region Washington operated in are fully described.

In the last chapter Freeman sums up the character and training of his subject. He finds him to be a reserved and complex man, sensitive and proud, with a liking for money and property. Washington's character, Freeman believes, was more complex than Lee's. He lacked a sense of humor and balance.

His dominant trait was a "quenchless ambition," a desire to excel in all things, in wealth, honor, eminence, and military distinction. He achieved these things not because of his genius but because of his infinite capacity for work and his great powers of concentration—always the mark of a man of ambition and ability.

Washington, at the age of 28, was already a colonel and probably the greatest native military commander in the Colonies. Freeman's analysis of his strengths and weaknesses as an officer will have much interest and timely importance to military men of today.

One must conclude after reading these volume that at this stage Washington was not a great man but he showed all signs of becoming one. He had many failings but they were those of youth and inexperience. If he was not a man who had the capacity to inspire the devotion which men like Lee and Franklin Roosevelt aroused, he certainly inspired the respect of those who knew him.

#### Contemporary Civil War

*THE AMERICAN ILIAD: THE EPIC STORY OF THE CIVIL WAR AS NARRATED BY EYEWITNESSES AND CONTEMPORARIES.* Edited by Otto Eisenschiml and Ralph Newman. 720 pages. Maps; bibliography; index. Bobbs-Merrill. \$5.00.

By Dr. John Miller, Jr.

The Civil War was probably the bloodiest in American history. The casualty rates in several World War II engagements in which American troops fought may have exceeded those of Gettysburg and Spottsylvania, but in spite of the unreliable nature of Civil War statistics it seems safe to suggest that, for the United States, it was proportionately more sanguinary than was World War II.

It is this bloody quality, the tremendous number of casualties, that will most impress the reader of *The American Iliad*. But certain other comparisons with World War II will undoubtedly spring to mind. One of the outstanding characteristics of Civil War tactics was the almost absolute superiority of the defense over the offense, given equality of numbers and equipment. Even though the widespread use of single-shot small arms inhibited the power of both defense and offense, it is continually surprising to note the

reliance on shock action, on closely massed columns of infantry with fixed bayonets hurling themselves in costly and frequently vain direct assaults against prepared positions. Yet in other respects the Civil War was the first great war of the machine age. The railroad, the steamship, and the telegraph found military employment. Breechloading rifles were introduced. An armored warship with a revolving turret effected profound changes in naval architecture and tactics. The scorched-earth policy and *Schrecklichkeit* were employed against civilians.

These points are all implied, rather than expressed, in *The American Iliad*, which as the full title indicates is a narrative account of military and naval operations in the form of excerpts from the writings of a large number of Federal and Confederate civil officials, soldiers, sailors, journalists, and observers, skillfully arranged by two close students of the Civil War. All ranks, from generals to private soldiers, give their testimony, but there are no quotations from De Forest's fascinating *Diary of a Volunteer*.

No hitherto unknown facts are recorded. The editors do not attempt any critical analyses of the documents quoted. Since precise citations are not given, and the editors have freely altered the texts of the quoted materials to shorten lengthy passages, clarify obscurity, and provide easy reading without distorting meaning, *The American Iliad* can not be used as a collection of source material. The cartography is far from adequate. The picture maps are, to this reviewer, more difficult to understand and much less informative than conventional military maps.

The objective of the editors, however, has been largely realized. They have presented, through the writings of eyewitnesses and contemporaries, an interesting and readable panoramic view of the battles of the Civil War.

**DID YOU LET IT SLIDE LAST YEAR?**

**Order now your Journal binder to keep the year's issues in handsome, handy reference.**

#### Civil War Stateswoman

*WOMAN WITH A SWORD.* By Hollister Noble. 395 pages. Double-day. \$3.00. By Robert F. Cocklin

Not much has been written about the vital role played by Anne Carroll of Maryland during the Civil War, Anne Carroll would be an extraordinary woman in any day but was particularly so during the period in which she lived. She was possessed of a brilliant mind, sublime courage, and a better legal education than a vast majority of the practising lawyers of the 1860s. She enjoyed a close companionship with her father, who had formerly been governor of Maryland, and through him gained a good basic knowledge of practical policies. Through close association with Henry Clay, Millard Fillmore and others, her political astuteness developed, and since the leaders of her day were quick to appreciate her intellectual brilliance she was accorded a respect unapproached by any contemporary woman. She actually served as advisor to President Lincoln and members of his cabinet, and in this capacity

*A Book to Scare Anyone (in an important way)*

## ROAD TO SURVIVAL

By WILLIAM VOCT

**SCIENTIFIC ANALYSIS WITH THE PACE OF AN ADVENTURE NOVEL**

A brilliantly written, relentless portrayal of mankind's dilemma as the earth is rapidly being impoverished and overpopulated. A noted scientist shows what can be done about it—or else. **\$4.00**

**U. S. FIELD ARTILLERY ASSOCIATION**  
1218 Conn. Ave., Washington 6, D. C.

AS INTRODUCTION  
TO  
THE REVISED  
ARTICLES OF WAR

THE NEW  
ARTICLES  
OF WAR

by

COLONEL  
FREDERICK B.  
WIENER

EXPLANATION AND  
COMPARATIVE TEXT  
FOR OFFICERS AND  
ENLISTED MEN

When the new Articles of War go into effect 1 February 1949 every man in the Army who is concerned with disciplinary problems or administration of the new A.W. must be familiar with the new Regulations, procedures and penalties.

