The FIELD ARTILLERY JOURNAL

MARCH-APRIL 1949

SECRETARY OF DEFENSE LOUIS A. JOHNSON

NEW LIST OF UNIT HISTORIES

—— As a service to members the JOURNAL has compiled from all available sources this up-to-date listing of every Artillery Battalion, Corps, Army and Division Unit History known to exist in published form. We also have on file many histories of Infantry Regiments and Units of all other branches of the service. Orders will be filled or information gladly furnished on request. Prices in some cases not available—members will be billed.

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UNITED STATES ARMY
THE CHIEF OF STAFF

STATEMENT BY

GENERAL OMAR N. BRADLEY

CHIEF OF STAFF, UNITED STATES ARMY

ARMY DAY, 1949

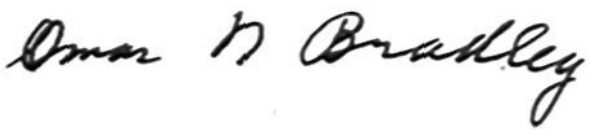
To Our Fellow Americans:

The Army job in 1949 is no small task. As part of the defense team, we must give the citizens of the United States a full dollar's worth of security for a dollar spent. At the same time, we are trying to make the Army an interesting, appealing career, open to all. Men and women in the Army are making many personal sacrifices in the work of guarding the frontiers, and deserve the full support of the Nation in this great task.

We have pledged ourselves to a speedy, effective unity among the Armed Forces. Within our service, we are striving to build a team of mobile divisions trained and ready for instant use in case of emergency. And in our plans, we are relying on the rising strength of the National Guard and Reserve Corps for the broad base of any future mobilization.

In all these plans, we are pledged to a constant observance, in the true democratic tradition, of the right and dignity of the individual.

On Army Day, 1949, we of the Army restate these pledges, and invite your interest in the progress we are making in the accomplishment of the missions the people have assigned to us.



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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.

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The
UNITED STATES FIELD ARTILLERY ASSOCIATION

Organized June 7, 1910

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General Eisenhower was misinformed . . .

ARTILLERY IN NORMANDY

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

GENERAL Eisenhower, in his book *Crusade in Europe,* describes a visit to the front in Normandy. "It was difficult," he says, "to obtain any real picture of the battle area. One day a few of us visited a forward observation tower located on a hill, which took us to a height of about a hundred feet above the surrounding hedgerows. Our vision was so limited that I called upon the air forces to take me in a fighter plane along the battle front in an effort to gain a clear impression of what we were up against. Unfortunately, even from the vantage point of an altitude of several thousand feet there was not much to see that could be classed as helpful. As would be expected, under such conditions, the artillery, except for long-range harassing fire, was of little usefulness."

In reviewing Gen. Eisenhower's book in the service weekly *Armed Force,* I said: "In respect to the employment of artillery in Normandy, Gen. Eisenhower seems to have been misinformed. He says that 'as would be expected, under such conditions, the artillery, except for long-range harassing fire, was of little usefulness.' This was not the fact. Counterbattery fire, interdiction fire, and direct support of the attacking infantry was constant and effective, thanks to the artillery's own air pilots and observers, forward observation and liaison parties with the assaulting infantry battalions, and flash and sound installations."

It is evident that no denial of Gen. Eisenhower's statement will ever reach more than a small percentage of the readers of *Crusade in Europe*. In fact most readers would not even remember the comment on the artillery's usefulness. But for three groups, at least, the facts should be definitely determined. These groups are: first, field artillerymen who did not serve in Normandy, who may think that our methods of fire direction, gunnery, communications, and liaison failed under the conditions that existed in the hedgerow country; second, infantrymen who may believe that they cannot get adequate artillery support under such conditions; and, third, general staff officers who might be led to cut allotments of water and air transportation for field artillery in a similar situation in the future.

About nine battalions of artillery, less several batteries which were on LCTs sunk by mines or gunfire, were landed over the American beaches (UTAH and OMAHA) on D Day. Additional artillery came in over the British beaches (GOLD, JUNO, and SWORD) and by air on that day. During the entire period of fighting through the hedgerow country, more artillery was brought in almost daily. To put it bluntly, if this mass of artillery was of little usefulness except for long-range harassing fire, someone made a hell of a big mistake.

Actually, no mistake was made. Without the artillery, it is doubtful if the lodgement in Normandy would ever have been accomplished. This would certainly be the opinion of every artilleryman who was there, but such opinions would obviously be subject to discount as coming from a prejudiced source. In discussing this matter, the editor of the FIELD ARTILLERY JOURNAL and I were agreed that convincing evidence could come only from the infantry, and that I should attempt to secure from the infantry some opinions concerning artillery support in Normandy and some examples of the success or failure of such support.

A brief word of explanation and apology is necessary at this point. I had intended to ask some former doughboys of the 4th Infantry Division, with which I served throughout the western European campaign,* to give me some help, and then to go on to representatives of some other divisions that fought in Normandy. Actually, the response was so overwhelming that limitations of space alone preclude use of more than a part of the testimony. Confronted with this situation, plus the fact that the 4th Division probably had as much hedgerow fighting as any division, it was decided not to ask other divisions for evidence.

The apology referred to is this: The 4th Division Artillery was under my command during the period under discussion, and the implication is probable that I am boasting. I hope that it will be evident that the redlegs at battalion level and below are the ones who deserve the credit, and that it is also evident that the artillery support in the other infantry divisions that fought in the hedgerow country (notably the 1st, 2d, 9th, 29th, 79th, and 90th) was equally effective.

An example of the necessity of condensation of material is found in the twelve pages of opinion and combat experiences received from Col. Gerden F. Johnson, now retired by reason of wounds received in action, but a major in the 12th Infantry in the summer of 1944. Here are some extracts:

"As a front-line infantry battalion officer, it is my unqualified opinion (and I can vouch for its being that of every infantryman with whom I served) that the work of the artillery units in the 4th Infantry Division was the deciding factor in the crucial battles fought by the infantry regiments in the campaign from *Utah* Beach to Cherbourg, in the bloody battles in the hedgerows of the Carentan swamps, and especially in the critical battle of Mortain.

"The work of the forward observers with the assault infantry companies, resulting in heavy casualties in forward-observer personnel, was particularly outstanding. I can not recall a single instance in which fire in direct support of the infantry was not immediately and accurately forthcoming. How such

* See "Infantry Division in Europe" in the May 1946 JOURNAL.

effective support was maintained, when artillery communications were constantly being knocked out by enemy fire, will always be a mystery to me. It is a tribute to their training, versatility, and skill."

The 12th Infantry suffered 1,950 casualties (63% of its initial strength) in the nineteen-day period between D-Day and the day that it entered Cherbourg. Here is the story of an action that took place on the morning of 7 June, 1944 (D plus 1), as told by Col. Johnson:

"The 12th Infantry attacked northwestward toward the high ground crossed by the Ste. Mere-Eglise - Montebourg highway north of Neuville-au-Plain. The first battalion, of which I was executive officer, advanced against small-arms and machine-gun fire until approximately 1000 hours, when it was stopped by a German counterattack delivered frontally across our battalion front. The enemy consisted of a reinforced battalion of infantry which had reached the front on bicycles.

"The terrain consisted of the usual apple orchards in small fields surrounded by high hedgerows. They provided no field of fire for the heavy-calibre machine guns and only the lights were in use. Only a single narrow road separated the hedge-lined fields in which the opposing forces were located. The counterattack was at close quarters and savage, and the fire was intense. It became a serious question whether or not we could hold, and I was ordered by the battalion commander to move the battalion CP and the aid station to the rear in preparation for a possible withdrawal.

"The battalion, which at the time was spearheading the regimental attack, used its 81mm mortars in battery, firing over 400 rounds in less than ten minutes. It did not lessen the enemy counterattack. Capt. Morrisett of Battery B, 42d FA Bn, climbed atop the front hedgerow to obtain observation and conduct the fire of his battalion in support of the infantry. This added fire support was sufficient to smash the counterattack, and almost all of the enemy battalion were killed. Had it not been for the accurate and effective support of the artillery we would not have been able to withstand this counterattack, and there was nothing behind us at the time except the regimental CP."

In mid-July the 4th Division was attacking south of Carentan. **"Here,"** says Colonel Johnson, **"we experienced hedgerow fighting at its worst. A 100-yard gain on a 300-yard front often meant a whole day's work for a battalion. During this entire operation, direct artillery support was handicapped by the difficulty of observation due to the hedgerows, as it had been throughout the Cherbourg operation, but it was not in any sense less effective."** Colonel Johnson goes on to emphasize the effectiveness and accuracy of fire based on map data during this attack.

Capt. Rudolph L. Walter, now in the insurance business in Washington, D. C., was a lieutenant in the 12th Infantry during the invasion of France and was seriously wounded on 6 July, 1944. He says: **"During my thirty-day combat experience in the Normandy campaign, all in the hedgerow country, I found that the artillery concentrations before an attack greatly destroyed the German soldiers' morale. This was especially apparent when we had taken our objective, where we could *see* the effects of this support in terms of dazed Germans, in addition to the dead and wounded ones. When the German artillery was supporting their counterattacks, the enemy knew exactly where we were, as we had just taken the position from him, and he could shell us easily. It greatly lifted the morale of a soldier on the receiving end to hear his own artillery open up with counterbattery fire and silence the enemy batteries, which had a definite advantage in the beginning."**

He also pays a deserved tribute to the artillery air observation. **"No amount of praise will ever be sufficient for the artillery observers in their light planes. When these slow, unarmed planes were in the sky we knew that we would not receive fire from the German guns."**

Brig. Gen. James S. Rodwell, who commanded the 8th Infantry during part of the Normandy campaign and was the division chief of staff during the rest of the period, has this to say in a letter from Rio Grande City, Texas: **"Although direct support was made more difficult because of the hedgerows, it was always effectively delivered. This was especially hard on the forward observers, and accounts for the large number of casualties in that group. One of the best results was obtained in preparing concentrations in advance to repel the daily counterattacks. That was lots of good shooting. You recall that it was solely the artillery who broke up an armored thrust by the German 2d Panzer Division early in August 1944."**

Although this is not infantry testimony, the story of one of the first—probably *the* first—artillery air missions flown in France is sufficiently unusual to justify its inclusion here. It was flown by Capt. David E. Condon between 1115 and 1150 on D plus 1. He went up to make an adjustment of a battery on a crossroad near Montbourg. Our fire-direction center got the report from the landing strip that he was off, and I tuned in on his wave length. Midway in his adjustment he broke in on one of his sensings to report an enemy battery firing only a few hundred yards from the crossroad. He immediately changed his sensing to give one ("Two hundred right, four hundred short," as I remember it) to shift the battery which he was adjusting onto the new target. Midway in this adjustment, he suddenly announced that he could see another battery firing and gave its location. I had a staff officer get a battery of another battalion laid on the new target. As soon as Condon ordered "Fire for effect" on his first target, I cut in, identified myself, and told him that another battery was ready to fire on his second target. He immediately gave "Fire." We passed it on to the battery and he promptly completed an adjustment on his new target. Score: two enemy batteries neutralized in the first thirty minutes he was in the air.

