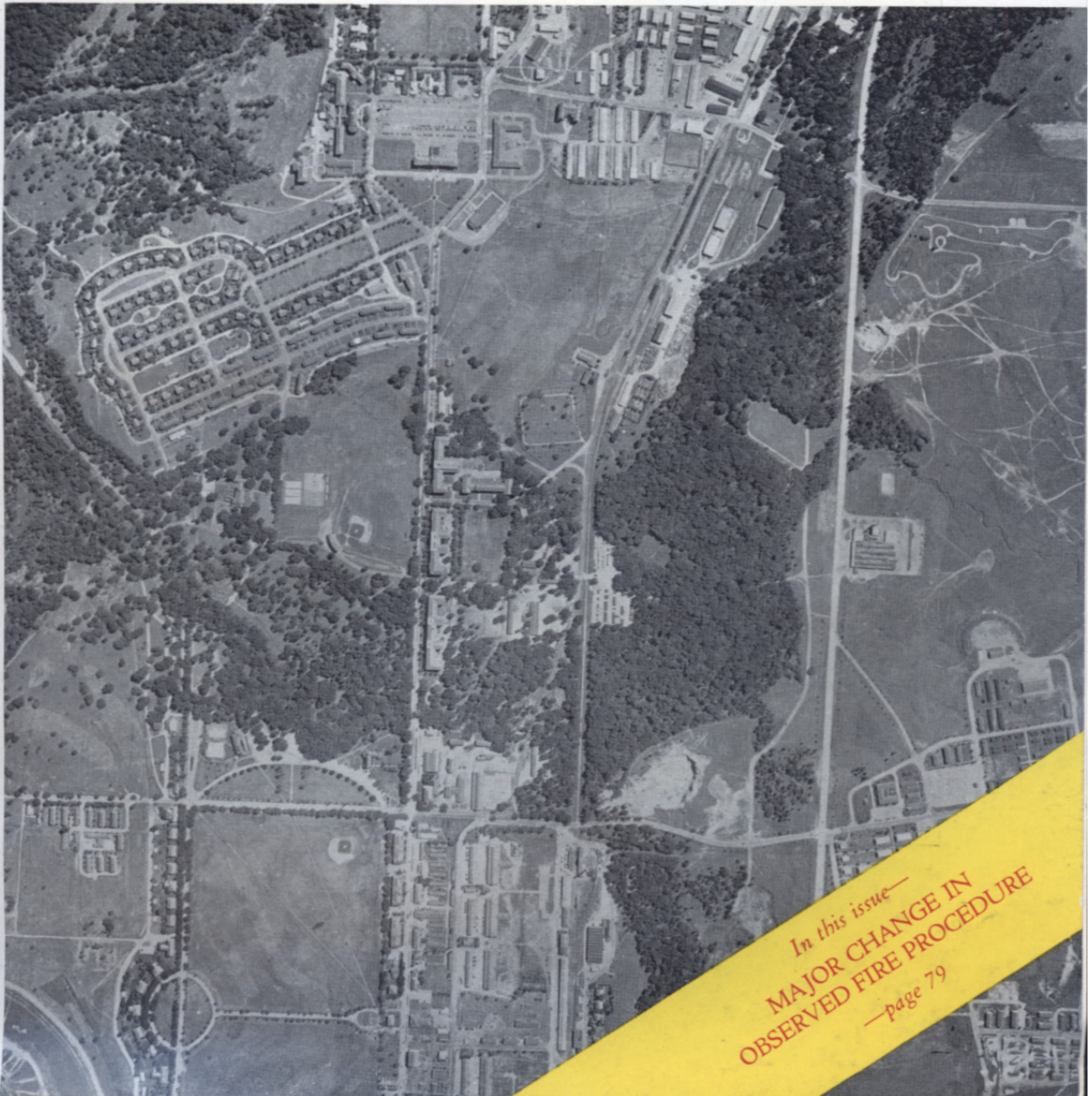


# The FIELD ARTILLERY JOURNAL



MARCH-APRIL 1947



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OBSERVED FIRE PROCEDURE**  
—page 79



# THE STRANGE ALLIANCE

BY MAJ. GEN. JOHN R. DEANE, RTD.

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*"A Strong America  
is a  
Peaceful America"  
Army Week—April 6-12*

In view of our Association's objects, it is redundant in a sense for our JOURNAL to give special space in a particular issue to the observance of Army Day or Army Week, as is the case this year. Our energy is devoted each day in each year to the purposes of Army Day.

THE FIELD ARTILLERY JOURNAL is proud, however, to add its voice to this year's observance, and particularly to the final thought in General Eisenhower's Army Week message—our Army is "a faithful implement of democracy."

To remind us—lest we soldiers ever tend to forget our primary role as citizen-soldiers—are the following words, carved in marble in the rotunda of the amphitheater at the Tomb of the Unknown Soldier in Arlington National Cemetery:

"WHEN WE ASSUMED THE SOLDIER WE  
DID NOT LAY ASIDE THE CITIZEN"





## NOT SO WILD A DREAM

BY ERIC SEVAREID

NOT SO WILD A DREAM is the colorful and moving autobiography of one of America's finest reporters — a man who combines a tremendous range of experience with a remarkable depth and honesty of perception. His coverage of World War II is both illuminating and accurately interesting.

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"Contributes to the Good of Our Country"

VOL. 37

MARCH-APRIL 1947

NO. 2

- Cover: Air photo, showing the heart of The Artillery School at Fort Sill, Oklahoma.
- Frontispiece: "A Strong America is a Peaceful America"—Army Week, April 6-12, 1947.

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

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# Historic Words ♦ ♦ ♦

*Extracted from a message delivered by the President of the United States to a joint session of the Congress on 12 March 1947.*

*Thoughtful soldiers will note well their tremendous significance.*

**T**HE GRAVITY OF THE SITUATION which confronts the world today necessitates my appearance before a joint session of the Congress.

The foreign policy and the national security of this country are involved.

## **GREEK CRISIS**

One aspect of the present situation, which I wish to present to you at this time for your consideration and decision, concerns Greece and Turkey.

The United States has received from the Greek government an urgent appeal for financial and economic assistance. Since 1940 this industrious and peace-loving country has suffered invasion, four years of cruel enemy occupation, and bitter internal strife.

Greece is in desperate need of financial and economic assistance to enable it to resume purchases of food, clothing, fuel and seeds.

The Greek government has also asked for the assistance of experienced American administrators, economists and technicians.

The very existence of the Greek state is today threatened by the terrorist activities of several thousand armed men, led by Communists, who defy the government's authority. Greece must

have assistance if it is to become a self-supporting and self-respecting democracy.

## **SOURCES OF HELP**

The United States must supply that assistance.

There is no other country to which democratic Greece can turn.

The British government, which has been helping Greece, can give no further financial or economic aid after March 31. Great Britain finds itself under the necessity of reducing or liquidating its commitments in several parts of the world, including Greece.

We have considered how the United Nations might assist in this crisis. But the situation is an urgent one requiring immediate action, and the United Nations and its related organizations are not in a position to extend help of the kind that is required.

## **CRISIS IN TURKEY**

Greece's neighbor, Turkey, also deserves our attention.

Since the war, Turkey has sought financial assistance from Great Britain and the United States for the purpose of effecting that modernization necessary for the maintenance of its national integrity.

That integrity is essential to the preservation of order in the Middle East.

As in the case of Greece, if Turkey is to have the assistance it needs, the United States must supply it. We are the only country able to provide that help.

## THE CHOICES

I am fully aware of the broad implications involved if the United States extends assistance to Greece and Turkey.

To insure the peaceful development of nations, free from coercion, the United States has taken a leading part in establishing the United Nations. We shall not realize our objectives, however, unless we are willing to help free people to maintain their free institutions and their national integrity against aggressive movements that seek to impose upon them totalitarian regimes. This is no more than a frank recognition that totalitarian regimes imposed on free peoples, by direct or indirect aggression, undermine the foundations of international peace and hence the security of the United States.

The peoples of a number of countries of the world have recently had totalitarian regimes forced upon them against their will. The Government of the United States has made frequent protests against coercion and intimidation, in the violation of the Yalta agreement, in Poland, Romania and Bulgaria. I must also state that in a number of other countries there have been similar developments.

At the present moment in world history nearly every nation must choose between alternative ways of life. The choice is too often not a free one.

One way of life is based upon the will of the majority, and is distinguished by free institutions, representative government, free elections, guarantees of individual liberty, freedom of speech and religion, and freedom from political oppression.

The second way of life is based upon the will of a minority forcibly imposed upon the majority. It relies upon terror and oppression, a controlled press and radio, fixed elections, and the suppression of personal freedoms.

## RESOLUTE ACTION

I believe that it must be the policy of the United States to support free peoples who are

resisting attempted subjugation by armed minorities or by outside pressures.

I believe that we must assist free peoples to work out their own destinies in their own way.

I believe that our help should be primarily through economic and financial aid which is essential to economic stability and orderly political processes.

The world is not static, and the *status quo* is not sacred. But we cannot allow changes in the *status quo* in violation of the Charter of the United Nations by such methods of coercion, or by such subterfuges as political infiltration.

Should we fail to aid Greece and Turkey in this fateful hour, the effect will be far-reaching to the West as well as to the East.

We must take immediate and resolute action.

I therefore ask the Congress to provide authority for assistance to Greece and Turkey in the amount of 400 million dollars for the period ending June 30, 1948.

In addition to funds, I ask the Congress to authorize the detail of American civilian and military personnel to Greece and Turkey, at the request of those countries, to assist in the tasks of reconstruction, and for the purpose of supervising the use of such financial and material assistance as may be furnished. I recommend that the authority also be provided for the instruction and training of selected Greek and Turkish personnel.

Finally, I ask that the Congress provide authority which will permit the speediest and most effective use, in terms of needed commodities, supplies, and equipment, of such funds as may be authorized.

## DARE NOT FALTER

This is a serious course upon which we embark. I would not recommend it except that the alternative is much more serious. The free peoples of the world look to us for support in maintaining their freedoms.

If we falter in our leadership, we may endanger the peace of the world — and we shall surely endanger the welfare of our own Nation.

# It's *Your Move,* Partner

By  
**Rosalee G. Porter**

**I**N THE HALCYON DAYS BETWEEN the wars, the Army move was a family affair. Some husbands, with the connivance of the War Department, became quite adept at taking off for maneuvers just about the time the packers were due. In that circumstance, the Army wife found that she could do it alone. On the whole, however, husbands and wives faced the ordeal together, and sometimes found it fun.

It really requires two people to stage a good move (just like a good fight), and all families are divided into two classes — the savers and the throwers-away. The balance of power determines just how many empty glass jars, flower pots, cardboard boxes, broken lawn mowers, jetsam and flotsam from foreign service, and leaky kitchen utensils will or will not be packed. It also helps a lot if the balance of power controls the exact items which will go in the car.

No one can possibly forget that heap of trunks, suitcases, lunch boxes, bags, blankets, thermos jugs, and birdcages that one family car was supposed to carry—in addition to the family. Nor can one ever forget that blessed feeling of relief that moved in when the last crate had been hauled away.

But now, in this brave new world, the Army move is a different thing. In some way the War Department found out that the Army wife could do it alone and they are letting her do it.

For the Army movers of '46, particularly the ones whose husbands had a year or less overseas service, even the last post was an uneasy affair. Though possessions were out of storage, many barrels and boxes were not

unpacked; no new furniture or upholstery had been added; only the most adaptable curtains had been purchased.

Eventually came the bitter day when for the second, third or fourth time, farewells had to be said. The husband was going on an overseas assignment. This time it was not to be so hard, the little ray of hope being that the separation would not be for long; this goodbye was lightened because the Army wife could go overseas too.

Oh, not with her husband, but she could go. Just as soon as he arrived at his overseas station and a suitable house was available and by promising that she would stay two years, he could "put in" for her. Depending upon his months of previous overseas service, the precious priority number was assigned.

In the meantime the wife who was left behind found those months of waiting long, expensive, and troublesome. To begin with she had no place to live. When the pioneer women were cut loose from their old familiar lives, they went with their husbands. They always had a nice covered wagon to crawl into when night came. These 1946 pioneers into strange lands have neither husbands nor wagons for protection or comfort. When their husbands left they were just cut loose.

The issuance of the priority number was a step in the right direction, but until the War Department had received it from the overseas theater commander, nothing could be done toward the move.

Ladies in waiting, after many moons, become impatient of red tape and superficialities. When one was asked by a pert young clerk how she happened to be in San Francisco, why hadn't she stayed at home to wait for her orders? Well, the answer to that one was that when a woman has been married in the Army for fifteen, twenty, or twenty-five years, the hotel she is in is her home. When her husband turned in the key to the quarters, she lost her home. It is true in hundreds of cases where Army wives are boarding in hotels, camping in trailers, or visiting with relatives.

Publication of the orders brings on a flurry of most agreeable activity. At long last something definite can be

done. The transportation officer can be contacted; the passport may be applied for; the questionnaire concerning household goods and car can be filled in and mailed. Then there is a sheaf of instructions to be read and re-read, but one stinky little line can't be ignored. It is to the effect that from four weeks to three months may elapse before the waiting wife will receive her port call. The port call is the notification that at last a boat will sail with a space on it for her. In all her reading she cannot find a place that tells her where to look for that much patience.

There she sits all vaccinated and inoculated; all questioned and answered; all instructed and expected; all packed up, wrapped up and tied with a big bow of red tape; but still she is not delivered.

When the port call comes, it comes with the well known awful suddenness. When the butterflies inside the excited wife have quieted down, the transportation officer has placed the coveted ticket into her hot little hand, the baggage has been checked, and she is off on the first lap of the journey that will reunite her with her husband for two whole years.

The movement of dependents has not been the failure that some news commentators have announced it to be. It does seem to be more difficult to transport a few hundred wives and children than it did to carry eleven million men and their equipment to all parts of the world for a war. It is a highly organized business and many difficulties have had to be overcome to make it possible at all. The resentment from the months of waiting, the feeling of being strapped to a production belt and moved along like a piece of inanimate machinery, the lack of understanding from the personnel who operated the belt, all these things have robbed the War Department of the credit it should have for a big job well done.

From the viewpoint of the Army wife who has so recently undergone the difficulties of separation, until she can move all her possessions with her, the war has not been won; until she can travel the world over with her husband, there is no peace.



# Simplified Observed Fire Procedure

By Maj. Gen. Clift Andrus, U.S.A.  
Commandant, The Artillery School

*"There was a tendency for young and inexperienced field artillery officers to abandon all methods of conduct of fire except the so-called air-ground. This of course passed the buck back to the fire-direction center where personnel were safer, more comfortable, and, the observer hoped, more competent than he. That he could not be sensing the direction, let alone the error, of the shot didn't lure him into some other method. Our officers in the next war will be equally inexperienced, and the tendency to try to use one method in all situations plus the remarkable success of the fire direction method of control, point to a simplification of the observer's job, but one that puts more emphasis on getting (and how to get) brackets in deflection and range. Another 'must' is to get Army, Navy, and Marine Corps gunnery procedure as nearly alike as conditions and equipment permit."*

TAKEN FROM AN ARTICLE by Major General H. W. Blakeley in the May 1946 issue of THE FIELD ARTILLERY JOURNAL, the foregoing quotation clearly states a problem on which The Artillery School has been concentrating its efforts for the past fourteen months.

We at the School feel that the problem has been solved in Change 2 to FM 6-40, now being distributed. That change is the reason for this article, wherein I seek informally to explain the circumstances and logic that combined to produce these changes. I state with emphasis that we at the School are confident that the overwhelming majority of artillerymen will agree with us that the new and simplified observed fire procedure constitutes a logical distillate of battle experience in World War II, and a major landmark in gunnery technique. Significantly, during the course of the development and test at the School, the European Theater General Board Report was released. This recommended exactly the solution which the School had evolved by independent study.

## THE BACKGROUND

We entered this war with two dissimilar methods of adjusting fire. In fact, a smart man would have had to work hard to design two more completely different methods. I refer, of course, to the so-called *battery commander* and

the *forward observer* methods of observed fire procedure.

The battery commander method was the product of all the years of our artillery history. We had built into it all the accuracy which study and experience could devise. The forward observer method, on the other hand, was the product of necessity, developed during World War I for adjusting fire with aerial observation. With his visual command of the target area the aerial

observer was able to make accurate estimates of the deviation of a round from the target. However, since he was not a trained artilleryman it was felt that he should transmit his observations in the form of sensings to an artillery officer who could change them to fire commands for the battery. During the peacetime years this method of adjustment was found convenient and applicable when the ground observer was close to his target. Its popularity grew tremendously with the development of the fire direction center and modern methods of fire direction.

In the effort to obtain precise results, the battery commander method had been broken into numerous cases—axial, small-T, large-T, and flank observation. Each had its own rules and applied different factors or combinations of factors. The forward observer method appealed to the combat observer because both its theory and its rules of procedure were simple to grasp and to apply. The fact that it was designed to apply when he had excellent command of the target area did not deter him from using it when he had no command at all. He used it on all occasions. The language of the two systems was entirely different, and this acted as an additional

Major General Clift Andrus, USA



bar to the use of the less familiar method. Unfortunately in the minds of many, the gulf between the two methods was so great that the fundamental gunnery principles learned in the battery commander method were not carried over and applied in the forward observer method. Thus when observing at great ranges or when observing from the lip of a foxhole with absolutely no command of his target area, the observer still attempted to guess the deviation of his burst from the target and, worse still, failed to bracket his target. Obviously, in either of these situations and in very many others, bracketing was the only way to establish the correct data to hit the target. All our good observers applied the principle of bracketing to FO shooting. The difficulty was that all too many observers failed to do so.

By the end of the war these facts were clear in the minds of all artillerymen:

1. The forward observer language, if not the method, was used in almost all observed fires. As a corollary to this, nearly all fire missions were handled through a fire direction center, either battalion or battery.

2. Many observers were very proficient in shooting by FO methods. These applied the principles they had learned when shooting by BC methods.

3. Many impressions of excellent results rested on the free use by less able observers of the report, "Mission Accomplished."

One very important conclusion can be drawn which must be added to the above facts to give the full picture of our wartime gunnery situation. The most important observed fire is the registration. On it depends the accuracy of the great mass of all artillery fires, on targets of opportunity as well as on scheduled fires. It is certain that had our registrations been solely by ground observation instead of being largely accomplished by air observation or by flash bases (in the larger calibres) the accuracy of our artillery fire would have suffered greatly. This was true not because of the difficulties in obtaining adequate ground observation, but because the method used was loosely drawn and resulted in sloppy work by many observers.

Examining our consciences, it was evident that there was no logic in having two types of gunnery procedure—one incorporating all the accuracy we could build into it but seldom if ever used; the other, simply but very loosely drawn and designed for limited application, but applied as the universal solution to all shooting. We were all aware that what happened on the ground was the same, regardless of the range from which we observed it or the angle our line of observation made with the gun-target line. We were obviously hurting ourselves when we administered gunnery instruction in the form of axial, small-T, large-T, flank, forward observation, and air observation, each with its own rules and procedure and perhaps even its own language.

### CHANCES EVOLVED

During the winter of 1945-46, before I arrived as Commandant, the Gunnery Department began experiments on how to "simplify the observer's job and put more emphasis on getting brackets in deflection and range," as General Blakely expressed it. In March a simplified method of conduct of fire was demonstrated at the Artillery Conference and the School benefited from the comments of the conferees. Following the conference, intensive proof firing by the Gunnery Department, in which the most experienced artillerymen on the staff and faculty participated, served to refine the method.

Concurrently, Army Ground Forces was taking positive steps (formalized in War Department Training Circular 6, dated 13 June 1946) to unify the gunnery procedure of the Army, Navy, and Marine Corps. Training Circular 6 establishes common procedure and common language for use by the air, ground, and naval forces in the adjustment of artillery and naval gunfire. This was a necessary forerunner to a modification of the Observed Fires part of FM 6-40.

The solution developed by the School and published in Change 2 to FM 6-40 has two essential elements: *First*. To prescribe a single language to be used in the conduct of all ground artillery fires. This language follows accepted field artillery usage except as modified by War Department Training Circular 6.

*Second*. To teach that regardless of observing range there are only two types of gunnery procedure: range-bracketing when range is the controlling element and deflection-bracketing when deflection is the controlling element. You bracket for deflection and you bracket for range, and you shoot the OT line to do it. I am sorry if I have let you down at this point, but that is all there is to Change 2 to FM 6-40.

There are, of course, various administrative changes in the new chapters. In keeping with Training Circular 6, "sensings" as previously transmitted by forward observers are abolished in favor of positive corrections. All observers' corrections are expressed in yards, not in mils. All go through a fire-direction center, though the fire-direction center may be no more than the battery executive and his recorder. None of the principles of gunnery have been discarded, though they have been consolidated and are not presented in as many aspects. The result has been a sharp emphasis on the accuracy of fire at little cost in the valued simplicity of our wartime FO methods.

The European Theater General Board Report on Field Artillery Gunnery, which so encouraged the School in its efforts, recommended "combining forward observer and conventional methods of conduct of fire to permit all types of problems to be fired using sensings or commands in yards without disregarding the factors involved. For example, the student will be taught the significance of factors but will be required to bracket both target and line by giving the proper sensing or commands in yards." This was exactly the approach to which our work at the School had pointed. And everything done since then has proven the simplicity, suitability and soundness of the concept.

### PROBABLE QUESTIONS

Questions which may arise when Change 2 is *read* will resolve themselves readily when it is *shot*. We at Sill know that it shoots well, but unfortunately many artillerymen now find themselves on jobs where they have no opportunity to see any shooting. For these individuals I would like to answer some of the

questions which have been asked by experienced artillerymen upon first reading the new change.

It has been objected that, at long ranges, deviations from a burst can not be estimated and hence sending commands in yards cannot be accurate at such ranges. This objection disappears when the change is read more carefully. Under the old system the deviation of the burst was measured in mils, multiplied by  $r/R$ , and sent to the guns as a command in mils; under the new, the deviation of the burst is measured in mils and multiplied by  $r$ . This converts mils to yards and the correction is sent to the fire-direction center in that unit. Not an iota of accuracy has been sacrificed.

Under the new method the observer determines one, occasionally two, simple factors, normally by shooting. It is frequently proposed that these factors be determined and supplied by the fire-direction center. Considerable work was done on this idea and it was strongly favored. Desirable as it appears, it was discarded for the following reasons:

(1) A battalion supporting an infantry regiment will have from 6 to 9 observers and may have more. In a moving situation the fire-direction center *can not* keep the locations of all these plotted, even when the observers know their own locations.

(2) In armored action, observers will move a great deal and frequently the observer will have no idea of his location with respect to any point on the firing chart. Fire will be initiated by a high burst or a round of smoke and factors can only be shot in.

(3) Under the best of conditions it would clutter communications. When the position of the observer was unknown it would fill the air with time consuming and security destroying communications.

(4) Firing chart factors work perfectly when shooting on a pool table. Shot - in factors take into account ground forms and the slope of the terrain and will always be better.

(5) The young observer will tend to place great faith in a factor supplied by fire-direction center and stick to it blindly rather than modify it according to the way it works on the ground.

The above reasons also answer another question. The European Theater General Board Report on Gunnery made alternative recommendations on gunnery development. One has already been quoted. The other recommendation was "separation of observation and conduct of fire, i.e., observers make sensings which do not include estimation of distances and computers at fire-direction center conduct the problems based on these sensings." In effect this disassociated the eye from the brain in shooting. It was an attractive idea and the School worked hard at it, but it would not work because the position of the observer had to be known to the fire-direction center. All the objections listed in the preceding paragraph, and more, presented themselves.

An objection frequently raised is that factors cannot be applied when the observing range is short because they then change from round to round. It is true that the shorter the range the more the factors tend to change as fire is shifted from one part of the target area to another. Nevertheless, there is little difficulty in keeping shots on or near the OT line once they have been brought to the general vicinity of the target. If the observer close to his target has a commanding view he can exercise greater tolerance in bringing his bursts to the OT line and yet obtain positive sensings and correct brackets in adjustment. On the other hand, when the observer has no command, the new

method supplies simple rules which surely bring the fire to his target. No more is he left with the glittering directive to "shoot the GT line" when he cannot for the life of him visualize the GT line, or to "bracket the target" when nothing he does results in a bracket but instead his rounds seem to spiral away from the target. With the new teaching we can hope for much better registration (even though the enemy keeps our air OPs on the ground) and for far fewer cases of an observer bringing in a division artillery on a point 800 yards from his target.

Undoubtedly, good artillerymen will raise more questions, but if this article gets much longer no one will read it. The system has been tested and approved by AGF Board No. 1. It has been fired extensively by gunnery instructors at The Artillery School, by many other officers, both senior and junior, of the staff and faculty, and by many students; it has been given considerable test by the Weapons Section of The Infantry School. All are convinced that it simplifies the several procedures of the past and results in a system which is accurate and yet is learned quickly and applied easily by the average man.

**Artillery forward observers of the 4th Infantry Division call for and correct fire missions in a forward observation post in the Prum Valley, Germany.**



# ARTILLERY SCHOOL'S OPINION

*—An extract from the official correspondence between The  
Artillery School and Army Ground Forces Board No. 1*

\* \* \* \* \*

## 2. In the opinion of The Artillery School:

a. The proposed change implements paragraph 1e of War Department Training Circular 6, 13 June 1946, which states: "The general features of this common procedure will be used as a basis to secure further uniformity in the methods and procedures of fire control throughout the military establishment." It is to be noted that if Change 2 is adopted all field artillery conduct of fire will be in keeping with Training Circular 6.

b. It improves the accuracy of fire because it requires every observer to bracket his target, a procedure which was frequently neglected in forward observer adjustments.

c. It loses none of the accuracy of the so-called battery commander method of adjustment. It retains all the rules of gunnery contained in the current version of FM 6-40, though it simplifies the application of these rules.

d. It is decidedly easier to learn than the current methods of adjusting fire because it uses only one language and reduces all shooting to two cases. The current FM 6-40 teaches totally different languages for the battery commander and the forward observer methods and has different rules and different factors for axial, large-T, small-T, flank, air observer and forward observer adjustments.

e. It recognizes the universal wartime practice in the field artillery of routing all adjustments through either a battalion or battery fire-direction center. It corrects the wartime practice of completely discarding the accurate battery commander methods and depending entirely on a forward observer method which tolerated very inaccurate adjustments.

f. It follows the recommendation of the European Theater General Board Report on Field Artillery Gunnery to "combine forward observer and conventional methods of conduct of fire to permit all types of problems to be fired using sensings or commands in yards without disregarding the factors involved."

\* \* \* \* \*

# Digest of New Observed Fire Procedure

By Lt. Col. Walter E. Barker, FA Department of Gunnery, The Artillery School

AS YOU HAVE READ IN A previous article, the new procedure of adjusting artillery fire (ground or naval) consists of only two cases: *range-bracketing* procedure is employed when the observer is on or near the *GT* line, and *deflection-bracketing* procedure is used when the observer is considerably to one side of the *GT* line. The case in which the observer is on or very close to the *GT* line (axial observation) is treated merely as a simple type of range-bracketing procedure. Likewise, the case in which the observer is on the flank of the target (*T* near 1600<sup>72</sup>) is a simple type of deflection-bracketing procedure.

## TERMINOLOGY

Instead of sending sensings in yards (as was done in the old forward observation procedure) or commands in mils (as was done in the so-called "BC method"), the observer now sends *corrections* in yards. These corrections are sent to the battalion or battery fire-direction center where they are converted into fire commands for the pieces. The corrections and terms most frequently used by the observer are listed below.

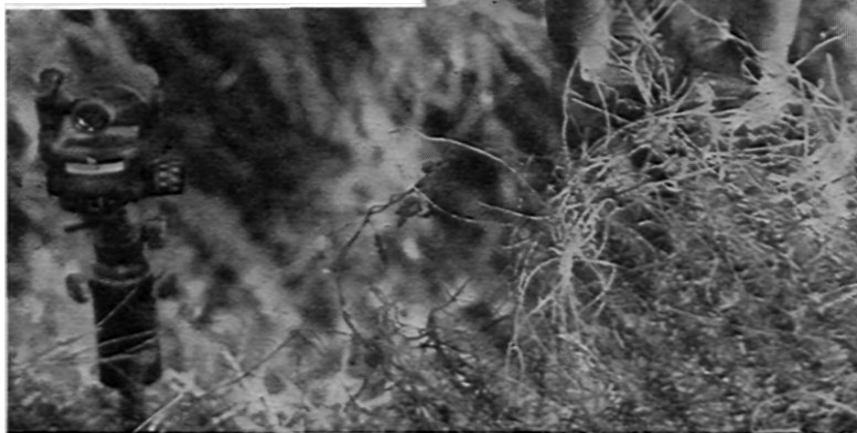
*Deflection:* LEFT (RIGHT) (so many yards).

*Distribution:* CLOSE (OPEN) SHEAF, (FDC makes an arbitrary change of 50 yards in width of sheaf.)

CONVERGED (100 - YARD) (200-YARD) SHEAF.

CONVERGE ON NUMBER TWO (or other piece).

*Height of burst (site):* UP (DOWN) (so many yards).



*Time of burning:* PLUS (MINUS) (so much) (in tenths of a second).

*Range:* ADD (DROP) (so many yards).

*Miscellaneous corrections and commands:*

SALVO RIGHT (LEFT). (To obtain salvos beginning with the right (left) piece.)

FIRE FOR EFFECT. (To indicate that the unit is to fire for effect.)

ERROR (followed by proper correction). (To change an erroneous correction to the proper correction.)

LOST (followed by a correction to obtain observation). (To indicate that the last round or volley was not observed.)

MISSION ACCOMPLISHED. (To cease firing on a target when the mission is completed.)

To begin a mission, the observer sends an "initial fire message" to the fire-direction center. In this message he includes such of the following elements as are appropriate in the particular problem.

### Example

Identification of the observer	FOX OBOE BAKER,
Warning order	FIRE MISSION,
Location of target	JIG MIKE 9763,
Nature of target	INFANTRY IN
Type of adjustment	FOXHOLES,
Type of ammunition	SALVO RIGHT,
Control	TIME FIRE,
	WILL ADJUST.

Any element of subsequent corrections, other than the correction for deflection and range, may be omitted if no change in that element is desired. If the observer wants to fire the same deflection (range) as the last rounds, he sends REPEAT DEFLECTION (RANGE). Subsequent corrections are given in the following sequence:

*Deflection correction*

*Distribution correction*

*Height of burst correction*

*Time correction* (in time registrations)

*Change in any special requirements* (for example, to change from volley to salvo fire)

*Change in number of rounds to be fired* (in precision fire)

*Change in ammunition*

*Range correction*

So much for the language employed by the observer. Let us turn now to details of the new procedure.

### PRINCIPLES

The target must be *bracketed* for both range and deflection. The basic procedure during adjustment is, first, to bring bursts to the *OT* line, and then to keep them on the *OT* line during changes incident to the adjustment. This is the only way the observer can be certain of establishing brackets. The observer brings bursts to the *OT* line and keeps them on the line with the help of two readily determined factors.

### FACTORS

Normally, the observer will determine his factors by firing "ranging rounds" in the vicinity of his target. Ranging rounds consist of two rounds fired as rapidly as possible from the adjusting piece, the first round at the point designated by the observer (the target) and the second round at a range 400 yards greater. When ranging rounds have been brought to the vicinity of the target the observer can (1) visualize the gun-target line, (2) determine the method of conduct of fire to be used (either range-bracketing or deflection-bracketing), and (3) determine the value of *S* and, where appropriate, *d*. When ranging rounds are desired the observer includes in his initial fire message, FIRE RANGING ROUNDS. Subsequent corrections are based on the first round of the last two ranging rounds.

The first step in the determination of factors from these rounds is to determine the observed deviation in yards between the bursts. This can be done best by measuring the deviation in mils between bursts and multiplying by small *r*. If this deviation is 200 yards or less, range-bracketing procedure is used. An *S* in yards is computed by dividing the observed deviation by 4. This is, of course, actually a *d* (in yards), but for angles *T* of from  $\emptyset$  up to about 550 mils the difference in the values of *S* and *d* is small.

When the observed deviation between ranging rounds is greater than 200 yards, the observer must use deflection-bracketing procedure, and he determines two factors, *S* and *d*. Since the observer now has a large angle *T*, he

must get his *S* by a means other than that given above, because as *T* increases above 550 mils the value of *S* increases much more rapidly than does the value of *d*. This point can best be illustrated by the following table, which gives values of *S* corresponding to the observed deviations listed.

Observed Deviation (yds)	Dev $\div$ 4	<i>S</i> (yds)
225	56	68
250	62	80
275	69	95
300	75	113
325	81	139
350	87	181
375	94	269

Since no handy rule of thumb can be set up for determining *S* in deflection-bracketing, the observer uses the following table of approximate values to obtain a usable *S*:

For an Observed Deviation of	Use an <i>S</i> of
250 yards	80 yards
300 yards	100 yards
350 yards	200 yards

For the larger values of the observed deviation (i.e., when *T* is large) determination of the precise value of *S* is not warranted because dispersion and ground forms cause variations in its practical value throughout an adjustment. However, the smaller the value of *S*, the more stable it appears on the ground and the more precisely it should be computed and applied.

To determine *d*, the observer measures the deviation between ranging rounds in mils and divides this deviation by 4 to obtain the angular deviation caused by a 100-yard range change. The factor is then divided into the deviation in mils of off-line bursts to determine the number of 100-yard range bounds necessary to bring bursts to the *OT* line.

Very often one or both of the ranging rounds will give a positive sensing. Naturally, the observer should take full advantage of such sensings to shorten his adjustment.

We have discussed terminology and the determination of factors. Now let us cover briefly the salient features of the two procedures.

### RANGE-BRACKETING PROCEDURE

In range-bracketing procedure the controlling element is range, since it is

the more difficult element to sense. The observer brings bursts to the *OT* line by making a deflection shift in yards equal to the deviation of the burst from the line. During the adjustment rounds are kept on the line by shifting 1 *S* for each 100-yard change in range.

In precision fire, the object of adjustment is to obtain a *trial range*. The trial range is the range for the center of a 100-yard (or 1-fork) range bracket, or a range giving a target hit. Fire for effect is started when the trial range is determined. On entering fire for effect, a deflection shift is made which will place the bursts on the *OT* line. When positive sensings are obtained, the deflection is changed  $\frac{1}{2}$  *S* or 10 yards (whichever is greater) until a deflection bracket is obtained. Deflection is correct when a target hit is obtained, when a 10-yard deflection bracket is split (20-yard for *GT* ranges greater than 10,000 yards), or when *deflection over* and *deflection short* are obtained with the same deflection setting. Of course, when the observer is on or very close to the *GT* line (with an *S* of less than 10), he can determine deflection errors exactly. He can, therefore, obtain the correct deflection by making the indicated shifts; bracketing the deflection is unnecessary. After six range sensings have been obtained, the observer reports these sensings to the fire-direction center. The FDC then computes the adjusted elevation. If the mission is destruction, the observer continues fire for effect until the target is destroyed; for example, 4 OVERS, 2 SHORTS, REPEAT DEFLECTION, ADJUSTED RANGE. If the mission is registration, the observer indicates when it is completed by reporting REGISTRATION COMPLETE; for example, 4 OVERS, 2 SHORTS, LEFT 5, REGISTRATION COMPLETE.

What used to be called "bracket adjustment" is now called "area fire." This change was made to avoid confusion with the terms "range-bracketing" and "deflection-bracketing" and to provide a more descriptive name for this type of fire.

Adjustment of area fire is normally conducted with platoon volleys. As in precision fire, deflection and range corrections

are coordinated to keep bursts on the OT line. Fire for effect is started at the center of a 200-yard bracket, if the location of the target is known only approximately, or at the center of a 100-yard bracket, if the size and nature

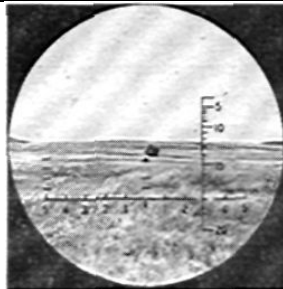
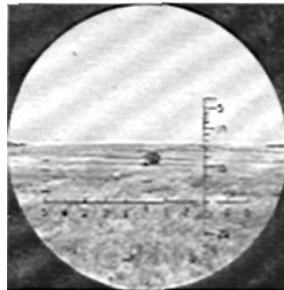
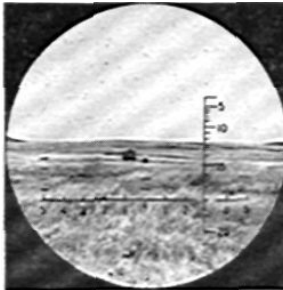
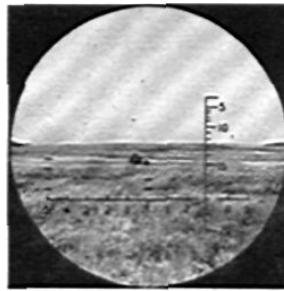
of the target warrant or if additional batteries or battalions are to be brought in for fire for effect. On entering fire for effect, a deflection shift is made which will place the burst center on the OT line. Upon completion of fire for

effect, the observer reports the effect observed; for example, MISSION ACCOMPLISHED, FIRE EFFECTIVE, INFANTRY DISPERSED.

Let's shoot a problem.

**PRECISION REGISTRATION MISSION, RANGE-BRACKETING PROCEDURE**

*Situation:* Target, base point; mission, registration; materiel, 105-mm howitzer; ammunition, HE shell, quick fuze. Base point has been plotted on battalion firing chart.

<i>Messages, Corrections, and Commands</i>	<i>Results</i>	<i>Sensings</i>		<i>Remarks</i>
		<i>Rn</i>	<i>Df</i>	
Obsr to FDC (initial fire message): FIRE MISSION, MARK BASE POINT, PRECISION REGISTRATION, FIRE RANGING ROUNDS, WILL ADJUST.  FDC to Obsr: <i>Baker, ranging                      rounds, fuze quick,                      base point, when                      ready. . . . .                      On the way.</i>	See Fig. 1	?		OT distance from map = 2,000 yards. With field glasses, observer measures 40 # between ranging rounds. Observed deviation = 80 yds (40 × 2). S = 20 yds (80/4). Guns to right rear. Range-bracketing to be used. No range sensing obtained. First ranging round is 80 mils right of OT line. Observer determines shift of 160 yds (80 × 2) necessary to bring burst to OT line.
Obsr to FDC: LEFT 160, REPEAT RANGE.  FDC to Obsr: <i>On the way.</i>	See Fig. 2	—		Small deviation is ignored. Observer decides that 200-yard range change should give a range bracket.
Obsr to FDC: RIGHT 40, ADD 200.  FDC to Obsr: <i>On the way.</i>	See Fig. 3	+		
Obsr to FDC: LEFT 20, DROP 100.  FDC to Obsr: <i>On the way.</i>	See Fig. 4	+		
Obsr to FDC: LEFT 10, 3 ROUNDS, DROP 50.  FDC to Obsr: <i>3 rounds on the way.</i>	First round See Fig. 5  Second round See Fig. 6	+  +	?  ?	
				