Colonel Wiener, authority on military law, compares the old with the new, explaining differences and effects.

96 pages — only \$1.00

Order Today

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

drafted many important papers for the administration. To her goes original credit for the daring plan which ultimately spelled victory for the Union forces in the West.

Mr. Noble has made the most of the excellent material which the life of Miss Carroll provides. There is ample evidence that the facts in this story have been derived from painstaking research and, what is equally important, it is a cracking good novel to boot. Hollister Noble has done a magnificent job of writing in *Woman With A Sword* and, coupled with his interesting subject matter, it combines into one of the most exciting and entertaining fiction pieces of the year.

#### Early Frontier Saga

*TOWARD THE MORNING.* By Hervey Allen. 458 pages. Rinchart & Co. \$3.00.

By Robert F. Cocklin

*Toward the Morning* is the third volume of a five-panelled chronicle which Hervey Allen expects to complete by 1951. He has entitled this chronicle *The Disinherited*, and it is essentially the story of the life of Salathiel Albine who as a boy was spirited off into the Allegheny wilderness by the Shawnee Indians.

In the course of the first two volumes, *The Forest and the Fort* and *Bedford Village*, Salathiel has grown to manhood and has returned from savagery. The phase of his life covered in this book traces his journey eastward from Fort Bedford to Philadelphia. It is a slow wintery journey, with frequent stops and diverting experiences. As a matter of fact, this volume displays to the fullest the remarkable writing talents of Mr. Allen. His vivid recreation of life in and around the Cumberland Valley during this early period rings with authenticity. At the same time, his wealth of detail and flamboyant description are carefully intermixed with his basic story-telling, which is both earthy and sound.

The story opens with Salathiel, accompanied by his sweetheart, Frances Melissa O'Toole, making their way eastward in the horse-drawn "ark" which Salathiel has inherited from his late superior, Captain Simeon Ecuyer. At their first stop in Fort Lyttleton, they

begin the first in a series of adventures that comprise the story of the journey. An agreement to take a frontier orphan, Bridget McSandliss, to her grandmother adds the third main character to the story.

The journey is longest delayed in Carlisle town and of course it is there that the greatest part of the action takes place. Here we see the author's writing mastery at its best. He manages to tell a number of complex stories simultaneously without losing control of any of them. And it is with awe that we report that each of them contributes to the overall theme and is neatly woven into the pattern.

#### Schools for Scandal

*THE HICKORY STICK.* By Virgil Scott. William Morrow & Co. 749 pages. \$3.95.

By Allen Otten

Sometimes a book rips the surface from part of the accepted, applauded life of America, and lays bare a subsurface so horrible that the reader almost refuses to believe. This is such a book. Pulling no punches and obviously writing largely from first-hand knowledge, Virgil Scott hammers home his theme — our small - town public school systems are loaded with graft, politics, bootlicking, incompetence, sloth. After 749 powerful pages, the reader is reluctantly convinced — and disturbed.

Ugly Doug Harris, fresh out of teachers' college, lands a job teaching English in Shenkton, a small town in Ohio. His salary is something under \$1,000 a year. In return, in order to keep his job, he and his pregnant wife must rent their house and buy their furniture, food, clothing, insurance, and medical services from members of the school board. Faculty members who try to knock some real knowledge into their pupils are rapidly beaten by a combination of student apathy, small-town morality, and local school board politics. Doug eventually solves his problems, but the book leaves the clear impression that few are so fortunate — and that all of us suffer thereby.

If only 50% of this book is true — and probably that much or better is — America had better start looking long and carefully at its public schools.

## BOOKS FOR TOTS AND TEENS

Best news for people who have to find presents for the very little ones is the relative abundance now—at fairly low cost—of the recently hard-to-get rag books. Platt and Munk has just reissued the long favorite Dean Rag Books from England (*Look Here, Hallo Neddy, Toy Town, ABC and Counting Book*, each \$1.50, and *Country Life, Fur and Feathers*, and *Farmyard Book*, each \$.75). Harper has come through with three titles, slightly less satisfactory than the Dean series but still very good (*What's That*, \$1.35, and *Sam the Fruit Man and Sounds Pretty*, each \$1.25).

Now for a listing of good recent books for the older little ones, for the early readers, and for the teens. The groupings are rough, and choices should be geared to individual tastes. We've tried to start each group with the simplest book and work on up.

### 2 to 6 or 7

*The Little Train That Saved the Day*. By Charlotte Steiner. (Grosset, \$.50). A good simple story of a little freight train snubbed by a big shining excursion train. Excellent colorful illustrations.

*Bears*. By Ruth Krauss. (Harper, \$1). Combines two sure-fire favorites: toddy bears and nonsense words.

*The First Christmas*. By Robbie Trent. (Harper, \$1). The Christmas story told rhythmically for the young listener.

*The Golden Mother Goose*. Edited by Jane Werner. (Simon and Schuster, \$1.50). Not up to the Golden standard, but still quite a buy.

*Creepers' Jeep*. By Hardie Gramatky. (Putnam, \$2.25). Typically appealing Gramatky illustrations enliven this story of the jeep that didn't want to be bought and acted up about it.