Maj. Gen. R. O. Barton, who has been a doughboy since he was graduated

from the USMA in 1912, commanded the 4th Division throughout the hedgerow-fighting period. In response to a request for his opinion as to the usefulness of the artillery in Normandy, he wrote a letter which any artilleryman would enjoy reading, as a tribute, voiced by an experienced and successful infantry commander, to the success of our methods and training. In this letter he says, **"I hope to cover the ground on the artillery, not only in Normandy, but all the way,"** but, of necessity, I have extracted the parts directly applicable to the Normandy campaign prior to the breakthrough.

Gen. Barton says: **"The artillery was my strongest tool. Often it was my only reserve. As you remember, my basic principle of artillery employment was to try to position it so that I could maneuver its fire in lieu of (or as) a maneuverable reserve. You should also recall that I repeatedly said that it was more a matter of the infantry supporting the artillery than the artillery supporting the infantry. This was an overstatement, but not too much of one. The basic evidence of that fact is that our doughfeet never wanted to attack unless we could put a cub airplane in the air. I wish I knew the countless times that positions were taken or held due solely to TOT's. I also wish I knew the innumerable times (in some of which I personally participated) when counterattacks were smeared by the artillery. And they were counterattacks that would have set us on our heels had it not been for the artillery.**

"The most notable instance of this was at the time of the German thrust towards Avranches. Condon,* reinforced by the 20th FA and eventually by the 29th and 42d, stopped the Panzer spearhead that had actually broken through. This great result was accomplished by the 4th Division field artillery and nothing else, for no one else participated.

"I remember an occasion up toward Cherbourg when Simmons,† commanding the 1st Bn 8th Infantry, was killed, and his successor, Jack Myer, took command. The battalion was repelling a serious counterattack by infantry supported by mortars and artillery. I happened to be in the 8th Infantry CP when Myer called in desperately for artillery fire. He was really in dire straits. I talked to him personally, told him he would receive the fire of the entire division artillery, and asked him where to put it. He gave me the co-ordinates. I called you and told you to give him the works. The immediate response from the division artillery was astounding. Within a relatively few minutes Myer called me with elation, relief, and enthusiasm. He said that the artillery came at exactly the right time and smeared the counterattack. I have since talked this engagement over with Col. Myer in great detail on several occasions. I am convinced that had it not been for the 4th Division Artillery at this time the 1st Bn 8th Infantry would have been routed, and the entire maneuver of the 8th Infantry would have been thwarted. This disaster would have seriously impeded and delayed our attack on Cherbourg at a time when hours, much less days, of opening that port were of paramount importance to the entire invasion.

"I feel perhaps more strongly than you do the magnificent contribution of the artillery to the war effort. I simply cannot understand any inferences to the contrary, and particularly in Normandy. One of the most outstanding impressions left with me during that period of baptism of fire was the enthusiasm of all infantry for their artillery support. I never visited a battalion or regimental command post but that the infantry was bursting to tell me of the great job the artillery was doing for them."

The evidence indicates clearly that the artillery in the hedgerow country performed its normal functions, using normal methods, to the satisfaction of the infantry concerned, and with little impairment of its usefulness. There should be no implication, however, that the artillery can prevent an infantry attack in hedgerow country from being costly. As found in Normandy, hedgerows are often around five feet high and topped by trees whose roots add to the solidity of the banks. They are, in fact, ready-made entrenchments, and determined enemy infantry, dug into the far sides, cannot be put completely out of the fight by shell fire any more than they can be completely neutralized when in other types of strong defensive positions.

As in any attack against such positions, the attacking infantry must have the training and discipline to get forward rapidly and courageously when the artillery fire is lifted.

One final point: Gen. Eisenhower's book is, as I said in the review from which I quoted earlier in this article, a fine and honest book. On what was, in the over-all picture, a relatively minor point he was either misinformed or expressed himself with less than his usual clarity.

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*Capt. David E. Condon, previously mentioned.

†Lt. Col. C. C Simmons, 8th Infantry.

Gen. Blakeley (standing) and Gen. Barton (pointing), Normandy, 22 June 1944.

Naval Gunfire Support

By Major Francis J. Roberts, FA

GENERAL

WORLD War II saw the development of the techniques and principles of amphibious warfare from a comparatively rudimentary stage to one of outstanding stature. An amphibious operation of any magnitude is very complex, requiring the participation and coordination of all three services and of the various arms or-type commands within these services. One of the most essential and powerful elements available to an amphibious force is its naval gunfire support component. Commanders must understand, appreciate, and know how to successfully employ this indispensible arm.

Naval gunfire support has but one mission—to support the seizure of the objective. This is accomplished by destroying or neutralizing shore installations which oppose the approach of ships or aircraft, by destroying or neutralizing defenses which oppose the landing of troops, and by assisting the advance of troops after the landing has been made.

ORGANIZATION

Prior to the arrival of the Attack Force in the objective area, the component of the Joint Expeditionary Force called the Advance Force arrives in the area. The Advance Force will contain the necessary elements to accomplish its mission of preparing the objective for assault by conducting necessary minesweeping, reconnaissance, preliminary naval gunfire and air bombardment, and underwater demolition operations. The Advance Force normally dissolves on D-Day and is redistributed to other parts of the Joint Expeditionary Force. An advance will include one or more fire-support groups which in turn are further subdivided into fire-support units. To be certain that the pre-D-Day bombardment fully supports the mission of the landing force, a senior landing force officer should be embarked in the Support Group (Advance Force) flagship as a temporary member of that staff. This officer will transfer to the Attack Force flagship upon its arrival in the transport area early on D-Day. In general this organization of the support group (s) of the Advance Force is similar to that of the Attack Force, which is discussed next.

An Attack Force is a task force consisting of assault shipping, an embarked Landing Force, and supporting naval units and tactical air units under naval control. A corps is the normal size Landing Force landed and supported by an Attack Force. The control of naval gunfire support is a responsibility of the Attack Force Commander during the D-Day bombardment and the post-D-Day bombardment. During this later phase responsibility may be delegated to the Support Commander.

For greater efficiency and control, the Fire-Support Group within the Attack Force is organized into Fire-Support Units. These units contain a variable number and type of support ships and craft, dependent upon the task of the Fire-Support Unit. Whenever possible it is desirable to assign specific ships to specific units of the landing force. Such ships are considered to be in *direct support* regardless of the size of the landing force unit. Typical assignments of ships for direct support missions are as follows: for a battalion, either a destroyer (DD), or a light cruiser (CL); for a regiment, either a light cruiser or a heavy cruiser (CA); and for a division, either a heavy cruiser or a battleship (BB). In addition certain ships are considered to be in *general support* when they are assigned to the entire front of the Expeditionary Force. LSMR's (Landing Ship Medium Rocket) are normally assigned support missions on the basis of two per assault infantry regiment plus one per flank battalion, plus one per 200 yards of division beach.

CHARACTERISTICS OF NAVAL GUNFIRE SUPPORT SHIPS AND CRAFTS

The main characteristics of naval gunfire support ships and craft of interest to troop commanders are as follows:

A battleship of the *IOWA* class, displacing 45,000 tons, has in the main battery nine 16″/50 guns, with an effective range of over 30,000 yards. The secondary battery of this class has twenty 5″/38 guns, with an effective range of over 15,000 yards.

A heavy cruiser of the *BALTIMORE* class, displacing 13,600 tons, has in the main battery nine 8″/55 guns, with an effective range of over 26,000 yards. The secondary battery contains twelve 5″/38 guns with an effective range of over 15,000 yards.

The light cruiser of the *CLEVELAND* class, displacing 10,000 tons, has twelve 6″/47 guns in the main battery, with an effective range of over 21,000 yards. The secondary battery has twelve 5″/38 guns, with an effective range of over 15,000 yards.

The destroyer of the *SUMNER* class, displacing 2,200 tons, has six 5″/38 guns, with an effective range of over 15,000 yards.

The LSMR is a comparatively new ship. None of the present day designed ships of this type saw action in the last war. However, for its size it packs the greatest fire power of any ship in the Navy today. It has ten twin rocket launchers with a range of over 5,000 yards. It also has four 4.2″ mortars with a range of over 4,000 yards, and one 5″/38 gun with an effective range of over 15,000 yards.

EMPLOYMENT OF NAVAL GUNFIRE SUPPORT

Of the above ships the light cruiser is the ideal direct-support ship for a battalion or regiment. In addition to the high rate of fire of which she is capable, plus the large magazine capacity, there exist a large assortment of

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Major Roberts graduated from the Naval Gunfire Support Course at Little Creek, Va., and recently completed over two years on duty with the Staff, Commander Amphibious Force, Atlantic Fleet. His letter accompanying his article states in part "This article presents a broad concept of Naval Gunfire Support. It does not attempt to go into the many details of gunfire support which are in themselves subjects for lengthy discussion. The intent is to present the overall picture of Naval Gunfire Support and to stimulate thought regarding this powerful supporting arm."

projectiles and fuzes available for gunfire support. The LSMR is an ideal ship for area targets.