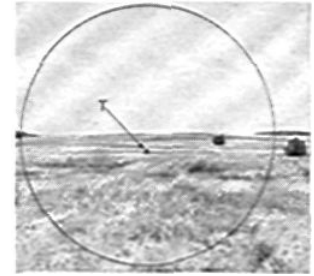


Figure 1

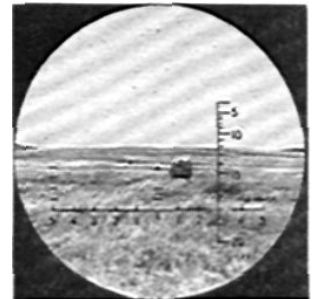


Figure 2

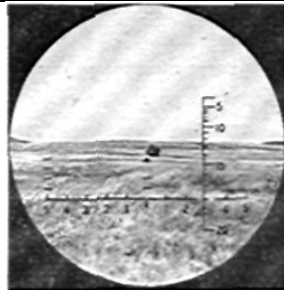


Figure 3

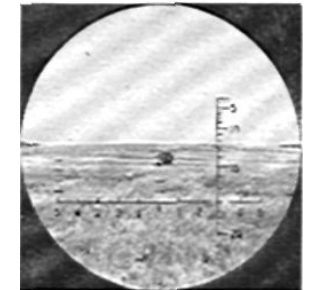


Figure 4

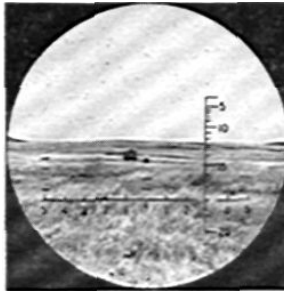


Figure 5

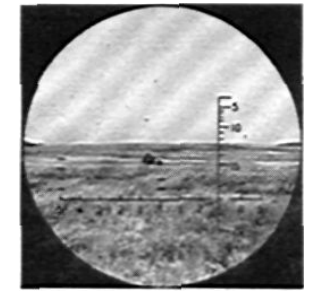
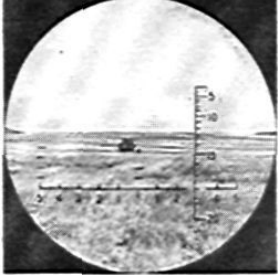


Figure 6

Messages, Corrections, and Commands	Results	Sensings		Remarks
		Rn	Df	
Third round	See Fig. 7	+	+	Because deflection is <i>over</i> , deflection is changed 10 yds ( $\frac{1}{2} S$ ) in the proper direction. Since all rounds are <i>over</i> for range, range must be decreased 50 yds.
Obsr to FDC: LEFT 10, 2 ROUNDS, DROP 50.  FDC to Obsr: 2 rounds on the way.				 <p style="text-align: center;"><b>Figure 8</b></p>
First round	See Fig. 8	+	?	Deflection will be correct when 10-yard deflection bracket is split. Round previously fired at this limit of bracket (first round following ranging rounds) resulted in range <i>short</i> . It is used as one round in effect.
Second round	See Fig. 9	—	—	
Obsr to FDC: 4 OVERS, 2 SHORTS. RIGHT 5, REGISTRATION COMPLETE.				FDC computes adjusted elevation based upon observer's sensings, using the mean of elevation at which the six rounds for effect were fired.

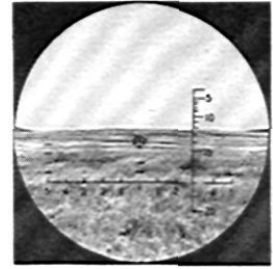


Figure 7

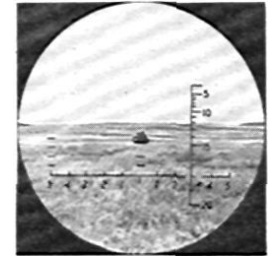


Figure 9

### DEFLECTION-BRACKETING PROCEDURE

Deflection-bracketing procedure is employed when the observed deviation between ranging rounds is greater than 200 yards (angle  $T$  greater than 500 mils). Deflection is the controlling element. Bursts are brought to the  $OT$  line by range changes. The measured deviation of an off-line burst is divided by the  $d$  (in mils) to determine the number of hundred-yard range bounds necessary to move the burst to the  $OT$  line. Changes in deflection and range are coordinated in order to keep bursts on the  $OT$  line; for each 1- $S$  deflection shift, a range change of 100 yards is made.

In precision fire, the object of adjustment is to obtain a *trial deflection*. The trial deflection is a deflection giving a target hit, or a deflection for the center of a 1- $S$

bracket (or the center of a bracket of 80 yards or less when  $S$  is greater than 80 yards). Fire for effect is started when the trial deflection is determined, with a range which will place the bursts on the  $OT$  line. Based upon positive sensings, the deflection bracket is split successively until deflection is correct (same rules for *deflection correct as were given above in range-bracketing procedure*).

In area fire, adjustment is conducted with platoon or battery salvos (beginning with the flank away from the observer). The  $d$  is employed to determine the range change necessary to bring off-line bursts to the  $OT$  line. When a deflection bracket is obtained it is split, and bursts are kept on the  $OT$  line by splitting the range bracket between line shots.

Fire for effect is started when the observer splits a 100-yard deflection bracket. The deflection change for the

initial volley in fire for effect is accompanied by a range change which will center the fire on the target.

This procedure is illustrated by the problem on the opposite page.

### AIR OBSERVER

The air observer uses modified range-bracketing procedure. Because of his command of the terrain, he normally shoots the  $GT$  (rather than the  $OT$ ) line, and uses no factors. Corrections are based on observed deviations from the  $GT$  line; thus the observer need not coordinate range and deflection changes during adjustment. The principle of bracketing the target for range (and for deflection in precision adjustments, or in any adjustment when the observer must remain well to the flank) applies in air observation as well as in ground observation.



**AREA FIRE MISSION, USING DEFLECTION-BRACKETING PROCEDURE**

*Situation:* Target, infantry reserves assembling in vicinity of an adjusting point; materiel, 105-mm howitzer; ammunition, HE shell, fuze M48 and VT fuze.

<i>Messages, Corrections, and Commands</i>	<i>Results</i>	<i>Sensings</i> <i>Rn</i>   <i>Df</i>		<i>Remarks</i>
<p>Obsr to FDC: (Initial fire message): FIRE MISSION, FROM CONCENTRATION 6, REPEAT DEFLECTION, UP 20, ADD 500, INFANTRY RESERVES ASSEMBLING, SALVO LEFT, VT FUZE IN EFFECT, WILL ADJUST.</p> <p>FDC to Obsr: <i>Battalion,</i> <i>Charlie,</i> <i>salvo left,</i> <i>fuze quick,</i> <i>VT fuze in effect,</i> <i>concentration 27,</i> <i>3 volleys, 1/2 c apart,</i> <i>When ready . . . .</i> <i>On the way.</i></p>	See Fig. 10		?	<p>OT distance from map = 1,500 yds. From previous firing in vicinity of this target, observer has determined:</p> <p>(1) <math>S = 100</math> yds (2) <math>d = 50</math> yds (3) Guns to left rear, (4) Deflection - bracketing to be used.</p> <p>Adjustment is begun with platoon salvos. First salvo appears 75 yds left of target. To bring burst to line—add 150 (<math>75/50 \times 100</math>) FDC will give observer cavitized shell with quick fuze during adjustment.</p>
<p>Obsr to FDC: REPEAT DEFLECTION, ADD 150.</p> <p>FDC to Obsr: <i>On the way.</i></p>	See Fig. 11		+	Obsr believes that 2-S shift will give deflection bracket.
<p>Obsr to FDC: RIGHT 200, DROP 200.</p> <p>FDC to Obsr: <i>On the way.</i></p>	See Fig. 12		—	
<p>Obsr to FDC: LEFT 100, ADD 100.</p> <p>FDC to Obsr: <i>On the way.</i></p>	See Fig. 13		+	Obsr can begin fire for effect with next split in deflection bracket. When Obsr orders fire for effect, the FDC will order VT fuze and make compensating site correction.
<p>Obsr to FDC: RIGHT 50, DROP 50, FIRE FOR EFFECT.</p> <p>FDC to Obsr: <i>Charlie firing for effect.</i></p>	See Fig. 14			First volley sensed "range correct, deflection correct." Remainder of fire for effect is observed and if necessary, proper corrections sent to FDC.
<p>Obsr considers fire for effect adequate; reports to FDC: MISSION ACCOMPLISHED, FIRE EFFECTIVE, INFANTRY DISPERSED.</p>				



Figure 10

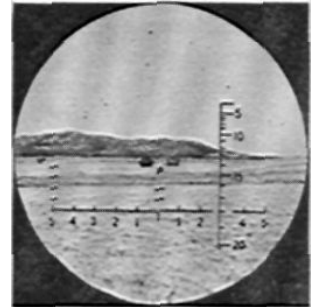


Figure 11

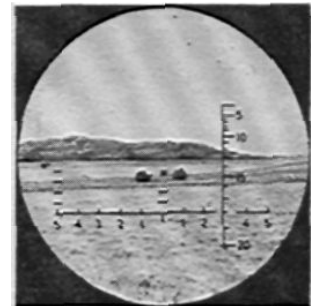


Figure 12

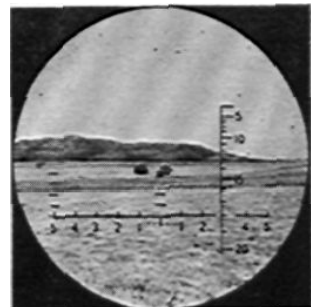


Figure 13

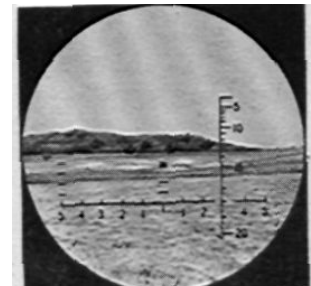


Figure 14

# Counter-Mortar Radar

By Lt. Col. Leonard M. Orman, CAC

Republished by courtesy *The Coast Artillery Journal*

ONE MORE task of major importance has been added to the numerous ones which radar already performs—that of counter-mortar. Mortars are deceptive things. They have been more than a nuisance since their invention. Both Germans and Japs demonstrated complete awareness of the mortar's inherent capabilities and thoroughly exploited its combination of mobility and firepower.

The small amount of flash and noise that accompany firing make ordinary methods of sound and flash detection impractical. Its characteristically high trajectory means that shells can be lobbed over hills or other obstructions which preclude the use of other field weapons. Because a mortar is so easily defiladed, direct location of it by either visual or radar means is usually impossible. In addition, it is light, small, easy to handle, easy to move and conceal. In combat the location of mortars posed a tough problem. Reports like the following testify to that fact:

"The extensive use of mortars has caused a tremendous number of casualties in this theater. The problem of locating enemy mortars is a difficult one—no satisfactory solution has been found for our troops."—Chief Signal Officer, Com Z, ETO.

"Fifty per cent or more of all casualties in the various theaters are the result of mortar fire."—Surgeon General's ASF Survey.

"Japanese mortar fire caused us more casualties than the rest of their weapons combined."—Platoon Leader, Leyte.

"There is an urgent need of any sort of equipment which can be put into the field now to combat enemy mortars."—U. S. Military Attache, London.

## RADAR TO THE RESCUE

Although the mortar itself can be successfully hidden from a radar, any set having the necessary power and

resolution to pick up a target as small as a mortar shell can observe the trajectory. As early as 1937, tests at Fort Monroe showed that antiaircraft shell bursts were recorded on radar scopes. In 1939, during tests of the first U. S. radar, the SCR-268, it was noted that 12-inch coast artillery shells could be followed across the scope but the signals received by the sets were weak. Since there was no apparent requirement for development of the phenomenon at the time, it remained just that—an interesting phenomenon.

Radar had been suggested by several sources as a possible answer to the mortar menace and had been given some tests which didn't pan out too well. However, when casualties in some outfits on the Anzio beachhead reached 73% and for the first time antiaircraft radar sets were close enough to the front lines to notice projectile "pips" on the scope, the need was so urgent that it was decided to try radar in spite of the earlier negative reports.

Much of the earlier experimentation with radar against the mortar was carried on right at the battle front, starting at Anzio. Almost concurrently, the British were carrying on their independent program in Normandy.

When tried in Italy, the first sets were moderately successful even though hampered by two factors: the mountainous terrain and the inability to make ground checks of results because

of the static state of the front. However, the first battery of two sets that went into action in the MTO recorded 226 targets in its first three weeks of operation.

## METHODS USED

Depending on the type of radar and the plotting facilities, the parabolic path of the shell can be determined either by plotting one or more points on the curve or by continuously tracking and, in both cases, computing the mortar's location by backward extrapolation.

The methods differ slightly in the two most successful sets used to date, Radio Set SCR-584 and Radar Set AN/TPQ-3.

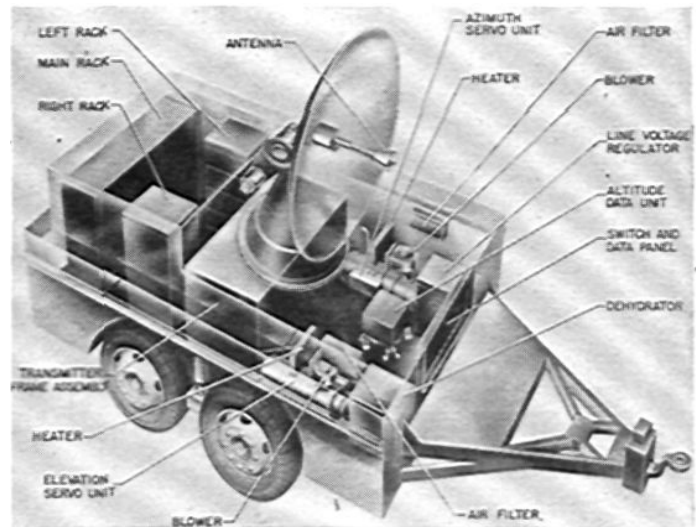
## THE 584

A basic antiaircraft SCR-584 is converted to mortar work by the following modifications:

1. The N<sup>2</sup> Gate, which was first developed primarily as an anti-jamming measure, was also very useful for those sets used in buzz bomb defense and generally speaking, it's a big help in tracking small targets through cluttered areas.

2. Provision for a 10,000-yard time base on the PPI scope.

3. The sector-scan kit, which was developed for buzz bomb work, is particularly adaptable to counter mortar work since the general area to be



Radar Set SCR 784 with operating personnel has been proposed for the T/O and E of a FA Observation Battalion.

searched is known before-hand.

The sector scan limits antenna search to a sector covering a unit front and is variable from 300 to 2,500 mils, eliminates the necessity for manually throwing a switch twice per second and provides a uniform sweep over the sector being scanned. The 10,000-yard time base and the  $N^2$  Gate provide greater accuracy at workable ranges. The ability to track a target automatically, a standard feature of the 584, improves the accuracy of data obtained and helps prevent tracking an interfering target. With these modifications, the 584 can locate a mortar site within 50 yards at a 5,000-yard range with an azimuth error ranging between 5 and 15 mils. While this is not an exact positioning of the mortar, sufficient data are given so that the area defined by the set is a worthwhile target for saturation fire,

and the mortar will be neutralized if not destroyed.

Care in siting the set and in its orientation will pay dividends. The range from the set to the enemy front line should be no greater than 6,000 yards as the signals returned from mortar projectiles are very weak beyond that range. Since enemy radio direction-finding facilities are capable of locating the radar, its use too close to the front lines is impractical. The 584 gives better performance when it is emplaced on the flank of hostile fire. Whenever possible the radar site should be chosen to allow the beam to make the largest angle possible with the plane of hostile fire. Higher command will usually designate a general area in which the radar section may select a position and may assign a definite area to search for mortars.

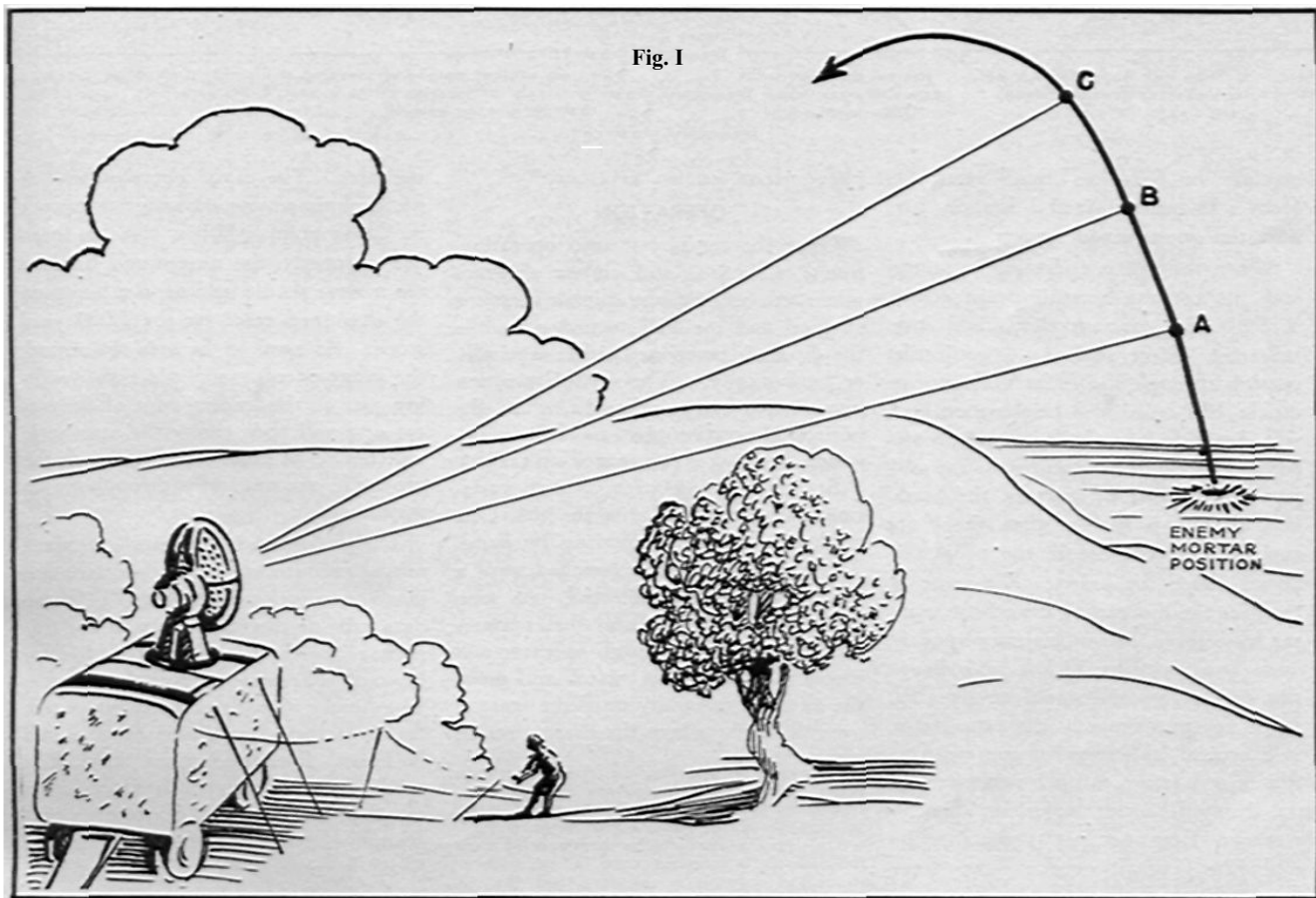
Important considerations in the selection of a site:

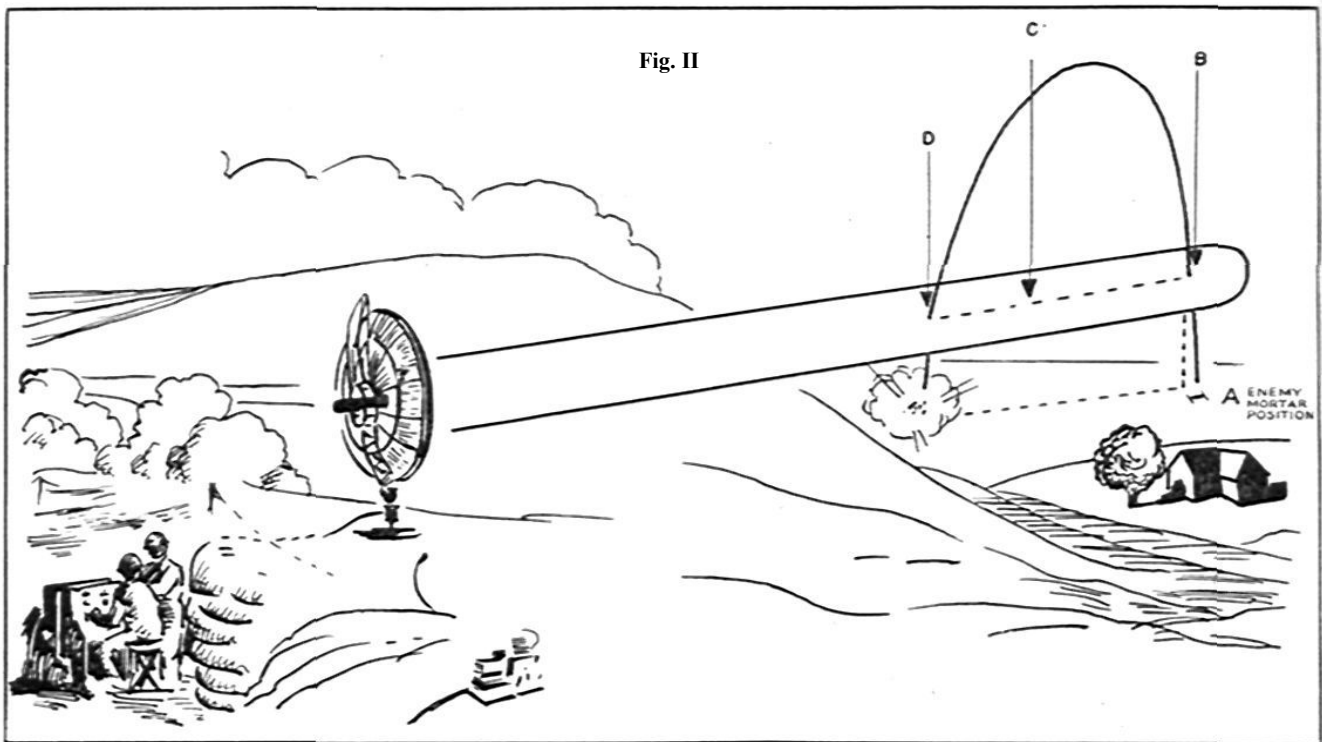
1. The set must be cited so that echoes from land masses will not cause clutter in the scope which would prevent the detection of targets in the sector of search.

2. Accessibility, defilade, camouflage, proximity of survey control and communication facilities are other factors entering into the choice of a site.

Proper orientation is essential and its direct effect on results cannot be overemphasized. Constant rechecking of survey and orientation is invaluable in obtaining accurate locations of enemy mortars. This orientation may be accomplished by several methods just as a gun can be laid for indirect fire: survey of the position area with computed azimuths to known points both near and far; "radar registration" using friendly

**Radar Set SCR-584 in action. Set tracks mortar projectile automatically, providing range, azimuth and elevation at each five-second reading. Point A represents the lock position; B, the five-second reading and C, the ten-second one.**





**Mortar location with Radar Set AN/TPQ-3. This set does not track automatically but uses another method of scanning at a constant elevation, picking up the mortar shell as it goes up through the beam and again when it comes down. A represents the location of the mortar; B the ascending range-azimuth; C the mortar line of fire, and D the descending range-azimuth.**

mortars or bazookas fired vertically from a known point; and friendly fire adjusted on surveyed targets.

When the 584 is operating in sector scan, its antenna beam is swept across a sector at a constant elevation. Any reflecting object such as a projectile passing through the beam will appear on the PPI scope as a bright spot, and will diminish in intensity as the beam passes beyond the direction to the object. In the case of mortars, the beam may flick a projectile three times on successive sweeps before the projectile passes above the beam. The same is true for the descending branch of mortar trajectory. The momentary appearance (two or three flicks) and disappearance of a small signal on the PPI scope at approximately constant range is a typical indication of mortar fire. Planes will return a much stronger signal than will mortar projectiles. Echoes returned from artillery projectiles in flight are generally weaker than those from mortar shells. This is due to a phenomenon known as aspect.\*

### OPERATION

Once the set is put into operation, tuned, adjusted, and clutter diagram taken and studied, the spinner motor is stopped and the PPI turned off while the dipole is positioned either vertically or horizontally. (The vertical position gives more exact azimuths while the horizontal position gives more exact elevation and makes target pick-up easier.)

Several plotting methods with variations have been tried with the 584. One method is graphical plotting by hand. The assigned sector is searched until a mortar projectile is detected. As soon as the pip from the mortar shell appears on the scope, the azimuth operator will throw the sector scan

\*Theory of *aspect*: When a projectile in flight passes through the antenna beam it becomes energized by the radio waves, and reradiates them. In effect, the shell becomes a transmitter.

The direction of the radio waves emitted from the projectile is dependent upon (a) the angle at which the projectile is energized, and (b) the contour of the projectile.

switch and move the antenna manually until the trace is over the point where the mortar round appeared. The range operator will at the same time move the range trace over the same point. When this has been done properly, the next round fired by the mortar should appear as a hump on the illuminated trace on the 2,000 yard scope. As soon as he sees the round, the range operator will place the tracking gate on the leading edge of the target and will then throw the automatic switches. The radar will then track the projectile automatically throughout its trajectory.

Three 5-second readings on slant range, azimuth, and elevation dials are taken after locking on. (Fig. 1.) These data provide discrete points on the trajectory which are projected to the ground. The line of fire is then drawn. The height of each point is computed, the trajectory drawn and extrapolated backward, freehand in most cases. The position of the mortar is the intersection of the extrapolated trajectory and ground mortar level—the latter checked closely against maps and aerial photos. Both the British and the Americans

have experimented with various types of automatic plotters.

Disadvantages of the 584 are its great weight — 14 tons — and the resultant difficulty of moving into position and getting into operation, which greatly limits its use in a fluid situation. These difficulties have been overcome to a certain extent by the development of the SCR-784 which is the same set electronically but weighs only half as much and presents a much lower silhouette. It has the additional advantage of automatic tracking in range as well as in elevation and azimuth. The 784 has been proposed as the organic FA Observation Battalion radar set.

### AN/TPQ-3

Since the size of the 584 made its use in and near the front lines impractical, the Army looked for a lighter set, and found it in the AN/TPS-3, a lightweight search radar which could be transported easily by troops to a front-line position.

The choice of the TPS-3 is rather a surprising one since it is not a microwave set and a mortar shell is such a small target. Although there is quite a gap between the TPS-3 and the 584 in general performance as radar equipments, they become comparable as mortar location sets.

Certain modifications were necessary to suit the TPS-3 to its counter-mortar role. These were:

1. Change in polarization from horizontal to vertical.

2. Separation of radar console from antenna by about 100 feet. This makes it possible to protect and conceal the operators and, at the same time, to locate

the antenna in a relatively exposed position, a fact greatly appreciated by the operators.

3. Installation of a range and azimuth marker unit; off-center PPI; sector-scan switch (400, 700 or 1000 mils).

4. Change of maximum range from 120 miles to 10,000 yards. With these modifications the name was changed to Radar Set AN/TPQ-3.

Knowing the approximate direction from which the mortar fire is coming, the operator scans a sector of about 60° until a shell signal appears, then continues the scan over a narrower sector centered on the shell echo. The range-azimuth marker, which is merely a movable spotlight on the PPI, is centered directly on the first point (ascent), then on the last point observed (descent). Range and azimuth to each point are recorded. The origin of the parabolic path of the shell passing through these two points is then determined by a Farad slide rule.

The TPQ-3 has two big advantages over the 584. It weighs a great deal less, which means a lot in mortar work, and being lower frequency, it is much less susceptible to rain echoes. Heavy rain will almost blanket the 584 scope when the set is used to track small targets at short ranges. The 584, on the other hand, has the edge on accuracy. The accuracy of any set depends upon a number of factors, principally the state of training of the operators. The artillery counter-mortar section works very closely with the counter-mortar agencies of the infantry through artillery liaison channels. The range of radar allows the most efficient operation from the general

position area of the field artillery battalion. The counter-fire potentialities are readily available there, as are the communication and survey facilities.

However, the usefulness of the radar does not end with the location of mortars. Fire adjustment can be accomplished with radar by tracking the projectile of the adjustment pieces. Then too, radar has been successfully used for road watching, and can locate personnel, patrols, vehicles and other ground targets of opportunity.

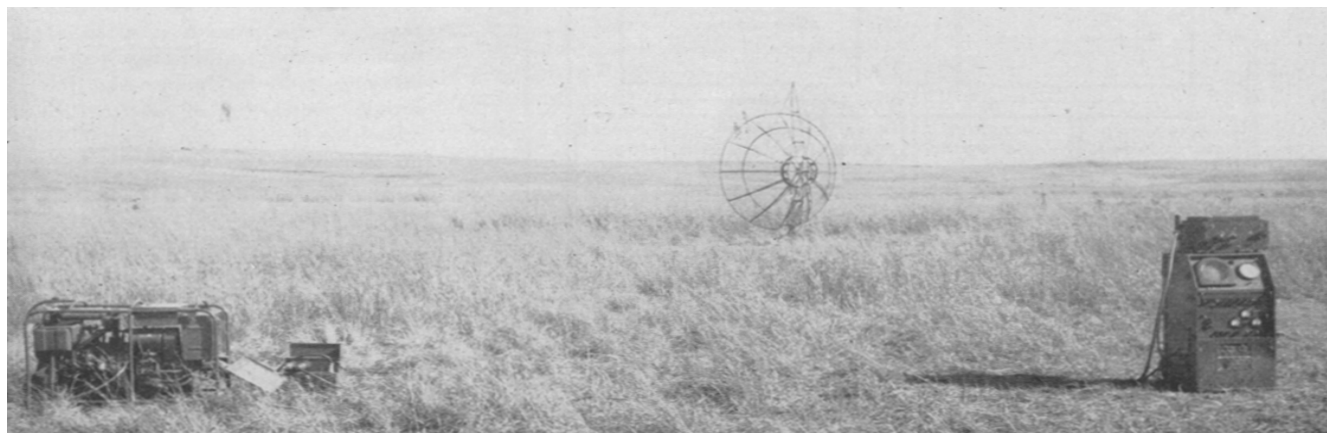
### SUMMARY

With present location methods and equipment, an enemy mortar position can be neutralized. But there are several prerequisites—well chosen sites, experienced operators, and of course, a knowledge of mortar employment. Under some field conditions, it is difficult to obtain a site that will give optimum radar performance but even under unfavorable conditions it should be possible to direct counter-fire close enough to a position to make it untenable.

General Somervell remarked near the end of the war, "Use of radar to locate enemy mortars is a device which, even in its infancy, is saving many American lives. Perfected, it can save many more. . . ."

So, remember this. Neither of these sets was designed for this job, but rather they were converted from existing sets which were doing entirely different jobs. Perhaps when sets are designed to fulfill the military characteristics of a counter-mortar set, radar will be even more the nemesis of mortars than it is today.

**Radar Set AN/TPQ-3 set up for mortar detection. Reading from left to right: power plant, modulator unit (small box with top up), antenna and console with control unit on top.**





# GOING TO SCHOOL?

ONE OF THE MOST PROGRESSIVE STEPS taken in the reorganization of our Army was the complete revision of the educational system for officers. The general framework of the system is shown by the chart below.

Immediately following is a series of six articles that take the artilleryman straight up through the school system, from The Ground General School to the colleges at the Joint Chiefs of Staff level. Neither shown in the chart nor discussed in these articles, however, are the literally hundreds of opportunities now open to American soldiers for advanced study both at military and civilian educational institutions. Some idea of the scope and diversity of these opportunities may be gathered by a close noting of the data included in the "Many Artillerymen Study and Teach" roster that accompanies these articles.

Returning to the general framework of the educational system, there are several points that are worthy of note.

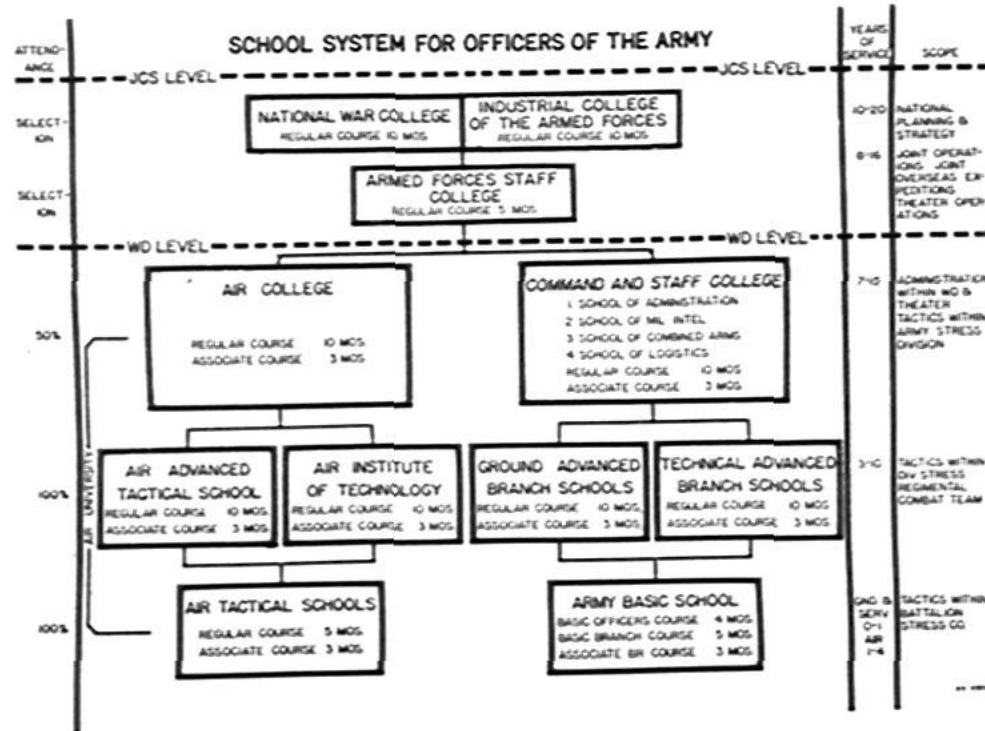
In order to utilize the ability and experience of officers whose Army education had been interrupted by the war and to fit the integrated officer into the school system, a

constructive credit system was established. Credits equivalent to formal schooling are established, by appropriate boards, for each officer of the Regular Army. Credits are determined on length of service, efficiency rating and performance of duty or attendance at schools. Credit is given only when the record of the officer clearly indicates, by demonstrated performance of duties, that he possesses the knowledge and qualifications which could reasonably be expected of a graduate of the school in question.

At the time this revised educational system was under discussion, there was considerable difference of opinion whether or not all officers—or merely selected officers—should progress through all levels of the system. The proponents of the view that all officers should attend argued that if the officer was not qualified for training in the school appropriate to his length of service and experience he should be eliminated from the service. The logic of this view is impressive, but it presupposes, among other things, the existence of effective methods for eliminating officers not qualified for higher training. Pending the evolution of a

sound and fair and workable solution to this difficult problem, a selective system for school attendance above the branch level will necessarily remain in effect.

The provision of a system for the progressive education of Reserve and National Guard officers is essential to national security. This requirement is met principally by the provision for associate courses in all of the major schools of the education system. Regular courses are also open to Reserve and National Guard officers whenever attendance for the longer period is practicable. In addition, appropriate schools will provide extension courses for the instruction of these officers when not on active duty.



# The Ground General School

By Lt. Col. Wheeler G. Merriam, Cav.\*

THE GROUND GENERAL School, which has recently been established at Fort Riley, Kansas, using the buildings and facilities that were formerly The Cavalry and Intelligence Schools, is an important part of the revised Army Ground Forces School System.

In addition to training all newly-commissioned officers in basic, branch immaterial subjects, the Ground General School will conduct the Army Officer Candidate School and will continue to carry on the functions of the Intelligence School in training intelligence officers and specialists. Horsemanship instruction will also be continued on a limited scale.

The activities of The Cavalry School which pertain to fields other than animals have been assigned to the Armored School at Fort Knox, Kentucky.

## BASIC, BRANCH IMMATERIAL COURSE

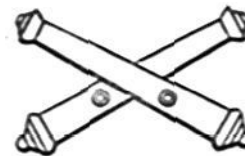
Commencing this coming summer, the 17-week Basic, Branch Immaterial course, for all newly-commissioned officers, which was previously conducted by the Infantry, Armored, and Artillery Schools, will be consolidated at The Ground General School. This instruction is designed to supplement instruction received prior to being commissioned and to provide a stepping stone to the more specialized instruction in the courses given at the various service schools. The instruction is aimed at qualifying the student to

carry out those duties and responsibilities of the officer, at platoon and company or battery level, which are common to all branches of the service.

The tactical instruction gives the student officer an understanding of the principles of small unit operations, security, and scouting and patrolling as well as an appreciation of the role played by all arms and services in modern military operations. Communications, weapons, and motors instruction is planned to give the student a thorough knowledge of equipment normally employed by all branches. In addition the student is given an appreciation of the capabilities of weapons and equipment peculiar to specific branches. Qualification firing will be conducted with one or more of the small arms in which the student has not previously qualified. Students will be given sufficient instruction and practice to enable them to carry out administrative, supply and mess duties at company or battery level. Application of the instructor training received at West Point will be effected by having students prepare and present selected periods of instruction to Officer Candidate classes.

Students will be kept abreast of recent military developments by a series of guest speakers, and it is also contemplated that for a portion of the scheduled time the student will be allowed a choice of subjects based upon his needs and interests.

The method of instruction stresses practical application in the duties and responsibilities an officer encounters in the administration, instruction and tactical handling of troops—with *officer*



## MANY ARTILLERYMEN STUDY AND TEACH

The following is a roster of Field Artillery officers now either studying or teaching at the military or civilian educational institutions noted after their names.

**Bold type** indicates that the officer is an instructor.

A key to the abbreviations used is given at the foot of this column.

It will open many an eye to note that, although this roster contains *over 900 names*, it does not include the name of artillerymen serving as National Guard, ROTC, and Organized Reserve instructors. It is true, indeed, that *many* artillerymen study and teach!