*Babar's Cousin: That Rascal Arthur*. By Lautent de Brunhoff. (Random House, \$3.50). A fine sequel to the elephant king series. Expensive but worth it.

*Lulu's Play School*. By Charlotte Steiner. (Doubleday, \$1.825). Lulu starts a hilarious school for the neighborhood children.

*Thidwick, the Big-Hearted Moose*. By Dr. Scuss. (Random House, \$2). Parents, even more than children, will enjoy this story of the moose whose tenderness to other animals got him in trouble. The usual fine Scuss illustrations.

*Blucherties jor Sal*. By Robert McCloskey. (Viking, \$2). Sal and her mother go berrying, and get mixed up with a mother bear and baby bear on the same mission.

*Mick and Mack and Mary Jane*. By Richard Bennett. (Doubleday, \$1.75). Two lumbermen and the mouse that saved their lives.

*Cats for Kansas*. By LeGrand. (Abingdon Cokesbury, \$1.50). Second in a series of illustrated story books based on authentic regional folk-lore, this tells how pioneer trader Gabe Slade brought his crate of cats to Kansas.

*More Favorite Stories Old and New*. Edited by Sidonie Matsner Gruenbert. (Doubleday, \$3.75). A top-notch collection for all ages and tastes. Worth the high price.

*Red Fairy Book and Green Fairy Book*. Edited by Andrew Lang. (Longmans Green, each \$2). At long last, reissues of these old favorites.

*Nils*. By Ingri and Edgar Parin d'Aulaire, (Doubleday, \$2.50). Another typically fine work of

the d'Aulaires, this time about a Norwegian immigrant lad who is determined to be an American cowboy.

### The Early Readers—6½ or 7 to 10 or 11:

*Azor*. By Maude Crowley. (Oxford, \$2). A charming story of a little boy to whom animals talked.

*Sue Ann's Busy Day*. By Sally Scott. (Harcourt Brace, \$1.75). A little girl earns the money to buy the silk flags she has set her heart on. A charming story, as is *Elsa's Secret*, by Eve Grey (Doubleday, \$2.25), the tale of a little would-be actress who feels she must hide the imminent loss of her first teeth lest she lose her part in the school play.

For the dog-lovers there are three novels: *White Boots*, by Helen Ott Watson (Houghton Mifflin, \$2.50), with an excellent Puerto Rican background; *Patch*, by Mary Elting (Double-day, \$2), with a Kentucky farm setting; and *My Brother Mike*, by Doris Gates (Viking, \$2.50). For the horsey set, there's *I'll Take Cappy*, by Lee McCabe and Norbert Fagan (Whittlesey, \$2) and *Rosa and Randy*, by Katherine Wigmore Eyre (Oxford, \$2.50).

*Barnyard Family*, by Dorothy Childs Hogner (Oxford, \$2.75) has lots of basic information for the fairly young on all the farm animals, and *Let's Look Inside Your House*, by Herman and Nina Schneider (William R. Scott, \$1.50), is made to order for the parent whose child is always wanting to know how electric lighting or plumbing or the furnace operates.

Three other excellent volumes do exactly what their titles imply: *The Junior Party Book*, by Bernice Wells Carlson (Abingdon Cokesbury, \$2); *How to Make Dolls and Dollhouses*, by Tina Lee (Doubleday, \$2.25); and *Tricks Every Boy Can Do*, by Joseph P. Todd (Hart, \$2).

### 11 or 12 on through the teens:

Recommended fiction includes: *Ab Carmody's Treasure*, by Cytus T. Fisher (Holt, \$3), a good adventure yarn with a Guatemalan background; *Red Embers*, by Dorothy Lyons (Harcourt Brace, \$2.50), a first rate girl-horse story, with a polo background; *Boots*, by Col. S. P. Meek (Knopf, \$2.50), boy and dog on a Wyoming sheep ranch; *Scarface*, by Andre Norton (Harcourt Brace, \$2.75), an action-packed yarn about the Tortugas pirates; *Southpaw from San Francisco*, by Philip Harkins (Morrow, \$2.50), tops for the baseball fan; *The Brown Fox Mystery*, by Ellery Queen, Jr. (Little Brown, \$2.50), a harmless whodunit for the junior set by the old master; *Saddle Up! Ride 'Em High*, by Billy Warten (McKay, \$2.50), a corking good cowboy yarn; *Bound for Singapore*, Howard Pease (Doubleday, \$2.50), typically high-grade Pease, combining sea and dog themes; *Pass That Puck*, by Richard D. Flood (Houghton Mifflin, \$2.50), the first good hockey story in ages; *Flashing Spikes*, by Frank O'Rourke (Barnes, \$2.50), another first-rate baseball tale; and *A Treasure Chest of Sea Stories*, edited by Max J. Herzberg (Messner, \$3), a fine salty collection.

For the older teens, good novels include: *Action at the Peaks*, by Frank O'Rourke (Random House, \$2.50), romance and adventure in the Apache warfare period; *Bride of Fortune*, by Harnett T. Kane (Doubleday, \$3), the fictionalized romance of Varina Howell and Jefferson Davis; *Black Ivory*, by Norman Collins (Duell, Sloan and Pearce, \$2.50), adventure in the slave trade days; and two corking Westerns, *Dead Man's Gold*, by W. C. MacDonald (Doubleday, \$2.50), and *Spectre Spread*, by Tom West (Dutton, \$2.50).