In general, naval gunfire is classified in terms similar to those employed in field artillery, i.e., destruction, neutralization, etc. In conduct-of-fire terminology, however, *close-supporting* fires refer to fire placed within 600 yards of the troops. Any fire outside this limit is regarded as *deep supporting*.

Two other terms that need explanation before any further discussion of employment of naval gunfire takes place are *fire-support areas* and *sectors of responsibility*. The former term refers to a definite sea area which is assigned to a fire-support unit or ship engaged in carrying out a fire-support mission. The areas are selected to permit the ship to have the greatest possible freedom of movement in accomplishing its task. The land area at the objective is divided into sectors of responsibility and these sectors are in turn assigned to the ships. When thus assigned, the ship becomes responsible for destroying or neutralizing known enemy installations or targets of opportunity in its sector. These sectors of responsibility of course can change as the operation ashore necessitates.

Prior to D-Day, the conduct of naval gunfire at the objective is the responsibility of the Advance Force Commander. His primary mission is destruction. The fire conducted at this time is slow, deliberate, and accurate. It begins well out from the land area and the ships move in as the destruction of enemy targets permit. Destruction fire at close range is essential and the operation proceeds accordingly. It is necessary that the direct and indirect-fire weapons which can seriously oppose the ship-to-shore movement, landing, deployment, and advance inland of the troops be destroyed. The only neutralization fire conducted during this phase is in support of minesweepers, underwater demolition teams, and hydrographic survey vessels. It should be emphasized that although the Advance Force operations preclude the element of surprise, it was proven in the last war that where the Advance Force was given the time and means with which to accomplish its mission the casualty rate was much lower than when this was not the case.

On D-Day, the naval gunfire support ships and craft must provide for the neutralization of all direct and indirect-fire weapons that remain and which seriously affect the approach of the transports, the ship-to-shore movement, and the landing, deployment, and advance inland of the troops. These ships must also be prepared to deliver close-supporting fires, deep-supporting fires, on-call fires, and fires at targets of opportunity.

The close-supporting fires at this time will commence at approximately H-2 hours and will include fire from all the types of ships and craft that we have already discussed. The armored amphibians (LVT (A)), normally comprising the first wave, will open fire when about 600-800 yards from the beach. The LSMR's in the meantime have opened fire when within range and have delivered their devastating area fire. These ships then move to their assigned fire-support areas and continue as directed.

After H-hour on D-Day, in order to insure gunfire support for the troops, close-support fires are scheduled for several hours after H-hour. This fire, of course, will be augmented by the requests for fire from the shore. The system employed for rendering close support at this time must be flexible enough to permit repetition, cessation, or acceleration of the fire as the situation warrants. At this time, also, the deep-support prearranged fire plan continues to provide for the neutralization of direct and indirect-fire weapons and for the isolation of the battlefield. Until artillery is ashore and firing, naval gunfire will be the main supporting arm of the troops ashore.

Subsequent to D-Day, naval gunfire continues to support the advance of the troops with close and deep supporting missions as desired by the forces ashore. It also conducts harassing, interdicting, and illuminating missions. Naval gunfire is most useful at this time in reinforcing artillery fire and destroying fortifications that are beyond the capabilities of artillery fire. Remember that naval projectiles are capable of delivering a terriffic punch. For example, whereas the 240mm howitzer fires a 395-pound projectile, the naval 16″ armor-piercing projectile weighs 2,700 pounds and can penetrate many feet of reinforced concrete at medium ranges. Naval gunfire also assists artillery in covering targets that are beyond the range of artillery. The mobility of ships frequently enables them to move into positions from which they can more readily take under fire those long-range targets or, in many cases, targets that are defiladed from artillery.

PLANNING

Proper employment and execution of naval gunfire support requires extensive coordinated planning for both naval and troop staffs. The Gunfire Support Plan of the Commander Joint Expeditionary Force is based on the requirements of the naval forces for surface and air support and defense. In turn this is the policy down through the various levels of command. In any gunfire-support plan there are certain basic responsibilities and considerations. The first of these is the selection of targets. This is a prerogative of the troop commander. Second is the priority in which these targets are to be fired upon. The relative priority is established based upon a general policy as laid down by the naval commander. Third is the designation of the gunfire-support means to deliver the support. This also is a responsibility of the naval command. The fourth and last major consideration is the timing of firing in relation to the operations of the landing force. This is a function of the landing force.

A review of the above responsibilities and considerations makes it obvious that, as in all other phases of amphibious warfare, coordination is not only necessary but must be an inherent fact. Without effective gunfire support an amphibious invasion will result in disaster and chaos on the beach. The gunfire-support plans must provide with certainty that the troop elements are given the maximum support possible, rendered in the most flexible and efficient manner, in order that the assault and advance inland will be successful.

(For further and more specific details of the operation of this vital support to amphibious operations, it will be necessary for interested officers to refer to various classified documents bearing on the subject. ED.)

Shooting Without Factors—a Naval Gunfire Version

By Lt. Col. Raymond H. Lumry, GSC (FA)

(The opinions or assertions contained in the following article are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large).

TWO representatives of the Gunfire Support School, Naval Amphibious Training Unit, Amphibious Command, Pacific Fleet, attended the special conference held 6-10 December 1948 at Fort Sill. One of their objectives was to receive firsthand information concerning the method of shooting without factors, as described in the September-October and November-December issues of the FIELD ARTILLERY JOURNAL, and now being taught at The Artillery School, as a prelimninary to testing this method in the adjustment of naval gunfire on shore targets by ground observers.

The adjustment of naval gunfire presents one major problem which had to be taken into account before experimental firing could be conducted. The problem is that of a constantly changing gun-target line due to the forward movement of the ship, tides, and currents.

A "spot-converter" (Figure 1) was constructed as follows: Two circular disks of Lucite were gridded identically, one disk being slightly larger than the other. No particular scale for the grid was used, since the spot-converter is not used in conjunction with a map or firing chart as is the case with the target grid in field artillery. The circumference of the larger disk was graduated counter-clockwise in degrees, with 2½-degree intervals. All etchings on this disk were inked in with blue India ink. The circumference of the smaller disk was graduated counter-clockwise in mils, with 25-mil intervals. The etchings on this disk were inked in with red ink. The two disks were then mounted, one on top of the other, on a common center, the smaller disk, graduated in mils, being placed on top.

The upper disk of the spot-converter is used as the observer's disk upon which his spots are plotted on board ship. The converted spot which the firing ship must apply in order to keep the next burst on the OT line is read on the lower disk. The grid is normally used as a 100-yard grid; however, for large spots any multiple of 100 yards may be used. The two disks are oriented with respect to each other by aligning the observer's reported azimuth to the target (included in his initial fire request) with the ship's bearing to the target (reported by the Dead Reckoning Tracer (DRT) operator). The ship's bearing to the target changes during the course of the adjustment, which necessitates re-orienting the spot-converter. Each time a new bearing is determined by the DRT operator, the spot-converter is re-aligned accordingly. The spot-converter is not used in determining data for the initial round of a mission if the target has been designated

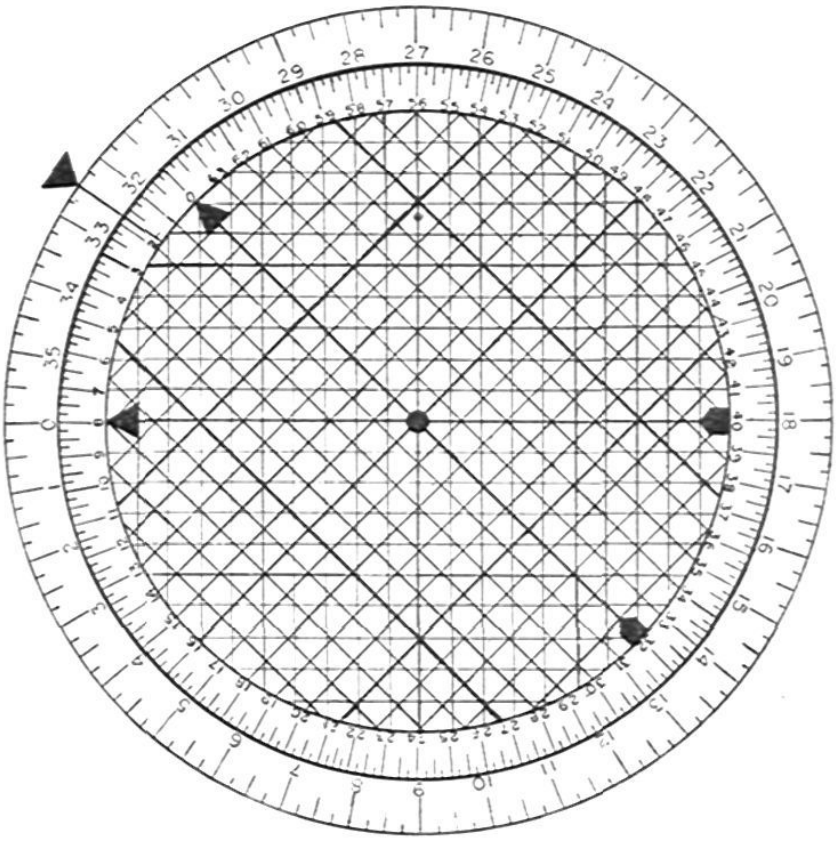


Figure 1. The "Spot-Converter." Oriented with observer azimuth 175 mils and ship bearing 325 degrees.

by coordinates.

On 12 January 1949, the author, in conjunction with Marine Corps and Naval officers from the Gunfire Support School, conducted experimental firing with the new method at San Clemente Island, off the coast of California. The fire was delivered by the USS MYLES C. FOX (DDR 829). One hundred rounds of antiaircraft common projectiles (comparable to artillery HE shell) were expended on eighteen missions, including two time-fire and four reverse-slope missions. The observer's ranges to the targets varied from 2,000 to 4,500 yards. The ranges from the ship to the targets varied between 6,000 and 8,000 yards. The minimum change in ship's bearing on a single mission was 3°, the maximum change was 17°.