Adams, Lt Col L. D., U of Calif.  
**Adams**, Col R. H., TAS  
Addington, Lt Col J. S., Columbia  
Ahern, Maj W. F., TAS  
Albergotti, Lt Col C. H., C&SC  
**Albrecht**, Maj A. W., TAS  
Alderson, 2d Lt F. K., TAS  
Alexander, 1st Lt G. L., NYU  
**Alexander**, Lt Col U. W., TAS  
**Allen**, Lt Col B. E., TAS  
Allen, Capt B. G., TIS  
**Allen**, Maj L. C., TAS  
**Allen**, Maj R. W., Jr., USMA  
**Allin**, Maj G. R., Jr., TAS  
**Almquist**, Lt Col E. H., Jr., TAS  
**Ambron**, Capt T. R., Armd Sch  
Amend, Lt Col J. W., C&SC  
**Anderson**, Lt Col C. H., USMA  
Anderson, Lt Col C. H., C&SC  
Anderson, 1st Lt E. N., TAS  
**Anderson**, Capt G. D., Jr., TAS  
Anderson, Maj G. L., TAS  
Anderson, 2d Lt G. E., TAS  
Anding, Col J. G., ICAF  
Andresen, 1st Lt R. M., Ill. Inst. of Tech.  
Andrews, 1st Lt E. G., TIS

## ABBREVIATIONS

**AFSC** — Armed Forces Staff College;  
**ARMD SCH** — Armored School; **C&SC** — Command & Staff College; **ICAF** — Industrial College Armed Forces; **NAT'L W. C.**—National War College; **NAV. W. C.** — Naval War College; **TAS**—The Artillery School; **TGGS**— The Ground General School; **TIS**— The Infantry School; **USMA**—U. S. Military Academy.

(Continued on page 96)

\*The author is Chief of the Department of General Subjects at The Ground General School.—Ed.

*responsibility and leadership* the theme throughout.

### OFFICER CANDIDATE SCHOOL

All AGF officer candidate instruction will be centered at The Ground General School starting in June 1947. The standard 24 weeks' course of intensive training will be given with few changes in content from that previously presented at Fort Benning and elsewhere.

Early phases of the officer candidate instruction directed at the basic training of the individual will include familiarization and qualification firing of small arms, motor maintenance, driver training, use of communications equipment, map reading, scouting and patrolling, drill and ceremonies, first aid and sanitation. Leadership and methods of instruction will receive considerable attention. Later phases will be directed at small unit tactics, familiarization with the equipment and functions of the various branches of the service, and the techniques of carrying out the tactical and administrative duties of the junior officer. As with the basic course, the stress in this instruction will be on the practical applicatory exercise to the extent possible with the large enrollment

that is anticipated.

Upon being commissioned in the Army of the United States the graduating students will be prepared to take the associate basic course at the school of their respective arm or service.

### OTHER COURSES

The Intelligence School, now redesignated as a division of The Ground General School, will continue to give instruction to selected officers and enlisted men as well as conduct the intelligence phases of instruction in the Basic, Branch Immaterial and Officer Candidate Courses.

The 18½ weeks' Intelligence Course trains selected officers of all arms for the performance of the duties of intelligence officers in the various echelons of command with emphasis on those of divisions and lower units. One phase of this instruction is directed at giving the student an understanding of the capabilities and limitations of all the agencies, both tactical units and specialist personnel and teams, that collect information of intelligence value. The other phase is concerned with the functioning of S-2 and G-2 sections. A feature of the instruction is the extensive

practice the student receives in the actual carrying out of the duties of the intelligence officer through practical applicatory exercises.

In shorter courses of 9 weeks' duration selected enlisted men are trained as specialists in specific intelligence activities including photo interpretation, order of battle, and the interrogation of prisoners of war.

With the purpose of maintaining a small nucleus of officers trained in the art of horsemanship, both the Intermediate and Advanced Horsemanship instruction for officers will be continued as 37-week courses limited to ten students each. This instruction will include a certain amount of horse cavalry tactics and technique in addition to horsemanship and animal management. The Horseshoer-Packer and the Saddler-Packer training for enlisted men will continue in courses of 18½ weeks each.

### INTERIM PERIOD

During the interim period before the first BI and ACC classes open, The Ground General School has several courses in session. The intelligence instruction mentioned above and one horsemanship course are being carried on. The last Reconnaissance and Security Course for officers is currently in session and will graduate in June. Also a series of intensive short courses in administration is being conducted for AAF officers of the Ninth Air Force.

Although currently operating on a somewhat reduced scale, The Ground General School will expand in the near future. With increments of 200 officer candidates arriving every few weeks commencing in June and with Branch Immaterial as well as the next Intelligence and Horsemanship classes starting in the late summer, enrollment will rapidly increase until it reaches a capacity load of well over 2,000 students by December 1947.

The instructor personnel at The Ground General School still shows a predominance of cavalry officers; however, a transition has already begun that will result in an appropriate representation from all branches of the service by the time the new activities are under way.

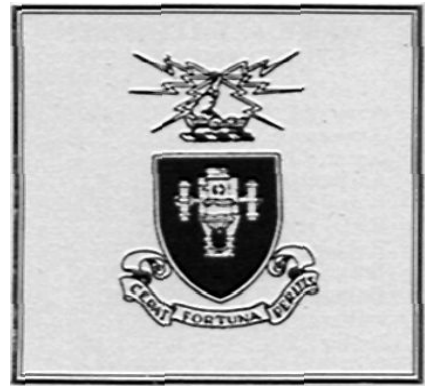
**Headquarters. The Ground General School Center**





# The Artillery School

By Col. Thomas E. de Shazo, FA  
Assistant Commandant, The Artillery School



SINCE V-J DAY MUCH INFORMATION has appeared in War Department orders, Army Ground Forces directives, and various press releases on the subject of the reorganization of the three artillery schools into one artillery school. This article recapitulates the facts and discusses the plans of The Artillery School in carrying out this program.

The Artillery Center, with headquarters at Fort Sill, Oklahoma, has been established to control The Artillery School, the Post of Fort Sill, and all Army Ground Forces troops stationed at Fort Sill. The Artillery School is a consolidation of the Field Artillery School at Fort Winfield Scott, California Guided Missiles School at Fort Bliss, Texas, and the Seacoast Artillery School at Fort Winfield Scott, California. Major General Clift Andrus is Commanding General of The Artillery Center and Commandant of The Artillery School. One staff, with general staff status, functions for both headquarters. There is a Deputy Commander, Brigadier General John Millikin, who is charged with administration of the Center and the School, and an Assistant Commandant, who is charged with instruction matters. There is an Assistant Commandant for each branch school, Major General John L. Homer at Fort Bliss and Major General Robert T. Frederick at Fort Scott, who exercise administrative and instructional jurisdiction over those installations.

The Artillery School at Fort Sill will teach subjects common to all artillery (antiaircraft, seacoast, and field) and field artillery subjects. The branch

schools will teach subjects peculiar to their branch. The War Department has announced that this consolidation of artillery schools is the first part of a plan wherein Congress will be asked to enact legislation to effect consolidation of the three artilleries into a single branch.

The Artillery School with its branches becomes the intermediate Army Ground Forces school for artillerymen. Attendance here will follow attendance at the Ground General School at Fort Riley, Kansas, and will precede attendance at the Command and Staff College at Fort Leavenworth, Kansas. At The Artillery School, artillery officers will receive their technical and tactical branch schooling.

In implementing this intermediate Army Ground Forces school system in The Artillery School these courses and subjects common to all artilleries and courses and subjects peculiar only to Field Artillery will be taught at Fort Sill. Courses and subjects peculiar to Antiaircraft Artillery (including guided missiles), and Seacoast Artillery will be taught at Fort Bliss and Fort Scott respectively. Both general courses and specialist courses will be taught at all three installations.

## COURSES OF INSTRUCTION

A chart description of courses conducted by The Artillery School and its branches follows:

### THE ARTILLERY SCHOOL

FORT SILL, OKLAHOMA

<i>Officers' Courses</i>	<i>Length</i>		<i>Concurrent Classes</i>	<i>Class Capacity</i>	<i>Course Capacity</i>	<i>Yearly Output</i>
Basic Artillery	26	Weeks	....	109	109	109
Associate Basic Artillery	13	Weeks	5	50	250	800
Advanced Artillery	41	Weeks	....	60	60	60
Associate Advanced Artillery	13	Weeks	4	100	400	400
Communication	18½	Weeks	....	40	40	80
Observation Battalion Officers'	18½	Weeks	....	25	25	50
AGF Pilot	16	Weeks	8	14	112	350
Refresher Courses for Senior Officers	To be announced					

<i>Enlisted Courses</i>	<i>Length</i>		<i>Concurrent Classes</i>	<i>Class Capacity</i>	<i>Course Capacity</i>	<i>Yearly Output</i>
Noncommissioned Officer	18½	Weeks	....	90	90	180
Communication Chief	18½	Weeks	....	60	60	120
Sound, Flash, and Survey	18½	Weeks	....	40	40	80
Armorer and Artillery Mechanic	18½	Weeks	....	90	90	180
Ballistic Meteorology	18½	Weeks	....	20	20	40
Radar	18½	Weeks	....	40	40	80
Air Mechanic	13	Weeks	7	14	98	350
Radio Repair	18½	Weeks	....	60	60	120
Artillery Surveyor	37	Weeks	....	60	60	60

**MANY ARTILLERYMEN  
STUDY AND TEACH**

(Continued from page 93)

Armfield, 2d Lt W. F., TAS  
 Armstrong, 2d Lt J. L., TAS  
 Arter, Lt Col A. A., C&SC  
**Aschenbeck**, Capt A. H., TAS  
 Babcock, 2d Lt Rob., III, TAS  
 Bads, Maj D. M., TAS  
**Bagley**, Lt Col L. W., TAS  
**Bailey**, Lt Col E. A., USMA  
**Baker**, 1st Lt A. F., TAS  
 Baker, 2d Lt D. T., TAS  
 Baker, 2d Lt Van Roy, TAS  
 Ball, 1st Lt R. D., TGGG  
 Barbaro, Maj C. Z., TAS  
**Barker**, Lt Col W. E., TAS  
**Barnes**, Lt Col N. P., TIS  
**Barnette**, 1st Lt E. N., TAS  
 Barnhouse, Lt Col T. D., C&SC  
 Basham, 2d Lt E. W., TAS  
**Bates**, Capt J. M., TAS  
 Bauman, Capt A. E., TAS  
**Bautz**, Maj E., Jr., Armd Sch  
 Beach, Lt Col D. E., C&SC  
**Beale**, Capt W. J., TAS  
 Beaman, Capt H. E., TAS  
 Beasley, 2d Lt R. W., Jr., TAS  
 Beauchamp, Capt H. C., TAS  
**Beaver**, Capt G. A., TAS  
 Beere, Lt Col D. C., Princeton  
 Beets, Lt Col W. O., C&SC  
**Beishline**, Col J. R., C&SC  
 Bell, Lt Col J. K., C&SC  
**Benner**, Lt Col J. G., TAS  
**Bennett**, Lt Col D. V., USMA  
**Benson**, Capt W. R., TAS  
 Berman, 2d Lt S. H., TAS  
 Berry, Lt Col E. S., C&SC  
**Best**, Lt Col L. J., Armd Sch  
 Beynon, Col J. L., C&SC  
**Binkley**, Capt J. F., TAS  
 Birdseye, Capt M. B., Jr., III,  
 Inst. of Tech.  
**Birnbaum**, Capt M. L., TAS  
**Bittner**, Lt Col J. F., TAS  
 Blacker, Lt Col K. K., TAS  
 Blackwell, 1st Lt A. D., TAS  
**Blair**, Lt Col J. S., TAS  
**Blake**, Lt Col C. J., TAS  
 Blake, Capt R. T., Calif. Inst. of  
 Tech.  
 Blanchett, Capt L. M., Jr. Calif.  
 Inst. of Tech.  
 Blodgett, Maj J. A., TAS  
**Blose**, Capt P. M., TAS  
**Bobo**, Maj C. E., Jr., TAS  
**Bogue**, Lt. Col J. R., C&SC  
**Bohannan**, Capt C. C., TAS  
**Boldt**, Lt Col S. C., TAS  
**Booge**, 1st Lt J. L., TIS  
 Bott, 1st Lt F. M., TAS  
 Bowen, Capt C. O., TAS  
 Bowen, 2d Lt F. M., Jr., TAS  
 Bowen, Capt J. D., TAS  
 Bowen, 2d Lt R. B., TAS  
 Bower, Lt Col R. C., C&SC

(Continued on opposite page)

**ANTI-AIRCRAFT AND GUIDED MISSILES  
BRANCH, THE ARTILLERY SCHOOL**

FORT BLISS, TEXAS

<i>Officers' Courses</i>	<i>Length</i>		<i>Concurrent Classes</i>	<i>Class Capacity</i>	<i>Course Capacity</i>	<i>Yearly Output</i>
Associate Basic	13	Weeks	....	70	70	210
Radar	37	Weeks	....	25	25	25
Research and Analysis	37	Weeks	....	20	20	20
Guided Missiles	37	Weeks	....	25	25	25
<i>Enlisted Courses</i>	<i>Length</i>		<i>Concurrent Classes</i>	<i>Class Capacity</i>	<i>Course Capacity</i>	<i>Yearly Output</i>
Radar Repair and Maintenance	37	Weeks	....	45	45	45
Fire Control Electrician	37	Weeks	....	50	50	50

NOTE: Additional courses in guided missiles not determined.

**SEACOAST BRANCH, THE ARTILLERY SCHOOL**

FORT SCOTT, CALIFORNIA

<i>Officers' Courses</i>	<i>Length</i>		<i>Concurrent Classes</i>	<i>Class Capacity</i>	<i>Course Capacity</i>	<i>Yearly Output</i>
Associate Basic	13	Weeks	....	25	25	75
Submarine Mine	18½	Weeks	....	10	10	10
Seacoast Electronics	18½	Weeks	....	10	10	20
Advanced Gunnery	13	Weeks	....	10	10	10
<i>Enlisted Courses</i>	<i>Length</i>		<i>Concurrent Classes</i>	<i>Class Capacity</i>	<i>Course Capacity</i>	<i>Yearly Output</i>
Seacoast and Marine Power Plant	18½	Weeks	....	12	12	24
Seacoast Wire Communication	18½	Weeks	....	12	12	24
Seacoast Gun Data Computer	18½	Weeks	....	12	12	24
Seacoast Arty. Radar Repair & Maint.	18½	Weeks	....	12	12	24
Subm. Mining Casemate Electrician	18½	Weeks	....	12	12	24
Submarine Mine Assembly and Planting	6	Weeks	....	12	12	12
Submarine Mine Coxswain	16	Weeks	....	12	12	12
Mine Planter Engineer	37	Weeks	....	12	12	12
Mine Planter Deck	26	Weeks	....	12	12	12

The distribution of courses shown on the chart follows directives under which The Artillery School is operating. Based on those directives the plans of the School for the conduct of the different courses and subjects to accomplish the objects provide an analysis of each course.

**Basic Artillery Course.** At the conclusion of the seventeen weeks' Basic Course at Fort Riley, Kansas, all newly commissioned officers of artillery will come to The Artillery School for the Basic Artillery Course. This course will consist of twenty-six weeks' instruction, sixteen weeks at Fort Sill and ten weeks at Fort Bliss. At Fort Sill, students will receive six weeks' instruction in common artillery subjects, such as communication, motors, materiel, maps and charts, survey, intelligence, seacoast artillery indoctrination, artillery staff functions and tactics up to the battalion level, and ten weeks' instruction in field artillery technique with emphasis on observed and unobserved fires, planning of fires, and fire direction. At the conclusion of sixteen

weeks' instruction at Fort Sill, all students will go to Fort Bliss for ten weeks' instruction in antiaircraft and guided missiles. This will round out their basic artillery instruction and they will then go to troop duty.

**Associate Basic Artillery Course.** This thirteen weeks' course is conducted for junior officers of the National Guard and Organized Reserve, for graduates of the Officer Candidate School, and for officers of other arms. The field is too broad and the time too short to attempt integrated instruction at this stage. Therefore, this course will be a specialist artillery course, with those officers assigned to field artillery units attending the thirteen weeks' course at Fort Sill; those assigned to antiaircraft artillery units attending a thirteen weeks' course at Fort Bliss; and those assigned to seacoast artillery units attending a thirteen weeks' course at Fort Scott. Integrated training for this group of officers will come at the Associate Advanced Course level.

**Advanced Artillery Course.** Students for this forty-one weeks' course

will be drawn from all the artilleries, between their third and tenth years of service. Since technique will have been emphasized in the Basic Course, most of this course will be devoted to staff functions, logistics, and to tactics of the combined arms, emphasizing the artillery role in formations up to and including the corps. General staff organization and functions will be included. The course will be broken down into two phases: first, a thirty-five weeks' course at Fort Sill to include general staff functions, combat orders, intelligence, tactics of the separate arms, and tactics of combined arms; second, an eleven weeks' course at Fort Bliss in antiaircraft and guided missiles artillery.

#### *Associate Advanced Artillery Course.*

This thirteen weeks' course is designed for artillery officers of the National Guard and Organized Reserve, and officers of other arms. Since the Associate Basic Course is a specialist artillery course devoted for the most part to technique, the Associate Advanced Course will be the stage where officers of the National Guard and Organized Reserves receive integrated artillery instruction. The subject matter in the regular Advanced Course will be condensed into a thirteen week period. Tactics and staff functions from the level of the reinforced battalion up through corps units will be taught. It is planned to conduct this course entirely at Fort Sill.

*The other courses* for artillerymen are similar to pre-war specialist courses. The Communication Courses and the Armorer and Artillery Mechanics' Course are broadened to take care of students from all types of artillery units. Officer and enlisted motors specialists for the artillery will be trained at The Armored School, Fort Knox, Kentucky. However, instruction in tactical operation of motor vehicles to include command inspection, preventive maintenance, and motor marches will be continued in general courses at Fort Sill. The Noncommissioned Officers' Course fills a long neglected educational gap. It is a general course offered to the line noncommissioned officer as opposed to the specialist (mess, motor, communication). The purpose is to make expert unit instructors and

noncommissioned officer leaders and to provide a stepping stone to the Officer Candidate School. The Artillery Surveyor Course is a new specialist course at Fort Sill. It is designed to qualify enlisted survey and operations personnel for all types of artillery units. It is interesting to note that pilots and airplane mechanics for all Army Ground Forces units authorized aircraft are trained at The Artillery School, and that all graduate pilots are trained in adjustment of artillery fire from the air. Enlisted specialists for the National Guard and Reserve components will be trained along with the regular students. Similar branch specialist courses are conducted at the branch schools.

### SCHOOL TROOPS

The problem of presenting this more complex scope of instruction will require augmentation of school troops beyond the old infantry-artillery team. In field exercises and demonstrations it is not proposed to leave hazy details to the student's imagination. He will be shown all the combat elements that make up the battle team. The importance of this stands out when it is realized that this is the only school which artillery students attend where instruction will include practical field exercises employing tactical formations. School troops now consist of five battalions of field artillery, equipped with all standard types of field artillery weapons, and one battalion of infantry. Antiaircraft artillery, armor, engineer, and signal units will be added to school troops.

### INTEGRATING THE ARTILLERIES

Real integration will not be attained until the students who attend the new Basic Artillery Courses have returned three to ten years later and have completed the Advanced Course. Experience with the present Advanced class shows that non-integrated students with a background of antiaircraft artillery and seacoast artillery are seriously handicapped by lack of basic knowledge of field artillery. In like manner, students with a field artillery background will face similar problems when the class proceeds to the two branch schools. National Guard and Reserve

**Bowlby**, Maj Lawrence, TAS  
**Bowling**, Maj C. M., Jr., TAS  
**Boyd**, Capt R. W., TAS  
**Boynton**, Lt Col R. E., C&SC  
**Brady**, 2d Lt E. B., TAS  
**Brewer**, Lt Col P. L., C&SC  
**Brewer**, Lt Col R. M., Ill. Inst. of Tech.  
**Brisben**, 1st Lt W. W., TAS  
**Brittingham**, Col J. F., TAS  
**Brooks**, 2d Lt H. E., Jr., U. of TAS  
**Brown**, 2d Lt B. C., TAS  
**Brown**, Lt Col D. F., TAS  
**Brown**, Col F. J., Nat'l W. C.  
**Brown**, Capt G. B., Jr., U. of Ill.  
**Brown**, Maj H. M., Jr., TAS  
**Brown**, 1st Lt J. A., TAS  
**Brown**, Maj J. T., U. of Ill.  
**Brown**, Lt Col R. O., C&SC  
**Brownfield**, Lt Col A. R., TIS  
**Brubaker**, Maj W. E., TAS  
**Bryant**, Capt C. M., TAS  
**Bull**, Maj F. G., TIS  
**Bullock**, 2d Lt R. O., TAS  
**Bullock**, Col W. C., TAS  
**Burbach**, Col C. F., Nat'l W. C.  
**Burelbach**, Maj A. L., TAS  
**Burnell**, 2d Lt R. L., Jr., TAS  
**Burns**, Col J. J., TAS  
**Burns**, Lt Col K. P., C&SC  
**Bursell**, 1st Lt W. R., TAS  
**Burton**, Lt Col E. Y., Jr., C&SC  
**Butler**, Lt Col B., Jr., TAS  
**Buttery**, Capt E. B., TAS  
**Camp**, Maj J. H., USMA  
**Camp**, Lt Col R. H., C&SC  
**Campbell**, Lt Col F. P., Harvard  
**Campbell**, Col W. A., C&SC  
**Capps**, Capt W. B., TAS  
**Cardell**, Lt Col R. L., C&SC  
**Carey**, Lt Col T. G., TAS  
**Carroll**, Capt W. D., C&SC  
**Carson**, Capt W. T., TAS  
**Carter**, 2d Lt R. F., TAS  
**Case**, 1st Lt J. J., TAS  
**Casey**, 1st Lt F. B., TGGG  
**Cathrae**, Maj W. F., C&SC  
**Cavanaugh**, 2d Lt J. R., TAS  
**Chamblee**, 1st Lt J. J., TAS  
**Channon**, Lt Col J. A., AFSC  
**Chapman**, Lt Col Gerald, TAS  
**Chapman**, 1st Lt R. C., TAS  
**Chase**, 2d Lt Benj., TAS  
**Cheatham**, 2d Lt A. B., TAS  
**Clark**, Lt Col Paul, Jr., AFSC  
**Clarke**, Lt Col L. E., C&SC  
**Clifton**, Lt Col C. V., Jr., U. of Wise.  
**Cline**, Lt Col P. E., TIS  
**Coates**, Lt Col D. Y., TAS  
**Coats**, Lt Col W. J., TAS  
**Cobb**, Capt J. J., U. of Mich.  
**Coburn**, Lt Col M. B., TAS  
**Cockrill**, Capt J. C., Jr., U. of Calif.  
**Cogswell**, Maj D. G., TAS

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**Bold type** indicates instructor. See page 93 for key to abbreviations.

## MANY ARTILLERYMEN STUDY AND TEACH

(Continued from page 97)

Cole, 1st Lt Phipps, U. of Pa.  
Collins, Col J. F., Nat'l W. C.  
**Colman**, Lt Col C. D., C&SC  
Combs, Lt Col O. B., TAS  
**Compton**, Col L. J., C&SC  
Conk, Lt Col R. H., C&SC  
Conner, 2d Lt S. L., Jr., TAS  
**Connor**, Col A. O., TIS  
Constant, 2d Lt T. M., TAS  
Contole, Capt W. S., TAS  
Convey, 2d Lt J. E., TAS  
**Cooke**, Lt Col F. G., TGG  
**Cooke**, 1st Lt H. G., TAS  
**Cooper**, Col R. C., Air Univ.  
**Corbett**, Lt Col W. H., USMA  
**Corley**, Capt L. J., TIS  
Corneil, 1st Lt M. G., TAS  
**Cornwell**, Capt F. E., TAS  
**Corwin**, Capt R. W., TAS  
Coverdale, Col G. B., G&SC  
Covey, 2d Lt F. F., Jr., TAS  
**Craft**, 1st Lt F. G., TAS  
**Crage**, Capt J. F., TAS  
Cramer, 2d Lt R. G., TAS  
Crandall, Lt Col R. G., AFSC  
Crawford, Lt Col S. F., AFSC  
**Cross**, 1st Lt L. J., TAS  
Crossley, Maj W. W., C&SC  
Crowell, Capt A. W., Northwestern  
Crystal, Lt Col T. L., Jr., Princeton  
**Cusack**, Col G. K., C&SC  
Dabrowski, 1st Lt E. A., Ill. Inst. of Tech.  
**Daley**, Col J. P., USMA  
Daniel, 2d Lt C. D., Jr., TAS  
**Daniel**, Col. M. W., Armd Sch  
**Daniel**, Lt. Col. W. J., TAS  
**Darden**, Capt J. W., TAS  
**Darley**, Capt W. H., TAS  
Dashbach, 1st Lt H. L., Jr., U. of Calif.  
**Davis**, Capt H. O., TAS  
Davis, 2d Lt H. A., Jr., TAS  
**Davis**, Lt Col J. J., TAS  
Davis, Col K. L., TIS  
Davisson, Lt Col H. L., C&SC  
Davitt, Lt Col H. H., Jr., C&SC  
Day, Col F. M., Nat'l W. C.  
Dayton, 2d Lt J. B., TAS  
Deans, Capt K. V., TAS  
DeGooyer, Maj L. C., TIS  
DeLong, 2d Lt W. J., Jr., TAS  
Dempsey, 1st Lt M. R., TAS  
Dennett, 2d Lt G. L., TAS  
**de Shazo**, Col T. E., TAS  
Dettry, 2d Lt G. W., TAS  
**Diaz**, Capt J. P., TAS  
**Dibble**, Lt Col John, Jr., TAS  
Dickens, 1st Lt P. B., TAS  
Dietz, Lt Col G. E., TAS

(Continued on page 100)

**Bold type** indicates instructor. See page 93  
for key to abbreviations.

officers will have similar difficulties when they attend the Associate Advanced Course. The Artillery School has proposed that, until graduates of the present Basic Course return as Advanced Course students, those Regular Army officers whose background has been in one branch of the artillery be required to complete the other Associate Basic Course before being ordered to the Advanced Course. Also, it would be preferred that this plan also apply to our National Guard and Reserve students before they attend the Associate Advanced Course, but it is doubtful if time will allow this to be done. As an alternate solution, it is proposed that they be required to complete appropriate extension courses in the basic subjects of the other artillery arm.

The next real problem of integration in preparing courses of instruction is to determine the correct allotment of time to be divided among the branches and allotted to subjects. The school year actually will cover the same instruction which was formerly covered in three school years. The School is not alarmed over this but feels that the former courses never have fully challenged the mentality or taxed the capacity of students. No one can absolutely fix the relative instructional importance of the three artilleries at this time, especially when one delves into the realm of conjecture and the possibilities of new weapons. Courses must be built now based on the organization, weapons, and equipment that we have or which are under development. The Artillery School plans that since the proportionate number of officers who will be required for seacoast artillery type units will be very low when compared to those required for antiaircraft and field artillery type units, that the art of seacoast artillery technique be preserved through the media of the Associate Basic and the Advanced Gunnery Courses presently offered at the Seacoast Artillery Branch of The Artillery School; that students be specially selected to attend these courses in addition to attendance at the Basic and Advanced Courses; that the school time available be devoted for the most part to antiaircraft and field artillery subjects.

The school plan supports the solution of the basic problem of preparedness for a sudden wartime expansion with the maximum effectiveness and with the greatest conservation of time, effort, and means. Certainly our real strength will lie in our reservoir of trained reserves. In the early stages of a war a correspondingly large number of antiaircraft type units will be needed. When our strength is mobilized and we go over to the offensive, large numbers of field artillery type units will be needed. By this stage at least a degree of air superiority will have been achieved, and integrated training will permit us to rearm with field artillery weapons those antiaircraft type units which are fully organized and trained but which are no longer needed in a defensive role. Integrated training will produce integrated thought that will adjust the differences in technique. For example, the real difference in technique at present is that antiaircraft units employ mechanical—while field artillery units employ manual—operation in the fire-direction centers. It is within the realm of practicability that a mechanical fire-direction center be developed for the field artillery units.

There has been resistance to consolidation in all three of the branches. The School would like to reassure all artillerymen that integration will not be made at the sacrifice of any of the separate branch techniques and skills so highly perfected over the years and so effectively employed in this war. The School is taking the lead in allaying fears that one branch will absorb the others, with the absorbed branches becoming submerged groups of forgotten men. There are already at Fort Sill antiaircraft artillery and seacoast artillery officers as staff and faculty members for the departments of Combined Arms, Gunnery, Communication, and Materiel. Others will be brought to help integrate extension courses and training literature for one artillery. The School looks forward with enthusiasm and predicts with confidence that integration will produce a stronger, more versatile and aggressive family of artillery which will employ with traditional effectiveness and elan whatever weapons may be developed.

# The Command and Staff College

Prepared by the Staff, C & SC



**K**EEPING PACE with the need for revised staff training required for field commands, the Command and General Staff School emerged in May 1946 with a new name and a new curriculum. With location unchanged at Fort Leavenworth, Kansas, it is now known as the Command and Staff College, with the assigned mission of providing instruction, in the light of war lessons and modern developments, to insure: (a) research and study to improve methods of personnel, intelligence, tactical, and logistical procedures; (b) efficient administrative, intelligence and logistical support of the fighting forces; (c) effective development and employment of all field forces within the framework of the army group; (d) coordinated employment of army units with air and naval forces.

Capstone of the Army Ground Forces school system, the Command and Staff College offers a Regular Course of approximately 10 months' length, an Associate Course lasting approximately 3 months, and such Special Courses as may be directed by the War Department.

## FOUR SCHOOLS IN ONE

The College consists of four schools analogous to the four divisions of the General Staff of the Army—School of Personnel, School of Intelligence, School of Combined Arms, and School of Logistics. Each officer attending the College is assigned to one of the four schools.

Of the 253 Army officers and 6 Marine officers now in attendance as

students in the First Class of the Command and Staff College, 54 are assigned to the School of Personnel, 60 to the School of Intelligence, 83 to the School of Combined Arms, and 62 to the School of Logistics.

In order that he may specialize in one of the fields, the student spends a substantial part of his time (10 weeks in the Regular Course, 8 weeks in the Associate Course) attending classes of his assigned school. To give him a knowledge of all essential staff duties to enable him to work as a member of the staff family, and to inspire him to further study to qualify as a commander, he spends the remainder of his period of residence receiving instruction common to students of all four schools.

The types of instruction used at the College are varied. At the beginning or the course, there is necessarily a considerable number of lectures and conferences, where the imparting of knowledge is the first consideration and the instructor must do most of the work. Progressively, and as rapidly as possible, more and more time is devoted to map exercises and terrain exercises, where the student, guided by the instructor, applies what he has learned to an assumed tactical situation, on the map or on the ground itself. Later, in map problems, he faces the situation without the instructor's help. During map maneuvers he works as a member of the staff team, doing precisely the work he will do as a staff officer of the future.

Discontinued during the war years, the College has reestablished the

conduct of field trips and terrain maneuvers. Whereas most of these are attended by the entire student body, some are attended only by the students of the school having a primary interest in the installation or activity visited.

## SCHOOL OF PERSONNEL

The School of Personnel has for its basic premise the principle that the success of any command, whether in the combat area or not, depends greatly on that type of personnel management which makes a complete and efficient use of manpower—management to include those phases of psychology which apply to human relations, leadership, classification and assignment, promotion, work adjustments, and morale.

During the recent war, the Army's manpower problem was always of critical importance. The military manpower problem was literally big business in a big way. With this in mind, and in line with War Department directives, the School of Personnel teaches that wherever practicable, procedures similar to those used successfully in industrial personnel management should be adopted and followed in our citizen army.

During the common course, presented to the entire College, emphasis is placed on those personnel procedures and functions applicable to units in the combat zone, the communications zone, and the zone of the interior. Personnel problems arising in special operations or because of new weapons are studied

## MANY ARTILLERYMEN STUDY AND TEACH

(Continued from page 98)

**Dillon**, Capt J. F., TAS  
 Diver, 2d Lt. R. B., TAS  
 Dixon, 2d Lt. J. T., TAS  
 Dockstetter, 2d Lt F. E., TAS  
 Dodo, 2d Lt F. A., TAS  
 Dondanville, 1st Lt W. L., NYU  
**Dougherty**, Capt J. E., TAS  
**Downing**, Lt. Col W. A., Jr., USMA  
**Doxsie**, 1st Lt D. R., TAS  
**Draper**, Lt Col P. H., Jr., USMA  
 Druiss, Maj Edward, TAS  
 Duin, Lt Col G. H., TAS  
**Duncan**, 1st Lt D. E., TAS  
 Duncan, Lt Col O. W., C&SC  
**Dunn**, Col. T. W., TAS  
 Dunning, 1st Lt G. L., TAS  
**Durbin**, Capt J. D., TAS  
 Easter, 1st Lt H. H., TAS  
 Eckhardt, Col G. S., ICAF  
**Eddy**, Col K. A., TAS  
 Edgar, Lt Col T. I., C&SC  
**Edwards**, Col Parmer, TAS  
 Eggers, 2d Lt F. J., TAS  
 Elder, 2d Lt J. M., TAS  
**Elkin**, Lt Col H. G., TAS  
 Elliot, Capt H. D., U. of Chicago  
 Elliot, Lt Col R. H., TAS  
 Ellis, Capt C. H., TAS  
**Ellis**, Capt H. V., USMA  
**Ellsberry**, Maj R. V., USMA  
 Embley, 1st Lt W. H., TAS  
**Epes**, Col W. J., C&SC  
 Errickson, 1st Lt F. M., TAS  
**Ervin**, Capt J. W., Armd Sch  
**Estep**, 1st Lt C. G., TAS  
**Eubanks**, Maj M. E., TAS  
**Evans**, Capt E. E., TAS  
 Evans, Maj G. W., TAS  
 Ewing, Maj T. P., TAS  
**Exton**, Lt Col H. M., C&SC  
**Eyerly**, Col W. J., C&SC  
 Fahey, Maj P. V., TAS  
 Faires, 2d Lt H. H., Jr., TAS  
 Farrell, 1st Lt W. J., TAS  
**Farrington**, 1st Lt A. A., Jr., TAS  
**Farthing**, Capt W. E., TAS  
**Faulkner**, 1st Lt R. W., TAS  
 Feldman, 2d Lt M. B., TAS  
 Fellows, Lt Col F. E., C&SC  
**Ferris**, Lt Col J. W., C&SC  
**Fetters**, Capt O. M., TAS  
 Fincher, Maj J. L., TAS  
**Firehock**, Lt Col R. B., TAS  
**Fisher**, Col M. L., TAS  
**Fitch**, Lt Col A. R., C&SC  
 Fluty, Capt C. S., TAS  
**Flynn**, Capt H. D., TAS  
**Fogel**, Capt R. U., TAS  
 Folda, Lt Col Jaroslav, Jr., Georgetown U.  
**Follansbee**, Col C. G., C&SC  
 Ford, Capt R. G., C&SC

in the latter part of the course. Considerable time is devoted to application of basic personnel management principles to concrete military situations.

During the specialized phase of the course, the students assigned to the School of Personnel further analyze modern methods of personnel management, and the application of these methods to Army needs and problems. The specialized phase includes visits to Personnel Centers and industrial plants where personnel management techniques are studied and later evaluated in school discussions. Various current and critical personnel problems are the subjects of student research groups.

Finally, consideration is given to the importance of the relatively new fields of public relations, information and education, civil affairs, and to the traditional importance of religion. These agencies are discussed in the light of their contribution to the effective handling of military personnel.

### SCHOOL OF INTELLIGENCE

Within the framework of the mission of the College, the primary mission of the School of Intelligence is to teach all students the principles of military intelligence as they are applied by commanders and staff officers in all types of military operations. In addition, all students are familiarized with the detailed operations of the G-2 section at all combat echelons, and are given basic instruction in War Department Intelligence—which is primarily strategic in character—a major advance in intelligence training.

Supplementary to its primary mission, the School of Intelligence is responsible for the conduct of specialized intelligence instruction to all classes. For the Regular Class, this specialized intelligence instruction covers considerable applicatory work in all phases of combat intelligence, and intensive work in War Department Intelligence with its inherent interest in scientific, economic, political, sociological, and geographic matters. For the Associate Class, this instruction is similar to that of the Regular Class but is necessarily more condensed to conform to the time available, and therefore devotes more emphasis to combat intelligence.

**Ford**, Col W. W., TAS  
**Fortier**, Col. L. J., AFSC  
**Fowler**, Maj J. H., TAS  
 Fralish, Capt J. C., TAS  
 Franks, Capt E. R., Northwestern U.  
 Fraser, Col W. B., TAS  
**Frederickson**, Maj E. C., TAS  
**French**, Capt K. A., TAS  
**Frey**, Capt R. E., Armd Sch  
 Fuller, 2d Lt E. J., TAS  
 Furth, 1st Lt N. J., TAS  
**Furuholmen**, Col Bjarne, AFSC  
**Gaddis**, Capt H. D., TAS  
 Gaines, 2d Lt T. E., TAS  
**Gall**, Capt John, TAS  
**Gallagher**, Lt Col W. J., TAS  
**Gardner**, 1st Lt W. H., TAS  
 Garton, Lt Col G. G., C&SC  
**Gassett**, Lt Col Silas, TAS  
 Gastineau, Capt H. E., TAS  
 Gatch, 2d Lt. T. L., TAS  
 Gay, 1st Lt F. C., Jr., TAS  
**Geiger**, Maj R. S., Jr., TAS  
 Geis, Capt R. W., Northwestern  
**George**, Capt C. C., TAS  
**Gibbons**, Lt Col U. G., USMA  
 Gibbs, Lt Col G. W., C&SC  
 Gibbs, Capt W. H., NYU  
 Gilbert, 2d Lt R. H., Jr., TAS  
**Gilchrist**, Maj R. W., TAS  
**Gildart**, Lt Col R. C., USMA  
**Gillespie**, Maj E. P., TAS  
**Gilmore**, Maj W. H., TAS  
 Ginsburgh, Capt R. N., Harvard  
 Gissell, Capt J. R., Northwestern  
 Giza, 2d Lt J. A., III, TAS  
**Gjelsteen**, Col E. B., C&SC  
**Glass**, 1st Lt L. E., Jr., TAS  
**Glover**, Capt W. C., TAS  
 Godby, Lt Col Paul, C&SC  
 Godfrey, Lt Col A. B., C&SC  
 Goldsmith, Col R. W., AFSC  
**Goodlett**, 1st Lt L. Armd Sch  
**Goodrich**, Col W. R., C&SC  
 Goodridge, 1st Lt M. R., TIS  
**Goodwin**, Lt Col J. E., TAS  
**Goodwin**, 1st Lt. N. W., TAS  
**Graham**, Col A. Armd Sch  
 Graham, Maj T. S., Jr., TAS  
**Green**, Capt E. C., TAS  
 Green, Maj J. O., U. of Calif.  
**Green**, Lt Col M. L., C&SC  
**Greene**, Lt Col A. A., USMA  
**Greene**, Lt. Col E. C., TAS  
 Greenlaw, 1st Lt W. R., TAS  
 Grier, 2d Lt Samuel, III, TAS  
 Griest, Maj O. E., TAS  
 Griffith, 2d Lt G. W., TAS  
 Griffith, Col W. N., C&SC  
**Grimsley**, Lt Col R. J., TAS  
**Grinnell**, 1st Lt J. H., TAS  
 Grisham, 2d Lt W. H., TAS  
**Grove**, Col W. R., Jr., C&SC  
 Grubbs, Lt Col W. E., TAS  
**Gunster**, Lt Col W. E., USMA

(Continued on page 103)

**Bold type** indicates instructor. See page 93 for key to abbreviations.

### SCHOOL OF COMBINED ARMS

The part of the course presented by the School of Combined Arms includes instruction in tactics, staff duties related to combat operations, and the combat characteristics of the various arms and services. This is accomplished by means of conferences, map exercises, terrain exercises, map maneuvers, and tutorials. Four hundred and twenty-three hours are devoted to these subjects in the 41 weeks of the common course. Students assigned to this school receive three hundred and fifty hours of instruction in tactics during the 10-week specialized phase.