There are many fine biographies for this age group: Nina Brown Baker's *Robert Bruce, King of Scots* (Vanguard, \$2.75); *That Lively Man, Ben Franklin*, by Jeannette Eaton (Morrow, \$2.50); *Fighting Frontiersman: The Life of Daniel Boone*, by John Bakeless (Morrow, \$2.75); *Verdi*, by Dena Humphreys (Holt, \$3.50).

## JUST RELEASED!

The intimate biography of  
the "soldier nobody knew"  
but millions loved as . . .



"Blackjack" JOHN J.

# PERSHING

General of the Armies

by his life-long friend

COL. FREDERICK PALMER

World famous as the leader of our Expeditionary Force in World War I, the dynamic, guiding genius of this great soldier, statesman and gentleman exerts an even greater influence on our national life today. Through the legacy of his brilliant military ideas and actions, through his proteges like Secretary of the State Marshall, General MzcArthur. and many other top ranking figures here and abroad, his spirit lives on.

This revealing portrait, which his death releases, shows the man behind the uniform from his boyhood in Missouri, through his days at West Point, to his role on the world stage where he played, and still plays, a decisive part.

ILLUSTRATED. \$4.50

400 PAGES

ORDER FROM  
U. S. FIELD ARTILLERY ASSOCIATION  
1218 Connecticut Avenue. N. W.  
Washington 6, D. C.

**NOW! Out of Germany comes this stupendous picture of an army in disintegration**

# Stalingrad

By THEODOR PLIEVIER

What happens to an army facing total defeat? Here, in a magnificent novel drawn from actual records and conversations with defeated Germans in PW camps, is the story . . . a volume which every one interested in strategy and tactics in actual practice must read.

A vast, panoramic story of men, from lowliest private to the High Command, snared in an icy inferno of starvation, disease and ceaseless attacks, STALINGRAD is a superb novel of conquerors in collapse. It stands alone as a searing indictment of War itself . . . a vividly dramatic novel of doomed souls facing, each in his own way, his terrible destiny. Here is the major piece of writing yet produced by the Second World War.

STALINGRAD has sold 1,200,000 copies in Central Europe in various editions. It has been translated into 17 languages. No more powerful book on any phase of World War II has been written in any language.

**\$3.00**

**U. S. FIELD ARTILLERY  
ASSOCIATION 1218 Connecticut  
Avenue, N. W. Washington 6, D. C.**

## BOOKS IN COLUMN

By Major N. L. Drummond, FA

This month's normal quota of briefs on recent books is grouped under general type headings for the convenience of Christmas gift-book shoppers. We wish to encourage season's greetings by book—especially for purchase through the Association's unparalleled offerings—but there is no attempt at complete coverage of good books available within each category.

### War Fiction

Together with Norman Mailer's *The Naked and the Dead* (July-August JOURNAL) four recent novels present effectively a large portion of every main aspect of World War II. Irwin Shaw's *The Young Lions* (Random House—\$3.95) portrays our European war with less deadly impact, but as vividly as Mailer's book handled the Pacific fighting. Shaw's sweeping panorama extends from prewar days through the entire action, primarily treating three infantrymen—a young German sergeant and two Americans of widely different background and temperament—whose combat careers are rather imperfectly interwoven. Rapidly shifting scenes of attack and retreat, front line action and rear area pleasure, develops effectively the drama of how these three change under the challenge of continued combat. The book is marred by a contrived, stagey handling of incident and plot structure, and often resorts to melodrama, but it is basically sound and highly readable. It satisfies one great lack of the Mailer book—showing the humor, strength and camaraderie which is a real part of war as well as its brutality and degradation. Shaw catches the immensely varied quality of European war experience—from snatches of civilian rear-area luxury to the frozen horrors of the winter Siegfried line—and here the two books accurately reflect what seems the basic difference between Pacific and European combat life.

*The Crusaders* by Stefan Heym (Little, Brown—\$3.50) concentrates on rear area aspects of the European war, the blend of cowardice and undramatic sacrifice, selfish connivery, self-less labor which formed the great supporting effort. When his scene shifts to front line combat—ranging from exuberant armored force general down to plodding infantry private—the author is equally sound and graphic. His story centers around a combat Propaganda Unit, its forays behind and occasionally into the lines, and how its varied members work out their adjustments to the war's opportunity for shrewd self-seeking or sacrifice, ruthless

brutality or magnanimity. The one common need is to find a personal justification for their unwanted crusade and this main theme of the book is brought into high relief when the close of fighting removes the immediate, compelling goals of victory and individual survival. As the swashbuckling general and the self-seekers or idealists under him begin to reestablish the civil pattern of German community life, open conflict develops between the men who wish simply new labels on the old rigid power and intolerance of the few and those who feel the war was won at least partly to create more opportunity and justice for the many. Round one of this bout is settled in the last chapter; reports on the final decision seem a continuing and uncertain matter for our daily newspapers.