The following observations resulting from this experimental firing are significant:

1. One additional man is required on board ship to operate the spot-converter. This man may be stationed either in the Combat Information Center (corresponds generally to the artillery fire-direction center) or in Plot (which computes and transmits firing data to the guns), with the former being preferable.

2. The time lag resulting from the use of the spot-converter was small and with practice will become negligible. On this firing, an average of less than ten seconds was required for spot conversion.

3. The spot-converter can be used in two ways:

a. Its center can be used as the point at which the observer desires the next round to burst. In this case, the relative location of the last round is determined by back-plotting from the center, on the upper disk, the observer's spot. Then the corrections for the ship to use are determined by reading on the lower disk the deflection and range shifts necessary to move the burst to the center of the disk. (Figure 2)

b. Its center can be used as the point at which the last burst landed. A forward-plot from the center of the upper disk is made of the observer's spot. The corrections for the ship are read on the lower disk, moving from the center to the plotted location for the next round. (Figure 3) This method is preferable because it is faster and less confusing to the spot-converter operator, thereby reducing the possibility of errors.

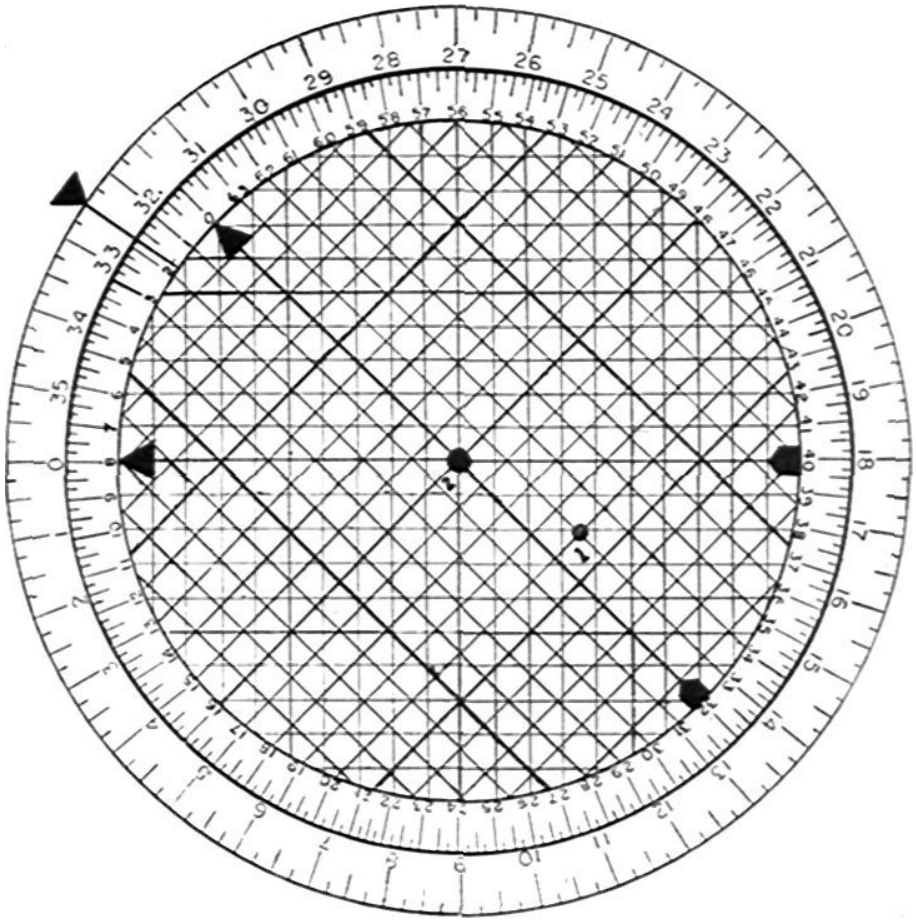


Figure 2. Back-plot method. Orientation: observer azimuth 175 mils, ship bearing 325 degrees. (1) Location of last burst. (2) Desired location of next burst. Observer's spot: Left 100. Add 400. Converted spot: Right 200. Add 350.

4. On reasonably level terrain, the ship was able to keep the shots on the OT line with remarkable accuracy, using only range and deflection changes.

5. On extremely rough terrain, in order to keep the shots on the OT line, it became necessary for the observer to include an accurate altitude change in each spot. The amount of the change was determined from the difference in altitude between the point of burst of the last round and the point at which the next round should burst, based on his deflection and range spot. This factor is more important with naval gunfire than it is with field artillery because of the smaller angle of fall of projectiles fired by the naval gun, resulting from its higher muzzle velocity and flatter trajectory.

6. This method of adjustment of fire resulted in a reduction of at least 25% in ammunition expenditure for adjustment, in comparison with presently prescribed methods of adjusting naval gunfire.

7. Adjustments were completed in at least 25% less time than with present methods.

8. The artillery fire-direction technique of announcing the actual deflection and site setting to the batteries for each round, if changed, rather than deflection shifts and site changes, is not adaptable to ship-board procedures in the delivery of naval gunfire. It is more feasible to apply deflection, altitude, and range spots to the computer, since it constantly generates the range and bearing from the ship to the target throughout the adjustment as the ship moves. The use of the artillery technique would entail setting up a new problem in the computer for each

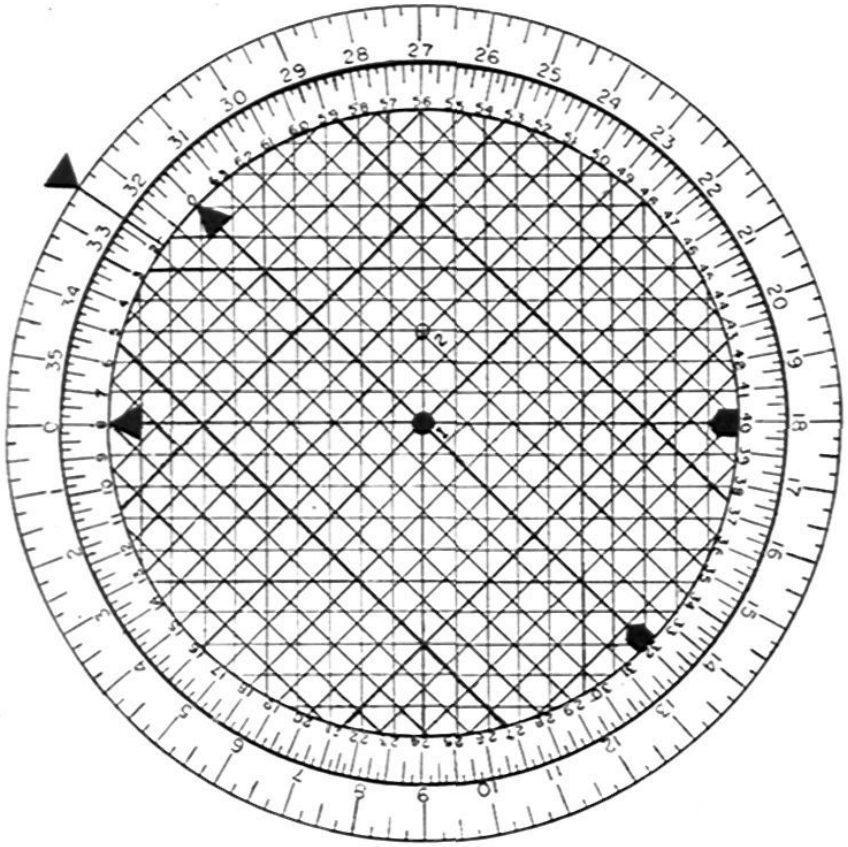


Figure 3. Forward-plot method. Orientation: observer azimuth 175 mils, ship bearing 325 degrees.
(1) Location of last burst. (2) Desired location of next burst.
Observer's spot: Right 200. Add 200.
Converted spot: Right 300. No Change.

round, which would greatly increase the time for adjustment.

9. The observer should retain control of the fire for effect in precision problems rather than release it to shipboard personnel. The reason for this is that—in spite of the excellent computers, range keepers, and other fire-control mechanisms on board ship—there is still a tendency for the solution to drift off, and it is therefore necessary for the observer to make additional corrections to keep the fire for effect on the target.

Based on the results of this experimental firing, it is believed that the use of this method of adjustment for naval gunfire would produce the following:

1. A substantial reduction in the time required for the training of naval gunfire ground spotters.

2. The time and ammunition required for adjustment would each be reduced by 25%.

3. Accuracy of fire would be the same as with present methods.

4. No change in existing ship-board fire-control mechanisms would be required. The only addition to present fire-control equipment and personnel would be the spot-converter and an operator for it.

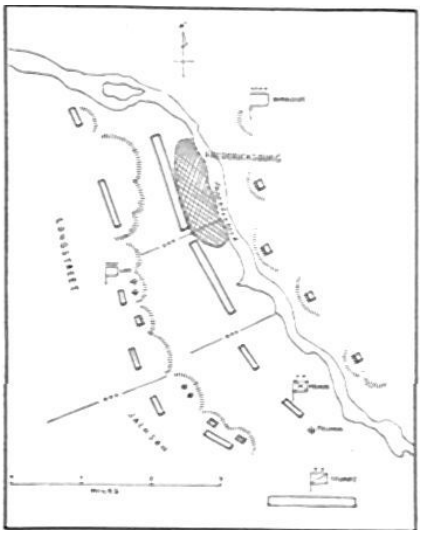
PELHAM—GALLANT GUNNER

By Major J. B. B. Trussell, Jr, CAC

THE TIME was December 1862. General Burnside had recently replaced General McClellan in command of the Army of the Potomac. With 120,000 men he was facing Lee's 78,000 Southerners, who were posted on the heights above Fredericksburg. Burnside had the initiative but he was fighting on unfavorable terrain. He had a river at his back and a plain to cross before he could reach the elevated position of the Confederates. Still, in view of his great numerical superiority there was a good chance that the Union infantry, supported by powerful artillery emplaced on the other side of the Rappahannock, might force the Southern line by sheer weight of numbers.