Since the first phase deals with operations in the combat zone, the School of Combined Arms has been given the largest share of instruction during this period. Most of this time is spent on a series of map exercises, first at the division, then at the corps, and finally at the army level. Map exercises follow a logical sequence, with each one dependent upon its predecessor for the situation. In other words, a complete campaign is conducted with various types of divisions. The students act as commanders and staff officers of infantry, armored and airborne divisions, and may well feel that they have been through several months of actual combat on a map. This method of tactical instruction is repeated in the series of corps and army problems. During these exercises, stress is placed on the commander's duties and responsibilities. For most exercises, instructors from all the schools of the College participate and present their particular parts of the problem.

In the final phase of instruction, the students are divided into small committees. One member of the group is designated the commander and the others staff officers. A directive that was issued by the Joint Chiefs of Staff for an actual operation during the late war is given to each group, which then plans the operation and later plays it on the map.

The School of Combined arms conducts its part of the Associate Course in a manner similar to that of the Regular Course. Due to time limitations, however, a greater proportion of the course is devoted to tactics and technique at the division level.

### SCHOOL OF LOGISTICS

The scope of the School of Logistics is indicated by the organization of its staff of instructors into five sections covering the main subjects that are taught—namely, supply, evacuation and hospitalization, transportation, services, and management. The names of all these subjects except management are so obvious as to require no further explanation. The management section teaches those subjects generally involving all of the others, such as organizational studies and the preparation of administrative plans and orders. Thus

**"Leavenworth" is world famous for excellent instructional techniques.**



management integrates the techniques of supply, evacuation, transportation and services into a complete logistical organization for the full support of the combat forces. It is, therefore, the largest and most important section, and 33% of logistics instruction is devoted to this subject.

School of Logistics instruction during the first, or orientation phase, is designed to give a general picture of the entire logistical organization, from the War Department and the zone of the interior to the theater of operations. During subsequent phases, details are filled in and the picture is compiled. The combat zone is studied in phase II, the communications zone in phase III, the supply and procurement problems of the zone of the interior in phase IV. In general, logistics techniques are taught in the beginning of each phase and then the students are required to combine and apply these techniques in applicatory exercises such as map maneuvers.

The 10-week phase V is the specialized portion of the course and during this period, logistics students are separately instructed by logistics instructors in the detailed mechanics of

being G-4s. Phase V goes more deeply into the same logistics subjects already discussed, and also takes up new logistics subjects that are so specialized as to be of little interest to other than logistics personnel.

Phase VI considers special operations including large amphibious and airborne operations, and those involving new weapons and methods of warfare that may be foreseen in the future. Throughout the entire course, the School of Logistics tries to emphasize future trends and developments in warfare, and their effect upon logistics.

### DEPARTMENT OF ANALYSIS AND RESEARCH

The rapid advances of science and technology, the development of new weapons and devices—the atom bomb, guided missiles, jet-propelled airplanes, radar, television, with undoubtedly more to come—may make wars of the future very different from World War II. In the fulfillment of its mission, the Command and Staff College gives full weight to these considerations.

A department of the faculty has been established to keep itself informed of the progress of new scientific developments and trends in warfare, to analyze their possible effects, and to keep their implications in front of the student body. Students are taught the principles of war, which have remained unchanged through the centuries despite the invention of a succession of new weapons. Throughout the course the student attends classes devoted exclusively to the implications of new developments in future war, and in every exercise he devotes some part of his time to a consideration of the effect of new weapons and new devices on the tactical situation he is studying.

IN ONE RESPECT THE Armed Forces Staff College has an advantage over the National War College. In Washington, some, but by no means all, of the instructors live on the War College grounds, but the students' living quarters are scattered around and outside the capital. In Norfolk, however, virtually all of the faculty and students live on the college grounds; socially as well as in the classroom there is complete mingling and, consequently, growth of friendship, understanding and harmony between the services.

Indoctrination in joint operations starts at an early age. The students and faculty have about 275 children, from a few months in age to college levels. These children of Army, Navy and Marine families play together and roam in and out—without regard to protocol or the privileges of rank or service—of the 176 apartments and four small houses that have been provided by the Government for students and faculty.

The auditorium, lecture halls, library, coffee bar, church services, school buses, bowling alleys, golf course, officers' club and other facilities are shared by all, regardless of service affiliation. Each Friday night there is a dance, at which the families of students and faculty may lay the basis for friendships that will pay future dividends in military cooperation.

If the "Franklin Field" mentality of the Army-Navy football rivalry comes to Norfolk with the students, it will soon be eliminated by a program such as this and by the wise and enthusiastic direction of Lt. Gen. Delos C. Emmons, the Commandant, and his officers.

*Hanson W. Baldwin*

New York Times, 23 Feb 47

*The*

# Armed Forces Staff College

Col. Paul Weyrauch, FA\*

THE COMPLEX PROBLEMS procedures encountered in planning and executing the joint operations of World War II made clear the necessity of including within the educational system of the armed forces a military college charged with the training of selected officers in joint operations.

To this end, the Joint Chiefs of Staff on 28 June 1946 established the Armed Forces Staff College to provide within the revised educational system a college charged with integrated instruction in joint operations and to bridge the gap between top-level unilateral service schools and the National War College. The directive establishing the College placed it under the direct supervision of the Joint Chiefs of Staff but charged the Chief of Naval Operations with the responsibility for the operation and maintenance of required facilities.

## ORGANIZATION

On 13 August 1946 Lieutenant General Delos C. Emmons assumed command of the College with Brigadier General Clyde D. Eddleman as the Deputy Commandant (Army), and Commodore Albert T. Sprague, Jr., as

the Deputy Commandant (Navy). Brigadier General Frank A. Armstrong, Jr., was later assigned to the College and designated as the Senior Air Instructor.

Also on 13 August 1946 the Secretary of the Navy announced the establishment of the College at Norfolk, Virginia, an admirable site as it is in close proximity to Headquarters Army Ground Forces at Fort Monroe, Headquarters Tactical Air Command at Langley Field, the Hampton Roads Base of the Atlantic Fleet, Commander Air Forces Atlantic Fleet at the Hampton Roads Naval Air Station, and the Amphibious Training Command at Little Creek, Virginia.

The faculty consists of the Commandant, the Deputy Commandants, the Senior Air Instructor, the Secretariat, and five faculty divisions known as Operations, Intelligence, Logistics, Communications, and Special Subjects Divisions. A director is in charge of each faculty division, which also has two assistant directors from the services other than that of the director. Members of the faculty have been so allocated within each division as to provide approximately equal Army, Navy, and Army Air Force representation. (See organization chart, page 104.)

\*Faculty, Armed Forces Staff College.



## MANY ARTILLERYMEN STUDY AND TEACH

(Continued from page 100)

- Gutschall, Capt R. B., TAS  
 Haas, Maj C. G., C&SC  
 Hackett, Maj W. J., TAS  
 Hadfield, Lt Col W. A., C&SC  
 Hairston, 1st Lt J. H., TAS  
 Haisley, 2d Lt P. D., TAS  
 Haley, Lt Col C. L., III, TAS  
**Hall**, 2d Lt C. M., TAS  
 Hall, Lt Col L. A., TAS  
**Hall**, Maj L. C., TAS  
**Hall**, 1st Lt T. J., Armd Sch  
 Hallgren, 2d Lt H. E., TAS  
**Hallock**, Col R. F., TAS  
 Hamilton, 2d Lt R. M., TAS  
 Hamilton, 2d Lt W. F., Jr., TAS  
**Hamlett**, Col Barksdale, TAS  
 Handy, Lt Col R. J., Nat'l W. C.  
**Hansborough**, Col J. W., Air Univ.  
**Hanselman**, Capt W. E., TAS  
 Hardin, Maj W. B., TAS  
**Hardman**, Lt Col Wayne, TAS  
**Hardwick**, Maj M. T., TAS  
**Harloff**, Maj E. L., TAS  
 Harper, Capt D. D., TAS  
 Harris, Maj C. K., TAS  
 Harris, 2d Lt H. S., TAS  
 Harrison, Lt Col F. B., TAS  
**Harvey**, Lt Col C. C., Jr., USMA  
**Hastings**, Maj W. H., TAS  
**Hatch**, Lt Col A. O., TAS  
 Hattan, Lt Col R. E., TAS  
 Hauser, Maj A. P., U. of Mich.  
 Hauz, Maj H. H., TAS  
**Hawkins**, 1st Lt W. S., TAS  
 Hawley, 2d Lt R. C., TAS  
**Hayden**, Lt Col J. C., C&SC  
**Hayes**, Capt T. F., TAS  
 Hazzard, 2d Lt R. P., TAS  
**Hearn**, Maj C. A., TAS  
 Heathcote, 2d Lt C. J., TAS  
 Hedges, Maj L. A., TAS  
**Heitman**, Col C. L., Jr., TAS  
**Helms**, Lt Col G. J., Armd Sch  
 Henderson, Lt Col J. K., C&SC  
**Hendrix**, 1st Lt P. C., TAS  
**Henning**, Col F. A., C&SC  
 Hernandez, Maj M., TAS  
**Hewitt**, Col R. A., C&SC  
 Hickey, 2d Lt F. F., Jr., TAS  
**Hiester**, Lt Col D. W., USMA  
 Hill, Capt D. A., TAS  
**Hill**, Col Francis, C&SC  
**Hill**, Capt F. S., TAS  
 Hill, Capt R. J., Northwestern  
 Hill, Maj William, Jr., TAS  
 Hoar—2d Lt J. C., Jr., TAS  
**Hoffman**, 1st Lt J. E., TAS  
**Hoffmiester**, Lt Col D. F., TIS  
 Hoge, Capt W. M., Jr., TAS  
**Holsinger**, Col J. W., C&SC  
**Holtzworth**, Col Bertram, Armd Sch  
**Honeycutt**, Lt Col J. T., USMA  
**Hopper**, Capt O. A., TAS  
**Horton**, 2d Lt Walter, TAS  
 Hough, 2d Lt G. W., TAS  
 Houseworth, 2d Lt J. E., III, TAS  
 Howard, Maj C. E., TAS  
 Howard, 2d Lt Harmo, TAS  
 Hedlicka, Capt E. B., TAS  
 Hubbard, Maj C. G., C&SC  
 Huddleston, 2d Lt T. M., TAS  
 Hudson, Capt E. B., TAS  
**Huie**, 1st Lt R. S., TAS  
**Hulsey**, Lt. Col D. D., TAS  
 Humphreys, 2d Lt W. A., TAS  
**Hungerford**, 1st Lt Harley, TAS  
 Hunsbedt, Lt Col T. N., C&SC  
 Hunt, 1st Lt E. T., TAS  
**Huntsman**, Maj G. R., TAS  
**Hurley**, Capt R. V., TAS  
 Husman, Maj D. L., TAS  
**Hustead**, Capt J. M., TAS  
 Hutton, Col C. L., TAS  
 Ingmire, Lt. Col E. J., Stanford U.  
**Ingram**, 1st Lt J. E., Armd Sch  
**Ireland**, Capt E. W., TAS  
**Isaacson**, Lt Col H. S., TAS  
**Jackson**, 1st Lt P. V., TAS  
 Jacobsen, 2d Lt G. R., TAS  
 Jaeger, 2d Lt Ronald, TAS  
**Jarrard**, 1st Lt F. C., TAS  
 Jaxheimer, Capt W. A., TAS  
**Jeffrey**, 1st Lt R. J., TAS  
**Jennings**, Col T. A., C&SC  
 Jennings, Lt Col W. A., TAS  
 Johnson, Lt. Col C. L., Howard  
**Johnson**, Capt E. E., TAS  
**Johnson**, 1st Lt L. L., TAS  
**Jones**, 1st Lt E. W., TAS  
 Jones, Col L. McC., USMA  
**Jones**, Maj R. G., TGGG  
**Jordan**, 2d Lt A. A., Jr., TAS  
 Joseph, 2d Lt E. M., TAS  
 Joyce, 2d Lt Jean K., TAS  
 Jun, Lt Col J. S., C&SC  
 Kasler, Capt C. L., TGGG  
**Kastner**, Col A. E., TAS  
**Kehm**, Col H. D., C&SC  
**Kelley**, 1st Lt E. L., TAS  
 Kennedy, Lt Col E. B., TAS  
**Kennedy**, 2d Lt J. F., TAS  
 Kenney, Lt Col J. J., U. of Calif.  
**Kercheval**, Lt Col B. B., TAS  
 Kerlin, Lt Col H. C., C&SC  
**Kerr**, Maj B. H., TAS  
 Key, 2d Lt R. C., TAS  
**Kilduff**, Capt F. X., Jr., TAS  
**Kindred**, Lt Col W. L., TAS  
**King**, Maj E. W., TAS  
 Kinley, Capt G. L., TAS  
 Kirby, 2d Lt K. C., TAS  
**Kirkpatrick**, Lt Col H. B., USMA  
 Kiser, 2d Lt W. M., TAS  
**Knapp**, Lt Col L. M., TAS  
 Knight, Maj O. B., TAS  
**Knott**, Maj J. W., TAS  
**Knowlton**, Maj J. L., USMA  
 Knuckles, Capt T. C., TAS  
**Koerper**, Capt C. E., Jr., USMA  
 Kohler, 1st Lt Chris  
 Kovalevsky, Maj Vitaly, TIS  
**Kramer**, Lt Col F. E., USMA  
 Kraus, Col Edward, TAS  
 Kren, 2d Lt R. E., TAS  
**Kriese**, Maj C. J., TAS  
 Kurowski, 2d Lt L. C., TAS  
**Kurtz**, Col M. K., TAS  
 Kyle, Maj D. M., TAS  
 Lafferty, Capt G. A., TAS  
**Lamb**, 1st Lt L. E., TAS  
**Lambert**, Lt Col H. F., TAS  
 Lancey, Maj W. S., Syracuse  
 Land, Maj L. C., Calif. Inst. of Tech.  
 Lang, Lt Col C. D. W., C&SC  
 Lange, Lt Col C. E., TAS  
 Lang, Lt Col H. W. W., Harvard  
**Langley**, 1st Lt W. J., Jr., TAS  
 Lanish, 2d Lt Matthew, TAS  
 Lansford, Maj E. O., TAS  
 La Rock, 2d Lt R. I., TAS  
 Latimer, Capt D. C., TAS  
**Latimer**, Maj H. M., TAS  
 Lawrence, Capt R. L., TAS  
 Lay, Capt S. P., TAS  
 Lee, 2d Lt R. V., Jr., TAS  
**Lee**, Maj W. B., TAS  
 Leech, Capt L. L., Jr., U. of Ill.  
 Lenzer, 2d Lt R. E., TAS  
**Levy**, Maj M. L., TAS  
 Lewis, Lt Col W. J., TAS  
**Lighkep**, 1st Lt G. R., TAS  
 Little, Lt Col D. C., C&SC  
 Loomie, 2d Lt J. R., TAS  
 Loomis, Lt Col C. W., C&SC  
**Lortz**, Capt J. J., TAS  
 Lotthrop, 1st Lt J. N., NYU  
**Love**, Maj J. W., TIS  
**Lovett**, Capt G. L., TAS  
 Lowry, Maj P. R., C&SC  
 Luettgen, 2d Lt L. J., TAS  
**Lynn**, Lt Col W. McG., USMA  
**Lyon**, Capt D. R., TAS  
**Lyns**, Capt J. G., TAS  
 Lysne, 1st Lt P. O., TAS  
**Mace**, Col R. R., TAS  
 MacMullen, 1st Lt L. C., Jr., TAS  
 Malone, Lt Col T. R., C&SC  
 Manning, Capt F. P., TAS  
 March, 2d Lt R. L., TAS  
**Marohn**, 1st Lt R. L., TAS  
 Marriott, Capt R. G., TAS  
**Marshall**, Maj J. W., TAS  
 Martinez, Maj Severino, Jr., TAS  
 Maslowski, Lt Col L. C., TAS  
**Mason**, Lt Col G. W., TAS  
**Matchette**, Maj C. H., TAS  
**Mathis**, Capt Z. C., TIS  
 Matteson, 2d Lt J. F., TAS  
**Mattocks**, Capt H. P., TAS  
**Maynard**, Lt Col H. G., Armd Sch  
**McArthur**, Capt D. E., TAS  
**McBride**, Lt Col C. R., C&SC  
 McBryde, 2d Lt T. H., TAS  
 McCaskey, Maj J. D., C&SC  
 McCormac, Lt. Coy W. A., TAS  
 McCoy, 1st Lt A. M., Jr., Ill. Inst. of  
 Tech.  
 McDonald, Lt Col R. C., Calif. Inst.  
 of Tech.  
 McDonough, 2d Lt J. D. H., TAS  
**McElroy**, Maj A. W., Armd Sch  
 McElroy, 2d Lt R. C., TAS  
**McFarland**, Capt G. H., TAS  
**McFarland**, Col J. A., TAS  
**McGee**, Capt. R. M., TAS  
 McGirr, 1st Lt J. B., TAS  
 McGiven, Capt P. L., TAS  
 McGowan, 1st Lt J. D., TAS  
 McGrady, 1st Lt M. M., TAS  
**McInnis**, Maj E. C., TAS  
**McKnight**, Capt J. W., TAS  
 McLaughlin, 2d Lt R. G., TAS  
**McLean**, Lt Col J. R., C&SC  
**McLemore**, Col E. H., TAS  
 McMaken, Maj Edward, TAS  
**McNayr**, 1st Lt J. S., TAS  
**Meacham**, 1st Lt R. H., Jr., TAS  
 Meeoni, Maj R. F., TAS  
 Mehlinger, Capt W. E., U. of Chicago  
 Merriam, Capt J. H., TAS  
 Merritt, 2d Lt. Doyle, TAS  
 Meyers, 2d Lt E. E., TAS  
 Miller, 1st Lt H. E., TAS  
**Miller**, Maj P. L., TAS  
 Miller, 1st Lt R. D., TAS  
 Miller, Maj S. T., TAS  
**Miller**, 1st Lt. W. R., TAS  
**Millhouse**, Capt F. G., TAS  
**Millican**, Maj R. W., Ill. Inst. of  
 Tech.  
 Milligan, 2d Lt C. W., TAS  
**Mink**, 2d Lt C. F., TAS  
**Minson**, Capt R. T., TAS  
**Mitchell**, Capt J. F., TAS  
**Mizell**, Capt C. M., USMA  
 Monroe, Capt M. C., TAS  
**Moore**, Maj G. B., USMA  
 Morey, Capt. A. W., Jr., TAS  
 Morgan, 2d Lt E. J., TAS  
**Morgan**, Capt G. C., TAS  
**Morris**, 1st Lt R. C., Armd Sch  
 Morris, 2d Lt R. F., TAS  
**Morton**, Lt. Col W. J., Jr., USMA  
 Moser, 1st Lt E. P., TAS  
**Mou**, 1st Lt A. S., TAS  
 Muir, 2d Lt G. C., Jr., TAS  
**Mulcahy**, Maj J. G., TAS  
 Munson, 1st Lt A. O., TAS  
**Murray**, Maj C. F., TAS  
 Murray, 1st Lt J. H., TAS  
 Murray, 1st Lt W. B., Princeton  
 Muzyk, Lt Col A. F., TAS  
**Naser**, Capt V. S., TAS  
 Neely, Lt Col R. B., TAS  
**Nethery**, Capt D. M., TAS  
**Newmann**, Maj R. T., TAS  
 Nichols, Lt Col H. D., TAS  
 Nichols, 1st Lt H. S., TAS  
 Nichols, Lt Col S. L., C&SC  
**Nickell**, Col Joe, C&SC  
 Nolan, 1st Lt W. J., TAS  
 Norling, Maj R. I., TAS  
 Nye, Capt C. A., III, TAS  
**O'Connell**, Capt B. F., TAS  
 O'Connell, Capt T. C., TAS  
 O'Connell, Maj W. H., TAS  
**O'Conner**, Capt J. P., Jr., TAS  
**O'Connor**, Lt Col G. G., USMA  
 O'Connor, 2d Lt P. J., TAS  
 O'Hare, 2d Lt J. J., TAS  
**Olney**, Maj F. X., TAS  
**Olson**, Capt Guste, TAS  
**O'Meara**, Col Andrew, TAS  
 O'Neill, 2d Lt C. R., TAS  
 Opfer, 2d Lt D. H., TAS  
**O'Shaughnessy**, 1st Lt W. P., TAS  
 Osmanski, Lt Col F. A., C&SC  
 Pace, Lt Col G. L., C&SC  
 Paden, 2d Lt J. K., Jr., TAS  
 Pagano, 2d Lt S. J., TAS  
 Panek, Maj J. S., C&SC  
 Panke, Maj R. E., Northwestern  
**Park**, Col Richard, Jr., TAS  
 Parker, 2d Lt J. G., TAS  
 Parker, 2d Lt W. C., TAS  
 (Continued on page 107)

**STUDENT BODY**

In accordance with the Joint Chiefs of Staff directive, the class consists of 150 officers divided approximately equally between the Army, Navy, and Army Air Forces. Quotas allotted the Army and Navy are apportioned as follows: Army—Ground forces . . . 30, Administrative and technical services . . . 20; Navy—Line . . . 34, Staff . . . 6; Marine Corps . . . 10.

The Army Air Force quota will be apportioned as directed by the Commanding General, Army Air Force.

Army and Army Air Force students are selected from Regular Army officers, officers of the reserve components of the Army, or officers of the Army of the United States with the following qualifications:

1. Have a minimum of eight years' commissioned service (to include commissioned service in civilian components).
2. Be chosen from highest rated officers otherwise eligible.
3. Be graduates of the Command and Staff College or Air College or possess equivalent qualifications from war-time experience.
4. Not have attained their 42nd birthday.
5. Be physically qualified for general service.
6. Have indicated by actual performance of duty a potentiality for high command or staff position.

Naval students are chosen by a special selection board from line and staff officers of classes 1930 to 1938 inclusive, and officers of corresponding rank approved for transfer to the regular Navy.

**SCOPE AND METHOD**

The Joint Chiefs of Staff directed that the five-months' course of instruction at the College embrace the following scope:

1. Characteristics, organization, and employment of Army, Navy, and Air Force and the relation of those forces to each other.
2. Joint staff techniques and procedure.
3. Trends of new weapons and scientific developments and their effect upon joint operations.

4. The organization, composition, and functions of theaters of operations and major joint task forces, and the responsibilities (strategical, tactical, and logistical) of the commanders thereof.

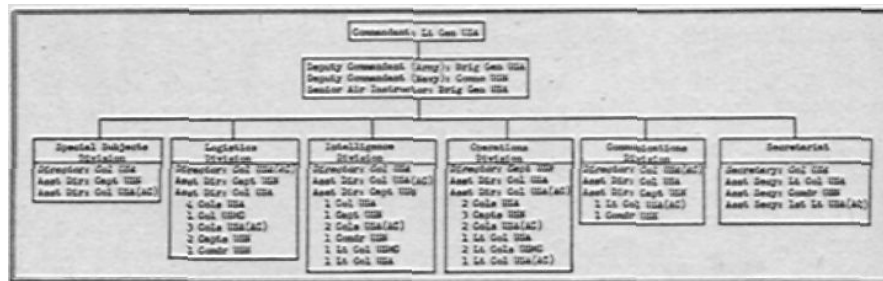
5. The preparation of plans for amphibious and airborne operations involving the employment of joint forces.

The first course of instruction is divided into three phases with conference/lecture hours as follows:

*Background.* (74 Hours) The characteristics, capabilities, and

one week aboard ship in the Caribbean area observing fleet maneuvers and participating in a landing exercise.

Commencing with the fifth week and continuing through the fifteenth week of instruction the class is organized into balanced committees for the conduct of student seminars. The membership of these committees is charged frequently to afford maximum instruction and to equalize, as far as possible, key functional positions within the class. The last six weeks of the course are devoted to theater and joint overseas operations



**Organization Chart, The Armed Forces Staff College**

limitations of the tools of war employed by the various services, the techniques peculiar to the separate arms, and the relationship that must exist between ground, naval, and air components are studied to the extent necessary to insure a sound common basic knowledge for joint planning. Selected amphibious and airborne demonstrations and historical studies are included in this phase.

*The Theater of Operations.* (95 Hours) The organization, composition, and functions of a theater of operations.

*Joint Overseas Operations.* (122 Hours) The conduct of joint overseas operations, and the preparation of plans for joint amphibious and airborne operations.

Included within the hours of instruction shown above are approximately 50 lectures by outstanding civilians and military personnel from outside the College who will cover subjects in which they are recognized experts. Also included in the course of instruction are visits of inspection to Army, Navy, and Army Air Force facilities in the Norfolk area. The entire faculty and student body spend one week at the Infantry School, Fort Benning, Georgia, attending air, airborne, and ground demonstrations and

staff planning with each student functioning in various staff assignments in the execution of a directive.

Throughout the entire course of instruction new scientific developments and their effect upon military science are stressed. The class is encouraged to work in an atmosphere of the changes that improvements in technology connote.

The attitude and atmosphere of the College are best summarized in an extract from the "Prospectus," Armed Forces Staff College, which is quoted as follows:

"This course provides the initial peacetime program of integrated instruction in joint operations for the Armed Forces. In a sense, it offers a challenge both to the faculty and to the class. Interrelated studies are not new members of the Armed Forces. However, this integrated instruction system makes possible the pooling of approaches and of background to explore the rich field of war experiences and to evolve a sound doctrine for future operations in keeping with scientific developments and with the objectives of the nation. Accordingly, it is emphasized that what each officer personally contributes to the course strongly influences the molding of the character of the College."

# The Industrial College of The Armed Forces

" . . . Working together with an efficiency never matched by any nation, American industry and manpower accomplished marvels of production in the Second World War. The very magnitude of this achievement will endanger the future security of the nation, however, if it should lead to complacency and to inadequate measures of economic preparedness. Never before has scientific and technological advance, as related to warfare, proceeded so rapidly and by such revolutionary strides. . . . It is essential that we anticipate the lessons and envisage the problems of a possible future national emergency. . . . It is the mission of The Industrial College of The Armed Forces to study the ever changing complex problems of mobilizing and administering the national economy of war and to promote an understanding of these problems, and of their implications for national security, among the members of the Armed Forces and in the nation at large."

WRITTEN by Brig. Gen. E. B. McKinley, the Commandant of the Industrial College of the Armed Forces, the foregoing appears in the foreword to a short catalogue\* describing the aims and objects of the College.

## HISTORICAL BACKGROUND

Prior to World War I, no effort had been made by the armed forces to train officers in the fields of war procurement and industrial mobilization. Thus, despite the tremendous productive capacity of American industry, the United States was to a large extent dependent upon its allies for military supplies throughout the war period. Profiting by this wartime lesson, the National Defense Act of 4 June 1920 established the Office of the Assistant Secretary of War to provide for industrial mobilization planning in the event of another war.

\*Primary source for this staff-prepared article.

Since effective industrial mobilization could be secured only through the preparation of adequate plans, together with the training of personnel to carry them out, the Assistant Secretary of War initiated a program to meet these requirements. Among other things it was proposed that a special course of instruction of approximately six months' duration be given to selected officers from the supply branches of the Army. As each group finished its course of study, the officers would return to duty with their branches and be replaced by others. Thus, the number of officers familiar with the methods of procurement and the problems of industrial mobilization could increase constantly.

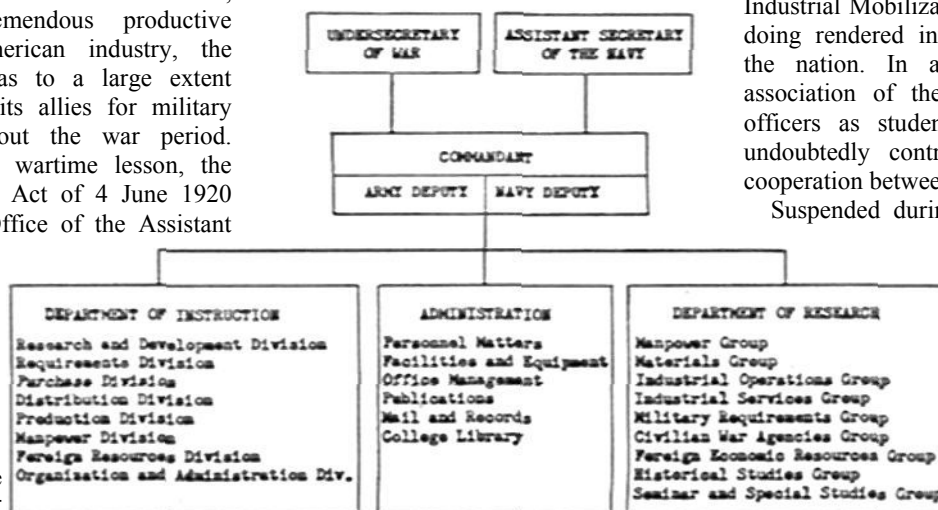
On 25 February 1924 a War Department General Order provided in part that: "A college, to be known as The Army Industrial College, is hereby established for the purpose of training Army officers in the useful knowledge

pertaining to the supervision of procurement of all military supplies in time of war and to the assurance of adequate provision for the mobilization of materiel and industrial organizations essential to wartime needs." Direct supervision and control of The Army Industrial College was vested in the Assistant Secretary of War. A board of fourteen Honorary Advisers was appointed, numbering among its original members Messrs. Bernard M. Baruch, Robert S. Brookings, Charles E. Dawes, Elbert H. Gary, Walter S. Gifford, and Daniel Willard.

Navy officers were first included among the student officers of The Army Industrial College in 1925, and have been in attendance ever since. In September 1926, the course was lengthened to one year and the scope of the College work was expanded. Through the years from 1925 to 1941, the size of the student body grew steadily, and by 1938 the curriculum had broadened to include advanced study of both national and international developments in in-industrial mobilization and their relation to the supporting economics. By 1940, a total of 804 regular officers of the Army, Navy, and Marine Corps had been graduated.

As European developments pointed more certainly to war, the resources of the College were turned to immediate and practical use — for example, the 1938-39 class was called upon to aid in the revision of the annexes to the 1939 Industrial Mobilization Plan, and in so doing rendered invaluable service to the nation. In addition, the close association of the Army and Navy officers as students in the College undoubtedly contributed to a close cooperation between the two services.

Suspended during 1942 and 1943, the Army Industrial College was reopened on 28 December 1943 with an interim mission to train Army and Navy officers in the



intricacies of the termination of war contracts.

On 11 April 1946 the College was given its new name *The Industrial College of The Armed Forces* and, together with the National War College, was placed on the top level of military educational institutions. Both Colleges now offer ten-month courses, and each is well integrated with the other. This formal recognition of the equal importance of military logistics and economic mobilization with tactics and strategy in planning for national defense, marks a long stride forward in the progress of military education. Also of profound importance to the national welfare is the realization, implicit in the organization of these schools on a *national* basis, that war can only be conducted successfully when all the agencies charged with its prosecution have a thorough knowledge and understanding of the problems of other agencies or sister services.

### GENERAL PLAN OF INSTRUCTION

The course of study is so planned that student officers are trained to examine the elements of economic mobilization and are taught the basic principles which will be of value to them in future higher echelon staff duties. It is not enough to supply the student officers with factual information of the past. Rather, it is the desire of the College to equip them to recognize problems and determine issues, evaluate related facts, and reach considered decisions as they arise in the field of economic mobilization.

The major portion of the student officers' work is spent on assigned problems, which involves the conduct of individual or small-group studies for which there are no "textbook" answers. This approach is designed to develop an understanding of economic principles in their application to the problems of mobilization for war.

Lectures are of a general informative nature and are given by the Industrial College faculty and research staff, selected representatives of the armed forces, and civilian experts in the various fields of endeavor related to the College studies.

Seminars develop discussion of pertinent reading, lectures, and other source material under the direction of

the faculty to assure proper integration of all information into committee reports.

Reading assignments are so planned as to provide the student officers with appropriate background material. Reading assignments are considered of equal importance with other sources of information since much of the assigned reading will be drawn from policy documents still in military files.

Consultations with staff members of the Department of Research and with government officials offer invaluable opportunities for student officers to discuss their assigned problems with specialists intimately acquainted with the subjects.

The findings, reports, conclusions and recommendations of the student officers assigned to committee problems are prepared for each unit of study and are presented orally before the student body, faculty, and other interested personnel of the services, government, and private industry.

Student officers are required to attend selected lectures at the National War College, and coordinated scheduling permits attendance at many others.

### MANPOWER DIVISION

Typical of the method followed by the eight divisions making up the Department of Instruction (see Organization Chart) is the Manpower Division, to which the efforts of this year's class were devoted primarily during the period 3 February-7 March 1947.

*Lectures.* The lecture series presented the major problems involved and the machinery for their solution with emphasis on: the place and importance of manpower as a prime factor of production and component of the civilian economy in both peace and war; the character and composition of the labor force and the changes incident to the prosecution of the war; the social and economic impacts of war and the ameliorative actions necessary; the agencies of government dealing directly or indirectly with problems of manpower utilization, their policies and operations; the technical and administrative problems of manpower in production for support of the war effort; problems of industrial relations, with special reference to organized labor, collective

bargaining, and the settlement of disputes; government and utilization of manpower and policy aspects of manpower which require determination for the successful waging of a major war.

*Seminars.* Seminars designed to develop a common appreciation of the point of view, purpose, and broad interrelation of the major factors of the problem. Discussion by groups studying interrelated phases of manpower designed primarily to avoid contradictions, duplications, and voids in the over-all report. The importance of manpower was emphasized as a prime factor of production—an essential part of the war machine which must be kept going. Discussion was pointed toward an evaluation of policies and methods to attain this end.

### DEPARTMENT OF RESEARCH

The Department of Research serves the needs of the Department of Instruction and other agencies of the military establishment by independent research into economic mobilization and demobilization, economic warfare, and the problems incident to the organization and functioning of a war economy. Research analysts gather and evaluate data on the experience of the United States and other major powers during the recent war and prewar periods in the planning, mobilization and administration of their economics for war. Continuing studies are made of current economic, social and technological developments which bear most directly on the ability of this nation and other major powers to mobilize their resources for the support of the armed forces in any future emergency. Liaison is maintained with other branches of the government, with professional, technical and learned societies, with research foundations and universities, and with industry in order to keep abreast of the most advanced developments in the fields of the College's interests. The research staff assists in the program of instruction, including delivery of lectures, participation in conferences and seminars and committee activities, and preparation of bibliographies, and serves the faculty and students in an advisory and consultative capacity.

## MANY ARTILLERYMEN STUDY AND TEACH

(Continued from page 103)

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**Parsell**, Lt Col S. R., TAS  
**Payne**, 1st Lt M. M., TAS  
**Pearce**, 1st Lt R. McL., NYU  
**Penning**, Capt E. W., TAS  
**Pepe**, 2d Lt J. P., TAS  
**Perchak**, 1st Lt Edward, TAS  
**Perkins**, Lt Col D. M., C&SC  
**Perry**, Col M. O., C&SC  
**Peterson**, Maj A. J., C&SC  
**Petros**, Maj H. C., TAS  
**Phillips**, 1st Lt M. F., TAS  
**Phillips**, Lt Col P. D., TAS  
**Pillsbury**, Maj A. W., Armd Sch  
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**Poinier**, Lt Col N. E., TAS  
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**Powell**, 1st Lt G. B., TAS  
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**Pruett**, 1st Lt L. O., TAS  
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**Pulver**, Maj M. B., Armd Sch  
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**Rader**, 1st Lt R. J., Northwestern U.  
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**Ratliff**, Lt Col F. G., TAS  
**Ray**, Lt Col John, USMA  
**Raymond**, Lt Col C. W., C&SC  
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**Reagan**, 1st Lt R. P., TAS  
**Rechtine**, Capt G. R., C&SC  
**Ree**, Capt G. A., TAS  
**Reed**, Maj A. W., Calif. Inst. of Tech.  
**Reed**, Maj C. B., TAS  
**Reed**, Capt G. A., TAS  
**Reed**, 2d Lt H. N., TAS  
**Reeder**, 2d Lt W. T., TAS  
**Reeves**, Lt Col J. R., USMA  
**Reeves**, Capt R. B., TAS  
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**Reid**, 1st Lt W. G., TAS  
**Reising**, Capt Henry, TAS  
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**Robinson**, 2d Lt E. M., Jr., TAS  
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**Sawicki**, Lt Col Stanley, Navy W. C.  
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**Schmidt**, 2d Lt C. P., TAS  
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**Slaughter**, Lt Col J. E., TGGGS  
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**Smith**, Maj H. V., C&SC  
**Smith**, 1st Lt J. L., Jr., TAS  
**Smith**, 1st Lt R. C., TIS  
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**Speidel**, Col G. S., AFSC  
**Spielman**, 1st Lt Kermit, TAS

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**Turk**, Capt S. J., TAS  
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**Van Court**, Lt Col L. P., TAS  
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**Vencers**, 2d Lt H. E., TAS  
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**Vivian**, Maj W. R., TAS  
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**Walker**, Col E. A., TAS  
**Wallace**, 2d Lt J. A., TAS  
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**Wells**, Capt J. D., TAS  
**Wells**, Lt Col J. F., TAS  
**Wendel**, Maj E., Jr., TAS  
**Wendt**, Lt Col J. R., Jr., TAS  
**Wenzel**, Capt G. H., TAS  
**Westmoreland**, Capt R., TAS  
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**Whitaker**, Capt D. D., TAS  
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**White**, Lt Col R. C., C&SC  
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**Wiley**, 1st Lt H. R., TGGGS  
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**Wilkerson**, 1st Lt C. F., TAS  
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**Williams**, Capt E. M., U. of Calif.  
**Williams**, Lt Col R. C., TAS  
**Williams**, 2d Lt R. L., TAS  
**Williams**, 2d Lt R. M., TAS  
**Williams**, Col W. D., TAS  
**Williams**, Capt W. H., TAS  
**Wilson**, 1st Lt F. C., Jr., TAS  
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**Wojcik**, Capt W. K., TAS  
**Wood**, Lt Col M. W., N.Y.C.  
**Wood**, Col Stuart, C&SC  
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**Woods**, Capt R. F., TAS  
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**Young**, Capt C. M., Jr., TAS  
**Zorn**, 2d Lt M. F., TAS

**Bold type** indicates instructor. See page 93 for key to abbreviations.

# The National War College

By Col. Richard J. Werner, Inf.\*

OUR NATION has been drawn into several world wars, but it took World War II to jolt us into a full realization of the sobering responsibilities that necessarily go hand in hand with great strength in a still power-conscious world.

Among the early results of this realization was the establishment, by the Joint Chiefs of Staff during the war period, of the Army and Navy Staff College which graduated twelve wartime classes. The National War College is the logical outgrowth of this successful school, and represents our first attempt to unify under one roof not only an advanced school of strategy but also an institution to analyze and integrate the many faceted and interrelated problems of national policy. Thus, the mission of the College may be briefed—to prepare selected officers from the State, War and Navy Departments for joint staff and command duties on the highest level in behalf of the national security.