In *Guard of Honor* (Harcourt, Brace—\$3.50) James Cozzens presents a complex but high paced and cohesive drama of air corps command personalities and problems at a huge Florida training base in 1943. Young Major General "Bus" Beal, outstanding combat pilot recently returned from Europe, has been placed in charge of the base in order to test and train his administrative capacity for a projected top-level Pacific command. Inherited personnel include his executive officer, a loyal but outmoded Aid Force colonel nearly a generation older; his eventual right-hand man, a wise elderly colonel recently called from a civilian judgeship; the general's hair-trigger combat comrade, unhappily coping with dull Florida air; and a complex network of career or temporary soldiers attempting to merge sharply differing talents and temperaments. With a superbly told story, equally marked by keen discernment, deft humor and gripping action, the author traces three critical days in General Beal's dynamic slice of empire, where politics, racial animosity, personal conflicts and wartime tensions finally erupt in rapidly mounting crises and a tragic—though soluble—climax.

*Stalingrad* by Theodor Plievier (Appleton-Century-Crofts—\$3.00) splendidly covers the gap left by the above books — the Russian-German front, caught here at its focal point of highest achievement and complete catastrophe. Plievier's novel is a gripping, though at times very wordy, study of the cumulative battle horror, despair, courage and desperate searching for sane values which marked all men from private to field marshal in the hopelessly fighting Stalingrad pocket, after Hitler's maniacal

order condemned the German Sixth Army to utter annihilation there. His main characters range from generals to privates of a penal battalion; amid the chaos of physical and mental destruction, which the book recreates on a sustained level of human tragedy beyond mere bitterness, two of these men work out the fortunate combination of ability and reason to go on living.

Three minor war novels are worth passing notice: *The Wine of Astonishment* by Martha Gellhorn (Scribners—\$3.00), *Thy Men Shall Fall* by Sidney and Samuel Moss (Ziff-Davis—\$3.00) and Allan Lyon's *Toward an Unknown Station* (MacMillan—\$3.00). Of these the first is best—sound in its pieces of combat atmosphere and often moving in its woman's view of the poignant transience of love during combat. The other two combine all normal ingredients of the infantrymen's undesirable life, with more complaint than power.

### Russia

Two recent works cast valuable light on the Russians, past and present. In *The City and the Tsar* (Doubleday—\$3.75) our best known scholar of Russian history extends his earlier treatment of Russia's growth under Ivan the Terrible, treating here the critical era when Peter the Great reorganized the empire and turned it firmly toward the West. A splendid and highly readable book which keenly illustrates that modern Soviet aggression and duplicity are no strange new part of the Russian scene.

A contemporary record of this nation which we must come to know well and quickly is furnished in *As We See Russia* (Dutton — \$3.75), a well-chosen group of articles on the various important aspects of its rulers and peoples by members of the Overseas Press Club of America. All are journalists of high repute and long experience in Russia, with widely differing viewpoints which give the book a well-rounded quality. Each approves and disapproves of much, though the general consensus is unfavorable to the system while sympathetic to the people it dominates. Dominant among the different themes is the feeling that both U.S. and U.S.S.R. are unprepared for their world leadership; we must work hard at building experience in diplomacy and understanding of each other.

### Collected Shorts

The many who enjoy good collections of short pieces should be well cared for this season. Of unusual interest and humor is Willey Ley's *The Lungfish, the Dodo and the Unicorn* (Viking—\$3.75), a light-veined, scholarly tour among the oddities of natural history and the startling facts or outrageous legends which have grown around them. A more contemporary compendium is *Star Reporters and 34 of*

*Their Greatest Stories*, edited by Ward Greene (Random House—\$3.00) which lives up to its title with a delectable menu of humor, personalities and drama. A similar though less varied book, *Disaster*, edited by Ben Kartman and Leonard A. Brown (Pellegrini & Cudahy—\$2.75) contains human interest accounts of the major rampages of nature and human error (outside organized war) which have punctuated the last century. Another form of convulsion is presented by *Dictators and Disciples* (International Universities Press—\$4.25), a connected series of studies in terms of modern psychoanalysis of the great western dictators from Caesar to Stalin.

Collections of more subtle literary flavor are W. Somerset Maugham's highly readable *Great Novelists and Their Novels* (Winston — \$3.00), in which the noted stylist's keen literary and common sense casts much new light on his choice of the world's ten top novelists; the O. Henry Awards *Prize Stories of 1948*, edited by Herschel Brickell (Doubleday—\$3.00), with an introductory discussion and critical commentary in addition to the usual fine short stories; and a group of unusual charm and regional flavor in *Creole Folk Tales* by Hewitt L. Ballowe (Louisiana State Un. Press—\$3.00).

### Americana

In these days of re-evaluating our greatnesses and shortcomings under the searching demands of world leadership, *America Through British Eyes*, edited by Allan Nevins (Oxford—\$3.50) is a particularly valuable contribution, presenting studies or impressions of American leaders, aims, institutions and society by outstanding British observers through 160 years. A thoroughly revised edition with much new material on the period from the first to the second World Wars.

*Fighting Indians of the West* by M. F. Schmitt and Dee Brown (Scribners—\$10.00) is as handsome in format as it is powerful in its treatment, through narrative and 270 closely linked illustrations, of the Indians' epic fight to retain their ancestral lands. The high courage and heartless deception, magnificence and tragedy of both red and white warriors are impartially portrayed; of particular interest are the striking photographs of Indian leaders.