Burnside's first thrust was against the Confederate right, where Jackson's corps was in position. About ten o'clock on the morning of the thirteenth, the river fog which had hung over the two armies rolled away, revealing to the watchers on the heights the great Federal force deployed in line of battle. They also saw exposed the movement of a division—it was Meade's—advancing resolutely toward the Confederate positions.

Beyond Jackson, closing the flank and forming a line at right angles to the main position, stood the Confederate cavalry division, under "Jeb" Stuart. As the situation became clear, Stuart's artillery commander held a



rapid colloquy with his chief. There was probably some vigorous gesturing as the subordinate urged his point and the General, weighing the risks, demurred. Finally, though, he gave his permission and the artilleryman, clapping spurs to his horse, hurried to his guns. He made a quick selection—a twelve-pounder bronze Napoleon and a rifled Blakely—and then, with caissons swaying behind their limbers, the drivers and cannoneers bending low over the necks of their horses, he led them forward at the gallop. Forward they rode to the intersection of two roads more than a mile in front of the farthest advanced Confederate outpost. As they went into firing position the left flank of Meade's division was almost abreast of them. They caught the Federals unawares with a devastating flanking fire. One round, two rounds of solid shot ploughed through the blue ranks. Then twelve guns opened upon these two. Shifting to counterbattery, the Confederates broke an axle of the number three gun of Battery A, 1st Pennsylvania Artillery. Almost immediately, however, a vengeful Federal ball smashed the Blakely. The Southerners' answer was to increase their fire to such a rate that a Union general was convinced that it was a battery which opposed him.

Nevertheless, the overwhelming odds could not but take effect, and the gray gunners began to drop on all sides. Stuart, watching, sent out his gigantic Prussian adjutant, Heros von Borcke, to tell the artillery commander that he might withdraw his remaining piece to cover. The answer was that the gun could continue to hold its position. A second time the General authorized return to the relative safety of the lines. A second time the gunner refused. Only after the third message, almost an hour after the duel began, when the Union fire had so reduced the crew that the artillery commander himself was helping to serve the piece and the ammunition chests were almost empty, did the officer give the command to limber up.

Meanwhile, General Lee had been watching through binoculars the action on the right flank. When told whose battery was fighting so furiously against such great odds, he said, "It is glorious to see such courage. . . ."

Meade had been halted. Calling for artillery support, he waited until the Union guns had thrown a barrage upon the heights occupied by the Confederates. Receiving no response, the dense blue mass resumed its march until it was met with such a devastating cannonade that it halted, wavered, and then, shattered and disorganized, fled.

After a second attempt to storm the Confederate right, this time with a closer approach to success, the Federals were again driven back. In the meantime, a similar attempt to pass through the streets of Fredericksburg to break Longstreet's line on the left flank was broken up, largely by the gray artillery, and Burnside withdrew his forces across the river. A failure in his first battle as a major commander, he was soon to join the limbo of discarded commanders of the Army of the Potomac, to be remembered chiefly as the proponent of a particular style of whiskers.

The battle of Fredericksburg is of considerable interest to artillerymen, representing one of the prime cases in the Civil War of the engagement of infantry by cannon in masses. However, the details of this battle are not our concern here, but rather to tell of Stuart's artillery commander.

Who was he, this man who daringly went forward with two light field pieces to engage an entire division? His name was John Pelham, and in a hero-worshipping age he was perhaps the greatest hero of all. In an army whose members pictured themselves—so often with fatal results—as knights in shining armor, braving tremendous odds with spectacular recklessness, he was Sir Galahad. Where every man was a *beau sabreur*, he was accorded the sobriquet of "the gallant Pelham."

He fulfilled the ideal of a thousand feminine hearts. Young (at Fredericksburg he was still but twenty-three years old), tall, blond, handsome, modest, he was universally admired.

In 1860 he had been a cadet at West Point, but had resigned immediately upon the secession of Alabama, his native state. However, it was not until almost a year after the first battle of Bull Run, when Stuart organized his horse artillery with Pelham in command, that his name began to be known.

At Williamsburg, early in May of 1862, he had performed a feat similar to the one he was to perform at Fredericksburg, a feat which was described by Stuart in his official report as "one of the most gallant and heroic . . . of the entire war." On that occasion Pelham had also taken a Blakely and a Napoleon out beyond the lines to counter an attack on the Confederate flank. The ill-omened Blakely, as was to happen again some seven months later, was knocked out of the fight at the outset. But Pelham's men, with only three weeks' training behind them, behaved like veterans, withstanding the fire of two Regular Army batteries. After the battle Stuart took Pelham to receive General Jackson's congratulations. The boy, shy in the company of one whose name was already a legend, blushed deeply and could only bow in thanks.

Williamsburg earned Pelham a majority. In recommending him, Stuart said, "Reluctant as I am at the chance of losing such a valuable [officer] . . . I feel bound to ask for his promotion, with the remark that in either cavalry or artillery no field grade is too high for his merit and capacity."

During the bloody Seven Days' battles before Richmond, Pelham consolidated his reputation. Largely because of his quick eye for terrain and the excellent gun drill of his cannoneers, he enabled Stuart to convince the Union forces encamped around the "White House on the Pamunkey" that a large force had come upon them. The result was that they broke camp and burned the supplies they had stored there, unable to take them along in their retreat. In Stuart's famous engagement with the gunboat *Marblehead*, it was dismounted troopers who drove the ship's landing party back aboard ship, but it was Pelham's guns which swept the decks and forced the gunboat to withdraw down river under full steam. When in October 1862 the Cavalry Division made its second epic raid deep behind the Union lines — this time through Maryland into Pennsylvania—Pelham was largely responsible for saving them from ultimate capture by his stand on the banks of the Potomac, holding off the pursuing Federals until the Division had forded the river.

It can be confidently stated that this

youth was no mere daredevil. His seemingly reckless feats were the product of careful calculation and a distinct flair for original tactics. His eye for terrain has been commented upon. Correlatively, he had an almost uncannily accurate judgment for range. There is a story of how, on one occasion, he personally laid a gun on a Federal color sergeant at a range of 800 yards and with one round brought down his target. If that seems a minor accomplishment, it should be remembered that, for those days, 800 yards was a considerable range for a light field-piece, and the guns, smoothbore for the most part, were sighted along the line of metal without benefit of computing instruments.

Pelham developed such facility in his gun crews that the rate of fire of his guns amazed his contemporaries. Using his mounted gunners as boldly as if they were cavalrymen, he threw his guns ahead of the line of skirmishers; under pressure of heavy attack, he would withdraw only at the last possible moment, but almost never without repeated halts on shrewdly selected ground to toss a few more rounds to discourage his pursuers.

His relations with Stuart were close, which in a day of rudimentary staff organization may have accounted for a part of his success. Living at Cavalry Division headquarters, his position was exactly the same as a modern "Divarty" commander, save only that his dual status of staff officer as well as artillery commander was not formally recognized.

During the winter of 1862-1863, Pelham's recommendation for promotion to lieutenant colonel was submitted by Stuart, with an approving first indorsement signed by Lee. Pelham's friends, however, looked forward to the inevitable campaigns of the coming spring and summer and confidently anticipated that, before the year was out, he would be wearing the wreathed stars of a brigadier general.

Stuart held him in a rather possessive, if brotherly, affection. If Pelham were away on an inspection trip at one of the batteries scattered at camps near the Rapidan, Stuart was quite capable of sending for him merely because he liked his company. A leave granted at supper to Pelham or another of Stuart's favorites might well be cancelled at breakfast.

The life in winter quarters was not unpleasant but it did pall. Pelham's chief recreation was in reading, with a brother officer, works on the Napoleonic wars. Tiring of this, he considered himself lucky in gaining permission to make an "inspection" in the vicinity of Orange Court House, where there was visiting at the time a young lady, one of Stuart's cousins. Pelham, it was said, was susceptible to every soft glance and, like many a young officer before and since, considered a harmless flirtation the pleasantest of diversions.

Knowing his commander well, he left headquarters before breakfast on the morning after his trip had been approved, stopping for a cup of coffee at the roadside bivouac of a battery. Slowed by the deep mud of the early spring, it was almost dark when, approaching the outskirts of Orange, he was overtaken by a courier. True to form, Stuart had missed him at breakfast and sent a message ordering his return.

Rather than overtire his already weary horse, Pelham rode on into the town, planning to go back in the morning. For some reason, however — the records are vague—he changed his plan and, on March 16, he went on by train to Culpeper, where he found his chief, who had come to give testimony at a court martial. At this point word arrived from Fitz Lee, "Marse Robert's" nephew, who was commanding a detached brigade of Stuart's division, that the enemy was advancing in strength toward Culpeper. Hastily Stuart and Pelham borrowed horses and rode posthaste toward Kelly's Ford. At the brigade command post, they found that the Federals were deployed defensively about half a mile from the ford. Since the enemy would not attack, the two impetuous cavalrymen decided that the Confederates would. Fitz Lee first sent forward a dismounted squadron of the 3rd Virginia Cavalry; then the rest of the regiment was ordered to charge. But as the gray troopers galloped forward, ripping the air with the high-pitched rebel yell, they met an unexpected obstacle in a stone fence. Too high to jump, it seemed to have no gate through which they might pass. As they took in the situation they swerved to the left toward a cluster of farm buildings where there should be an opening of some sort.

Pelham had been watching, but as the column swerved he galloped diagonally forward toward its head. When he reached the buildings he found the men pushing through an open place in the wall. Pausing, he urged them on.

At that moment a Union gun, silent hitherto, opened with a round of canister. The tall young major swayed for a moment and slipped from his saddle to the ground.

When they found him, he was smiling, with his eyes open, but when they turned him over they found a small hole at the base of his skull. Thinking him dead, they put him across a saddle-bow like a sack of meal and carried him toward the rear.

A few miles back someone thought to check his pulse, which was still beating. A horseman was sent to bring an ambulance to carry the wounded boy to Culpeper. Three surgeons examined him, but whether the wound was fatal or the jolting ride on the horse's back was responsible, he died the next day.