Ideally located in the old War College building, which has been extensively improved, the College is administered by the War Department but operates under the jurisdiction of the Joint Chiefs of Staff. Vice Admiral Harry W. Hill is the Commandant, Major General Alfred M. Gruenther is Deputy Commandant, Brigadier General Truman H. Landon of the Army Air Forces is Deputy for Operations, and Mr. George F. Kennan is Deputy for Foreign Affairs. The faculty includes resident civilian members as well as officers of the armed services. The student body for this, its first year, is composed of thirty ground officers, thirty air officers,

thirty naval officers, and ten foreign service officers from the State Department. There is no grading of students nor are examinations given. There are, however, the usual efficiency reports.

During the first four months of the course, the students studied the political, economic, geographic and military aspects of international relations — the object being to provide a solid background of understanding of the problems of security in the atomic age. This portion of the course was essentially under the guidance of the civilian faculty, with outside lecturers chosen from the leaders in the educational and scientific world. The second semester is devoted to a study of the strategic areas of the world, the scientific and technological advances that have complicated the tasks of maintaining the national security, and joint strategical problems on the Joint Chiefs of Staff and "Theatre of Operations" level.

As a matter of organization, the students are grouped in committees and seminars, the composition of which changes frequently. In this manner they

work on joint problems and gradually assimilate the habit of thinking in terms of total military strength and against a national and global background rather than in the limited problems of one service. It is a very effective method of integrating the views and experiences of the several services. One of the greatest benefits derived from this type of organization for study is the personal knowledge of and confidence in each other developed by these men of the Armed Forces and Department of State.

The courses of study are so arranged as to require much reading and research acquainting the students with a tremendous store of information which they can only tap in the year of the course. They are designed not merely to convey the most complete and up-to-date knowledge of relevance, but also to inspire the students to further and continuing study after leaving the institution. The work is hard, the principal incentive to work being the stimulating breadth of the studies, and the knowledge on the part of the student that, as a graduate of The National War College, he is a marked man.



The home of The National War College. The Industrial College of the Armed Forces is housed in adjacent buildings.

\*The author is the Executive Officer at The National War College.—Ed.

# Where Are The "Light" Divisions?

By Capt. Henry P. Walker, FA

IN RECENT PUBLICATIONS there has appeared the plan for the reorganization of the infantry and armored divisions, but I do not recall having noted that there were any plans for "light" or "mountain" divisions. In fact, to the best of my knowledge we are planning to keep only one combat team of mountain troops.

During the recent campaigns in the Mediterranean the need of specially trained mountain troops was very clear, as evidenced by: the formation of a provisional pack artillery battalion and a pack train by the 3rd Infantry Division and the use of Ranger battalions before Cassino; the support of the 88th Infantry Division by two pack artillery battalions in the drive from the Garrigiano to Rome, and the excellent use made by the French of their "Corps de Montagne" (the 4th Mountain Moroccan Division and the Brigade of Goummiers) during the same action; the almost universal use of Italian pack trains in the North Appenines; and the excellent performance of the 10th Mountain Division during the last winter and spring of the Italian Campaign.

The efforts of our standard infantry divisions to learn mountain warfare while engaged with an active enemy employing at least two mountain divisions are a matter of history—and much of it painful to the veterans who fought in Italy! From conversation with veterans of the Pacific fighting, moreover, it appears that "light" divisions could have been used to great advantage in that theater.

Mountain warfare calls for special skills and training over and above and *not in place of* the usual training given an infantry division. Thus it would be far easier to convert a mountain division into a standard division than to reverse the process.

Now my question is; why aren't some of the National Guard divisions set up as mountain divisions?

There are several areas in the United States which have naturally rugged terrain combined with several months of heavy winter and which are located close to heavy population centers. Northern New England and Northeastern New York is one such area. The mountains of the West Coast are another. There is a large pool of young men in these areas with varying degrees of skill in skiing, mountain climbing, and living out-of-doors. The old CCC camps scattered through the countryside and the state and national forests and parks would make excellent sites for small unit training. For example the Underhill range of Fort Ethan Allen, Vermont, had two such camps close to the base of Mt. Mansfield, the site of some of the best skiing in New England.

During the winter months, the weekly training periods could be spent in the field on weekends based on such camps and devoted to skiing and winter operations. The summer periods could be used for mountain climbing, and the intermediate periods could be devoted to routine armory duty. It strikes me that, provided skilled instructors and the necessary equipment was made available, recruiting for such units would present no problem. What is more important, if the special skills and know-how of these mountain divisions were not needed in an emergency, they could be converted without difficulty into standard divisions.

In other words, I wonder if we are taking the fullest advantage of the variety of terrain and weather and the interest in sports of our youth with which nature has endowed our country.



## OF MORE THAN PASSING INTEREST

**Happy Birthday.** The Signal Corps was 84 years old on 3 March 47.

**Congratulations:** To the following artillerymen and temporary major generals, recently appointed permanent brigadier generals in the RA—Archibald V. Arnold, Louis A. Craig, Stafford LeR. Irwin, and Alfred M. Gruenther; and also to the following FA colonels, recently selected for attendance next year as students at The National War College — Verdi B. Barnes, John P. Daley, Carl H. Jark, Howard E. Kessinger, Ralph M. Osborne, and Alex N. Williams.

**"Threw the Book."** In the first case tried by a "trainee court" at the Fort Knox experimental UMT unit, 7 privates awarded the maximum punishment to an offending contemporary.

**Millions Saved.** Ideas submitted by civilian employees of the WD have saved over \$170,000,000.

**Greetings.** The National Guard Association recently presented an excellent preview issue of *The National Guardsman*, hereafter to be the official publication of the NGA.

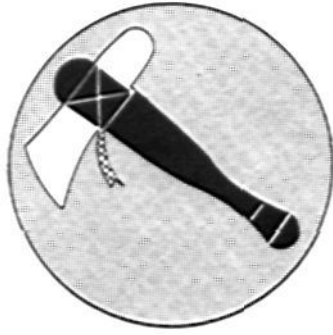
**Famous Army.** The Third Army, made famous by the inspired leadership of the late General George S. Patton, has replaced the Seventh Army, with headquarters at Atlanta, Ga.

**Rhodes Scholars.** The USMA is led only by Princeton, Harvard, Yale, Brown, Dartmouth, Idaho and Michigan in the total number of Rhodes Scholars appointed.

**Esprit de Corps.** Except for divisions, corps, and armies, the varied shoulder sleeve insignia of small, non-divisional units will soon be replaced by the AGF patch. Object—to foster an increased AGF *esprit de corps*.

**BHOSM.** Funds have recently been made available to rebuild Fort Sill's famous Block House On Signal Mountain and to preserve it as a monument to the old west.

**What Goes Up . . . ?** The Bureau of Labor Statistics index of wholesale prices recently hit a new, all-time high.



## *Intangible Factors in Combat*

Republished by courtesy of  
*The Military Review*

By Lt. Gen.

Raymond S. McLain, USA



Banker and National Guardsman prior to World War II, Lt. Gen. McLain's combat record as a division artillery, division and corps (XIX—see cut, above) commander was extraordinarily brilliant. Last year he accepted an appointment as a permanent brigadier general in the Regular Army, and is now on duty in the War Department.

THE FOLLOWING comments do not pretend to cover in any completeness or in detail the subject which I have chosen. Indeed they are hardly more than thoughts on this vital subject. But I believe they are well worth study, amplification and extension by any student of military science.

### DOCTRINES

Doctrines are very much akin to principles, but in an entirely different category. Like principles, they are subject to *interpretation*. It is the application of doctrines—the *knowledge* of how to apply doctrines—awareness of the point at which the ramifications of one series of doctrines has progressed into another and entirely different series; that must be determined. This interpretation of doctrines is vitally affected by *combat judgment*. Combat judgment is developed from many different sources. First, there must be the mentality, then education, and finally there must be experience. From a combination of these factors, always limited by factors of personal characteristics, combat judgment is formed. It is much easier for an officer to act in any situation, and especially in an emergency, if his combat judgment is built on the application of doctrines which have been well learned and with which he is intimately familiar. Thus, I heard many times after the initial fighting on the southern shores of Sicily that we had thrown the book away and were having a "rat-race" across the island. In actual fact, nothing of the sort was taking place. The truth of the situation, as later events disclosed, was that the Germans and Italians had been defeated and were falling back so that the nature of the operation was a pursuit. Therefore, the doctrines of a pursuit were applicable. The same situation occurred again, many times during the battle for France, after the breakthrough from Normandy and again in the battle of Germany, after the crossing of the Rhine.

Doctrines must often be changed, especially doctrines which have been set up as applicable to new weapons or new means of warfare, or to meet new means of warfare. The doctrines which

were believed to be valid early in the war, that tanks would not fight tanks but would only fight infantry, proved to be incorrect. Whenever our tanks made their presence on the battlefield evident they drew enemy tanks. This was not quite true in the reverse, because the heavier guns carried by the German tanks and the heavier armor of the Tiger and King Tigers made the contest unequal. Such targets had, in most cases, to be taken by other weapons. It may now be said, however, that tanks adequately gunned will seek tanks or seek to block the advance of tanks on any battlefield.

It was believed that the tank destroyer would seek out enemy tanks and run them down and destroy them. This doctrine did not prove correct because it was found that any armor maneuvering on the battlefield was soon the victim of a concealed gun, and while the tank destroyed did do considerable maneuvering, the idea of giving chase to enemy armor was not correct. A vivid example of how armor draws armor was offered in the second battle of Aachen or the drive to the Roer. There, in about ten days of continuous fighting, the 2d Armored Division made a determined drive of about ten miles through thick mud and across three ridges of the original Siegfried Line. During this time, the division lost more than 150 pieces of armor, but drawing against its advance the bulk of the German armor in that locality, it practically destroyed three enemy armored divisions and damaged two others. It is, therefore, apparent that the application of doctrines is based on judgment and that they are subject to change with a change of weapons, enemy defenses, and means of warfare.

Doctrines are sometimes based on speculative conclusions. For example, the Germans tied themselves to the doctrine that air and armor would win all of their battles. Having come to this conclusion and adopting this doctrine, they neglected artillery. The American Army had artillery. Had the German Army possessed artillery in the same proportions as the American Army, and had they been able to use it with the same facility and efficiency, it is doubtful that they could ever have been defeated. Certainly, it would have required



a much longer time. Similarly, the American Army could easily have adopted a doctrine that the Germans could be bombed out of the war. We had an apparent amplitude of means for that purpose. We also had probably the most efficient organization that could be put in the air for that purpose. There is no discounting the great damage that air can do to an enemy, especially against his supply installations and transportation. It is possible that an enemy could become so exhausted by such bombardment as to concede defeat and surrender rather than continue to resist. But there is no question about his defeat when ground armies have overrun his positions and have dispersed or captured his army and occupied his country. The one is speculative, the other is a certainty.

### TEAMWORK

Great stress was laid on teamwork in this war, as well as in all other wars. Marvelous results were obtained from it. One of the great examples of it during this war was the cooperation between infantry and artillery. Another fine example, especially evident, in the breakthrough from Normandy, was the teamwork between the ground forces and fighter planes, between armor and infantry. To be sure, no special plea is needed to demonstrate the value of teamwork. What must be kept in mind is that adherence to the doctrine of teamwork should not be permitted to invalidate some of the basic principles applicable to factors of the team. Rigidity of command and routine must yield to flexibility. Thus, there was often too much inclination for divisions to fight by combat teams instead of fighting as a unit, which would have much greater power and flexibility than the power inherent simply in three combat teams. In maneuvers, there were often lengthy debates as to when artillery should pass to the combat team commander, and when it should revert to division control. In actual practice this question became academic. The infantry regimental commander too often found that he had more to occupy his mind than he could take care of, and was very willing that the artillery commander assume the responsibility for artillery support, even at extended distances. I believe it can be said that

infantry commanders universally felt that they had superior artillery support. It happened many times in my experience that the division artillery officer could very often give the regimental combat team commander better artillery support than he could himself demand. This was true for the simple reason that the artillery officer had a closer knowledge of what his artillery could do than the infantry commander could possibly have. Thus the division artillery officer would require an artillery battalion commander to occupy positions which were questionable because he knew that the risk was amply justified.

Effective teamwork is often harassed and handicapped by being tied to clearance rules. Ends must be tied together of course. But many functions necessary to an operation can become automatic, so that delay for clearance is not necessary before the main wheels begin to grind. This may become dangerous unless the commander is very familiar with the capabilities of these supporting functions.

### MORALE

Although morale is an invaluable factor, it always has a veil of mystery cast over it. Generally, it may be said that the winner has good morale. Success breeds good morale. Troops like colorful leadership and they will do stupendous things when their morale is high. At the outset there may be very little difference between the ability of two leaders, but one may grasp a slight success, contribute a little color to an operation; and from then on, success is inevitable, while the other may suffer a slight reverse at a critical time and find that his machine is gradually stalling. Much has been written on morale on which I will not attempt elaboration. Basic principles of morale are always a factor, such as good food, good arms, ample ammunition, warm clothing, but probably the greatest factor of all is leadership.

### LEADERSHIP

Leadership is one of the most difficult factors to achieve in a great army. It is no less difficult to achieve in civil life. Business, industry and the professions are all looking for

leadership. There were more than 800,000 new officers made during the past world war, but there were not 800,000 natural leaders in the United States, nor in any other country in the world. To have found that 80,000, or ten per cent of this number, were natural leaders would have been surprising. The 800,000 or more, who were actually selected, had many of the elements of leadership and they were successful beyond anything that could have been expected, even in this great country which probably produces more leadership than any other nation in the world. If industry, business and the professions could have, in such a short time, produced from this group of men such an outstanding performance it would have been a remarkable thing. In lieu of adequate natural leadership, men who had the greatest possibilities were given the responsibilities. They were surrounded by routine, and many of them in a certain sense became "synthetic" leaders, carrying out orders of their superiors, following a definite pattern which had been laid out before them. They performed in channels, but if they had been called upon to exercise their own judgment, they would have been found lacking in many qualities. Leadership cannot be produced by a hasty system of education or training. The basic factor of leadership is innate. From such qualities as are innate, leadership must be developed over a long period of time and this does not mean a year or so. It means a long period of years. The young men who were given positions of responsibility and leadership in this army had developed a large measure of whatever characteristics of leadership or non-leadership they possessed before they even entered the military service. It is a high compliment to the top leaders of our army that a great organization was put together and performed a magnificent job in defeating two of the greatest military nations that history has ever known, with a minimum of casualties that is no less remarkable.

On the question of leadership, I have heard officers of high rank express the opinion that the quality of gallantry on

*(Continued on page 134)*

THE FIELD  
ARTILLERY  
JOURNAL

## HONORING ARTILLERYMEN



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  
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PROPERLY, THE EYES OF OUR ASSOCIATION are focused primarily on the changing present, and not on individuals and events of an earlier day. In so doing, however, we of the staff are deeply mindful of the truth in the words written recently to the Editor by a most distinguished artilleryman, now retired: "The grand spirit of our Field Artillery rests to a great extent on sentiment, and our marked efficiency in the war just ended was based upon esprit as well as knowledge. Had we lacked either, the record would not have been so outstanding. This esprit and this knowledge did not start suddenly on Sunday morning, December 7, 1941 — it started in 1907, and has been continuing ever since."

### UNCOMMON ARTILLERYMEN

Editorially, our JOURNAL has sought, and will continue as best it can, to keep faith with our rich artillery heritage and the many splendid soldiers who have preceded us in the Field Artillery. Among other things, there was initiated a good many months ago what was then hoped would develop into a stimulating and continuing feature column, *Uncommon Artillerymen*, dedicated to the honor of American soldiers, no longer in the Service, who had rendered uncommon service to the Field Artillery. Mistakenly, it was anticipated at the time that the Association membership would take an active interest in this feature and submit numerous recommendations with adequate supporting data. In due course it was realized, however, that the final determination of who were, and who were not, uncommon artillerymen was going to devolve upon the staff. This, we are obviously not competent to do— unquestionably, a degree of injustice and ill feeling would have resulted from such an effort. For these reasons, the *Uncommon Artillerymen* feature was not further pursued.

### OBITUARIES

For what were then impelling reasons, our JOURNAL suspended the publication of obituaries during the war years. Appropriate in every way for our type of publication and, more important, entirely in keeping with our purpose to nourish the rich heritage that is ours, the publication of obituaries is resumed with this issue. Although in some instances the staff may elect to prepare an obituary, in general it will be expected that they be prepared by members and submitted for publication, as was the obituary of General George on the opposite page. Necessarily, the Editor reserves the prerogative of briefing or making other appropriate changes in obituaries submitted.

### GENERAL SNOW

In deciding not to publish a formal obituary upon the death of Major General William J. Snow, we are motivated by the realization that it would be an injustice to his greatness merely to reassemble the cold facts of official record—they have been recorded several times in our JOURNAL.

Our Association itself is a monument to General Snow—his disciplined energy brought it to life. And in a sense it may not be stretching the truth too greatly to state that the *Field Artillery itself* is a monument to General Snow. He was our first and greatest leader.

Although none of us on the staff ever had the privilege of serving for or with General Snow, his death was a personal sorrow for us all. Until relatively recent months he frequently dropped into our offices for a chat. His brief visits were invariably a stimulant, and his many friends among older artillerymen will be pleased to know that, at age 79, his spirit remained undaunted, his personality no less inspiring, and his vibrant interest in events of the present undiminished. Nor had he lost his keen interest in Association activities; but he always refused with a laugh any suggestion that he again take pen in hand and, drawing upon his great experience, discuss artillery evolutions of the present day. "I'm just a has-been!" he'd say. "Nobody's interested in what I might say."

Regrettably, it seems that perhaps General Snow was as much right as wrong. As our first Chief of Field Artillery, he straightened out an artillery situation in World War I that was apparently nothing short of deplorable and chaotic. But these great lessons were lost and forgotten somewhere along the line between World Wars I and II, with the result that one of our outstanding artillery commanders, Major General John L. Crane, Retired, felt constrained to observe last June in our JOURNAL: "Faulty and slow though our steps, we were moving steadily in the direction of a more suitable structural organization for artillery control, it seemed to me, as World War II progressed. But it was hard going much of the time. I trust that we won't always have to learn the hard way."

General Snow realized full well the need, both on and off the battlefield, for what this JOURNAL has called a *suitably integrated artillery guidance*.

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**CHARLES P. GEORGE**  
**1886 - 1946**

Brig. Gen. Charles P. George, Retired, died of a heart attack on December 30, 1946, at his home in San Antonio, Texas.

General George was born at Fort Concho, Texas, on August 10, 1886, the son of Major Charles P. George, 16th

U. S. Inf. (USNA 1881). He attended Georgia Tech; then, being disappointed in not receiving a promised appointment to West Point in 1905, he enlisted and served as a private, corporal and sergeant until commissioned in the Field Artillery in 1908. His service from then until the advent of World War II was marked by wide command and staff experience, and national and international fame as a horseman. He was a member of two Olympic teams, riding in France and Holland. He was an official at the Olympic games in Los Angeles in 1932. He rode successfully in the Olympia Horse Show in London, the Canadian National Horse Show, many times in the National Horse Shows in New York and Washington, as well as many horse shows in other parts of the United States.

Known affectionately to all as "Toddy," General George was positive in his likes and dislikes, had a rich sense of humor, and was a born fighter and competitor. Whether at work or at play in the horseshow ring or tactical exercise, his eye, mind and effort were fully devoted to the game, which he won more often than he lost — a good winner and a good loser, he hewed a place for himself in the hearts of all who knew him.

He was promoted to Brigadier General in March 1941 and, after a short tour of duty at Fort Sill organizing the Replacement and Training Center, he was transferred to Fort Lewis, Washington, and to the command of the 76th Field Artillery Brigade there and in the desert training area, where, with his brigade, he built Camp Granite.

While on duty at Camp Granite, he suffered a heart attack, was transferred to Brooke General Hospital, where he remained for several months. Upon being returned to duty, he was assigned to command several groups of heavy artillery located at Fort Leonard Wood, Missouri; Fort Bragg, North Carolina; Camp Campbell, Kentucky; and Camp Forrest, Tennessee. This command entailed a great amount of travel by motor and airplane, and probably brought on his second heart attack, at Fort Bragg, in August 1944. He was again sent to Brooke General Hospital, and while there, suffered a third and more severe attack. He was retired for physical disability in October 1945, and went to his home, where he resided until his death. His valiant courage and cheerfulness during the many long months of his illness, when he was so distressingly physically impaired, won the admiration of everyone.

He gave his life to the Army he loved, as truly as any soldier killed on the field of battle.

Announcement is made, with regret, of the death on 27 February 1947 of uncommon artilleryman, Major General William Josiah Snow, Retired — first Chief of Field Artillery and founder of The Field Artillery Association.

# As We Merge

By Col Harry P. Storke, FA

Acting First Army Artillery Officer

WITH THE FIELD ARTILLERY and Coast Artillery merger progressing, a resumé of the current activities of the First Army Artillery Section, so fully occupied as it is with harbor defense activities, may be both timely and helpful, particularly to field artillerymen who must hereafter have considerably more than a passing knowledge of such activities.

## ORGANIZATION

The First Army Headquarters is organized in normal fashion. Under it, however, are two sub-commands, whose sole function is to handle civilian component matters: First Service Command (Boston) and New York-New Jersey-Delaware Military District (New York City). First Army Artillery Section is paralleled in the sub-commands by artillery sub-sections. There are no civilian component sections as such in First Army Headquarters.

There being at present but a handful of RA T/O units in this area, most of First Army business is concerned with harbor defense and civilian components. There are seven major harbor defenses, stretching from Maine to Delaware, requiring well over half of all the personnel assigned to harbor defenses in the entire U. S. Future artillery strengths in civilian components are estimated as follows:

	<i>NG</i>	<i>ORC</i>	<i>ROTC</i>	<i>Totals</i>
FA	13,920	11,630	1,010	26,560
AAA	25,950	2,920	350	29,220
HD	5,550	2,590	180	8,320
Totals	45,420	17,140	1,540	64,100

First Army Artillery Section is organized into FA, HD & AA, and S1-S4 Divisions with a personnel strength of 8 officers, 6 enlisted men, and 6 civilians. Although plans visualize a future necessity for radar, guided missiles, and Air OP divisions, and the WD Manpower Board recently surveyed

the Section and granted a paper increase to 10 officers, at the moment there is little call and no place for these officers.

## THE MAJOR TASK

Without meaning to minimize their substantial work load, this article proposes to pass over the work of the FA & AA divisions as routine and common to all Army artillery sections. Special mention might be made, however, of the following unusual business: our continuing efforts to secure, for artillery firing, danger or caution areas among the vastly-increased airways in the First Army area; our recent contribution of one officer to the WD atomic energy course and to the disseminating of atomic energy information to First Army and First Service Command headquarters; and our continuing efforts to arrange for the periodic publication of the First Army Artillery Information Service (AIS), so successful during the war years.

At least 80% of all work in this section involves harbor defense business—our harbor defenses, of course, being directly under the Army Headquarters.

Why harbor defense business, one may ask. Don't we know that harbor defenses are outmoded? Don't we realize that landing operations in France proved that harbor defenses have ceased to have any major defensive value? Haven't we heard of atom bombs and guided missiles and radar improvements and propelled mines and all those forward steps which will surely obsolesce harbor defenses?

Yes, we've heard. And we believe. But we still stand here holding a bear by the tail. The harbor defenses of this area, mostly rebuilt during the early '40's, are models of up-to-date steel and concrete military construction. You cannoneers who drove piles into almost

bottomless mud to anchor your 155 howitzers into some semblance of firing position; who sloshed out of your clammy dugouts to shoot that harassing mission at 0358 hours; whose freezing fingers spliced lines while sleet bit at you and seemed to congeal your very marrow—you should visit one of these modern harbor defenses and have your eyes opened. These defenses are the last word in what were efficient military installations to shoot accurately at targets on the bounding waves or to detonate better than a ton of TNT beneath the exact desired hold of a marauding enemy vessel or to blanket the sky with VT-fuzed ack-ack—while their troops worked in air-conditioned comfort at various machines so that their data were relatively untouched by human hands, uninfluenced by errors of the human brain. Yes, you'd be impressed. Visit a modern harbor defense objectively sometime. Maybe you can get some ideas for gadget machine control of field artillery (rocket) data computation which might stand us in good stead in this now-beginning scientific age.

## GOOD QUESTION

But let's lay sentiment aside. Why should we use presently precious funds to maintain these installations on even a caretaking status, when they might never again fire a single round in anger? A good question. Answer: Because they do have a function now, and will probably have an important defensive mission if war comes again.

No, we cannot simply snap the locks at the harbor defenses and go home. We have to have a more practical answer than that. The War Department may make recommendations to dispose of certain obsolete or obsolescing armament and equipment at all U. S. harbor defenses; we await a directive to take our first main concrete steps in a progressive, yet destructive, direction. In the meanwhile three of our present missions keep us particularly interested: caretaking, placing certain armament and equipment in indefinite storage, and preparing to train civilian components when that program shapes up more definitely. As you might gather, those three missions are not entirely convergent. Dealing with their specific and

various problems is a fascinating education.

First of all, we are not resting entirely on an expected directive, but are continually planning on more tightening down of harbor defenses, reaching toward a reasonable solution which will insure that in a future emergency any of our present armament and equipment that we retain will be able to perform its defense mission at least temporarily, until improved and up-to-date armament and equipment can be put into full operation, but that between now and then there will be a minimum of wasted effort on unnecessary maintenance.

We are thinking ahead tactically too, and, we believe, constructively. Permit us to make an assumption which we consider axiomatic: The big cities in the First Army area — containing as they do large populations, many and varied industries including war material plants, and important centers of communication — must be frontally protected in some way, in case of war and of possible water offensives or raids against our east coast. Although the enemy would probably not attempt to make his main landing at, perhaps, the piers along west side New York City, we must nevertheless refuse him easy

surface access to such facilities and to shipping in such harbors. Hence some static defense against surface vessels appears necessary in front of those cities. Mine fields immediately come to mind. Then to prevent our enemy from sweeping or detonating convenient channels through our mine fields, we must protect those mine fields by above-surface fire and also by Anti-Motor-Torpedo-Boat battery fire. We visualize that those protective batteries will be armed mainly with mobile 155 mm guns and 90 mm AA guns (or their rocket replacements). That will be our basic defense. Now we must have communications which will not fail, and

should preferably be well installed ahead of time, be they wire or radio. A well-established triangulation system including GP's, OP's, and base-end stations is necessary. We have those three elements — guns, communications, and survey—already. So much we believe essential. On other armament we are open-minded at the moment, but an answer is shaping up.

#### OTHER PROBLEMS

However, let us proceed to consider other duties, smaller in importance in the big picture, but nonetheless of daily occurrence in these harbor defenses of today.

**Modern harbor defenses are models of up-to-date steel and concrete military construction. Field Artillerymen will be impressed.**



Ever present, ever pressing, is the personnel problem. Our harbor defenses are now at bed rock on numbers and efficiency of personnel, and it becomes increasingly apparent that the fewer personnel we have, the more technically expert each of them must be, not only in one field, but in several. At present, then, we are seeking approval of listing as critically needed specialists such as apparent irreplaceables as casemate electricians, powerhouse engineers, mine planter officers, etc. Just as you are doing, we too are continually screening and screaming.

No matter whether any of our harbor defense guns ever shoot at an enemy again, we reiterate that mine defense appears to be of prime importance. All mines used in this area in World War II have now been recovered and disarmed. The next question is how much in money and personnel to expend to keep our present equipment up, since we conjecture that future mine improvements might well make all of our present mines obsolete. Every possibility for economy is being explored. Closely allied to mines are, of course, the mine planters *Abbott*, *Frank*, and *Mills*, presently berthing here. Large boats cannot lie entirely idle for most of the year and then be quickly put into commission for summer training, but must keep in at least low steam running condition continually. The *Abbott* and *Frank*, therefore, we are making as useful as possible during this non-training period by employing them on freight shipments in this area.

The *Mills* has been converted physically to a cable ship, to be controlled jointly by the First Army Signal and Artillery Officers. Another important policy of ours is to keep the protected military communications along the shore constantly in working order, since to repair too-far deteriorated cables in this area in case of emergency would require well over one year, and these cables might well be needed on short order for other than harbor defense communications. During periods of relatively quiet water, therefore, the *Mills* will be kept busy. Of course we are fully cognizant of communications improvements which will probably make cable obsolete altogether and are ready to

jump at those improvements, but at this time we have no other alternative than to keep the cables in efficient order.

Disposal of real estate and buildings is another problem. The first part is easy, since in principle no government-owned land is to be disposed of, but only leased properties. The second part is not so easy; we are responsible for passing recommendation judgment on every building in these harbor defenses, be it the ex-Van Swang summer place or a structure of mere outhouse proportions, before that building is declared available for sale or salvage. Many of these buildings are located on islands, of which we are blessed with a total of twenty-two.

That brings up the purely nautical aspect of the harbor defenses. In addition to mine planting, boats are needed for target towing, regular food and milk deliveries, personnel ferries, freight movements, etc. Total boats of various sizes in this area number slightly less than 100; naturally most of them are now in storage, with only the bare minimum necessary for essential operation now sailing. Boats require a high degree of maintenance, so we run our own boat repair shops, for work short of civilian shipyard necessity.

Valuable equipment, worthwhile maintaining and/or required by present directives to be maintained, is another problem. For instance, the 125-375 KVA Diesel power plants studding this area to generate electrical power for loading and operating guns, lighting casemates, operating directors, providing air conditioning, etc., cannot by present directives be dismantled and stored, but must be exercised with simulated loads for three hours weekly. Switchboards of the latest design must be kept at constant temperatures so that humidification will not ruin them. The intricate mine panels must be continually inspected and their dehydrators replaced about every three months. And so on.

Among the minor, but nonetheless binding, jobs once done by normal mainland Regular Army posts, the harbor defenses have several worth passing note: centralized Army exchanges, ceremonies for civilian communities, surplus properties by the warehouses-full, commissaries mainly

supplying outlying customers, induction centers, integration centers, separation centers, motor maintenance shops for vehicles from small and scattered military installations, Army guard houses, helping National Guard units in various ways to get started, etc. Yes, the harbor defenses are quite versatile. The multiplicity of small branch immaterial duties such as those above are one good reason why in this area, where there are practically no Regular Army troops or Regular Army posts, certain harbor defense posts must be kept operating, even if they never fire a gun again.

Again I say, cannoneer, that at this time harbor defenses are an interesting experience, with few dull moments, and their future is a problem well worth continuous thought and study, until finally we emerge with a well-rounded, practical answer.

#### THE WIDER VIEW

But the future of all artillery—field and antiaircraft as well as harbor defense—is an interesting, vital problem, on which as yet we lack several important answers. We should all keep airing our views, trying to get action, until we arrive at those answers. For the record we offer the following as sane, long - range artillery policies which should be put into effect.

First and most vitally important is the necessity for active furtherance in every possible way of *integrated guidance* under an artillery *director*, near the top, until we finally get him. Already there are too many indications of the serious need for an artillery "papa." If artillery in the future is to fulfill properly its indispensable role, so well exemplified in World War II, it must be championed, guided, and coordinated during its peacetime preparation. Our efficiency in World War II didn't just "happen." Branch immaterial supervision offers at best a fumbling, impractical answer to that. So we support wholeheartedly the campaign the JOURNAL is conducting for a "papa," and consider it the duty of each artilleryman to take every opportunity to support that campaign more tangibly.

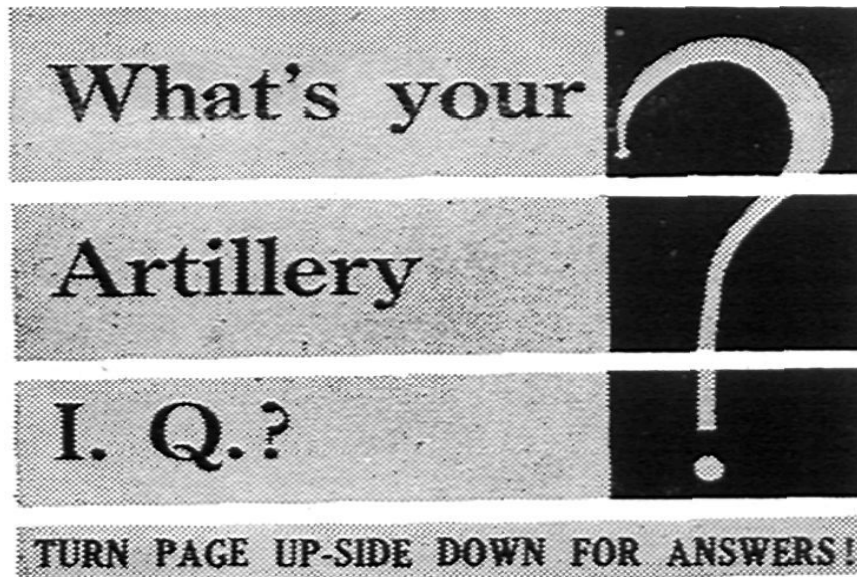
We believe that at least a skeletonized *artillery section* should retain its

identity in each army headquarters, no matter what work it actually does at this time. As the civilian component program takes more complete shape there will be plenty of pure artillery work to be done. We also recommend a further step: those armies which have sub-commands should also retain artillery sections. In each case the section should be a separate special staff section of its headquarters. The artilleryman must keep his articulate identity at every turn; already our big, sure voice from World War II, which surmounted obstacles of ignorance and mistrust of artillery to finally prove overwhelmingly the power of efficient artillery, is being forgotten. Yes, we must keep proving ourselves—"selling" ourselves, if necessary—for the good of the Army as a whole.

On the question of *rockets and guided missiles*, we feel that in the future the artillery must itself shoot or launch projectiles at least up to the ranges necessary for an army commander to bring fire to bear in order to insure his tactical success with weapons under his own direct control and no matter what the weather might be. Maybe one hundred miles, maybe farther. We are therefore in full accord with those who seek to lift restrictions against artillery experimentation, development, and operation of rockets and guided missiles. We feel that every artilleryman should fight hard on this point, and that the fight should be conducted right now, before it is too late.

However, we don't dissent on everything. We believe that the *merger* of Field and Coast Artillery is reasonable and practical and long overdue. The merger should produce a strong and closely-knit artillery organization whose claim to existence as vital infantry support and protection will never be questioned in the future. But that organization won't just grow, like Topsy. It must have a boss, strong and wise. So the merger itself is one more sound argument for an artillery "papa."

As we merge, let us all—Coast and Field Artillerymen alike — pledge ourselves to develop into a successful and a happy family. And may the Artillery soon have a "papa" and a champion.



1. In time fire, after *initial commands*, the command for "Time, so much" immediately precedes the command for: (a) direction; (b) site; (c) method of fire; (d) elevation.
2. The commands, "Center, one round, do not load, elevation 260" have been given. To have the pieces loaded and fired the proper subsequent command(s) is (are): (a) Fire; (b) Load, 260; (c) Center, one round, 260; (d) 260.
3. The battery has been laid parallel with the aiming circle. The commands, "Aiming Point, Church Steeple to direct front, refer, record base deflection" is give to the battery. Number 2 piece reports "Base Deflection #2, Zero." The distance to the aiming point from the battery is 2000 yards. Number 3 piece is 40 yards to the left of Number 2 piece. The reported base deflection for Number 3 piece would be: (a) Zero; (b) 3220; (c) Two-Zero; (d) 3180.
4. The battery was laid initially on compass 5000 (declination constant of instrument used was 200) and base deflection reported as 2368 on the base piece. After registration of the base piece the commands, "Report Adjusted Compass" is received. You, as battery executive, check the sight of the base piece and read the deflection as 2254. You report "Adjusted Compass": (a) 5114; (b) 4886; (c) 5000; (d) 1600; (e) 1714.
5. Of the following, which, if any, are incorrect sensings? (a) graze short; (b) range approximately correct; (c) graze above; (d) over, deflection short; (e) below.
6. When a 20 second transit is used on a short base survey, the selection of the base should be sufficiently long to give an angle of intersection at the desired point of at least: (a)  $1^{\circ}30'$ ; (b)  $2^{\circ}15'$ ; (c)  $5^{\circ}40'$ ; (d)  $8^{\circ}27'$ .
7. Using the same situation as above, but substituting an aiming circle for the transit, the angle of intersection should be at least: (a) 75 mils; (b) 100 mils; (c) 125 mils; (d) 150 mils.
8. The most accurate way to obtain the initial direction for a survey from two known points on the earth's surface is by: (a) computing the direction; (b) measuring the azimuth with a needle; (c) plotting on a chart then measuring with a protractor.
9. The bearing of a line is: (a) the clockwise angle from north; (b) the smallest angle from an east-west direction line; (c) the smallest angle from a north south direction line.
10. The bearing of a line whose azimuth is  $355^{\circ}45'$  is: (a) N  $4^{\circ}15'$  E; (b) N  $4^{\circ}15'$  W; (c) S  $4^{\circ}15'$  W; (d) S  $4^{\circ}15'$  E.
11. The executive gives the command "Battery Adjust," Aiming Point, Church Steeple to right front, Deflection 800." As soon as the pieces are laid, the sheaf is: (a) prallel; (b) converged; (c) diverged.
12. After the command "Suspend Fire" is given, to continue firing in accordance with the schedule, the correct command is: (a) "Continue Firing"; (b) "Resume Firing"; (c) "On Schedule, Fire."
13. The command, "At my command" remains in effect until (a) a new elevation is given; (b) a new elevation followed by "Fire" is given; (c) a new method of fire is given followed by "At my command."
14. At a service practice the safety officer at the howitzer position is responsible only to: (a) the battery commander; (b) the officer conducting fire; (c) the executive officer.
15. When the compass of the aiming circle is used, the executive should set the instrument at least the following distance from a heavy gun: (a) 40 yds; (b) 60 yds; (c) 75 yds; (d) 100 yds; (e) 150 yds.

ANSWERS: 1. (d); 2. (d); 3. (c); 4. (e); 5. (e), (b); 6. (c); 7. (d); 8. (a); 9. (c); 10. (b); 11. (b); 12. (b); 13. (c); 14. (b); 15. (b).



## The Editor Talks About LIFE INSURANCE

*With the exception of the food he eats, the clothes he wears, and possibly the automobile he buys, there are no other single items for which the average Army officer, during the course of his career, spends as much as he does for insurance in one form or another. The great bulk of these regular expenditures go for life insurance. This being the case, it is regrettable that the average Army officer, and Army officers are by no means a peculiar group as regards this weakness, should know as little as he does about the principles of insurance.*

ARRANGED in the first instance by this writer, the italicized words above have been repeated in a number of subsequent revisions of a pamphlet, "Principles of Insurance," prepared by the Department of Economics, Government and History, and used for cadet instruction at the United States Military Academy.

The words are as true today as when first written in 1936, except that perhaps *taxes* should be included in the list of expenditures! But there is nothing *voluntary* about the payment of taxes, so the omission may still be defensible.