### For the Sportsman

A monumentally attractive and useful gift book, covering its field from A to Z, is *The Hunters Encyclopedia*, edited by Raymond R. Camp (Stackpole & Heck — \$17.50). Good organization, lively text and lavish illustrations in color and black and white make it worth the high price. On several levels below comes *The Fishing and Hunting Answer Book* by David M. Newell

(Doubleday—\$2.45), a grab-bag of chatty information. For a pleasant variety of short, unadorned hunting narratives, *The Field and Stream Game Bag*, edited by Robeson Bailey (Doubleday—\$3.45) presents the best from twelve years of a top sporting magazine. *Hunting American Lions* (Crowell—\$3.75) by Frank C. Hibben—hunter, cattleman and Doctor of Anthropology—is packed with action, anecdote and information, plus a welcome sprinkling of reflective writing.

### Classical and Popular Music

Three handsome gift possibilities cover the main fields of music: *The Concert Companion* by Robert Bagar and Louis Biancolli (Whittlesey House—\$7.50) a carefully organized presentation of discussions of over 500 compositions, with dramatic sketches of their composers; *The World's Great Operas* by John T. Howard (Random House — \$2.95), which conveniently groups and indexes the plots, characters, composers and librettists of 205 familiar or obscure operas; and *A History of Popular Music in America* (Random House—\$5.00) by its popular expert, Sigmund Spaeth, whose current coursing of musical highways and byways is stimulating and thorough.

A brilliant  
companion book to  
**THE MARCH OF  
MUSCOVY**

## The City and the Tsar:



**PETER THE GREAT AND THE  
MOVE TO THE WEST. 1648-1762**

by **HAROLD LAMB**

THE story of Peter the Great and his gigantic labors to dominate the European continent after the Thirty Years' War. Harold Lamb brings all his superb story-telling ability and scholarship to bear on a situation with a parallel for today. An illuminating book for anyone who has ever speculated on the Russian course of empire. Illustrated with maps.