Stuart, weeping, mourned, "Our loss is irreparable." While Pelham's body lay in state in the capitol in Richmond, General Lee wrote to the President to ask that Pelham's name be not dropped from the list of promotions. "I mourn the loss of Major Pelham," he said. "I had hoped that a long career of usefulness and honor was still before him. He has been stricken down in the midst of both. . . ." The Cavalry Division published a general order eulogizing him and the horse artillery and the Division staff wore mourning for thirty days. Three girls—Pelham was gallant in more ways than one—put on black.

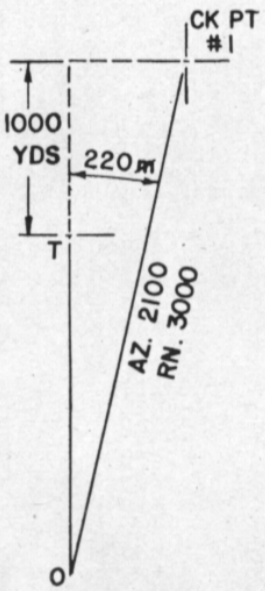
The South buried her hero, and his name and deeds, in the passing of the years, have been largely forgotten. But, remembered or not, in the tactics he fathered and in the gallant tradition of the artillery, to which he added his full share, his contributions will live forever.

TYPE PROBLEMS
OBSERVED-FIRE PROCEDURE
USING TARGET GRID

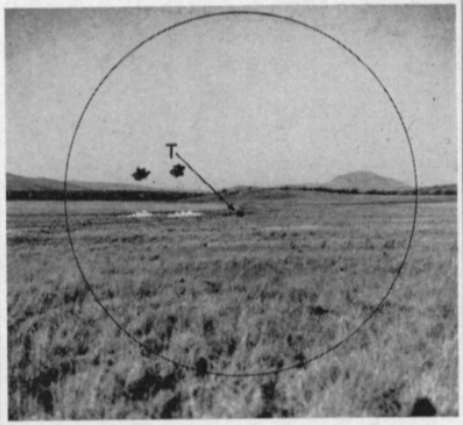
(continued)

PROBLEM 3. — *Area fire mission*

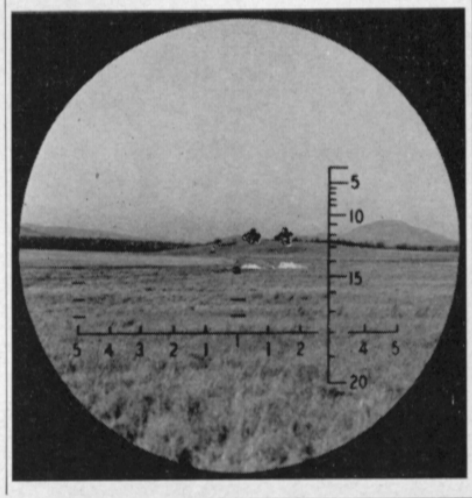
Target, enemy mortars; mission, neutralization; materiel, 105-mm howitzer; ammunition, HE shell (both M51 and M55 fuzes are available in the battery). Shift from Check Point No. 1.



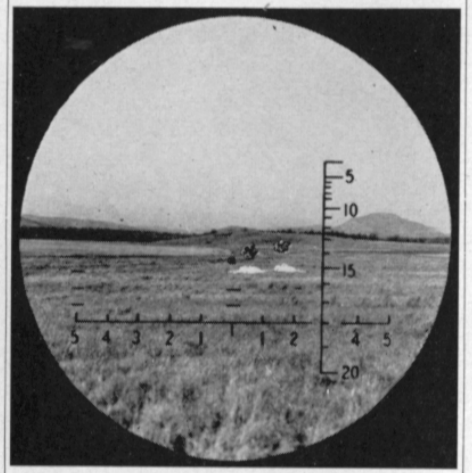
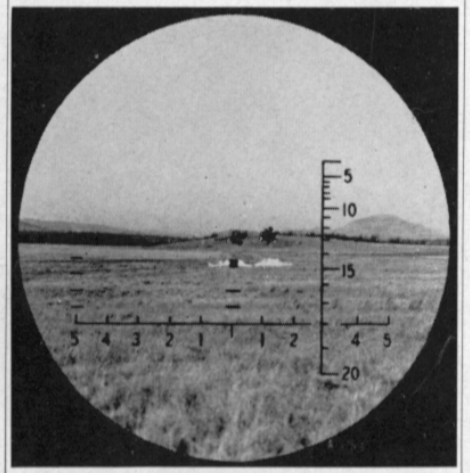
Sketch of observer-target relationship.

TRANSMISSIONS	RESULTS	SENSINGS HB	SENSINGS RN	SENSINGS DEV
Observer to FDC (Initial fire request): FIRE MISSION, AZIMUTH 1880, FROM CHECK POINT 1, LEFT 660, DROP 1000, MORTARS, FUZE TIME, WILL ADJUST.	① 	*A*	*?*	*30L*
FDC to Observer: *BATTALION, BAKER, FUZE TIME, CONCENTRATION 2, 2 VOLLEYS, CENTER RANGE, WHEN READY ... ON THE WAY.*				

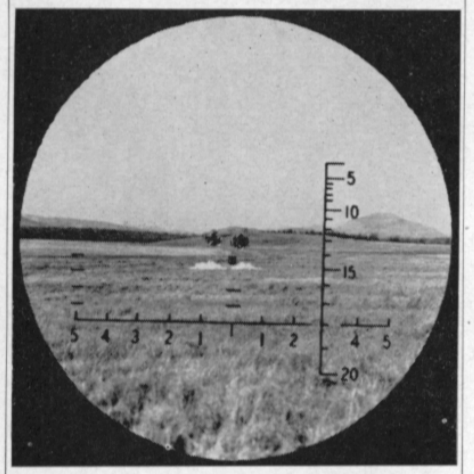
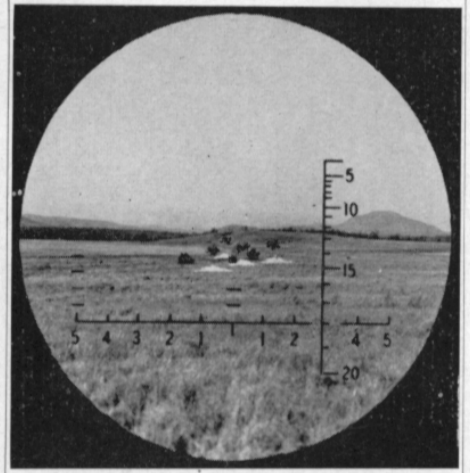
Remarks: Estimated *OT* distance = 2000 yds. Observer measures deviation of burst center 30 mils left of *OT* line. Observed deviation = 60 yds (30 × 2.0). No range sensing is obtained.

Observer to FDC: RIGHT 60, DOWN 10, REPEAT RANGE.	②			
FDC to Observer: *ON THE WAY.*		*A*	+	*10R*

Remarks: Deviation of 10 mils is small. The observer elects to ignore it unless it persists, inasmuch as he is able to obtain sensings.

TRANSMISSIONS	RESULTS	SENSINGS HB	SENSINGS RN	SENSINGS DEV
Observer to FDC: DROP 400.	③ 			
FDC to Observer: *ON THE WAY.*		*A*	—	*10R*
Observer to FDC: ADD 200.	④ 			
FDC to Observer: *ON THE WAY.*		*A*	+	*8R*

Remarks: The deviation of 8 to 10 mils right still persists. The observer therefore considers it in his next correction.

TRANSMISSIONS	RESULTS	SENSINGS HB	SENSINGS RN	SENSINGS DEV
Observer to FDC: LEFT 20, DROP 100.	⑤ 			
FDC to Observer: *ON THE WAY.*		*A*	—	*Line*
Observer to FDC: ADD 50, FIRE FOR EFFECT.	⑥ 			
FDC to Observer: *BAKER FIRING FOR EFFECT.*		*Mixed Air*	*Correct*	*Line*

Remarks: First volley in effect sensed *mixed air, range correct, line.* Remainder of fire is observed and, if necessary, corrections are sent to FDC.

AID TO TURKEY

By Col. Thomas E. de Shazo, FA

EARLY in 1947 The Truman Doctrine was announced by the President, in which military aid was provided to certain countries whose independence was threatened by communistic expansion. It is distinct from the later Marshall Plan. Under the provisions of The Truman Doctrine, Congress appropriated one hundred million dollars for fiscal year 1948 for aid to Turkey. Additional funds have since been appropriated. A joint survey made by the State and War Departments in June 1947 determined that the first needs of Turkey were for military aid in order to modernize and to increase the effectiveness of her fighting forces, and that the greatest portion of the initial funds should be applied towards this end.

In August 1947 the Mission for Aid to Turkey was created, with temporary headquarters in Washington, and was made up of Army, Navy, and Air Force Groups. Major General Horace L. McBride, the head of the Army Group, by virtue of seniority, is also coordinator of the joint mission. The Army Group is titled "Turkish United States Army Group" and abbreviated "TUSAG." It is organized under the conventional United States staff organization of general and special staff sections, to include the Arms and Services. The scope of this article will be confined to the activities and experiences of the Artillery Section of TUSAG. It is regrettable that for security reasons many interesting details cannot be published in an open article.

The first mission of the Artillery Section before departure from the United States was to determine itemized lists of artillery equipment required for a tentative troop strength for the Turkish Army, and the second mission was the preparation of plans for instruction of key personnel of Turkish units in the reception, operation, and maintenance of American equipment. Study of the report made by the original survey group (OLIVER REPORT—Maj. General Lundsford Oliver) supplied information about the Turkish Army, its organization, and its installations. When the location and physical facilities of the Turkish Artillery School were learned, it was decided that the most practical and effective method of conducting indoctrination and technical courses of instruction would be to fully exploit the facilities of the school. It was early apparent that artillery material would comprise a generous portion of the aid equipment. Much equipment was obtained from surplus war stocks at about 10% of cost price.

By extreme good fortune the American personnel of the Artillery Section were selected directly from instructors of Departments of Instruction at Fort Sill and Fort Bliss. By November 1947 the advanced echelon had arrived in Turkey and by February 1948 all personnel had closed in Ankara. Also arriving was a large shipment of complete copies of Programs of Instruction, Lesson Plans, Instructor Notes, and other instructional material used for the courses at Sill and Bliss; duplicates of Training Aids; American training films and film strips; and of course copies of American field and technical manuals.