This article deals only with life insurance principles, and I have tried to express them in a direct manner and with an economy of words. I am convinced that if these fundamentals are understood, major life insurance errors can be avoided. What is more, I have observed that those who understand these things almost invariably develop sufficient interest to inquire closely into the details and intelligently work out a soundly conceived life insurance program—a program that *provides safe and adequate life insurance protection for dependents, at minimum cost and as early as possible in the life of the family head.* At present, this is a serious problem for many men—soldiers and civilians alike—whose status during the war years denied them the opportunity to take out other than government

insurance policies. This group should be particularly careful not to make serious errors — as, for example, rushing into a hasty choice of insurance company or policy type.

I discuss three things only—the insurance principle, insurance policies, and insurance companies. Before turning to the body of the article, however, I wish to emphasize that, *in the opinion of those best qualified to know*, it is an error for eligible individuals to fail to take maximum

**Both my keen interest in the principles of insurance as well as the strong convictions that stand forth clearly in this article date back a number of years when, as an instructor at West Point, in addition to using it as a text for five years, I assisted materially in a major revision of the "Principles of Insurance" pamphlet referred to in the first paragraph of this article. Experience and observation over the intervening years have combined to strengthen my convictions in these matters. It is for this reason that I take advantage—I trust not too shamelessly—of my position as Editor to record my views in our JOURNAL.**

**In the preparation of certain sections of this article, I leaned heavily and directly upon the USMA pamphlet. I was also fortunate in having the draft manuscript reviewed critically by a number of individuals whose judgment in insurance matters I respect highly. Emphasized, however, is the fact that I, alone, am responsible for the so-called *primary insurance lessons* pointed out and *all opinions* expressed.**

DEVERE ARMSTRONG,  
Col., FA—Editor

advantage of the National Service Life Insurance opportunities offered them by the United States Government.

### INSURANCE PRINCIPLE

Insurance may be defined as a scheme of social cooperation whereby a hazard, which is too great for any one person to bear and to which a large group of persons are exposed, is spread over the entire group. To take the simplest possible example, suppose that there are 1,000 families in a certain community and that each family owns a home worth \$1,000. Suppose, further, that in this community experience shows that one house burns down each year. Since all of the home owners are in a similar predicament, it is obvious that if each of them contributes \$1.00 there will be assembled a fund of \$1,000 that can be given to the individual whose house burns.\*

**Primary insurance lesson:** *No one was "cheated"—that is, each participant received his "money's worth."* The peace of mind, the avoidance of the threat of great loss—that is, the *insurance protection* that each received—was ample compensation for his \$1.00 expenditure.

The risk of death is admirably suited to the insurance principle and analysts

\*Disregarded here and in subsequent illustrations are all considerations of interest, overhead costs, etc.



have been able to build up mortality tables that show the average number of persons of any age that may be expected to die each year. Such tables form the actuarial basis for life insurance calculations.

A *yearly renewable* scheme of life insurance would be identical, in principle, to the fire insurance scheme outlined above. In other words, based on the expected number of deaths in a given group, each member would contribute his share of the total sum needed to pay the insurance benefits of those who die during the year. For example, the American Experience Mortality Table shows that of 100,000 persons alive at age ten, 90,471 are still living at age 23. The table also shows that 720 of this number die during the coming year. If each one of the group wishes to insure his life for \$1,000, a fund of \$720,000 will have to be raised and each participant will have to contribute \$720,000/\$90,471 or \$7.97. If similar calculations be carried on until, by the mortality table, all members of the original group are assumed to be dead, Curve "A" in Figure 1 shows the plotted result. The ordinates show the theoretical cost, for the age span covered, of \$1,000 life insurance for one year. It will be noted that this annual cost increases from \$7.97 at age 23 to many hundreds of dollars late in life.

**Primary insurance lesson:** The cost of yearly renewable life insurance is relatively low from age 23 until about age 50, but *the scheme is obviously unsound for full life protection.*

Since the yearly renewal life insurance plan was found unsound, the principle of the *reserve* was developed. Under this scheme, during the early policy years each participant contributes more than his share of the anticipated death claims for his particular age group. (See shaded area lying between Curves "A" and "B" in Figure 1.) Not being needed to pay death claims, these excess payments build up in the reserve, which is kept invested with interest compounding. When the death rate increases in later years, the reserve is called upon to make up the difference

between the annual contributions and the mounting claims. Upon the basis of experience, as recorded in the mortality tables, it is possible to make exact mathematical calculations of the cost of any particular kind of insurance. Again disregarding interest accumulations and overhead costs, Curve "B" in Figure 1 shows the recurring annual cost (called *level premium*) at age 23 for a \$1,000 *whole life* insurance policy. (Hereinafter, the more usual term "ordinary life" will be used instead of "whole life" to describe this type of policy, which is also sometimes called "straight life.")

Whereas the reserve for a particular policy-holder builds up steadily (see *schematic* representation in Figure 2), the total reserves for a large group of insureds (see *schematic* representation in Figure 3) build up steadily for a number of years and then fall off as the mounting death claims are met.

If the actual reserves of any age group push ahead of requirements during a given year (see insert to Figure 3) such

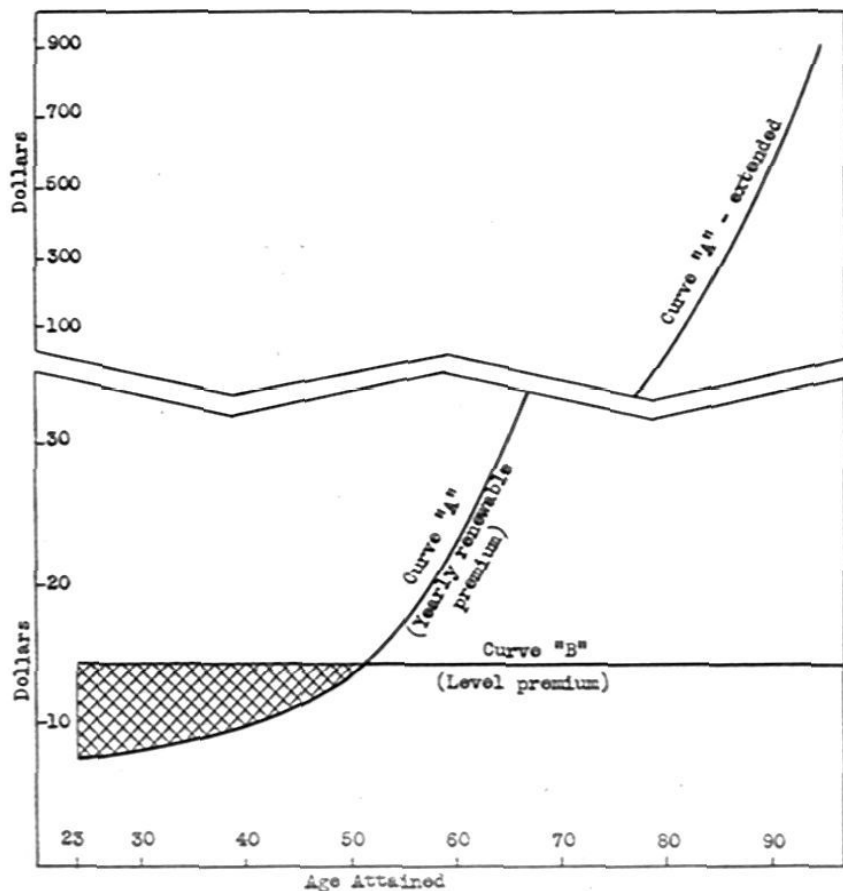
excess sums may be made available, in non-profit making life insurance organizations, for distribution as *dividends* to policyholders.

Derivative from the foregoing are the following **primary insurance lessons:**

a. The fact that Curve "B" (Figure 1) extends unbroken across the age span of the chart does *not* mean that one must *either die or live a century* "to beat" an ordinary life insurance policy. Premium payments in excess of the cost of death claims in the early years build up, with interest compounding, and permit the inclusion in all reserve-type insurance policies of the so-called *guarantee values*—that is, extended insurance, cash and loan values, and paid-up insurance.

b. The fact that Curve "A" (theoretical cost of *yearly renewable* insurance from age 23) lies below Curve "B" (level premium for ordinary life insurance at age 23) for a good many

Figure 1



years explains the fact that non-reserve insurance—called *term* insurance—is modest in cost from young manhood through middle age. Since the annual premiums paid approximate the cost of death claims and provide no reserve, pure term insurance policies carry no guaranteed values.

c. Able management, carefully selected insurance risks, interest earnings beyond anticipation—these, and other factors generally combine, in non-profit making companies, to permit the regular payment of dividends to policyholders. Dividends are not guaranteed by the insurance contract.

### INSURANCE POLICIES

The first principle to understand about life insurance policies is that—assuming (as can never, of course, be the case in fact) complete equality in managerial capacity — *there are no "bargains" to be found*; the insured gets just what he pays for, and no more. Corollary thereto is the fact that *luxury* benefits and privileges in life insurance contracts cost money, like all other luxuries. There is nothing wrong in buying luxury items — big cars, rare paintings, country estates, or luxury types of life insurance—*provided one can afford them*. Overlooked by too many, however, is the fact that most of us can't afford to be luxurious in our choice of life insurance, any more than we can afford to be luxurious in choosing our automobiles or our dwelling places.



This section is devoted for the most part to the characteristics of the two primary types of life insurance policies—that is, *term* and *ordinary life* insurance policies. Of course, if not already realized, those who set out to buy life insurance will discover at once that commercial companies offer a confusing variety of policies. From an actuarial viewpoint, however, all life insurance policies are either a combination or a variation, coupled possibly with savings provisions—in one form or another—of the *term* and *ordinary life* types. And I believe that when these two basic types are understood thoroughly, the relative

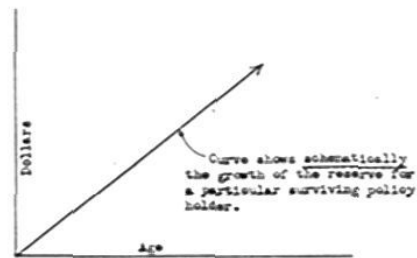


Figure 2

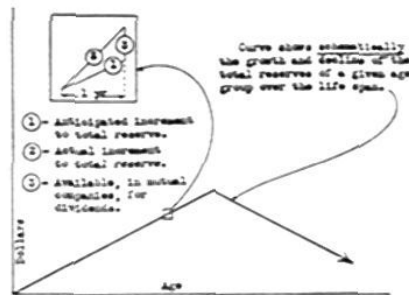


Figure 3

advantages and disadvantages of the variations and combinations thereof will sift themselves out for most people with a minimum of analysis.

**Term Insurance.** For the *limited period* covered by the policy, this type offers the maximum possible protection per dollar invested. It is not dissimilar, in principle, to the fire and car insurance we buy for our homes and automobiles. When the period of the contract (hence, the name *term*) ends, the life insurance protection ceases. While in effect, the contract constitutes a fair exchange of value—dollars for insurance protection.

Term policies are written for varying periods. Although a small reserve may build up, there are no cash-surrender, loan, or other values guaranteed by the company.

Term policies are usually convertible, at any time during the term of the policy and upon payment of the premium for the *then attained age*, into one of the permanent (i.e., *reserve*) types. The conversion provisions of a term policy merit close study, particularly in regard to physical examination requirements. *Renewable term* policies may be renewed without physical examination upon payment of the premium of the then attained age, but most insurance companies will not grant term insurance protection beyond age sixty.

Although cheapest at the moment, term insurance cannot be continued indefinitely, and the cost of conversion to one of the permanent types increases as the years pass. Speaking generally, therefore, *one should convert a term policy at the earliest practicable time*.

Under certain circumstances term insurance can be remarkably useful; frequently it satisfies most conveniently and adequately a particular insurance problem of both young and middle aged family heads. As one example, among many, the present high-cost-of-living period has already created, and will probably continue to create, pressing financial circumstances in many families that render most difficult the building up of an adequate program of reserve-type life insurance.

**Ordinary Life Insurance.** Under this type of life insurance contract, the insured agrees to pay a certain level premium (see Curve "B," Figure 1) as long as he lives. In return therefor, the company guarantees certain things, chief among which are: (a) to pay the face value of the policy to the beneficiary upon due proof of the insured's death, and (b) to fulfill, under the conditions stipulated, the cash surrender, loan, extended insurance, paid-up insurance, settlement option, and other values and benefits guaranteed in the policy.

*Ordinary life insurance provides the maximum permanent* (i.e., reserve) *insurance protection for the minimum cost*. This is the overriding advantage of this type of policy. More important, *there are no disadvantages* to the ordinary life type of insurance policy, from a life insurance viewpoint.

The following facts should be burned indelibly into the consciousness of all prospective life insurance purchasers, and particularly the younger family heads:

a. Most salaried men (and, certainly, all Army officers who live on their salaries alone) find it extremely difficult to carry enough insurance of *any kind* to provide, in the event of their death, sufficient income to enable their families to continue living in their accustomed manner.

b. The lapse rate of ordinary life insurance policies is the *lowest* of all of the permanent types.

c. Whereas many policyholders of

the luxury types of insurance inquire each year about converting them to the ordinary life type, it is virtually unheard of for the holder of an ordinary life policy to seek the conversion of his policy to a more expensive type.

d. Considering the guaranteed values (cash surrender, loan, extended and paid-up insurance, etc.) of ordinary life policies, the *average* family head will find that, from an *insurance protection* point of view, he will be well advised to utilize the *difference* between the cost of one of the luxury types of life insurance and an ordinary life policy of equal face value to purchase *additional* ordinary life insurance.

**Limited payment life, modified life, family income, endowment, and other types.** I have emphasized that, generally speaking, one gets what he pays for—no more and no less—in a life insurance contract. Consistent with this thought, each and every one of the many types of policies offered by commercial companies include benefits commensurate with the additional premium cost. Relatively, then, the problem confronting the purchaser is quite simple: he must balance the cost and advantage of these additional benefits and privileges against the advantage of investing the premium differential in additional term or ordinary life insurance protection. The following example illustrates quite clearly, I think, the balancing process to which I refer.

The annual rates per \$1,000, at age 25, for an *ordinary life* policy and a *twenty payment* life policy of National Service Life Insurance (Veterans Administration, Washington, D. C.) are as follows: ordinary life—\$16.22; twenty payment life—\$25.10. By subtraction, the premium differential is \$8.88. The prospective purchaser must balance the advantage of paying \$25.10 a year for *only* twenty years against the advantage (in view of the urgent need in the average family for *added protection right now*) of using the \$8.88 to buy approximately 55% *more* ordinary life insurance. In balancing these relative advantages, the prospective purchaser must not overlook the following

*guaranteed values*<sup>1</sup> that will accrue, respectively, under a \$1,000 twenty payment life policy and a \$1,550 ordinary life policy:<sup>2</sup>

\$1,550 Ordinary Life Policy			\$1,000 Twenty Payment Life Policy	
Cash value	Paid-up insurance	End of policy year	Cash value	Paid-up insurance
70.93	183.92	5	95.49	247.61
153.36	356.24	10	208.95	497.64
248.55	541.03	15	343.86	748.47
357.28	708.07	20	504.58	1,000.00
610.87	1,001.56	30	609.92	1,000.00
883.69	1,221.85	40	723.24	1,000.00

Several points stand out sharply from this illustration, virtually all of which apply *in principle* to all of the luxury types of life insurance policies.

a. Speaking generally, it is not logical for the average man at age 25, when earning power is low and insurance requirements are frequently high, to spend \$8.88 each year for 20 years for the *privilege* of not paying premiums after age 45, when his earning power may well be at its maximum. Most families will realize that this money might better be devoted to the purchase of *additional* ordinary life or, possibly, term insurance.

b. If death occurs before age 45 (as it will, inevitably, to a certain number) *the extra payments and interest accumulations might just as well have been thrown into the ocean!* In such a case, the beneficiary receives the face value of the policy *only*—that is, no more and no less than if the policy had been of the term or ordinary life type.

c. If, on the other hand, the premium differential is applied to the purchase of 55% more ordinary life insurance *protection*, at the end of 30 years (age 55) the cash and paid-up insurance values of the larger ordinary life policy exceed those of the smaller twenty payment life policy. (It is true, of course, that the insured ceased payments on the 20-payment policy at age 45). At age 65, the retirement age in many professions, the disparity is even greater.

d. This illustration *gives the lie* dramatically to the persistent fallacy that one "must either die or live a

century to 'beat' an ordinary life policy."

Of great interest, too, in this illustration is the fact that—provided the type fitted the purchaser's requirements—the \$8.88 premium differential would purchase an *additional* term policy of approximately \$1,120, thereby *more than doubling* the insurance protection immediately available. Of course, only \$1,000 of the \$2,120 total insurance would be of the permanent (i.e., reserve) type. Unless converted to a permanent type prior to the end of the term, the \$1,120 insurance protection would cease at the end of the term—in this case, 5 years.

Although already mentioned, the following **primary insurance lessons**, drawn from the foregoing, are repeated for the sake of emphasis:

a. Disregarding managerial inequalities, *there are no bargains in the life insurance market.*

b. Most people *cannot afford* the luxury benefits and privileges included in the expensive types of life insurance.

c. From an insurance viewpoint, there are no disadvantages to the ordinary life type of policy. It provides the maximum permanent insurance protection for minimum cost.

d. Although inherently *temporary* in character, term insurance is a remarkably useful type under certain circumstances. Likewise, certain combinations of the ordinary life and term insurance types in a single policy are often very convenient and useful.

e. Speaking generally, the purchase of a *future privilege with present dollars* as an integral part of a life insurance contract is unsound in principle, since the extra dollars paid (plus all interest accumulations) *are lost forever* if death occurs before the end of the payment period.

## INSURANCE COMPANIES

It is important to understand the difference between *stock* and *mutual* life insurance companies. (Some companies, incidentally, combine the features of both types.)

**Stock companies** are organized for profit, the stockholders being entitled to any gain that may result from the operation of the business and responsible

<sup>1</sup>Extended insurance guarantees are not included.

<sup>2</sup>This example is illustrative of principles only, since NSLI is granted only to persons in the active military or naval service in multiples of \$500, and not less than \$1,000 not more than \$10,000.

for any losses that may be incurred. This type of company does not issue policies permitting the insured to participate in the profits of the company. Stock companies are commonly referred to as *non-participating* companies, as are the policies they issue.

**Mutual companies** have no capital stock and no stockholders. They are composed of the policyholders, who own all its assets and who control its management through some system of voting. Mutual companies are commonly referred to as *participating* companies (as are their policies) since the policyholder participates in any profits that may accrue. Such profits are distributed as *dividends*.

**Stock vs. Mutual Companies.** Past experience indicates that in most cases the *net* cost of insurance in a mutual company has been less than in a stock company, particularly when the policies have been carried ten years or longer. But valuable though past experience may be as a guide to future performance, I do not believe that any man is justified flatly to state, with a sweep of the arm, that mutual companies are to be preferred over stock companies, or vice versa. Of real importance in some cases, however, is the fact that the original premiums for the stock company's policies are considerably less than for participating policies. In the past, the mutual company's *net cost* advantage has resulted from dividend payments to the policyholder as the policy matures over the years. However, the *utility of dollars in hand now* may override the possible advantage of a lower net cost spread over a period of years.

**Selecting the Company.** Far more important than the *type* of company selected is the *quality* of the company selected. By *quality*, I mean all aspects of the business—managerial efficiency, financial stability, settlement practices, service and good will to policyholders, and numerous other tangible and intangible factors. Obviously, we laymen are not qualified to judge the relative quality of the many commercial life insurance companies doing business in America. However, the layman *can* give heed to certain guides that can help prevent making a poor selection. Emphasized is the fact that these are

*guides*, alone, and not iron-clad rules to which there may be no exceptions.

**New vs. Old Companies.** Honesty and good intentions do not, of themselves and alone, guarantee efficient management. The efficient management of a life insurance company is a highly complex proposition requiring seasoned executives, highly skilled actuaries, broad-gauged economists and financiers, medical advisors and scores of other specialists. In my judgment, a balanced and well coordinated managerial staff of proven quality is more apt to be found among the older, well-seasoned life insurance companies than among the younger ones.

But what is "old" and what is "new" in life insurance companies? Naturally, individual opinions will differ, but I suggest that "new" life insurance companies are those that are under 50 years of age. Companies under this age may, in my opinion, still lack the seasoned maturity that comes after a complete generation of policyholders have, so to speak, "passed through" the company. If still going strong after 50 years, the company will have acquired what—to coin a phrase—may be called a "mature age balance" within its policyholder group, proven its ability to meet its obligations over a reasonably long period, and demonstrated its managerial quality by weathering the inevitable ups and downs of the business cycle and other threats to financial stability over a number of decades.

As mentioned earlier, the insurance principle presumes that a *large group* will share a hazard that is too great for an individual to bear. Thus, there is a corollary to the "new" vs. "old" comparison — namely, the "large" vs. "small" comparison. Since most of the older companies have grown steadily over the years, a great many of the old companies are also large companies. Personally, I can see little reason to go outside this group in selecting a company.

**State Regulation.** That life insurance is a *trust* proposition requires no supporting argument. The whole scheme has been developed to *provide protection for near and dear ones*, and the accomplishment of an adequate insurance program frequently requires a

notable current sacrifice by the entire family group. Hence, no prudent family head will place *his own personal trust* in other than the highest quality life insurance company he can find.

In our country, the regulation of life insurance companies is a function of the states. This being the case, the quality and degree of this regulation varies considerably. There are adequate laws in many states, but it is generally agreed that the four states — Massachusetts, Connecticut, New York and New Jersey—have developed particularly good insurance departments which rigidly enforce the laws for the protection of policy owners and beneficiaries. One excellent guide, therefore, is to buy only from life insurance companies that are licensed to do business in these states.

In this connection, service personnel are cautioned that, under existing law, state regulation of life insurance companies *does not extend* to Army posts (Federal installations), even though they be entirely enclosed physically within a state's borders.

**Net Cost.** Less important, in my opinion, than the foregoing but nonetheless worthy of consideration, is the *net cost* indicator of managerial quality.

I place relatively less emphasis on this guide than some for the reason that net cost variations are sometimes traceable as much to differences in contract wording, services rendered, and other intangibles, as to pure managerial efficiency. On the other hand, having in hand a list of carefully selected, high quality life insurance companies, the astute purchaser will do well to inquire pointedly into the comparative *net cost*, as shown by past experience, of similar policies offered by the several companies under study. Although by no means conclusive, past performance is an impressive comparative guide to general managerial efficiency and probable future trend. The same fine old life insurance companies in America come up, year after year, with enviable net cost data.

These comparative net cost data are readily available — the *Flitcraft Compend*<sup>1</sup> being one of the most common standard references. A small book, virtually

<sup>1</sup>Published by Flitcraft, Inc., 613 Maple Avenue, Oak Park, Illinois. Price \$2.50.

every insurance agent carries one in his pocket.

One adequate net cost comparison for a given period is readily provided by the following simple formula: net cost *equals* total premiums paid *less* cash surrender value *less* total dividends received. Applying this formula to a \$1,000 ordinary life policy purchased at age 25 from a company taken at random from the *Flitcraft Compend* for 1946 gives the following net *surrendered* cost data for the past twenty years:

	20 premiums.....	\$402.80
less	Cash value (at 20 years) ...	230.50
		\$172.30
less	Total dividends.....	109.39
		\$62.91
	Net (20 year) cost .....	\$62.91

It happens that the 20-year net cost of the same type policy for the same age and issued by the life insurance company listed in the *Flitcraft Compend* just ahead of the foregoing company was \$71.37. More often than not, a wider discrepancy in net cost will be noted. Selecting more carefully, for example, I find another company showing a 20-year net cost of \$47.08; and still another that shows only \$40.25. *Other things being equal*, the astute buyer would certainly pick the company that showed a net cost of \$40.25 per \$1,000 over the past 20 years over the company that showed a net cost of \$71.37. Buyers of the first policy *actually saved over \$300* per \$1,000 of insurance purchased during the past 20 years by selecting their company instead of the other one.

The following **primary insurance lessons** are emphasized, by way of summary:

- a. Being *trust* funds, life insurance should be purchased from the *highest quality* company a man can find.
- b. The *proven quality* of a life insurance company is of more vital interest to the buyer than its type (i.e., stock or mutual) or a few dollars difference in net cost experience data.
- c. Having selected a number of high quality life insurance companies, their comparative net cost experience data *on identical policies* warrants close scrutiny.



**Question and Answer**

Dear Editor:

Here is a question I'd like to see discussed or answered in your pages: *Why don't we adopt the Austrian method of adjusting on a target to be taken under bracket fire?*

According to an article I read during the war, the Austrians lay each piece of the battery for a different range with a 100 yard interval and fire one salvo; for example, #1 range might be 5200; #2 range would be 5300, etc. The next command calls for a volley—the first in fire for effect—at the range nearest the center of the area to be searched.

It seems to me that a very valuable element of surprise would be gained by adopting the Austrian method, and I see no drawbacks to it. Under present methods the average officer does not go into fire for effect soon enough to achieve real surprise.

MANFRED W. EHRICH, JR.  
Arlington, Vermont

▼—Queried, the Gunnery Department at The Artillery School agrees that under *very* favorable observing conditions—that is, when the observer has *commanding observation and a small target offset*—the "ladder" procedure proposed might give fair results and partial surprise, but stresses the following inherent weaknesses:

1. The proposed procedure violates the basic principles upon which we have based our methods of adjustment of fire; namely, that the target (or auxiliary target) must be bracketed for both range and deflection (or target hits must be obtained) before entering fire for effect. In the proposed procedure the observer actually enters fire for effect based upon a single sensing. This is particularly risky when additional batteries or battalions are to be brought in for fire for effect.

2. Complete surprise can seldom be obtained when the target itself is used as the adjusting point, but may be obtained by:
  - a. Adjusting on an auxiliary (nearby) target and shifting to the new target with fire for effect.
  - b. Calling for fire for effect on an area which has been previously adjusted upon.
  - c. Calling for fire for effect by giving the *accurate* location of the target on a map or photograph, provided the firing unit has performed the survey and registration necessary for delivery of accurate transfers of fire.—ED.

**School Solution**

Dear Editor:

I am completely exhausted reading of the exploits of the First Army artillery. . . .

COL.—, FA

Fort Sill, Okla.

Dear Editor:

*With the Big "A" in Europe*, in the Jan.-Feb. issue, was splendid. Ned Vergason's writing is refreshing, General Hart's stimulating. . . .

COL.—, FA

Fort Sill, Okla.

**Privileged.**

Dear Editor:

I was privileged to serve in the same unit with Capt. Benjamin A. Swartz, in whose honor I note from your Nov.-Dec. issue a road at Fort Sill has recently been named. I merely wish to tell you that he was one of the finest officers I met during the war. He commanded the respect of every one of his men.

NORMAN KROG

St. Paul, Minn.



# PERIMETERS in PARAGRAPHS



By Col. Conrad H. Lanza, Ret.

## THE PEACE TREATIES

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.—Editor.

**P**EACE TREATIES WITH FINland, Hungary, Romania, Bulgaria and Italy were concluded and made public on 18 January 1947, and signed by representatives of the countries mentioned at Paris, on 10 February. Ratification was expected to follow shortly.

This column has already discussed these treaties as regards the reduction of the military forces of the defeated nations and the payment of approximately 1-1/3 billions of dollars of reparations, two-thirds of which go to Russia.

Excepting Romania, all treaties were signed under protest. Although Greece was not a party, she filed an objection alleging an unjust boundary adjustment with both Bulgaria and Albania. Romania accepted the treaty with good grace since she received Transylvania from Hungary. This had been promised here unilaterally by Russia in 1944, in consideration for which Romania—at that time an ally of Germany—deserted to the Allied cause and furnished a minimum of 12 divisions in the campaign through Hungary toward Vienna and Budapest.

Imposed by force of the victors, the peace treaties will be maintained and

will assure a temporary peace only so long as the victors agree among themselves to continue to enforce them. It is fair to observe that neither the vanquished nor some of the victors consider the treaties just or in accord with the principles of the Atlantic Charter.

Yugoslavia signed the treaties as one of the Allies, but she also filed a protest regarding the boundary with Italy and the erection of Trieste as a separate state. All treaties provide for transfers of territory and peoples without regard to the wishes of those concerned and include what many consider exorbitant reparation clauses. The old causes for war remain, and will break out again as soon as the pressure of the Big Powers declines.

### TRIESTE

Although inhabited by Italians, Trieste and Fiume never belonged to Italy prior to World War I. Trieste was the commercial port (and a very prosperous one) for the Austro-Hungarian Empire. Pola was the naval base of Austria-Hungary. All three ports were awarded to Italy at the end of World War I, as was the entire Istria peninsula.

Prior to World War II the commerce of Trieste and Fiume had declined, respectively, about 50% and 80% under Italian rule, the reason being that they were not favorably situated to serve the industrial centers in northern Italy. The same situation existed with regard to Yugoslavia which had ports, further to the south, better suited for her trade. The former business with Austria and

Hungary also declined greatly. Those new countries could now ship to other ports whereas, under the old Empire, nearly all their foreign shipments went via Trieste.

It is not clear how the new state is going to get enough business to support itself under the new arrangement. Italy found it necessary to pay the local government from the Italian Treasury in order to balance their budget. Presumably, from now on the United Nations will foot the bill.

The peace arrangement appears to satisfy no one—Yugoslavia, Italy or the inhabitants.

### COMPLAINTS BY SIGNATORIES

Hungary charges that about 25% of the Hungarian people have been forcibly assigned to foreign domination, and that many of these are deprived of human rights. This is the same situation as arose after World War I, and was the prime reason why Hungary joined with Germany in World War II—namely, to liberate her own people.

Bulgaria complains that she has failed to obtain a port on the Aegean Sea.

Greece objects that her frontier with Bulgaria favors the latter unjustly. Besides, the military forces of Bulgaria are considered a threat to Greece. She has approximately the same complaint as regards Albania. It should be noted that these are the underlying causes that led to war between Albania, Bulgaria and Greece in the past.

Italy complains that frontier changes are unjust, and objects even more vigorously

to the loss of her colonies. Italy considers that the colonies are essential to absorb her growing population; and complains that, by contrast, the victorious Allies already have more territory than is necessary for their own peoples.

### NEW STATES

The treaty with Italy recognizes Albania and Ethiopia as independent states. Ethiopia is to receive reparations from Italy, but credit for the value of Italian improvements within Ethiopia is not allowed. For example, the Italian built road system alone exceeds in value the allotted reparations.

Reports from Ethiopia indicate that that country is retrograding rapidly.

The Ethiopians have confiscated all former Italian property. Power, sewage and water plants are giving out — in some places they ceased to operate within three months of Ethiopian possession. It is said that Italian houses are being used as stables while the new owners live outside in the former garden.

In view of this situation, the inhabitants of Eritrea (adjacent Italian colony whose destination has not been determined) are objecting strenuously to being assigned to Ethiopia. This has been proposed but has not yet been ordered.

Eritrea has a military value. It had an Italian naval base, now being dismantled. An American supply base

was added during the war. There are airfields, and the road system is good. There are some railroads. The naval base at Massaua is well situated to cover the south approach to the Suez Canal. In view of the British withdrawal from Egypt, the final disposition of this base merits careful consideration.

### COMMENT

**In view of the fact that the defeated nations have signed the peace treaties under protest, it is doubtful whether any weight can be given to subsequent ratification. All will seek the earliest possible opportunity to rectify what they consider as unjust treatment.**

## THE MEDITERRANEAN AND NEAR EAST REGIONS

**T**HE MEDITERRANEAN AND Near East remain critical areas where important developments are taking place. The British air and naval forces dominate the Mediterranean, with main bases at Gibraltar, Malta and the Suez Canal. A new base is being developed at Cyprus, which is already available as an auxiliary base. A small American naval force, including naval aviation, is also in the Mediterranean.

British ground troops are in Greece and Palestine, both of which are strongly held. British troops, heretofore in Egypt, are withdrawing to the Suez Canal Zone to the east and to Sudan in the south. The British also hold the former Italian colony of Libya. Thus, Egypt is entirely surrounded by British force—ground troops on the east, south and west, and air and naval forces on the north. In this situation, Egypt cannot leave the British camp.

### EGYPT

Negotiations were commenced with Great Britain in May 1946 for the evacuation of Egypt by British troops. There has been no special difficulty about this. British GHQ closed in Cairo and reopened at Fayid, which is on the west side of Bitter Lake (on the Suez Canal) about 70 miles northeast of Cairo. Being in the desert, the new military station needs considerable construction and is not expected to be completed until 1949. From a military

point of view, the new center of British activity is well located: it is within a few hours' drive of Egyptian centers of population, and it covers the Suez Canal as well as the line of communication between Egypt and Palestine.

Disagreement exists between the British and Egyptians over the disposition of the Sudan. Egypt demands that it be evacuated by the British and turned over to Egypt, regardless of whether the Sudanese like this or not. It is very doubtful whether the Sudanese desire annexation to Egypt. The southern part is Negro and has no affinity with Egypt; the northern part is mixed, part Egyptian and part non-Egyptian. In the absence of an agreement, the Sudan remains under British control.

By building about 80 miles of railroad, the Sudanese lines could be connected with those of Eritrea. Uniting the Sudan with Eritrea (both at present under British rule) would make a powerful military site for future possible military operations. This would cover British possessions in East and South Africa and the southern approach to the Red Sea and Ethiopia.

### PALESTINE

Sabotage and disorder against British occupation troops continues. From a military point of view these have a nuisance value only.

The gist of the trouble in Palestine lies in British promises dating back to 1917.

At that time Palestine belonged to Turkey. The British promised to "liberate" Palestine, and there to establish a Jewish national home. It was not then supposed that many Jews would want to emigrate to Palestine; hence, there would be no special opposition to their doing so.

After World War I Great Britain accepted Palestine as a mandate, which prescribed that there shall be a Jewish national home, and that the administration of Palestine "shall facilitate Jewish immigration under suitable conditions." What constitutes "suitable conditions" is open to wide interpretation. Since World War I the desire for Jewish emigration to Palestine has increased to unforeseen numbers, due to the refusal of practically all other countries to receive Jews. This has brought about strong opposition from the Arab inhabitants of Palestine.

The Arab position is that the original promise of Great Britain—to establish a Jewish national home in an Arab country and thereafter to admit foreign Jews in unlimited numbers—was made before the British either owned or occupied Palestine, and was given without the consent of the Arabs in violation of the self-determination provisions of President Wilson's 14 points. Not objecting to the admission of a reasonable number of persecuted Jews, the Arabs strongly object to taking all of them.

It is impracticable to reconcile the Jewish and the Arab positions. The Jewish Zionists claim that, having given the promise and regardless of later events and the hostility of the Arabs, it is up to the British to establish the national home and admit as many Jews to Palestine as may wish to go there. The Arab position is that they will not stand for this as the original British promise was contrary to law and therefore void. They have armed and threaten to fight to protect their own country against what they consider to be undesirable immigrants.

A British-Jew-Arab Council met in London in early February to consider partitioning Palestine between the Jews and the Arabs. This dissolved on February 14th, without having reached an agreement either on the proposed partition or on the amount of Jewish immigration, which the British suggested might be 4,000 per month for the next two years. It has been decided to refer this matter to the United Nations.

The Arabs reason as follows. The British will have another war. Then they will need the support of the Arab and Moslem world. It is unlikely, therefore, that the British will do anything seriously to antagonize the Arabs. The Arabs have no objection to the United Nations discussing the subject of Palestine. They have representation in the United Nations and feel reasonably certain that, if necessary, the British will exercise their veto power to avoid antagonizing them to the extent of driving them into joining a potential enemy.

#### LEVANT STATES

The last French troops were withdrawn from Lebanon on 31 December. That small state and Syria are now independent.

#### TURKEY

The strategical position of Turkey resembles that of Poland prior to World War II. Poland had two powerful neighbors—Russia to the east and Germany to the west. Each neighbor suggested that Poland join it in a war against the other neighbor. Poland detested both the Germans and the Russians, did not desire to have a war, and declined both offers. Thereupon, the

two powerful neighbors joined together and partitioned Poland between themselves. At the end of World War II that part of Poland seized by Germany was restored, but what Russia had seized was not returned.

Turkey is now located between two powerful neighbors — Russia to the north and the democracies to the south in the Mediterranean area. Both are seeking Turkey's aid. Turkey fears a war between her two powerful neighbors and, should it come, does not want to become involved. Remembering Poland, her problem is what to do about it.

Turkey is seeking to discourage possible attack by maintaining her military forces at a high level of efficiency. She has modified her disregard of other Moslem races, and is now engaged in negotiations with some of them. The President of Lebanon, the Prime Minister of Iraq, and the King of Transjordan have visited Ankara and consulted with Turkey's Government. No information has been released as to the nature of the discussions. Unofficial Arab statements are that consideration is being given to an alliance between Turkey, Iraq, Iran and Afghanistan—all Moslem states. The recent expulsion of Russia from Azerbaijan has increased the prestige of Iran, and the Saadabad League. Arabs claim that Great Britain is encouraging the proposed extension of Moslem alliances, but does not desire to do so openly at this time.

#### ARABS VS. RUSSIA

Russian efforts to secure Arab sympathy and to establish good liaison have not been successful. The Arabs do not like Communism. They desire to remain on good terms with both the United States and the British Empire, although they do not approve of the position that the United States has taken in favoring Jews in Palestine rather than Arabs.

#### KURDISTAN

Russian radio propaganda tending to urge the Kurds to revolt is still in progress, and it is reported that funds and munitions from Russian sources have been received by the Kurds. The original plan appears to have been to start a Kurd revolt in the spring of 1946. However, the expulsion of Russia from Azerbaijan, under pressure from the

Anglo-Saxon nations in May 1946, discouraged the revolt. Presumably, it is now planned to have it in the spring of 1947, but it is very doubtful that this will come off. Kurds take all funds, arms, munitions and other property issued to them—then, do about as they please.

#### GREECE

The civil war in the north has died down, frozen for the winter. During the period covered by this report only minor patrol encounters have taken place. General belief is that hostilities will recommence, probably in April.

#### THE BALKANS

The general situation is that in Greece there is a Communist revolt, quiescent for the moment. In Yugoslavia there is an anti-Communist revolt. Yugoslavia accuses Greece of being responsible for this; and Greece accuses Yugoslavia of being the cause of her civil war. The Communist strength in Greece is known to be somewhere between 15% and 20%. The anti-Communist strength in Yugoslavia is not known.

Under Tito, Yugoslavia is very Communistic—at the moment, more so than the Kremlin. Tito is dissatisfied over Russia's having yielded on Yugoslavia's demand for Trieste, and thinks that Russia is too slow and is temporizing with the democracies. Yugoslavia wants union with Bulgaria and Albania and possession of Trieste and Greece—or at least northern Greece. She wants Russia to back her in these matters, but Russia is apparently not prepared to do so at the risk of starting a new war. This is a dangerous situation. Yugoslavia started World War I through impetuous action. Close watch is now necessary to avoid a new crisis.

#### SPAIN

The acuteness of the situation has decreased. Of 24 Spanish divisions, 20 have been watching the Pyrenees frontier, with 4 divisions in reserve. Four divisions have been withdrawn from the Pyrenees, in view of the growing improbability of an attack, leaving 16 on the frontier. These divisions are good for defensive purposes but lack armor and other equipment for a modern offensive.