**\$3.75**

**U. S. FIELD ARTILLERY ASSOCIATION  
1218 Conn. Ave., Washington 6, D. C.**

## VOLUME XXXVIII (1948)

### INDEX OF TITLES

<p>AERIAL OBSERVATION MODEL OF 1861 By Lt. Col. Carl T. Schmidt, Inf. .... 22</p> <p>AMERICAN FOOTBALL—TRAINER OF GENERALS By Brig. Gen. A. R. Harris, Ret. .... 262</p> <p>AMPHIBIOUS ARTILLERY By Major E. J. Rowe, USMC ..... 66</p> <p>AN ENGLAND FRANCE SUBWAY By Frank W. Bail ..... 276</p> <p>ANIMAL TRANSPORT AND THE NATIONAL GUARD By Captain Edward L. Bimberg, Cav. Res. .... 37</p> <p>ANNUAL STATION LIST? ..... 257</p> <p>ARMY GROUND FORCES REORGANIZED ..... 187</p> <p>ARTILLERY IN AIR GROUND COOPERATION By Lt. Col. Edward S. Berry, FA ..... 169</p> <p>ARTILLERY REPRESENTATION ON HIGH LEVEL BEFORE AND DURING COMBAT By Brig. Gen. C. E. Hart ..... 208</p> <p>ARTILLERY WITH THE TEAM By Maj. Gen. Archibald V. Arnold ..... 26</p> <p>A SEAGOING REDLEG By Lt. Col. John C. Hayden, FA ..... 220</p> <p>ASSOCIATION MEDAL WINNERS, 1948 ..... 72, 216, 261</p> <p>BISCUIT BOMBERS By Major Edward M. Flanagan, Jr., FA ..... 73</p> <p>BOOK REVIEWS ..... 48, 96, 144, 194, 240, 287</p> <p>BOOKS FOR TOTS AND TEENS ..... 200</p> <p>BOOKS IN COLUMN ..... 55, 103, 151, 199, 247, 294</p> <p>CAVES IN THE WAR OF 1812 By George F. Jackson ..... 217</p> <p>CROSSING THE MEUSE By Captain Tattnall R. Pritchard, Jr., FA ..... 128</p> <p>DEFLECTION BRACKETING—A SIMPLIFIED METHOD By Lt. William N. Martin, U.S.C. &amp; G.S. .... 19</p> <p>DETAILS WITH THE NATIONAL GUARD By Colonel R. C. Williams, Jr., Inf. .... 173</p> <p>"D" OF THE 5TH ..... 122</p> <p>EXERCISE SEMINOLE By Lt. Col. John V. Roddy, FA ..... 12</p> <p>FROM MOROCCO TO BERLIN By Col. Hugh M. Exton, FA ..... 108, 162</p> <p>GROUND OF PHOTOGRAPHY—ITS PLACE IN COUNTERBATTERY By Major Harold F. Kleindieast, FA-Res. .... 82</p> <p>HAPPY HARRY HEADS FOR HEAVEN By Col. Christiancy Pickett, FA ..... 214</p> <p>HERE'S A NEW TERRAIN BOARD By Lt. Col. Joseph M. Harrison, FA ..... 271</p> <p>HIGH BURST WITH A STOP WATCH By Captain Leslie W. Hamilton, FA Res. .... 65</p> <p>IDENTIFICATION By Lt. Col. Arnold M. Anderson, FA-Res. .... 143</p> <p>INDOOR GUNNERY By Lt. Col. H. K. Holman, FA ..... 80</p> <p>INTEGRATION FINALE By Lt. Col. George L. Forsythe ..... 131</p> <p>IT HAPPENED AT CHRISTMAS By Ralph Trowbridge ..... 261</p> <p>IT HAPPENED ON THE FOURTH OF JULY By James Aldredge ..... 131</p> <p>LIGHT OVER BABEL By Max Sherover ..... 258</p> <p>MAXWELL MURRAY ..... 213</p> <p>MINUTES OF THE ANNUAL MEETING OF THE U.S.F.A. ASSN., 15 Dec. 47 ..... 30</p> <p>NEW MEMBERS OF EXECUTIVE COUNCIL ..... 29</p> <p>NOTES FROM THE FA-CMG ..... 83, 124, 164</p> <p>NOTICE OF ANNUAL MEETING, U. S. FIELD ARTILLERY ASSN. .... 207</p> <p>OF MORE THAN PASSING INTEREST ..... 125</p> <p>PERIMETERS IN PARAGRAPHS By Col. Conrad H. Lanza, Ret. .... 38, 86, 133, 178, 231, 277</p> <p>PIGS AND WAR By Harold Helfer ..... 161</p> <p>PRIZE WINNING PHOTOGRAPHS BY FIELD ARTILLERYMES ..... 64</p>	<p>PROBLEMS OF A NEW ROTC UNIT By Col. Giles R. Carpenter, FA ..... 10</p> <p>RED-LEGGED DOUGHBOYS By Captain Henry P. Walker, FA ..... 117</p> <p>REVERIE OF PATRIOTISM By William M. Hearn ..... 47</p> <p>REVISION OF ENLISTED GRADE TITLES ..... 215</p> <p>SEARCHLIGHTS? HOW CAN THEY HELP US? By Lt. Col. Joseph H. Harrison, FA ..... 70</p> <p>SHOOTING WITHOUT FACTORS By Captain Donald E. McArthur, FA ..... 204, 267</p> <p>SOME STATEMENTS ABOUT UMT ..... 15</p> <p>SOMETHING WE SHOULD KNOW By Lt. Col. R. C. Williams, Inf. .... 119</p> <p>SO YOU HAVE TO BUY A HOUSEL By Lt. Thomas F. Crouch, U.S.C.G. .... 34</p> <p>SPEAK UP! By Major Joseph H. Banks, Inf. .... 175</p> <p>STARS FELL ON IWO JIMA By Franklin W. Ball ..... 224</p> <p>THE ARMY THAT SPEAKS MANY TONGUES By Colonel James L. Hathaway ..... 78</p> <p>THE ARTILLERY REPORT ON "EXERCISE MESQUITE" By Captain George W. Watkins, FA ..... 160</p> <p>THE BALM TO END ALL BOMBS By M. Hoyle ..... 95</p> <p>THE BEAUTIFUL BUNGALOW By Harold Helfer ..... 275</p> <p>THE BIRTH OF THE PIGSKIN By Harold Helfer ..... 266</p> <p>THE CLIMB TOWARD PERFECTION By Captain Henry J. Blossy, USMCR ..... 227</p> <p>THE CONTENTIOUS MR. BRAGG By George T. Ness, Jr. .... 83</p> <p>THE CORNELL UNIVERSITY ROTC By Colonel Ralph Hospital ..... 4</p> <p>THE EIGHTY-YEAR HANGOVER By Harold Helfer ..... 172</p> <p>THE FA OBSERVATION BATTALION THE FIELD ARTILLERY SECTION OF THE CAREER MANAGEMENT BRANCH, P AND A DIVISION, GSUSA ..... 18</p> <p>THE FIRE-SUPPORT COORDINATION CENTER By Lt. Col. Henry L. Shafer, FA ..... 156</p> <p>THE GERMAN PARIS GUN OF WORLD WAR I ..... 126</p> <p>THE LAST STRAW By Francis L. Fugate ..... 223</p> <p>THE LIEUTENANT WHO LICKED THE SUBS By Jerome Kearful ..... 286</p> <p>THE OCCUPATIONAL S-2 GOES UNDERGROUND By Lt. Col. Bryce F. Denno, Inf. .... 115</p> <p>THE PASS By T. E. Bussey ..... 225</p> <p>THE RENDEZVOUS By Roy Denial ..... 33</p> <p>THE STRANGEST MISSION By Lt. James R. Johnson, USMC ..... 76</p> <p>THE UNBEATABLE SECRET WEAPON By Melvin Goodman ..... 274</p> <p>THE UNDECLARED MEXICAN WAR By Melvin Goodman ..... 222</p> <p>THE UNITED STATES CONSTABULARY By Captain H. P. Rand, FA ..... 60</p> <p>THE WAR TIME LAND E PROGRAM By Major I. Heymont ..... 268</p> <p>TO NEVER FORGET By Robert E. Kleiner ..... 84</p> <p>VIEQUES—WE WERE THERE TOO By 1st Lt. L. B. Mattingly, FA ..... 116</p> <p>YOUR TOOLS ARE THE RESERVES By 1st Lt. Hugh Cort, FA-Res. .... 176</p> <p>YOU'VE NEVER HAD IT SO GOOD By Rosalee G. Porter ..... 166</p>
---	---