Continuous conferences were started with the Turkish Chief of Artillery, with the Commandant and Faculty of the School, and with the General Staff. It was apparent that the activities of the Artillery Section would lie in two fields: in instruction at the Artillery School and in an advisory capacity to tactical units, with the first requirement becoming the main effort. Again for security reasons the field forces cannot be discussed, except to say that dealings with them are in the nature of follow-up visits, to insure that doctrine and technique as taught in the school is being correctly disseminated and to assist with training problems.

105mm how btry on the road at the School

I must pause to say that the reception of American personnel by the Turkish Government, the Army, and the people has been hearty and openhanded. From the beginning there have been frank, straightforward, and direct dealings on both sides. Far-reaching good will and important understanding has resulted, since neither the Turks nor the Americans are subject to thin-skinned sensibilities.

Out of the conferences there evolved a plan to introduce initially into the school, under the guidance of U. S. instructors, special courses of instruction, and at a future date to level off into a long-range military educational program. The Chief of Staff of the Turkish Army having announced the decision that American tactical doctrine and technique was adopted by the Turkish Army, the way was cleared for the American personnel to make detailed plans. Among the first things that had to be done were: preparation of new T/O & E's; blocking out and preparing courses for the school, including the voluminous work of writing lesson plans; and the great task of translation into Turkish the adapted instructional material and the field and technical manuals to be used as texts.

T/O & E's were based on those of similar-type units and calibers in the United States Army, with some adaptation and modifications. Loading charts were prepared as a check against the T/O and E's and to be used as a training aid to quickly disseminate detailed understanding of the T/O & E's. Except for uniform differences, although there is a striking similarity between the newly adopted Turkish and the American uniforms, an American artilleryman would have to look sharply to distinguish between the new Turkish and an American artillery unit on the march, in firing position, or in camp or bivouac.

The first courses at the School were designed to indoctrinate key officers and soldiers in American technique and to teach them mechanical operation and maintenance of equipment, in order to reorganize, under new T/O & E's, to receive, operate, and maintain equipment arriving from the United States. Graduates returned to their units and conducted unit schools. Thereafter courses at the school were patterned after the war-time short courses at Bliss and Sill, with the aim of providing quickly sufficient numbers of qualified graduates to fill key and specialist T/O positions in troop units. There are also special basic and advanced courses for junior and senior officers. At a later date the school program will level off into annual and semi-annual courses.

Translations presented a problem of large proportions as to volume and numbers of translators required. The Turkish General Staff rounded up all the English-speaking officers it could lay its hands on and supplemented these with civilians. Enough were assembled so that, by 1 May 1948, courses were in full operation at the school. The best working plan developed was that the Americans would write out subject matter in longhand, pass it on to translators who turned it into Turkish longhand. From there it went to Turkish typists who cut mimeograph stencils, with draftsmen reproducing drawings, sketches, etc.

Translation introduced many new technical terms and phrases into the Turkish language. A dictionary of military terms was prepared by a board of American and Turkish officers, which was invaluable in translations. Realizing that errors and foggy translations would occur as a result of haste and newness of terms, no effort was made to print manuals until after the mimeograph copies had been tested as texts for one or more courses in the school. Students and instructors were charged to be alert and errors were discovered and rapidly reduced.

Another problem was to assemble course instructors. English-speaking Turkish officers who had worked as translators formed a nucleus and additional students were added to each course from which future instructors were chosen. To tag the top students as instructors is a pernicious practice, condemned by the Turkish as stoutly as by the American tactical units, but necessary if high standards are to be established and maintained at the schools. A longer-range program of

Instruction in fire direction

sending English-speaking Turkish officers to courses in the American artillery schools was instituted.

Sound-tape recorders were brought over with the training aids. The English-narrative sound tracks on training films were translated into Turkish and recorded. It is simple to synchronize the recorder and projector, and American training films are effectively used in instruction.

Concurrently with the introduction of new courses, the school-troops units were increased, reorganized under new T/O & E's, equipped, and trained. A plan for the reorganization of the school to provide an adequate staff and faculty was drawn and approved. Instructional departments were reorganized or newly created. A building program was initiated to provide increased housing for students, instruction, troops, gun and motor sheds, maintenance, and storage facilities. Firing ranges and training areas were greatly increased. The Turkish Army has or is rapidly acquiring the facilities for a completely modern artillery school capable of turning out graduates as well trained as those of any army, and in sufficient numbers to fill full mobilization tables of organization spaces with a reservoir of trained replacements. While an artillery training center is not independently set up, the school at any time could be separated into a school and training center.

Unabashedly the Turkish Artillery School is patterned in detail after its American counterpart. A current cliché among the American personnel is that should an instructor from Sill be transported to Turkey overnight he would find his class and could continue his instruction without pause. This is a slight exaggeration. A visitor from Sill, however, would find a duplicate of every instructional department and the air full of cub planes. The local terrain is a duplicate of West Range, Ft. Sill.

While many difficulties do arise, American personnel have found this a most interesting and challenging assignment. All armies are bound by regulations and red tape to about the same degree. We have found the Turk to be a forthright person. He is very serious and intent in his undertakings. As a student he compares favorably with American students. The average soldier does not possess the same mechanical or educational background, but earnestness of purpose goes a long way in making up the difference. He grasps and retains what he has been taught. Since Turkey has universal military training, considerable numbers of trained automobile mechanics, drivers, radio mechanics, operators, instrument operators, clerks, and typists will annually return to civilian life. This will be an important boost to the national economy.

The Staff College and other branch and service schools have been operating in the same manner as the Artillery School with about the same experiences.

The post-war American Army is operating some twenty military missions to aid foreign countries, and the chances are that this number may be increased. It probably will not be uncommon for most officers sooner or later to be assigned to this type of duty. For this reason details are included in this article which otherwise would be of no particular interest.

The Turks have traditionally been rugged combat men. There is today an intense national spirit. No such thing as a potential fifth column exists. An American moralist could no doubt make criticisms of individual freedom and an economist could criticize monopolies, but the country is on a mobilization footing, and security and economic controls are necessarily tight.

The discipline of the Army is outstanding. Outside of the unknown quantity of Russia they have the best army in Europe today. Modern equipment being supplied under the aid program, skillfully employed on naturally strong defensive terrain, will make them a formidable opponent indeed. There is no doubt about their ability or will to put up effective and stubborn resistance if their country is attacked.

The United States has a long-range stake in Turkey. The geographical location in Asia Minor and across the Bosphorus in Thrace places it on the flank of a possible communist advance through the Balkans to the Mediterranean, or through Iran, Irak, Syria, and Palestine to Africa. Full value is realized for every American military dollar spent in strengthening Turkey. This is a critical area where effective measures, if continued and exploited, can be placed in opposition to the expansion of communism.

Demonstration at the School — Occupation of position by 105mm how btry

NOTES FROM FA-CMG

When do I go to School?

Prepared by LT. COL. HAROLD E. MARR, JR., FA

MANY officers have expressed a mistaken idea that the termination of an officer's formal schooling means the end of his career. This fallacy will be true when the Army ceases to exist and not before. The primary purpose of military schools must be to teach an individual how to perform a field requirement. Certain assignments are of a more technical nature (not more important) than others and require more preliminary training. The demand for officers to fill these field requirements and the limitation of facilities govern the size of the classes at schools. Personnel requirements which do not require formal school training are sufficiently numerous and diversified to discourage strict channelization of career and to obviate individual dissatisfaction.

The large number of "When Do I Go To School" letters received daily by the Field Artillery Branch of Career Management Group attests to the widespread fear of getting lost in the assignment shuffles. A brief survey of the school situation as it will affect Field Artillery officers during the next three years may alleviate this concern to a desirable extent.

THE ADVANCED COURSE

TM 20-605 (Career Management for Army Officers) indicates that an officer will be sent to the Advanced Course sometime after his second year of service, and it is considered desirable to accomplish this assignment by the time an officer completes seven years service. This goal can not be attained immediately. The large war-created backlog of technically eligible officers and the insatiable personnel requirements to fill Department of the Army commitments preclude a rapid solution. However, current policies will adjust most inequities by 1952.

Designation to attend the Advanced Course depends upon two principal criteria—age and availability. Priority is granted to the older age groups to insure early eligibility for higher-level schools. To enhance stability of assignment, officers should be ordered to branch schools only upon completion of a normal tour of duty. Assuming no material change in the allocation of space quotas to the schools, it is doubtful if officers below thirty years of age will attend either the 1949-1950 or 1950-1951 courses. The 1951-1952 list may include slightly younger age groups, since the backlog will be largely eliminated. APPLICATION TO ATTEND IS NEITHER NECESSARY NOR DESIRABLE.

THE COMMAND AND GENERAL STAFF COLLECE

While all officers may anticipate assignment as students at the Advanced Course level, less than fifty per cent will attend the Command and General Staff College. Selection is based primarily upon a comparison of the records of service of all eligible officers. Approximately ten percent of the officers on the eligible list may anticipate selection this year. Few officers under age 34 will attend. Officers must be under 41 years of age at the time the cource commences, have seven years commissioned service, and have credit for completion of the Advanced Course. While previous school ratings are a very minor consideration in selection, the record of service of an officer who does poorly at lower-level schools will be scrutinized most carefully to determine whether higher schooling is warranted. APPLICATION TO ATTEND IS NEITHER NECESSARY NOR DESIRABLE.

THE ARMED FORCES STAFF COLLEGE

About one third of the officers with credit for Command and General Staff College may anticipate selection to attend the Armed Forces Staff College. Again selections are based on the record of service. Officers must be under 42 years of age and have eight years commissioned service. The competition is extremely keen, with over four hundred Field Artillery officers currently eligible to fill the annual quota of approximately eighteen spaces. With few exceptions officers will be between 36 and 39 years of age when selected for this school. APPLICATION TO ATTEND IS NEITHER NECESSARY NOR DESIRABLE.