## THE ARCTIC REGIONS

UNTIL RECENTLY THE ARCTIC regions were always considered an insurmountable obstacle to the passage of large forces. That period has passed. By using planes, ground troops can now be maintained in the Arctic; and troops can, of course, be flown completely over the area between America and Europe or Asia. To date only single planes have made flights clear across the Arctic, but the time is not distant when this will be a common event, and practicable for fleets of planes of unlimited numbers.

Russia was a pioneer in long distance flights across the Arctic. In 1937, three planes were despatched from Moscow and flew non-stop over the North Pole. One plane landed near Vancouver, Washington, and a second near Los Angeles, California. The third plane was lost. Present Russian airfields are a thousand miles nearer than Moscow to the United States, and the 1947 planes are enormously superior to those of ten years ago.

Since 1937, eight Russian reconnaissance flights to the North Pole are known of. The latest was in October 1945, and was based on fields in western Siberia, near Longitude 75° East and Latitude 77° North. The other flights were based on Novaya Zemlya, at about the same latitude but 10° further west. These fields are approximately as far north as Thule, Greenland. Consideration has been given to establishing an advance airfield near the North Pole, but the latest report was that there was so much open water there and that ice was drifting and unstable.

The United States, Canada and Russia have all been experimenting within the Arctic in order to determine the equipment and weapons best suited for operations in the rigorous climate of the area. Extensive reconnaissance has been made over regions heretofore unexplored. American reconnaissances have been limited to the sector between

Alaska and Greenland, both inclusive. That is an arc of approximately 160°. The arc over Russia, including Siberia, is slightly under 160°. The remainder of the Polar arc of about 40° is credited to Norway.

To obtain air control over the Norway arc, Russia has requested Norway to cede to her Bear Island, and to grant concessions for air bases on Spitzbergen. Bear Island is some 200 miles south of Spitzbergen, and would be suitable for an air base. Russia has had coal mining rights on Spitzbergen for some years, and is exploiting them. There are also fishing rights. Russia is well acquainted with Spitzbergen and knows what she wants. To date no action has been taken on Russia's requests.

From now on the Arctic region, which furnishes a broad passageway for air movements, will be an important strategical area.

## CHINA

THE WAR between the Kuomintang (the Nationalist Government of Generalissimo Chiang Kai-shek) and the Communists continues. There has been no diminution of hostility. Military operations, however, have been on a small scale, and have been of minor importance. Principal factors affecting the situation are now economic and political. There have been major developments in those fields.

### MILITARY SITUATION

No material change has taken place. Nevertheless the base of conditions in China rests upon the military situation.

With minor exceptions, that part of China south of the Yangtze River is Kuomintang territory. North of that river, Kuomintang armies operate in hostile territory. They hold railroad lines and certain cities, and have the mission of keeping the railroads open for traffic. Defeating the Communist armies is incidental to that objective. All moves of Kuomintang troops have been towards

capture of geographical places including lines of communication between them. By their own returns, the total strength of Kuomintang armies (about 300 divisions) is 4,900,000 men.

The Communists hold all territory north of the Yangtze River, including Manchuria, less the cities and railroads held by the Kuomintang. In other words they control the country. Their troops, estimated as perhaps 500,000 men, are quite widely scattered and are much inferior in number to the Kuomintang. They probably do not have over 30 divisions. In view of this disproportion in strength, the Communists avoid major engagements with the Kuomintang. The Communist mission is to interrupt the railroads so as to prevent the Kuomintang from consolidating its hold within Communist territory. Incidental to this mission attacks are made on isolated detachments, when as occasionally happens it is possible to make raids with forces locally superior.

Neither Kuomintang nor Communists have as a major mission the destruction of the opposing armies by battle. This is why this war, which has now been going on for 20 years, is still continuing. It is likely to continue until one side or the other succeeds in crushing its opponent by fighting.

The Kuomintang abandoned its campaign in Manchuria, alleging that the winter climate made it impracticable to maneuver. Of their 300 divisions, 39 have American equipment, and most of this is in Manchuria or north China. The Chinese report that the American motor vehicles are frozen and will not run and that consequently no movements are possible. The real reason for this is unknown. It may be an excuse, or it may be due to failure to provide winter lubricating oils. American trucks do run in winter if properly serviced.

The general Kuomintang plan for the current winter was placed in effect immediately after Christmas. The major operation was to open the Tientsin

and Nanking RR, which was held by the Communists along the section passing through Shantung. Secondary operation was to open the Tatung & Puchow RR which runs from south to north through Shansi, and the central section of which was held by the enemy.

The Kuomintang estimate of the situation on which the foregoing plan is based indicates that if successful it is hoped that these two operations will cut the Communist main axis of supply and communications. That axis is believed to extend from Yen-an eastward to Shantung, then due north across the Gulf of Chihli to Liaotung and on to Harbin. The Communist GHQ has been at Yen-an for years, and an advance CP has been opened in Harbin. Numerous troop movements have at various times been observed along the axis. It is hoped that if the axis can be kept cut, the Communists will be split into two major segments based respectively on Harbin and Yen-an.

Well aware of the foregoing plan, the Communists adopted a counter plan—a repetition of previous ones: to withdraw from before the superior Kuomintang forces, fighting only delaying actions at favorable places. Being lighter equipped than the Kuomintang and being in friendly territory, the Communists count upon being able as before to retire as desired, without incurring any serious losses, and then to close in behind advancing Kuomintang troops and occupy a new section of the railroad. This simple plan has worked for years, and is counted upon to continue to do so. Perhaps nowhere other than in China could that happen.

The major campaign was launched from the north bank of the Hwang River in Kiangsu. The first objective was Lini, a town about 100 miles away, which was held by the Communists with approximately 4½ divisions. The Kuomintang states it had 200,000 troops. The objective was duly reached on 15 February, 52 days after the commencement of the campaign. This is an average advance of about 2 miles a day. The Communists fought several delaying actions but withdrew each time, and made no defense of Lini. The Communist commander in this area has been energetic. Diversionary attacks were made against the left flank of the

advancing Kuomintang armies which captured large coal mines and presumably wrecked them. As this account closed the Kuomintang was far from having opened the Tientsin and Nanking RR.

The secondary operation which started west from near Liaohsien, Shansi, at the end of December reached the Tatung & Pukow RR at the end of January near Fengtang. The enemy held the railroad both to north and south, so that also was far from being opened.

Around Peiping, the Communists have been on the offensive. They have made raids on lines of communication constantly interrupting them. The all weather road to the coast is reported to be so demolished as to be impassable for motor vehicles. Fighting has also occurred near Tsingyuan (Paoting on some maps) held by the Kuomintang, but with the Communists on the offensive and cutting lines of communication both to the north and to the south.

#### CHINESE GENERALS

On 25 January General Ho Peng-Chu was commanding a Communist division in the Lini campaign. On that date he deserted to the Kuomintang, where he was welcomed with open arms and given a field command at once. In his new job, he rushed into a suburb of Lini on 10 February, and had the bad luck to be captured by a Communist patrol. Ten years or more ago General Ho Peng-Chu was a Kuomintang general in good standing. Then he deserted to the Communists. After Japan invaded China he deserted the Communist cause and joined the Japanese. In due time he became the Japanese governor for Shantung. When Japan fell General Ho rejoined the Communists and was assigned to command a division. He held that until his latest desertion mentioned above.

General Ho was promptly brought before a GCM and tried on charges of desertion to the enemy in time of war. It is believed there was only one specification, earlier offenses having been condoned. He is reported to have been sentenced to be executed, but approval of the court's action is being awaited. Desertions by generals are not uncommon in China.

General Yen Hsi-shan commands about a division at Taiyuan, Shansi. He has held that post for many years and claims to be neither Communist nor Kuomintang. His troops are well armed and partly officered by Japanese still in their own uniform. Troops are partly Japanese and partly Chinese. Taiyuan is an industrial center with steel mills capable of providing General Yen with infantry weapons and ammunition. His division has artillery. His force is small, but appears to be efficient. There are numerous other industrial establishments, so that General Yen is independent of outside sources for supplies. The industries were mostly constructed by Germany, and the German engineers are present and in charge.

Both Communists and Kuomintang would like to have General Yen join their side. To date he has shown no inclination to accept either invitation. The Kuomintang is slowly closing in from the east, while the Communists are doing the same from the west. Under this pressure some action by General Yen may shortly be expected. His small territory will be a valuable military asset to whichever side can control it.

#### POLITICAL AND ECONOMIC SITUATION

In 20 years the Kuomintang has been unable to conquer the inferior Communist forces. It was quite incapable of defeating Japan, although the Nationalist Chinese forces outnumbered the Japanese about 8 to 1. In recent years the Kuomintang has been kept alive as a going concern through being financed by American loans and furnished with vast quantities of arms, munitions and supplies. Even with that help it contributed little in the war against Japan. Since the end of that war, it has equally failed to overcome the inferior Communist forces. Main reasons for the inefficiency of the Kuomintang Government have been corruption (an internal administrative problem) and wrong application of standard strategical principles (a military problem). There are other factors involved, but the two mentioned are the main ones.

The United States has taken the

leading part in attempting to establish peace and order in China. It seems to have been President Roosevelt<sup>1</sup> who arranged for China's recognition in 1942 as one of the then Big Three, a recognition accorded before even Russia was recognized as a Big Power. The idea at the time appears to have been that China would become a real leader among nations, and represent in the United Nations the vast number of Asiatic peoples. That was a hope which has never been realized.

During the period covered by this report, the American Government has taken several steps. On 18 December, President Truman, in line with an earlier statement made in December, 1945, expressed belief that it was of the utmost importance to world peace that broadening of the base of the National Government of China would lead to a united and democratic China. He added that the armed conflict now under way in China was a threat to world stability and peace.

On Christmas Day the Chinese National Assembly adopted a new Constitution to be effective on Christmas of this year. The present Government was directed to hold national elections in September, 1947, for the new government officials. The Communists had been invited to send delegates to the National Assembly but had declined to do so. They have repudiated the action taken. They have strengthened their own Government, whose headquarters remain as before at Fushih (better known as Yen-an) in Shensi. Following the Russian model, a Politbureau has been organized and is functioning. As before, the titular head is Mao Tzetung.

The Politbureau has laid out a program for 1947. This continues the policy of refusing battle with major Kuomintang forces, due to their superiority in numbers and their American equipment. They will intensify guerrilla activities, and tighten the economic blockade of Kuomintang China. New features are providing for an air corps and for propaganda within the United States and the British Empire through use of local Communist

organizations. The latter are expected to do the work upon receiving necessary data from China.

The economic blockade is working well. Method used is to keep the railroads interrupted by raids on lightly guarded sections, to destroy the coal mines by other raids, and to destroy all other supplies and transportation. Main success has been on the railroads, which are nearly paralyzed and quite unable to carry the freight necessary to maintain the country's economy. This is slowly being wrecked.

General George C. Marshall, then Special U. S. Ambassador to Kuomintang China, issued a statement on 7 January. He summed up the reasons for the antagonism between the Kuomintang and Communist parties. First among these was that neither side trusted the other, a fact that has been reported repeatedly in this column. The salvation of the situation, as General Marshall saw it, was to organize a new government based on the liberal elements of the Kuomintang but remaining under the leadership of Chiang Kai-shek. He did not evidence much hope that this could be brought about. He called attention to propaganda by both sides, much of which was knowingly false — that of the Communists not only being false but also anti-American.

Shortly afterwards, the United States withdrew General Marshall from China. The American truce teams which had operated in the field to maintain peace between the hostile factions were demobilized, and the U. S. Marines (guarding coal mines in the Tientsin area) were also ordered withdrawn. Further, the United States announced that until further order, no more funds, munitions or supplies would be furnished the Kuomintang. As this account closes, these measures are in process of being carried out. The naval station at Tsingtao is not included in the withdrawal orders, but elsewhere American military forces are withdrawing. When this is completed, Kuomintang China will be on its own for the first time in years.

On 15 January, 1945, a Russian estimate of the situation was issued, and copies supplied the Communists in this country. That estimate foresaw that the United States would be unable to work

with the Kuomintang Government and would eventually withdraw its support. Note that this Russian estimate was written *over two years ago*, before the Yalta Conference. The estimate provides for Russian assistance to the China Communists and predicts that after the United States has gone these Communists will defeat the Kuomintang and overcome it. Missionaries recently returned from China report that this is likely to happen.

The Russian estimate then predicts:

**During the years 1946 to 1949 the China Soviet Republic will gradually extend its territory to include all of China and will restore order throughout its area by liquidating all *Traitors to the People*. This liquidation will be based on a questionnaire required to be answered by every Chinese, in which he will answer the following questions:**

1. Why did you not join the Communist army in 1933?
2. Just what did you do under the Kuomintang?
3. What anti-Kuomintang sabotage have you engaged in?
4. Name your accomplices.
5. Name 3 collaborators of the Kuomintang.

**Thus did the Soviet Union bring the blessings of peace and true Marxist-Leninist - Stalinist democracy to the great farmer working classes of . . . Asia.**

General Marshall in his 7 January statement said: "the Communists [of China] frankly state that they are Marxists and intend to work toward establishing a Communistic form of government in China." This appears to corroborate the Russian estimate.

According to Kuomintang reports the total strength of all their military forces is 4,900,000. The annual expenditure required to maintain this large force in an extensive war is 5 trillions of Chinese dollars. Other expenses exceed 4 trillions more. As no such amount of money is available through legitimate taxes, the money is just being printed as required. An extraordinary inflation has resulted, with the American dollar being quoted officially as 12,000 Chinese dollars, but really having a value in the market of about 50% above that. Due to its financial difficulties, the economic

<sup>1</sup>The part which Great Britain had in this decision, if any, is not yet known.

collapse of the Kuomintang is not improbable.

The loyalty of the Kuomintang army is not above question. Reports from American correspondents indicate that pilots and bombardiers in the Air Force frequently fly around aimlessly rather than carry out missions of attacking the enemy. This is corroborated by an absence of reports showing any accomplishments by the Air Force. As the Communists have no effective air force, there is nothing to prevent the Kuomintang planes from going wherever they please, if they want to go.

### COMMENTS

The American recommended plan to "broaden the base" of the Kuomintang Government by a combined government of Kuomintang and Communists has been tried in other countries. A similar recommendation was made in regard to governments installed in Poland, Romania and Bulgaria, where at the time the governments were all Communist.

In each case the American plan was accepted. Those three governments did "broaden their base" by installing Ministers who were non-Communist. In no case, however, were the results happy. In each case an "election" followed, which was dominated by the Communists whose representatives were elected, usually by "unanimous" choice of the electors. This notwithstanding that in Poland and Romania the population had been known to be strongly anti-Communist. The United States has declined to recognize the "elections" as just. Nevertheless the Communist Party remains in complete charge.

There is little reason to believe that the same policy for a government with a "broader base" in China would have a different ending. There is no similarity between democracy and communism. The two won't work together. If forced to combine, one or the other disappears. So far this has resulted in the extinction of a number of former democracies.

Communism is based upon the supremacy of the state, where its

citizens are slaves of the state. They are slaves exactly as were the Negro slaves of the United States prior to their being freed, except that instead of having an individual as a master, in Communist countries the slaves are the property of the state. In both systems for obvious reasons the slaves are rationed, clothed and quartered by their master. It may truly be said that there is no unemployment and that rations, clothes, etc., are equitably distributed in slave nations.

Democracies are based on the freedom of the individual, who, outside of exceptional cases such as war, cannot be required to work either for his government or any particular master, unless he so agrees under conditions which he willingly and freely accepts.

Communism and Democracy just won't mix. They may exist separately but not as a combination.

The refusal of Generalissimo Chiang Kai-shek to work jointly with a Communist Party having equal rights is quite understandable.

## INDIA AND SOUTHEAST ASIA

### GENERAL SITUATION

JAPAN was thoroughly defeated in World War II, and her nationals throughout Asia have been forcibly deported back to their homeland. This has included civilians some of whom never had seen Japan. In general their property was confiscated for the benefit of the victors. In this way it was hoped that the Japanese influence throughout Asia would be completely eradicated.

This policy will probably not succeed as it was intended. In China, all foreigners are generally disliked. There the Japanese influence, while not eliminated, is down to a low level and is not likely to rise again in the predictable future.

Elsewhere the Japanese have gone. But they have left their mark. Their slogan of *Asia for the Asiatics* has gone over with the native populations. There is a general movement of native races throughout south and southeast Asia to eliminate the rulership of the white races. That rulerships in the long periods prior to World War II has been exercised by the British, French and Dutch, each

of which ruled over many millions of natives. They are now confronted with a rising of the natives against European government.

The strong, and increasing, opposition of European control has been met by the three European Powers in different ways. The British have agreed to grant complete independence separately to India and Burma without reservation. It is hoped that war may be avoided, and that both India and Burma will voluntarily remain as additional members of the British Commonwealth, and retain a friendly feeling for the British people who are responsible for having developed national states. It seems probable that the British will ultimately succeed.

The French have not been willing to release their hold on Indo-China by granting independence. They are willing to grant home rule, with certain reservations regarding defense, foreign affairs, etc., but insist that Indo-China must remain part of the French Empire.

Like the French, the Dutch do not wish to grant independence to the

Netherlands Indies. They are also willing to grant home rule with reservations, and contingent on remaining within the Dutch Empire.

To date, French and Dutch have not arranged a satisfactory basis for future relations with their former dependent Asiatics. The latter obstinately refuse to remain dependents any longer. In former French and Dutch territory, the Japanese are becoming heroes and the pioneers of freedom for the Asiatics.

### INDO-CHINA

On 20 August, 1945, Japanese GHQ in Indo-China transferred command to a native organization. Since the same action was taken in the Netherlands Indies at the same time, it is to be presumed that this was under orders from Tokyo. Thereby Japan, in her own defeat, prepared the way to defeat her enemies in recapturing their former valuable colonies.

For Indo-China the native organization selected to take over command was the Annam-in-Exile Party known as the

Viet Minh. It consisted of Annamese refugees in China. According to Japanese intelligence reports it had a working staff and the best organization. The Exiles returned and assumed command, before the Allies arrived.

The correct name of the Viet Minh is *Viet Nam Do Clap Dong Minh* meaning Viet Nam's League of Independence. The abbreviated form Viet Minh now applies to the directing General Staff; while Viet Nam includes the entire party.

As previously recounted in this column, the Viet Nam opposed the return of European troops, leading to military operations already recounted in this column. The Viet Nam was defeated, but not crushed. The President of Viet Nam is General Ho Chi-Minh. That individual went to Paris in September last, and pleaded for the independence of his country. France refused. An agreement was made by which France undertook to recognize local independence of Tonkin and Annam as Viet Nam territory, and to authorize Cochinchina to vote as to whether it desired, or did not desire, to join Viet Nam. Cambodia and Laos were to remain French protectorate. France however agreed to withdraw her troops from Viet Nam areas within 5 years, at the rate of 20% per annum. These being best available terms, an armistice was arranged and *cease firing* was sounded by both parties on 30 October last. During November this was respected.

In December, friction between French and Viet Nam increased. The French charged that, in Cochinchina, the Viet Nam was kidnapping key personnel known to be in favor of continued French control, with a view of insuring that the promised elections would surely favor Viet Nam. Further identifications of prisoners and dead showed that substantial Japanese forces were present among the Viet Nam troops. For these reasons the French considered themselves justified in disregarding the armistice in certain respects. Both sides now commenced open preparations for a renewal of hostilities.

The main French posts were at Hanoi in Tonkin, and at Hué and Tourane in Annam. They claimed to hold Cochinchina, where no known Viet Nam

troops were present. Laos and Cambodia were neutral. The Viet Nam controlled Tonkin and Annam, less areas held by the French garrisons. Total French strength was around 65,000, but their distribution is not known.

Fighting broke out at Hanoi, on 18 December. Each side charged that the other fired the first shots and thus precipitated hostilities. It may never be possible to ascertain who did fire first. Both sides were looking for trouble and, once started, it spread rapidly. Next day Viet Nam attacked the French garrison in Hanoi. It had considerable artillery and the shells broke the water supply, and destroyed the power plant. The French took a hedgehog position and prepared to withstand a siege, pending relief asked for by radio to be sent from Haiphong, a port 70 miles away.

By 21 December, Viet Nam was attacking all French garrisons in Tonkin and Annam less Haiphong. Minor fighting had started in Cochinchina in the form of guerrilla activities against the local government alleged to be French puppets. Fighting in Hanoi was severe. The 1st French Armored Division was present, but was unable to overcome the attacks. There was much destruction of buildings. An attack in force against Tourane was defeated, but the French lost a small outpost at Vinhyen, 30 miles northwest of Hanoi. The French commander radioed for reinforcements. Pending their arrival operations were planned for the defensive only. The French had an air force while Viet Nam had none, and no anti-aircraft defenses. French bombers attacked Viet Nam artillery around Hanoi, but were able to neutralize it only for restricted periods.

A Viet Nam force with artillery was attacking Haiphong by 25 December. It had been impracticable up to this time for the French to send a relief expedition to Hanoi, where the garrison was closely besieged. On 31 December, Viet Nam captured Phulangthuong, 40 miles northeast of Hanoi but the French garrison made good its retreat to Bacninh. Fighting increased in Cochinchina and started in western Cambodia. In both cases native operations were confined to guerrilla activities.

France rushed reinforcements toward Indo-China. The equivalent of 3 divisions were forwarded from north Africa and France. Leading elements arrived on 1 January. By 3 January, Viet Nam had taken Bacninh, but again the French escaped and managed to join the surrounded troops at Hanoi. There the French held the center of the city, with a 10-mile perimeter. They now made a sortie with armored troops towards the coast simultaneously with an advance towards them from Haiphong. After some fighting, the two forces connected on 6 January. This however did not raise the siege.

It was found that the Viet Nam artillery was Japanese and officered by Japanese. Viet Nam infantry weapons including heavy weapons however were of latest United States pattern, and plentifully supplied with American ammunition. Some weapons are reported as post World War II Ordnance models. Explanation is that this was Lease-Lend materiel, furnished to Chungking China and intended for their army. Due to Chinese corruption some of this was sold to Viet Nam. Of course, the French are also using American materiel.

By 9 January, the French columns united east of Hanoi returned to that city, and partially opened the road from Haiphong. This French column appears to have been part of the 1st French Armored Division, plus motorized units of the Foreign Legion which had landed at Haiphong. At this date severe fighting was in progress at Langson on the China frontier, and at Namdinh (about 50 miles southeast of Hanoi) where French garrisons were under siege. The French reinforced the garrison at the latter place using parachute troops landing at Haiphong, but failed to drive off the Viet Nam troops.

In the meantime, Viet Nam had prepared a new theater of operations in Saigon. Sending a detachment, estimated by the French as 10,000 men in civilian clothes, they infiltrated into Cochinchina and with the aid of local sympathizers organized a ring around Saigon, the capital city. This ring was effective as a blockade and prevented French movements in small parties. The French bombed suspected sniper's posts

but this did not relieve the situation. Neither did armored patrols through adjacent villages have much effect.

Viet Nam commenced to destroy concrete bridges to prevent movements of armored troops. In a short time the French lost control of the entire country less certain garrisoned towns. The local government is pro-French but is repudiated by the people, who demand an election particularly as to whether or not they should be authorized to unite with Viet Nam. Such an election is prescribed under the admistice of 30 October, but the French have refused to hold it on the ground that peace and order must first be established.

By mid-January the French in all Indo-China were estimated at 60,000 combat ground troops, plus 40,000 more in the services and air force. The French intention was to raise this force to 250,000 men. The troops present are heavily armed (almost entirely with American weapons and transportation) and have motor equipment, armor, and planes which the Viet Nam does not have. The French are much superior in artillery, but are at a disadvantage in that they are in a hostile country, whose language few understand. Viet Nam has possibilities of guerrilla warfare, which it claims can continue for years. It has commenced the destruction of French property, beginning with the rubber plantations. This is to be followed, during the dry season, by burning rice lands in excess of whatever is needed for local needs. Rubber and rice are the great exports, and the destruction of this trade is expected to ruin the French in the country.

The French Foreign Legion is an excellent combat unit. It is much superior to anything Viet Nam has. Its weak point is that the soldiers are foreigners, many of them Germans. Desertions to the enemy are numerous. It is estimated that 300 Germans alone are now fighting with the Viet Nam. Another French weakness is that their enemy is familiar with the country, and can break off an engagement and withdraw to fight another day. Unfamiliar with the country, the French cannot follow retreating forces with sufficient rapidity to capture them. Consequently combats are indecisive.

On 19 January, the leading elements of the 25th Airborne Division debarked. On this date an overland expedition was started from the naval base at Tourane towards Hué, 40 miles to the north. An amphibious expedition was despatched to the same objective at the same time. Hué is the capital of Annam. About 500 French civilians, guarded by 1 battalion of infantry, had been under siege there for a month. Some supplies had been received by parachute. The Viet Nam had a reported 5,000 men with 2 light guns in the besieging force.

The troops from Tourane, consisting of the 23rd Colonial Infantry plus part of the Foreign Legion, had sent out exploratory patrols several days in advance. Viet Nam noticed these and correctly anticipated that a French column would follow them. When this happened no resistance was offered until the French were 15 miles from their base. There they were stopped—as was the amphibious expedition.

At the end of January, the French were operating armored patrols around Hanoi, without having been able to clear Viet Nam from sections of that city. The road to the port of Haiphong could be used for supply provided strong escort was furnished to convoys. Except where physically occupied by French troops, the country was Viet Nam. The latter had sent regular troops to Cochinchina, where posts were established and strongly defended. A new feature was the extension of Viet Nam operations to Cambodia, where guerrilla bands appeared in the west section bordering Siam. Part of that area was the district in dispute between France and Siam. The inhabitants are Thais, and do not want to belong to France. Originally conquered by France, it was retroceded to Siam in 1941 under Japanese pressure. Under pressure of the Allies, it was ceded back again to France in 1946, without regard to the wishes of the inhabitants. The latter are now working with Viet Nam. Cambodia has a King—Norodon Sianouk—and is supposed to be a French Protectorate.

A similar situation exists in Laos, under King Sisavang Vong. There also Siam has been forced to recede territory in the south section. It withdrew its own forces only on 19 January, 1947.

On 4 February, a new amphibious expedition succeeded in reaching the beleaguered garrison of Hué. Viet Nam continued to attack the town, and had by this time begun a siege of Tourane. No further change occurred during the period of this report.

Indo-Chinese resemble the Japanese in that they are fanatical fighters. They fight if necessary until every man is killed. They are reported by the French to be cruel to prisoners, and are accused of torturing them. International Red Cross reports do not check with this. The Red Cross states they have visited Viet Nam POW camps, and have found the prisoners treated normally. As the Red Cross did not visit all POW camps, both reports may be correct.

### NETHERLAND INDIES

The general situation has not changed. An armistice is in effect between the Dutch, who hold the important seaports with about 100,000 troops, and Java and Sumatra troops who hold all the rest of those two big and populous islands.

The Dutch have formally agreed to recognize Java and Sumatra as the Indonesian Republic. There are limitations to the independence claimed to be granted. The new state must remain subject to the sovereign of Holland, Dutch troops are to have bases, etc. A definite treaty has not been signed, and an uneasy armed truce exists.

The Dutch authorities proclaimed the state of East Indonesia on 25 December, with headquarters on Bali. This includes a vast number of islands, but excludes Sumatra and Java which are Indonesia, and New Guinea and Borneo. Borneo is to be still another state, to be proclaimed about 1 March. Disposition of New Guinea is undecided. East Indonesia includes Celebes, Helmahera (well known to our troops through Morotai) and Timor.

On 2 January Dutch troops at Medan and Palembang attacked the Sumatra troops after a preemptory order to withdraw 20 miles. At Medan the Sumatrans withdrew covering their retreat by artillery fire. This is the first report that the natives had artillery in Sumatra. It is presumed this was obtained

from Japanese units, the last of whom did not withdraw or disarm until November last. At Palembang there was a 3 day fight which resulted in the destruction of a large part of the town and over 2,000 casualties among civilians. In view of this situation the Indonesian Government on Java warned on 8 January that, if the Dutch did not cease their aggressions, the entire Java army (estimated at about 10 divisions) would attack. Pending satisfactory explanations from the Dutch, the Java Premier Sutan Sjahrir (now also Premier of Indonesia) announced that the agreement with Holland for setting up the state of Indonesia would not be ratified.

The Dutch Government in Holland announced on 13 February that their patience had been exhausted in dealing with the Indonesians. It had 100,000 ground troops, and some naval ships. It had desired to undertake not a general reconquest of the Indies, but a series of limited advances to force the Indonesian Government to sign the kind of agreement they wanted. It considered that the number of their troops was sufficient for the contemplated operations, but the troops had ammunition only sufficient for 3 months' warfare. Besides they needed artillery, motor transportation, infantry weapons, etc. Application had been made to the State Department to purchase the needed arms and munitions from the WAA now disposing of surplus military stores in the United States. To date the State Department has refused to grant the permission desired, on the ground that the American people were not in sympathy with the Dutch efforts to reestablish their authority over an unwilling people. In view of that action the order to cease firing was issued on 14 February.

### BRITISH POSSESSIONS

**India.** Great Britain has announced her intention to withdraw from India by June 1948. Meanwhile, she is turning over the government to native officials in an orderly manner. The proposed *Union of India* is to consist of minor Unions to include: (1) the Provinces of Madras, Bombay, United, Central, Bihar and Orisa; (2) the Provinces of Punjab,

Northwest Frontier and Sind; and (3) Bengal and Assam.

The Union of India is to control foreign affairs, defense and lines of communication, and is to have an Executive and Legislature. The minor Unions are to have jurisdiction over all matters not reserved to the main Union. The grouping indicated is advisory. The Provinces may arrange themselves into any number of minor Unions desired. The main Union is free to remain within the British Empire, or to withdraw.

India has about 365,000,000 people of which some 75,000,000 are Moslems and 290,000,000 are non-Moslems. In the past, prior to British control, the Moslems were the dominant race. India was never united until the British established peace and order. Theretofore it consisted of hundreds of small states frequently at war with each other.

A Congress has been formed, in which the 290,000,000 non-Moslems are endeavoring to write a Constitution for the Union of India. The 75,000,000 Moslems were invited to associate themselves in that task, but declined to do so. They desire a Moslem Union as part of the main Union. The non-Moslems will not agree to the Moslem demand, in view of the fact that in all Provinces there is a substantial non-Moslem representation, even where the Moslems have a majority. The Moslem demand is called *Pakistan*, from the words *pak* and *stan* meaning pure and land. The outcome of this difference cannot be foreseen.

The Moslems have an All-India Moslem League. On 10 September 1946, the Province of Sind requested that League "to work in other Moslem countries for the formation of a Moslem Federation with Mecca as its center, comprising Albania, Turkey, the Arab Federation, Egypt, Morocco, Iran, Afghanistan, Russian Majority Moslem Republics, African Moslem Majority Zones, and other countries where Moslems form a majority."

There is a resurgence of Mohammedanism in the world. A Federation comprising all Moslem peoples is not likely in the immediate future, but smaller Moslem federations are in process of being formed. The India Moslem League is the most important, as it has a large population,

and extensive resources and industries. It could soon appear as a military factor in the international situation.

India appears sympathetic to the Indo-Chinese. The possibility that India may intervene in their favor after the British depart is possible.

**Burma.** Great Britain has offered Burma independence on the same terms as that granted to India. The Burmese have accepted, and are in process of arranging a local government to take over the country. The Burmese do not desire that all British forces leave their country. There is considerable disorder present and British troops are considered necessary. It therefore seems probable that Burma will elect to remain within the British Empire.

**Malaya.** On 11 January a general assembly held at Singapore voted by a large majority to accept the British scheme for federation, remaining within the British Empire. Sole difference appears to be limited to Singapore Island, which is not included as part of Malaya. The population of Singapore is predominantly Chinese and not Malay. Yet the Chinese, who are British citizens since the immense majority were born in Singapore, have indicated a desire to join the proposed Malaya Federation.

### COMMENTS

**The British have made excellent progress in settling their differences with their subject races in India, Burma and Malaya. They have avoided wars and managed to retain friendly relations, which may result in all territories becoming strong and loyal members in the British Commonwealth of Nations.**

**Ceylon is not part of India. It already has local independence, and is within the Empire. With Ceylon and Singapore, strong British naval and air bases in the Indian Ocean seem assured, for control purposes.**

**The British policy contrasts sharply with those of France and Holland. The two latter nations have resisted granting independence to their former subject Asiatic colonies. They now find themselves involved in costly wars, which regardless of their outcome, are bound to result in native hatred for their former European masters.**

## INTANGIBLE FACTORS IN COMBAT

*(Continued from page 111)*

the battlefield might be a liability rather than an asset in these days of rapid firing guns, of high explosives and of tremendous fire power. I have heard it said that courage and heroism on the battlefield might only result in the possessor becoming an early casualty. It is my opinion, from nearly two years' experience in combat, that there is no factor on the battlefield which is superior to gallantry in action, to courage and heroism. I do not believe there ever has been a greater factor; that there is now or ever will be in the future. I do not mean to say that courage will win any battle. There must be an approach to equality of means. But when all of these are balanced off, I think it will be found that more battles have been won by courage than by any other factor on the battlefield. Courageous leadership on the battlefield must apply not only to the local platoon or company leaders but all the way up to at least the corps commander. When a battalion is bogged down someone must start it. If the regimental commander fails to do so, then the division commander, or the assistant division commander, or some other officer, must step in and set the example and get the battalion moving. It cannot always be done by mandate and order. When a unit is bogged down, it is remarkable how much can be achieved by the appearance of the corps commander in the front-line battalion. It generates, very suddenly, a great deal of interest in the commander of the battalion which has been bogged down, in the regimental commander, and the division commander. Results are very often remarkable. When any leader, at least from a corps commander down, does not visit his front-line battalion frequently, this in itself is definite evidence that his leadership is not satisfactory. I once heard an officer say that leadership was the art of making someone do what he didn't want to do. I think he was at least ninety per cent wrong.

### SPEED

Speed on the battlefield is a very important factor. It will often achieve

success where other measures fail. When resistance is considerable, it must be compromised with planning and preparation. But after adequate planning and preparation speed is absolutely essential. I heard one general officer, for whom I have a great deal of respect, say that if a planned operation, such as the capture of a town, or the reduction of a strong-point, did not show success within one hour after the assault was launched, he considered its ultimate success doubtful. In such circumstances, he said, he had often pulled his troops out and made other preparations. His division was known for its thorough planning, but I never knew it to be outdistanced in an advance against resistance.

There is validity in the assertion that courage is a liability, when without thorough planning, that courage puts men in front of an enemy amply armed with rapid fire weapons, mortars and artillery support. There is no validity to the assertion that troops which have suffered heavy losses in any particular action have demonstrated efficient fighting. Troops which storm a strong point at the loss of a thousand men are not as valuable as troops which will maneuver and capture a strong point with a loss of two or three hundred men. There is no economy in the first case, because the drain on man power will frequently make the unit ineffective long before the unit which takes more precautions. However, when the planning and preparation have been adequate, there is nothing which will get the job done quicker than courage and dash in carrying the thing out.

### VOLUNTEERS

Another intangible factor with which I have always taken issue on the battlefield is the inclination to think it entirely proper to carry out hazardous missions by calling for volunteers. There are always a varied number of heroic individuals in every organization; individuals who cannot resist the temptation to volunteer for every mission where their courage is challenged by a call for volunteers. I believe that a commander should always protect these courageous souls and give them the same chance that their less gallant comrades may have to return to

their families and homes. It may not be possible for a commander to achieve equality in this regard altogether. It is sometimes necessary to accomplish the mission, even if it requires imposing an unduly hard burden on some courageous leader; but this should be resorted to only when fully justified by the situation. There is no point in exterminating the courageous souls of any organization, especially since the effectiveness of the organization is likely to be impaired materially for a considerable period of time.

### SUPERVISION

Supervision is just as necessary on the battlefield as on the maneuver field. I recall two minor operations which amply demonstrated this. The division commander had ordered the regimental commander to take a town within this zone. The regimental commander had ordered a battalion to take the town and held another battalion in readiness to take the adjacent town when the first town had been captured. Why the assault on both towns had not been made simultaneously was not clear. The battalion commander crossed the river and assembled his battalion in an olive grove, some three miles from the town. He then sent out a company to work up the road and take the next town. The company came under fire and lost two or three men. It then sent a platoon to work forward and get into the town. The platoon lost a man and sent a patrol forward. The patrol got out of sight and was bogged down and the situation remained that way for some seven or eight hours. The company finally took the town and was out of communication with the battalion. The battalion had no supporting weapon within supporting distance. The company was absolutely on its own. After the place was taken and the troops were posted on its perimeter to prevent the enemy from returning, five enemy tanks got loose inside the town and did a great deal of shooting. Fortunately, the troops, being all on outskirts, suffered few casualties. A hit by a bazooka shell in one of the tanks persuaded them all to withdraw and head for their own line.

The other battalion later took the adjacent



town and was ordered to take a hill beyond. Two companies were assigned to this task. The battalion commander had his CP in the rear and for approximately three hours the companies were bogged down at the foot of the hill which was lightly defended. The battalion commander had no mortars up to support them although the target was ideal for mortars. He was not where he could see the action, though CP locations were good. It was finally taken by four men. Had the regimental commander personally inspected these two operations he could have made corrections on the spot. There was no reason why both the regimental and battalion commanders should not have been where they could have observed and directed these actions. The leader does not belong in his CP in offensive actions.

#### FIRE POWER

Fire power is not exactly an intangible factor because its volume and possible effect can be calculated. However, its actual effect has some of the elements of intangibility. In early wars, when the machine gun had not yet taken its place and explosives were not as well developed as at the present time, fire power was obtained by the individual riflemen and certain methods of advancing and developing and holding this fire power were worked out. In this day of multiplicity of means of procuring fire power, the infantryman should never be required, unless in very exceptional cases, to develop the fire power necessary for his advance. It can much better be developed by mortars, by machine guns using overhead or flanking fire; by artillery and by air support. The infantryman has an infinitely greater problem in working his way forward behind this fire support, and any attempt on his part to use his rifle prematurely or to secure a superiority of fire by his own means will only subtract from his effort to get forward, slow his advance and cause great casualties. He should have to use his rifle only to take out enemy that had been bypassed. Infantry which stagnates and is pinned to the ground is always a definite target for the enemy's mortar, artillery and other fire power.

While a soldier is moving, the enemy is not certain where he is. When he stops he is a definite fixed target.

#### RUMORS

Rumors on a battlefield play an extremely important part in combat results. Thus in the battle of the Ardennes, when the breakthrough occurred, there was a great deal of concern over reports that German troops were being dropped in civilian clothes behind the lines. Actually the efforts in this regard were meager and frequently these troops which were actually dropped behind the lines were reported by civilians who were friendly to our forces, and there was little difficulty in mopping them up. This picture might have been different had we been in Germany and the civilians not been friendly to us. Rumors spread fast and though often baseless, cause much unnecessary concern.