### INDEX OF AUTHORS

<p>Aldredge, James ..... 131</p> <p>Anderson, Lt. Col. Arnold M., FA-Res. .... 143</p> <p>Arnold, Maj. Gen. Archibald V. Ball, Franklin W. .... 224, 277</p> <p>Banks, Major Joseph H., Inf. .... 175</p> <p>Berry, Lt. Col. Edward S., FA ..... 169</p> <p>Bimberg, Captain Edward L., Cav. Res. .... 37</p> <p>Blossy, Captain Henry J., USMCR ..... 227</p> <p>Bussey, T. E. .... 225</p> <p>Carpenter, Col. Giles R., FA ..... 10</p> <p>Cort, 1st Lt. Hugh, FA-Res. .... 176</p> <p>Crouch, Lt. Holmes F., U.S.C.G. .... 34</p> <p>Denial, Roy ..... 33</p> <p>Denno, Lt. Col. Bryce F., Inf. .... 115</p> <p>Drummond, Major N. L., Jr. .... 35, 103, 151, 199, 147, 294</p> <p>Exton, Lt. Col. Hugh M., FA ..... 108, 162</p> <p>Flanagan, Jr., Major Edward M., FA ..... 73</p> <p>Forsythe, Lt. Col. George I. .... 134</p> <p>Fugate, Francis L. .... 223</p> <p>Goodman, Melvin ..... 222, 274</p> <p>Hamilton, Captain Leslie W., FA-Res. .... 65</p> <p>Harris, Brig. Gen. A. R., Ret. .... 262</p> <p>Harrison, Lt. Col. Joseph H., FA ..... 70, 271</p> <p>Hart, Brig. Gen. C. E. .... 208</p> <p>Hathaway, Colonel James I. .... 78</p> <p>Hayden, Lt. Col. John C., FA ..... 220</p> <p>Hearn, William M. .... 47</p> <p>Helfer, Harold ..... 161, 172, 266, 275</p>	<p>Heymont, Maj. I., Inf. .... 268</p> <p>Holman, Colonel H. K. .... 80</p> <p>Hospital, Colonel Ralph, FA ..... 4</p> <p>Hoyle, M. .... 95</p> <p>Jackson, George F. .... 217</p> <p>Johnson, Lt. James R., USMC ..... 76</p> <p>Kearful, Jerome ..... 286</p> <p>Kleindieast, Major Harold F. .... 82</p> <p>Kleiner, Robert E. .... 84</p> <p>Lanza, Colonel Conrad H. .... 38, 86, 133, 178, 231, 277</p> <p>McArthur, Captain Donald E., FA ..... 204</p> <p>Martin, Lt. William N., U.S.C. &amp; G.S. .... 19</p> <p>Mattingly, 1st Lt. L. B., FA ..... 116</p> <p>Ness, George T., Jr. .... 83</p> <p>Pickett, Colonel Christiancy, FA ..... 214</p> <p>Porter, Roselee G. .... 166</p> <p>Pritchard, Captain Tattnall R., FA ..... 128</p> <p>Rand, Captain H. P., FA ..... 60</p> <p>Roddy, Lt. Col. John V., FA ..... 12</p> <p>Rowe, Major E. J., USMC ..... 66</p> <p>Schmidt, Lt. Col. Carl T., Inf. .... 22</p> <p>Shafer, Col. Henry L., FA ..... 156</p> <p>Sherover, Max ..... 258</p> <p>Trowbridge, Ralph ..... 261</p> <p>Walker, Capt. Henry P., FA ..... 117</p> <p>Watkins, Captain George W., FA ..... 160</p> <p>Williams, Lt. Col. R. C., Jr., Inf. .... 119, 173</p>
---	---

—Brilliant and Exciting

**ROOSEVELT  
AND  
HOPKINS**

by **ROBERT E. SHERWOOD**

Dramatic study of top-level politics, diplomacy, and events behind recent headlines of peace and war.

Primary source material on occupation of Berlin, promises made to Russia, etc.

**VITAL**

reading for every informed citizen—no abridgement can handle its 1000-page impact—

**\$6.00**

**SAY MERRY  
CHRISTMAS WITH A  
BOOK FROM YOUR  
ASSOCIATION**

**ORDER**

**THESE TWO FINE BOOKS  
OR ANY BOOK IN PRINT  
FROM THE JOURNAL**

*Best Book Service Obtainable*

1. ALL BOOKS AT A DISCOUNT  
You are not limited to a few selections as in most book clubs.

2. CONVENIENT AND QUICK  
Buy all books through us — no shopping, no delays, no bills. All orders processed in one day.

3. SHIPMENT ANYWHERE  
We ship directly from stock or publisher to any point on the globe.



First-hand conversations with surviving German Generals after World War II.

By **B. H. LIDDELL HART**

"The most stimulating military writer that we have."—Wavell

In vivid language the book shows why Hitler allowed the Dunkirk escape, how the Russian Army looked to the German Generals, how ours looked.

**\$4.00**

*ADDITIONAL ADVANTAGES: Books are always welcome gifts. We will ship your gift order directly to recipient, with your name on appropriate card. Advisory list of available books on any specified subject will gladly be prepared for you. Refer your book problems to us.*

**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*