The phrase "88 fever" played a great part in the war by spreading among our troops the fear of this weapon. There is no denying that the "88" was a very efficient all-purpose weapon. It could serve as artillery. It made an ideal weapon for tanks and for other purposes. However, the "88" as a piece of artillery was far inferior to American artillery. The only advantage it had was range. It did not have the capabilities of a high trajectory which our 105s and our 155s had. It was not effective as direct support artillery in situations such as the mountains of Italy, and in certain localities in France and Germany. It did not have the explosive effects per shell; and, as I have said before, the Germans were unable to mass their artillery as the Americans did, so that, actually, the effect of our artillery on the Germans was many times the effectiveness of the German artillery on us, and there was no reason to have been unduly alarmed and to have created the phrase "88 fever."

The fear of armor on the battlefield was much exaggerated over its actual capability by both the Germans and the Americans, and it is true that this fear enabled armor to perform such feats as it did on various occasions. But had it not been for the fear which the individual soldier had of armor, neither side could have accomplished

such results as they did with it. In the battle of Chambois, in closing the Falaise pocket, a bazooka team of two men knocked out four tanks in ten minutes with five shells. This team had never fired a round in anger before. These were Mark IV tanks, but it must be remembered that the bazooka now is a much more powerful weapon than it was at that time. The men waited until the tanks were within thirty-five to sixty yards from their position before opening fire, thus making every round count. They demonstrated the capacity of the bazooka team, lying in wait, and knocking out these very expensive pieces of ordnance with a very simple and inexpensive weapon. When soldiers are trained and become inured to the battlefield, they will realize these things and the power of the tank will be greatly handicapped.

#### WILL POWER

The ultimate aim of an army in battle is to break the opposing army's will to fight. Troops with strong will and battle experience can withstand much if they have a reasonable means of doing their job. The German soldier has a very strong will, but that will was weakened by the easy successes achieved in France and Poland and other fronts by *blitz* tactics, where the defending forces were inadequately prepared to meet Germany's modern arms and methods of offense. It is a much greater tribute to the Americans that they succeeded in *blitz* fashion against Germans who had had earlier experience and should have been prepared to meet *blitz* methods. The truth is that, despite this experience, the Germans were not so prepared either in the battle of France or the battle of Germany. The morale of their soldiers collapsed after the hard fighting of the American troops, but this collapse of the Germans came much sooner than it should have, and much sooner than it would have come if they had continued their resistance to the maximum of their capacity. Therefore, we can return to the conclusion that courage on the battlefield is the greatest single factor in the winning of battles and the waging of war.



### Historical Scholarship

*JAMES MONROE.* By W. P. Cresson. 577 pages. University of North Carolina Press. \$5.00.

By Edmund S. Morgan

This book, which constitutes a major piece of historical scholarship, has a history of its own. It was begun by Mr. W. P. Cresson, an American diplomat and writer, who had written the first draft at the time of his death in 1932. Since that time many different hands have worked to complete it, and it has now been brought to publication fourteen years after the death of the author whose name appears on the title-page.

The subject of the book is a significant one. James Monroe's active life spanned the first fifty years of American independence, and during those years he was constantly engaged in public service as a soldier, as a governor, as a diplomat, and finally as a President. He walked to school with John Marshall. He crossed the Delaware with Washington and was wounded at the Battle of Trenton. He served his political apprenticeship in that famous nursery of famous statesmen, the Virginia Assembly. He helped to negotiate the Louisiana Purchase. During the War of 1812 he was both Secretary of War and Secretary of State. From 1817 to 1825 he was President of the United States, and during his tenure of that office he enunciated the dictum of American foreign policy that has come to be known as the Monroe Doctrine. In other words, the biography of James Monroe is very largely the history of this country during his lifetime. And yet for some reason the man, even in his own time, never stood out as a dramatic figure or even as a sympathetic figure. He was a little too cool, a little too plausible ever to appeal strongly to the popular imagination.

Mr. Cresson and his successors have done well by Monroe. They have rescued his reputation from some of the unjust accusations which have hitherto been made against it, and they have restored to him much of the credit for the doctrine which bears his name and for which John Quincy Adams has frequently been given more than his share of responsibility. If James Monroe does not come to life from these pages, it is not Mr. Cresson's fault, but the fault of James Monroe.

### Civil War Lore

*LETTERS FROM LEE'S ARMY.* By Susan Leigh Blackford. Charles Scribner's Sons. 312 pages. Index. \$3.50.

By Richard Gordon McCloskey

In the last year the Blackford family has contributed heavily to the narratives of the Civil War. Colonel W. W. Blackford, C.S.A., contributed *War Years With Jeb Stuart*. Now come Captain Charles Minor Blackford, a brother, and his wife with their *Letters From Lee's Army*.

These letters give a warm and human picture of life in the Confederate Army during the war years. They add nothing new to the voluminous accounts of the Civil War, but they do bring a spark of life to the dry military histories, and puncture many a fanciful idea of the Confederacy held by historical novelists. They make a fine addition to any Civil War library.

The book consists mainly of letters written by Captain Blackford to his wife, and her replies. The Blackfords agreed when the Captain went to war that they would keep all letters that passed between them. Fortunately, both had one eye on posterity while they were writing, and they went into more detail and analysis than is usual in purely family letters. Their correspondence makes an outspoken

and intimate account of army life in the field and the trials and troubles of those who stayed at home. Captain Blackford served with the Second Virginia Cavalry. His appointment in 1862 as Judge Advocate on Longstreet's staff carried him from the field to headquarters and gave him a new perspective. His wife moved about Virginia during the war; she was in Charlottesville during Custer's raid, and spent much time in the wake of the invading Northern armies.

Written as an unashamedly partisan and very personal account, this book isn't history, but it is eminently readable.

### New Fiction Leader

*TALES OF THE SOUTH PACIFIC.* By James A. Michener. 326 pages. Macmillan Co. \$3.00.

Since I can claim reasonable familiarity with the locale of *Tales of the South Pacific*, I finished the book with the feeling that I had not fully utilized my time when I was there!

The author spins his yarns through the familiar device of making himself a character within the story—a young naval officer and admiral's aide, who travels extensively up and down the islands, meeting and sharing experiences with many characters (both in the service and out) who reappear from yarn to yarn. Though each tale is an entity in itself, the book follows a definite pattern and many, whose wartime experience took place in this area, would be inclined to add the word "fairy" to the title. Nevertheless, Mr. Michener has ably combined fact and fiction to produce a highly entertaining book.

*Tales of the South Pacific* contains about every form of emotion known to man. For suspense and thrills, there is the story of the Remittance Man. He went to live among the Japs during the early days of the war and reported their

movements by radio all during the crucial early days of the Coral Sea battles and the clearing of the Slot. For romance, with its accompanying tears and laughter, pick any one of a half-dozen tales—the young Marine lieutenant and the Tonkinese girl on Bali-ha-i; or Emile de Becque, the French planter who fell in love with the American nurse; or Tony Fry, one of the book's outstanding characters, and Latouche, the French-Japanese beauty. Amphibious landings, dog-fights, Jap attacks and sundry other breath-taking episodes round out the remainder of the tales.

To James A. Michener, for providing some most entertaining evenings—a well done. R. F. C.

### Red-Baiting

*THE PLOTTERS.* By John Roy Carlson. 393 pages. Index. E. P. Dutton & Co. \$3.50.

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

John Roy Carlson is one of the country's shrillest screamers. One of his loudest sounding-boards is Walter Winchell, who has unbounded admiration for him. An immigrant from the East, Carlson has adopted a strong Anglo-Saxon name for pen and publicity purposes. He has also established himself as an authority as to what should not be permitted in America.

Since writing *Undercover* he has learned to organize his material better, but his "anti" cries are as loud and sweeping as ever. Most of the book is anti-fascist. Some of it is anti-communist, but this reviewer was left with the feeling that this was more window-dressing than sincere. To judge from news accounts, Carlson seems to have too much sympathy from left-trending individuals, and probably some fellow-travelers as well, for his anti-extreme-left "exposures" to be taken too seriously.

Certainly our presses should not be completely one-sided; neither Right nor Left should have a monopoly. It may be that the gad-fly serves some useful purpose. But for me, I would rather have a better perspective and more restraint in the books I read. Then I wouldn't feel I should take them with as

much salt as this one seems to need in too many places.

### Pictorial

*SOLDIER'S ALBUM, The SHEAF Pictorial History of the War in Europe.* By Col. R. Ernest Dupuy and Lt. Col. Herbert Bregstein. 173 pp. Houghton Mifflin Co. \$5.00.

This, I think is a splendid book. It is no more, and no less, than the title says, and I found the running commentary of the text material sufficiently adequate to bring the many striking pictures into logical focus. Regardless of where he may have served or his insignia of rank, I am confident that this book will mirror many a personal experience and memory for all who served in Europe. An excellent gift book. D. A.

### Authoritative

*THE WAR REPORTS of General Marshall, General Arnold, and Admiral King, with Foreword by Walter Millis.* 801 pages. Illustrated. Index. J. B. Lippincott Co. \$7.50.

Except, as pointed out in the foreword by Walter Millis, for the necessary omission of certain illustrative material, these are the unabridged texts of the nine official reports prepared (three each) by these three great leaders, upon whose shoulders "the final responsibility for the military conduct of this country's share in the greatest war in history rested." This being the case, this is a book that every officer and man who participated in the war would like, no doubt, to have in his library. It is regrettable—and, may I say, quite beyond my understanding—that a book with such wide general appeal and containing, as it does except for a three-page foreword, nothing but official material, should be priced so highly. Be this as it may, *The War Reports* stand apart as the only authoritative and available overall picture of the military aspects of World War II. D. A.

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The War Trials

*THE NURNBERG CASE.* By Robert H. Jackson. 269 pages. Alfred A. Knopf. \$3.00.

By Maj. W. A. Solf, JACD

Mr. Justice Jackson has selected the high points of the Nurnberg trial of the major Nazi war criminals. The brief volume contains: the preliminary report by Jackson to President Truman; the four-power agreement and the charter of the International Military Tribunal; Jackson's opening statement for the United States; Jackson's comments to the court with respect to the guilt of the Nazi organizations (including the High Command and General Staff, which is of utmost significance to soldiers); the closing address for the United States; and some dramatic excerpts from the cross-examination of Herman Goring, Hjalmar Schacht, Albert Speer, and Field Marshal Erhard Milch, Inspector General of the Luftwaffe, who was called as a defense witness in behalf of Goring.

In a short but informative preface, Mr. Justice Jackson explains some of the difficulties involved in reconciling the viewpoints of the four powers with respect to the procedure and organization of the tribunal. It is a hopeful and significant phenomenon that such contentious individuals as lawyers, representing four diverse judicial systems, should have compromised their differences and agreed to a judicial undertaking of such major proportions. He also explains the prosecution's decision to avoid "deals" with any of the defendants, some of whom were willing to testify for the prosecution in return for a sentence to be shot instead of to be hanged.

Although the cynical twenty-third century historian may comment that some who planned and waged aggressive war in 1939-40 were conspicuous by their absence from the prisoners' dock, nevertheless, it can never again be said that there is no precedent for the trial and punishment of high level war criminals.

The book is a fitting epilogue for the "Why We Fight" films, and is recommended reading for laymen and lawyers who don't have time to dig into the record.

### Militant Center

*THE THIRD WAY.* By Stuart Cloete. 536 pages. Houghton Mifflin. \$3.00.

By Richard Cordon McCloskey

Stuart Cloete believes we are confronted by these alternatives: reaction or revolution. His solution, the third way, is a militant center.

Despite his presenting the alternatives of reaction or revolution, he insists that it is not necessary to choose either. He believes it is possible to defeat the pendulum swing of history if we understand how many of our daily, almost routine, decisions tend to push us politically right or left. He writes persuasively and pungently when he discusses the alternatives, but his third way solution is weak and unconvincing. Nevertheless, his summary of the problems confronting the modern world makes this an eminently readable book.

### AAF Pictorial History

*THE OFFICIAL PICTORIAL HISTORY OF THE AAF.* By the Historical Office of the Army Air Forces. 213 pages. Duell, Sloan and Pearce. \$10.00.

By John R. Cuneo

This is a picture book designed primarily for the general public. The text which accompanies the various photographs, drawings and newspaper clippings contains little or no information not already available in print and indeed most of the photographs seem very familiar. There is an interesting pictorial catalog of most of the types of aircraft used by the Army since 1909 but by disregarding the historical development of classification the purpose of many of the machines is confused.

One cannot help being disappointed with this volume. Nowhere does the text reveal that its writer or writers had more than a superficial knowledge of their subject and certainly no comprehension of the history of world-wide military aeronautics. Here and there airplane types are erroneously identified—perhaps these slips are excusable in view of the large number of photographs (said to be over 600). For example, the machine at the top of page 38 is a Caudron G.3, not a "Morane rouleur" as stated in the caption. The

two-seater identified at the bottom of page 39 as a "Breguet" is in reality a Spad XI. The compilers have seen fit to pass over any period in which the air force did not appear at its best—for instance, there are no photographs of the dramatic period when the Army sought to fly the mails. It is less of a history and more of a laudatory paen of self-admiration.

The volume is rather thin—less than three-quarters of an inch—and its cover is about eight inches wide and eleven inches long. While the paper is a good quality print with a gloss finish, it hardly appears to be a ten dollar value. Book prices have been going up but this one seems to have been jet-propelled into the stratosphere.

#### One-Volume Lincoln

*THE LINCOLN READER.* By Paul M. Angle. 539 pages. Bibliography. Index. Rutgers University Press. \$3.75.

Abraham Lincoln enjoys the unique position of being the most widely biographized person in American history. The innate human appeal in his "rags to riches" story plus the critical importance of his administration to American destiny has provided a wealth of material for many biographers. Thanks to Paul M. Angle, however, Lincoln enthusiasts can now obtain a complete all-around biography of the Great Emancipator in one volume entitled *The Lincoln Reader*, which mirrors a compilation of the many facets of Lincoln's life as recorded by some sixty-five previous biographers.

The words of the poet Carl Sandburg relates the birth and boyhood of young Lincoln. The story of the nominating convention in 1860 stems from the pen of Murat Halstead, the outstanding political reporter of that era. For the inside story of Lincoln's administration, Mr. Angle has included passages from the diary of Gideon Welles, a member of Mr. Lincoln's Cabinet. Additional information on the more intimate family life of Lincoln the President is related in the stories by Mrs. Lincoln's cousin, a seamstress and a teen-age White House confidante. The ultimate result is a complete and authentic saga of the life and times of Abraham Lincoln, and this reviewer can do no

better than to echo Carl Sandburg's appraisal—"It is the best all-around, one volume biography of Lincoln that can be bought, borrowed or stolen."

R. F. C.

#### Unleavened Chinese History

*CHINA'S DESTINY.* By Generalissimo Chiang Kai-Shek. Roy Publishers. \$3.50.

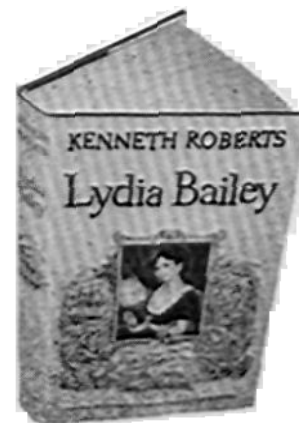
By Col. Paul W. Caraway. Inf.

The book is far from the sensational expose that the dust wrapper would lead the casual reader to believe. The translation contains a dry review of Chinese history, and an uninspired statement of political and economic theories.

*China's Destiny* and *Chinese Economic Theory*, written in the darkest period of the war, apparently have as their principal object the restoration of the faith of the Chinese nation in itself, its government and its future. They have the usual weaknesses of that type of propaganda.

This edition has made the translated texts the bases for attacks upon the Kuomintang and Chiang Kai-Shek. The editor and commentator by means of his footnotes interprets the documents to suit his reading of Chinese history and his solution of China's problems. This may be a laudable undertaking in itself but is calculated to produce a biased viewpoint on the part of the reader. The commentary credited to Mr. Jaffe contains at least one inaccuracy, and part has little bearing on the translations it purports to clarify and explain.

The book does not help the average American reader understand China today. Anyone having a serious interest in China and the Chinese could more profitably read the official version of "China's Destiny" in conjunction with any standard history of China and the final note handed to the leaders of the Kuomintang and Communist Parties by General Marshall shortly before his departure from that country. Thereafter the reader can intelligently form his own considered judgment, something not possible from reading only the Jaffe book. This edition of *China's Destiny* is not recommended reading.



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# TALES OF THE SOUTH PACIFIC

BY JAMES MICHENER

Tough, amusing, romantic, TALES OF THE SOUTH PACIFIC is one of the best fiction stories to come out of the war. Here's a sample of what the reviewers are saying about it: ". . . A superb collection of tales . . . Romantic, nostalgic, tragic—call it what you will—this book seems to me the finest piece of fiction to come out of the South Pacific War."—*N. Y. Herald-Tribune*.

\$3.00

## Austrian Apologia

*AUSTRIAN REQUIEM*. By Kurt von Schuschnigg. 296 pages. Appendix. Index. G. P. Putnam's Sons. \$3.50.

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

Kurt von Schuschnigg became Chancellor of Austria after the Nazis murdered Dollfuss. He held office until Hitler swept over his country, then was held by the Gestapo for some seven years. He has thus been an object of world-wide sympathy. One wonders a bit, however, just how much of this sympathy is entirely justified.

The Christian Socialists, party of both Dollfuss and Schuschnigg, played a dangerous game and lost. It was not so wholly concerned with patriotism as Schuschnigg would here try to lead one to believe—it played at least its share of party politics. For instance, in the seething situation of early 1932, nine full months before Hitler came to power, this party (which was dominant in the country) desperately opposed the holding of parliamentary elections: recent local elections had shown that their enemies the Socialists would doubtless make sweeping gains.

Even when faced by external forces the Christian Socialists would not team up with other parties so that a stronger national front might be presented. Perhaps this was due in part to the influence of the Heimwehr and other extra-reactionary supporters. Failure to cooperate with the Socialists probably gave the Nazis just the bit of additional encouragement they needed, with the catastrophe of February, 1934, a quite direct result.

While the fascism of Germany and of Austria had some differences, they were both along the same general pattern. This similarity became greater as time went on. Actually, the record indicates that Schuschnigg (and perhaps Dollfuss as well) was most interested in preserving his own authoritarian position and regime. It has been well said that Dollfuss pawned his country to Mussolini, and that Schuschnigg left it there until forced into the agreement with Germany July 11, 1936.

Many of the facts of the case are denied directly or by implication in *Austrian Requiem*. Schuschnigg's technique in so doing is interesting. First he tries to get the reader on his side, sympathetically inclined toward him, by detailing his experiences while prisoner of the Gestapo. His diary of that period is copiously extracted. And there is no denying the fiendishness of the German political police. Political discussion comes after this softening-up process. Actually, of course, a more honest perspective would result from reading the material more closely in chronological order: then there would be a good picture of cause and effect, the earlier double-dealing leading to national and personal loss of liberty and collapse.

It is most interesting to set Schuschnigg's explanations against the facts. For instance, the author claims to have led a gallant fight against Naziism. Yet Starhemberg, Vice Chancellor and head of the Heimwehr, frequently stated he intended to establish an Austrian brand of

Fascism—and Schuschnigg stated at the time that he never differed from his aide on fundamental matters!

*Austrian Requiem* is more important as an attempt at an *apologia* than as a sound and honest historical account. It will appeal to students of the period and events which it covers, but it must be read with extreme care and constant recollection of the facts.

## Custer's Last Stand

*I FOUGHT WITH CUSTER*. By Frazier and Robert Hunt. Charles Scribner's Sons. 236 pages. Illustrations. Index. \$3.50.

By Richard Cordon McCloskey

The first half of this book is the autobiography of Sergeant Charles P. Windolph, the last survivor of Custer's 7th Cavalry. Sergeant Windolph, now 95 years old, is a remarkable story teller. He spins a fascinating yarn, and his short autobiography goes right to the front of first-hand accounts of Army life. The Sergeant served with Troop H of the 7th—Benteen's troop—for 12 years, and participated in the fateful campaign. You don't have to be a horse cavalryman to enjoy the story—you don't even have to be in the Army.

The Sergeant contributes no new facts to the famous Battle of the Little Big Horn—in fact, nobody has contributed anything new in the last fifty years—but he does give a vivid eyewitness account of early Army life and of the events leading to the battle. I suppose the fascination of the Little Big Horn is that no white man survived. The one Indian Scout, Curly, who survived (many think his story is a fake) could give no coherent account. The Indian foe either wouldn't talk or gave such widely varying stories that they were useless. Nobody knows what happened, or why Custer allowed the engagement to take place.

The second half of the book is a rehash of speculation about the battle and the post-battle recriminations. If you are familiar with Graham's book you have as much of the story as anyone knows. *I Fought With Custer* would have been a better buy if the editors had let Sergeant Windolph's story make the book—they add little to his story, and nothing to our knowledge of the battle.

**Off We Go**

*ROCKETS AND SPACE TRAVEL.* By Willy Ley. 374 pages. Illustrated. Appendices. Bibliography. Index. The Viking Press. \$3.75.

By Richard Cordon McCloskey

I have long admired the deft way Willy Ley unravels the technicalities of ballistics, projectiles and weapons. His *Bombs and Bombing, Shells and Shooting and Rockets* have steered me through many a maze of War Department manuals on the same subjects. This revised edition of *Rockets* is excellent. While it does not make obsolete the original edition, it contains so much new material that even if you have the first edition, you certainly need this one. Considerable information is given on Goddard and von Braun, on submarine rockets, rocket automobiles, and on rockets in World War II, with a long account of the experiments at Peene-munde.

This is *the* book on rockets and space travel for my money.

**More on Nuremberg**

*DESIGN FOR AGGRESSION.* By Peter de Mendelssohn. 270 pages. Index. Harper and Brothers. \$3.50.

*22 CELLS IN NUREMBURG.* By Douglas M. Kelley. 245 pages. Greenberg. \$3.00.

By Richard Cordon McCloskey

The official background records of the Nuremberg trials run to eight huge volumes. Volumes III to VII are well over a thousand pages each. I have not read them, but I have studied them enough to realize that even the most diligent scholar is going to be appalled when he tries to sift the unorganized mass of material they contain. I have been hoping that someone would attempt to summarize certain of the more important aspects of these crucial trials. Mr. de Mendelssohn has done just that, and done it remarkably well. Out of the welter of material he has extracted the documents dealing with military and political plans (the terms were synonymous to the Nazis), organized them and provided enough comment and explanation to make a coherent narrative. I don't know why this book should not be required reading in the higher Army schools.

The first chapter outlines the general German political and military plans from about 1938 to the invasion of the Low Countries a year later. This phase of Nazi planning is notable for its logical development. The succeeding chapters study special phases of Nazi war planning: German - Italian relations, 1937-43; the planned invasion of Britain; German-Spanish relations, 1937-43; and the German-Russian relations, 1939-41.

The book by Doctor Kelley pretends to give "a non-technical psychiatric profile" of the top Nazi rogues awaiting trial at Nuremberg. I am no psychiatrist, but I believe any intelligent civilian could have done as adequate a job merely by consulting the files of the *New York Times*. Possibly sometime Dr. Kelley will write a technical account of his examinations which will give us something more than the very elementary analysis here.

**For Air-Minded Juveniles**

*OUR FIGHTING PLANES.* By Reed Kinert. 160 pages. Illustrated. Index. Macmillan Company. \$3.75.

By John R. Cuneo

The jacket blurb and the subtitle of this volume would lead the reader to believe that it is a "definitive" account of U. S. military and naval aircraft in World War II. Actually it is a set of full page drawings (about 75) of the different types employed in the war accompanied by about the same number of pages of text. The comments and specifications are general and of no particular novelty to anyone familiar with military aircraft. The drawings—particularly those in color—will be best appreciated by air-

minded juveniles. The latter will enjoy the book which would be an ideal gift for them.

**Amoeba to Zymurgy**

*SCIENCE SINCE 1500.* By H. T. Pledge. *The Philosophical Library, New York, 1947.* 357 pages. Illustrations. Index. \$5.00.

By Richard Cordon McCloskey

I don't know if H. G. Wells did a service or a disservice to mankind when he wrote *The Outline of History*. The book itself, despite manifold faults, was a service because it was produced with Wellsian genius. The idea of an "outline" history wasn't such a good one. Too many hacks and incompetents have jumped on the bandwagon and flooded the unwary reader with "outlines" of tripe, "collections" of misinformation, "treasuries" of mistakes, "stories" of errors and "romances" of everything from amoeba to zymurgy.

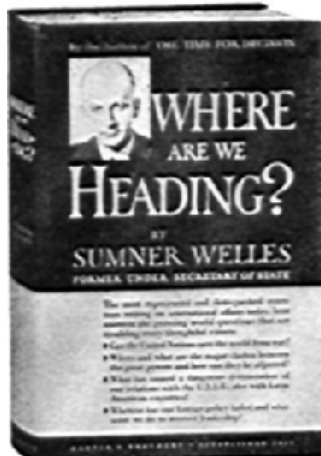
Mr. Pledge, who is librarian of the Science Museum of London, has written a history of science that you would expect a librarian to write. From what is undoubtedly a fine library he has culled enough material on biology, astronomy, mathematics, mechanics, optics, geology, physics, organic chemistry, cryptology, ecology, the quantum theory, relativity and cosmology to make a book of 357 pages. It is useless for the student because the material on each subject is too compressed. It is useless as a reference book because the material is too skimpy. The writing is too dry to read it for pleasure. But, by gosh, the book will look fine in your library, or to drop over the quarter mystery when your wife disturbs you in your "study."

## **COMMAND DECISION**

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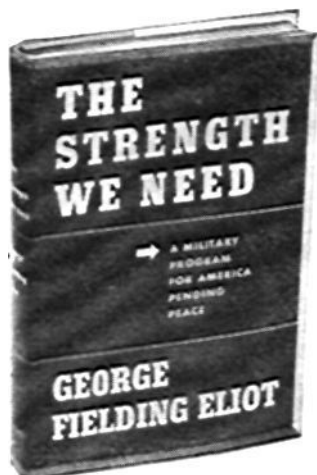


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### Russia's Leading Woman

*ALEXANDRA KOLLONTAY.* By Isabel de Palencia. 309 pages. Illustrations. Index. Longmans, Green and Co. \$3.50.

By Richard Cordon McCloskey

Alexandra Kollontay is one of the few Russian women that the western world knows anything at all about. As Minister to Norway, Mexico and Sweden she capped a remarkable career for a Russian woman. Daughter of a Czarist General, she watched the bitter 1905 rebellion from the sidelines. Her sympathies leaned strongly to the left after that, and by 1917 she was ready to throw in her lot with Lenin: and he made her Minister of Social Welfare in his first council. As a staunch supporter of the Party she gradually worked her way up in the hierarchy, serving Russia with diligence and ability until she was retired last year.

As a biography, the book is not particularly good, but as a report on an upper class Russian family, it holds much fascination. Three chapters in particular are very revealing in their analysis of basic Russian beliefs: "Discipline Comes First," "The New Woman and the Working Class," and "Communism and the Family."

### Headhunting with a Paintbrush

*NEW GUINEA HEADHUNT.* By Caroline Mytinger. The Macmillan Company. 441 pages. Illustrated by the author. \$3.75.

By Richard Cordon McCloskey

Somewhere along the line I missed the first book by this writing painter. I'm going on a search now to find it, for if this sequel is like all other sequels—not as good as the first—the first must be something extraordinary, for this sequel is truly high adventure.

Caroline Mytinger headhunts with paint and pencil. Too few of her illustrations are shown in this book, and they are in black and white instead of color, to judge much of her painting, but her writing is top-notch. She blends good sound anthropological information with informal moonlight swims in the nude, and always manages to see the best side of the worst—after it's over.

Anyone who's been in the territory she covers will kick themselves for not seeing what she saw by making just a

little more effort to get around (I grant you that during the New Guinea campaign combat tourists didn't have much time for sightseeing). If you've been there, this book will take you back. If you haven't, it will make you want to go.

### More for Junior Birdmen

*GUY KILPATRICK'S FLYING STORIES.* 287 pp. E. P. Dutton & Co. \$2.50.

By John R. Cuneo

These seventeen short stories, on the whole, are a conventional, commonplace collection, dependent on the glamor of aviation to attract readers. A few can be recommended as enjoyable reading but probably only youthful aviation enthusiasts will find all the stories interesting and worthwhile. The author—best known as the creator of the Glencan-non stories—was an early birdman and his introductory account of the early days is more absorbing than most of his yarns.

### Inventor Robert Fulton

*QUICKSILVER BOB.* By Corinne Lowe. 273 pp. Illustrated. Harcourt, Brace & Co. \$2.00.

By Capt. Benjamin Arkin, FA-Res.

Robert Fulton, the hero of this biography, was an engaging character. He was a painter, inventor and traveler. Laying her scenes in Philadelphia, London and Paris, Corinne Low contrives to associate her hero with such diverse men as Benjamin Franklin, Benjamin West, Napoleon and many other great. The scenes are good and the background of the times—the American and French revolutions—is exciting. Fulton was not so much an inventor as a developer of existing ideas. He was one of the first to apply engineering principles to steamship design. The book covers the author's trials from a poor young man in Pennsylvania through his ups and downs abroad until he teamed up with Robert Livingston to become a financial success. The book brings out the little known facts of Fulton's work with torpedoes and submarines. Written in an easy, fluent style with many illustrations, it is sure to please the young people for whom it was written.



## WRITING YOU'RE READING

By Major Robert F. Cocklin

The first flush of victory has now subsided and books with a wartime flavor will now prosper or fail entirely on their own merits. Readers should welcome this new era as it promises relief from the flood of mediocre stories slanted for the war-conscious market.

Although the principal advantage of this new trend will be in the production of truly objective historical works, it has already bolstered the quality of the war-fiction field. Two of the most outstanding examples of this fact will be found in *Command Decision* by William Haines and *Tales of the South Pacific* by James Michener, a review of which appears elsewhere in this book section.

In *Command Decision* (\$2.50) William Haines has an angry story that is packed with drama of the first order. He tells the tale of Brig. Gen. Dennis, commander of a division of heavy bombers whose main concern was winning the war. The general risks his career to stick by his guns in the face of official censure. *Command Decision* is a grimly real story that you will lay aside reluctantly. The air corps backdrop is incidental as the plot would contain the same fire with any combat setting.

The Overseas Press Club has just published a volume of fascinating stories written by 22 of our wartime correspondents, entitled *Deadline Delayed* (\$3.50). These are important stories that never reached print for reasons of censorship, policy, etc. Though passage of time has relieved them of news value, they remain vivid and absorbing pictures of the world in which we live as seen through the eyes of some of the top names in the field of journalism. There are stories by Edgar Snow, Richard Tregaskis, Henry J. Taylor, J. P. McEvoy, to name but a few. One of the most entertaining is "Atoms Aweigh," by Bob Considine, wherein he relates the trip to Bikini for the atomic bomb tests.

Being an old sailor in C. S. Forester's *Horatio Hornblower* crew, I found Carola Oman's *Nelson* (\$5.00) a natural. The tempestuous life of Britain's greatest seadog, Lord Horatio Nelson, provides plenty of incentive to any story-teller. Carola Oman's previous biographical experience has stood her in good stead in the preparation of the life of Nelson, for in this work there is ample evidence of painstaking research, excellent construction, plus 24 pages of footnotes and an index which greatly enhances its value. Aside from its historical importance, *Nelson*

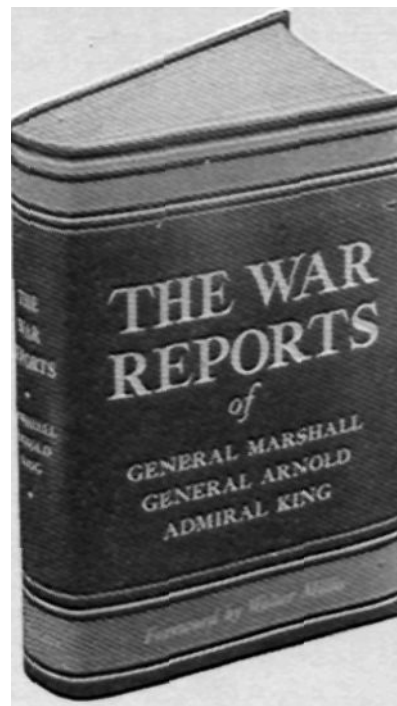
is the adventurous story of one of the most romantic and exciting figures in all history, whose battles gave Britain command of the seas, and whose spirit has inspired his countrymen ever since.

The latest writing of John Steinbeck has been something of a problem to me. I have just finished *The Wayward Bus* (\$2.75) and enjoyed it very much. The disturbing factor lies in its apparently obvious social significance which somehow seems to escape me. I thought the book was fine as a story of some average people and their reactions to a set of unusual circumstances. To me the characters were real, vivid and entirely plausible. I was willing to let it go as an excellent piece of fiction written by a master craftsman but now that I have read several of the reviews of the book, I find that there must have been a great deal between its covers that I failed to grasp. One reviewer mentioned "three dimensional characters" and a "not intrusive symbolism." Still another reviewer believed that "it might be good for one's soul." Though it failed to move me spiritually and my view of the characters remains two-dimensional, I would rate *The Wayward Bus* third from the top of Steinbeck's list.

*Dulcimer Street* (\$3.00) by Norman Collins is bouncing right up the list of best-selling fiction. A native of London himself, Mr. Collins has set his story in the residence of Mrs. Vizzard, which is located—oddly enough—on Dulcimer Street in the south of London. Mrs. Vizzard rents most of her home and the tenants are the characters around which the story revolves. It's a superbly told story of London's little people and the drab lives they lead.

Early in World War II, S. E. Morison (a professor of American History at Harvard) approached President Roosevelt on the possibility of preparing a detailed record of naval operations during the war. With the blessing of both the President and Secretary of Navy Knox, Mr. Morison was commissioned a Lieutenant Commander in the Naval Reserve and assigned the sole duty of preparing these Naval histories. He was given every cooperation by the Navy (including an adequate staff) and was free to roam about the world wherever the Navy happened to be. The first fruits of this unique assignment have just been published under the title *Operations in North African Waters* (\$5.00)—the first of a series of volumes that will cover all phases of the Navy's work during the past war. If subsequent volumes contain the well-documented, excellently planned material that makes up *Operations in North African Waters*, the naval history of World War II will be the finest that has ever been compiled on any arm of the service.

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# . . . Spring Round Up . . .

Howdy partners! We stretched our legs, rode the range . . . figured that there's a mighty fine herd of horse books this season, and gradually came to the notion that we'd better have a roundup. Each one's a thoroughbred, packed with punches, loaded with thrills and rarin' to go with a small but special rider. Makes you kinda lonesome for Medicine Bluff and those hunts at Fort Sill, don't it? They've been roped, tied and branded . . . but I'll leave you to look 'em over and take your pick while I mosey along to the chuck wagon. Nice to know you . . . hurry back!

S. L. A.

*HOLIDAY. Written and illustrated by Wesley Dennis. Viking. (5-9). \$2.00.*

Stilt-legged colts with perky ears and whisk broom tails have long been a favorite subject for this artist. (*Flip*, and *Flip and the Cows*, \$1.50 each.) Hence, his young readers will beg for his newest book about a horse that gets so tired of winning blue ribbons that he *almost* quits. Consistent prize winners, as usual, are the Wesley Dennis drawings.

*THE ADVENTURES OF ARAB. Written and illustrated by Louis Slobodkin. Macmillan. (7-11). \$2.50.*

Caldecott Award winner Louis Slobodkin (see September page for *Many*



*Moons*, \$2.00) has won my heart with his spirited drawings and merry tale of a magical wooden horse on a carousel.

Arab yearns to see more of

the big city, so slips away from his post with the help of an old coach horse. Adventures follow fast, before he winds up as a proud gold weather-vane high above the city streets. Fine fantasy for reading aloud, and clearly one of the best books of the season.

*PAT RIDES THE TRAIL. By Genevieve T. Eames; illustrations by Dan Noonan. Messner. (8-11). \$2.00.*

Girls particularly will enjoy Pat and her horse West Wind, who enter the rugged two-day Hundred Mile Trail Ride. With the lovely Vermont countryside as background, the story is as swiftly paced as the horses themselves.

*HIGH STEPPER. By Helen On Watson; illustrations by Manning de V. Lee. Houghton Mifflin. (8-12). \$2.00.*

Mrs. Watson, army wife, proves a keen observer of circus life and the accord between horse and rider in a wonderfully readable story. The Big Top, with its panorama of clowns, acrobats, tigers and elephants, parades with young Zan and his

handsome high stepping horse. Behind the glittering sawdust trail lies the determination of a lonely boy to prove his mount's intelligence by mastering the difficult high school steps. Earlier, Midnight Star, a motherless colt, joins a herd of wild horses, but he and Zan are reunited. These thrilling chapters swell to a crescendo when, together, they step out proudly as star performers.

## FAMOUS STORIES OF THE WEST

*SMOKY, THE DARK HORSE, SAND, SCORPION, COW COUNTRY and SUN UP. Written and illustrated by Will James. Grosset & Dunlap. (10-up). \$1.39 each.*

*Smoky*, the Newbery Award winner, is the best known of Will James' cowboy stories (see cut) but the others also merit their places in the bookcase. The layman will marvel that these books can be so beautifully compiled and sell for so little, but no boy will bother his head about price when he sees the full color jackets, the many vigorous drawings (particularly appealing are the horses heading each chapter) and the easily read print. Space won't permit a review of each, but for authentic western flavor and horses that seem excitingly alive—from wobbly foals to wild outlaws — your children deserve to hear from this man. Will James, as cowboy



and horseman, actually lived the colorful life he recorded, so we are lucky to have access to his rich cache of stories.

*GREEN GRASS OF WYOMING. By Mary O'Hara. Lippincott. (15-up). \$2.75.*

If the brilliant descriptions of wild horses ranging the Wyoming mountains and plains were all that this sequel to *My Friend Flicka* and *Thunderhead* contained, it would still deserve its popular rating. Even though



Ken is older and beginning a real romance, it is the magnificent stallion, Thunderhead, who steals the show. Filled with action, tenderness and beauty, here is a good choice for those entering the grown-up world, and a refreshing adventure for me and thee.

## TRIED AND TRUE

*BLACK BEAUTY. By Anna Sewell; illustrated by Fritz Eichenberg. Grosset & Dunlap. (8-up). Three editions at \$1.00, \$2.00, and \$3.00.*

We can't close up the corral with a clear conscience without singling out *Black Beauty*, whose popularity is as great now as when we were using a fence rail to mount up. A lump of sugar too for the publishers who have produced the Illustrated Junior Library with nine other classics on the market. These are: *The Adventures of Tom Sawyer*, *Pinocchio*, *Heidi*, *Hans Brinker*, *Robinson Crusoe*, *Alice in Wonderland* and *Through the Looking Glass*, *Andersen's Fairy Tales*, *Arabian Nights* and *Grimm's Fairy Tales*. The three dollar edition is truly a glimpse of fairyland, but *each* edition of each title contains ten full color illustrations by fine artists, clear type, and between 30 and 100 lovely drawings. Although on required reading lists in most schools, this showcase of titles was awarded top rating by our juvenile judges whose votes always decide the winners.

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