THE NATIONAL WAR COLLEGE

One third of the officers with credit for Armed Forces Staff College may be selected for the National War College or the Industrial College of the Armed Forces. Again selection is based upon job-performance record. Considerable weight is given to the record of an officer who has demonstrated outstanding ability in diversely typed assignments, i.e., a record that reflects a rounded career pattern. Eligible officers include those individuals who are under 46 years of age and have ten years commissioned service. APPLICATION TO ATTEND IS NEITHER NECESSARY NOR DESIRABLE.

In conclusion, the level of schooling of an officer is a single component of his entire career pattern. Few officers will attain the highest level of military schooling. Personnel requirements and on-the-job record, not level of schooling, will govern to the greatest extent future assignments and material benefits to be extracted from an Army career.

ILLUSTRATION CREDITS

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

U. S. Army: Cover
Frank Scherschel—LIFE Mag.: 54
National Archives: 78

Small Unit Action . . .

Breakthrough!

By Capt. Tattnall R. Pritchard, Jr., FA

THE MORNING of 24 July broke bright and clear, and hot. After the wet weather of the preceding week the open sky was doubly welcome; it seemed that the weather men were at last predicting with some accuracy. In the early morning, breakfast was jeeped up as far as battalion headquarters, and hand-carried from there to the companies in hot containers. By 0830 every man had been fed, and at 1000 hours the 1200-yard withdrawal ordered the night before was begun. Shortly after 1100, however, while the withdrawal was still in progress, heavy low-hanging clouds rolled up and a slight sprinkle began. Orders seeped down to halt the withdrawal, but in the meantime the first wave of heavy bombers slipped in under the dark clouds and salvoed along the St. Lo road, which was the bomb line. The bombing continued spasmodically until almost 1300.

In the early afternoon the bewildered doughs of the 60th Regiment were ordered to re-occupy the line they had vacated that morning. This proved to be easier said than done. There had been no pressure on the withdrawal, but a surprised Jerry had slipped in in the wake of the movement, and the doughs had to fight hard to regain their old fox-holes. Some of the fox-holes were quite elaborate — the Ninth Division had sat on the road for six mortared days — and the men were loath to give them up without a struggle.

I found my own Castle Underground — buttressed with sandbags, roofed, sump-pitted, and lined with straw— unoccupied, and had only to hook up my telephone to be again in business. By nightfall—which at that time of year was quite late—the MLR had been regained, and except for tree-hidden snipers the area was quiet.

The next morning we did it all over again—but this time Jerry had been tipped off and quickly moved in strength into the 1200-yard safety belt. At 1155 artillery began marking the bomb line with red smoke, and precisely on the dot of 1200 the first salvoes whistled down. From then on all hell broke loose. I took refuge from fluttering bomb racks under a prime mover, and with each salvo the ground lifted and smacked me in the chin. For what seemed hours the ground heaved and retched, and the air was clothed in the fullness of terrible sound and fury, stitched with the riveting of multiple aircraft machine guns. Toward the end of the furious bombardment a slight breeze sprang up, and the red smoke marking the bomb line began to drift back into our lines. With each succeeding wave of bombers it drifted closer, and with each succeeding salvo—coming nearer and nearer—the noise grew louder, more frightening, more terrifying. At last the inevitable happened, and a full stick dropped in the command post of the 39th Infantry, on our left in the line, and wiped it out. And then all was quiet.

The sudden stillness hurt the ears. Men struggled, staggering, to their feet; radios began to whistle and chatter importantly; tank motors roared, and settled to an easy growl; and the birds sang away to the joyous morning. Down the road in front of us the sandpaper-ripping of a Schmeisser piped a song of death. I stepped into the road, still muddy from yesterday's rain, and looked into the future.

This would be my first engagement. Six days before, as the result of "normal attrition," I had been promoted out of my job as Exec of Charlie Battery, 60th Field, to that of LnO to the 3rd Bn, 60th Infantry. The 3rd Bn—commanded then and for the rest of the war by Keene Wilson, a young Alabaman who had taken over the month before as a captain—had arrived on 19 July at the St. Lo Road, where I joined them. My six days' "combat" had been limited to the patrolling and shelling normally incident to life 500 yards behind the MLR.

My infantry-supplied walkie-talkie squawked with a message from the forward observer, Lt. Carroll Jenkins of Savannah, Georgia. He reported that the assault companies were moving slowly—resistance in the lightly wooded area to our front was severe. This was the area encompassed by the 1200-yard safety zone, which, though it had been lightly but accidentally bombed and some casualties inflicted, was still thick with Germans. While I was Rogering the message, Capt. Wilson and his staff came out of the field bordering the road and began a single-file advance up the ditches. I fell into column, with my radio operators following.

We had passed completely through the files of the reserve company before we stopped; pressure on the assault companies had halted them temporarily. White, frightened faces peered up at us from the fancied safety of the roadside ditches. In the week preceding, many replacements had come in, and this was—as to me—the first taste of fear. The angry buzzing of hundreds of stray bullets from the fire fight just ahead clipped through the trees and filled the mind with paralyzing anxiety and dread.

I moved ahead along the column to locate the battalion commander. By this time the assault companies had reached (for the third time) the St. Lo road, and leading elements had crossed into the fields beyond, from out of which a large volume of small-arms and mortar fire was raining down. I found Capt. Wilson crouched in a hedge row eating a K-ration. His calm matter-of-factness steadied my nerves, as did the high spirits of the wounded collected here to await medical transport.

I hurriedly set up the 610 and tuned in on the battalion channel. Lt. Jenkins was conducting a fire mission, attempting to knock out a nest of machine guns and mortars impeding the advance.

Capt. Wilson (already known to everyone as "Slick") listened without comment until Lt. Jenkins went into fire for effect. Then, over his 300, he urged the company commander with Jenkins to get his men forward under the curtain. In a few minutes we were moving again.

I had been briefed in my job with necessary haste. I had been told, hurriedly, what was expected of me; but the one thing to stick firmly in my mind was my obligation to be always at the elbow of the battalion commander. This was meant to mean that I was to be constantly within call of the battalion command post, but I understood otherwise. This misconception (which did not allow for the equally urgent need of keeping information flowing constantly to the rear) got me into difficulties in short order.

Capt. Wilson—with me following—hurriedly crossed the road in the wake of the assault companies, which had swung sharply to the right to face the high ground of the objective. Halfway up the slight incline, at the far side of an open field divided by a hedgerow, was a farmhouse. Our leading elements were just entering the farmyard under walking fire; forward elements of the division to our right were firing into the farmhouse, across our front; Slick decided at once to crowd up on his company commander and get into the farmhouse, where he would be needed.

To do this he had to go across the crater-pocked field and over a drainage ditch which divided the field at right angles to the hedgerow. The farmer, to facilitate his passage from one field to the other, had bridged the ditch with two half-logs set firmly into the banks just to the right of the hedge. The ditch—it was really a small canal—was about fifteen feet across by six deep, and almost filled with sluggishly moving water.

We were lying in a shell crater on the edge of the field about a hundred yards from the ditch, and another hundred yards from the farmhouse. The hedge running down to the ditch was lined with infantrymen firing to our left into a small grove of trees some five hundred yards away. "Slick" moved in a crouch behind the hedge to the bank of the canal, took a quick look up-stream toward the enemy and then crossed in a rush. I trailed him to the bank and watched him cross. Then I followed.

I was met in mid-stream by an angry buzzing and snapping, a full blast from a Schmeisser concealed up-stream to the left. Evidently the sniper, seeing Slick cross, had waited patiently for his certain victim, the next man to attempt the bridge. It happened to be me.

The rain of bullets snapped the walkie talkie from my hand and sent it spinning into the water. Bullets riddled the herringbone fatigues I was wearing, chipped splinters from the makeshift bridge, and splashed and splattered over the surface of the stream. With an instinct I didn't know I had, I let everything go and collapsed headlong into the water.

I crawled out on the far side to a chorus of raucous laughter, and took refuge behind the hedgerow. To say I was terrified is mild, and the general amusement was no help. Slick's merriment was the most painful; he had reached the farmhouse yard, and had turned just in time to see my header into the canal.

The hedgerow offered protection, although scanty. Unfortunately, tall weeds grew close to the hedge, and every time I moved they moved, giving away my position. The Schmeisser spat away at me spasmodically, clipping leaves from the hedge, but the sniper could not depress quite enough to do more. With my hot and swollen tongue clinging to the roof of my dry mouth, I was forced to crawl the hundred yards through that muddy field, followed all the way by the angry little bees. When I finally reached the farmyard I stood up—filthy with cow-pasture mud—and faced Capt. Wilson.

"Congratulations," he offered dryly. "You are now a member in good standing of the PBI—the Poor Bloody Infantry."

We pushed on. Late in the afternoon the battalion overran the objective, and established a defense perimeter on the top of the hill. Slick set up his CP in an old house just short of the crest, and Lt. Jenkins came back to meet me there and make his report. Just before dark, the two of us went down to the MLR to establish from the ground the location of the companies on our maps. The three companies were now in the line, side by side in a misshapen semicircle around the hill, and would require defensive concentrations and final protective fires for the night. We went through them without incident, plotting our goose-eggs as we went, and then started back for the CP. Darkness had already fallen.

After the noise and the bustling confusion, the heat and the fear of the day, the silence of the night was unnatural and terrifying. Scuffling the dark leaves as we walked through the gloom of the woods, we expected any minute to see our horrifying fears take concrete shape. Every bush along the way was a machine-gun nest, every tree concealed a sniper. We crouched along with drawn guns, our hearts choking us, the smell of our fear rising like a pall.

We almost walked head-on into the tank destroyer, squatting dark and silent in the middle of the narrow road. A hand grabbed my pistol belt and flung me bodily into the ditch. A voice yelled, "Look out, you damn fools!" and the TD's gun spat a bright dagger of noise and flame. The shell burst a scant hundred yards behind us, back the way we had come — and all was silent again.

A cool, disgusted voice spoke out of the darkness by my ear. "You silly . . . ass!" it said. "You just walked right through a machine-gun nest. Another minute, and you'da had it square in the back."

I staggered back to the CP and burnt my mouth and tongue on a canteen cup of coffee. I didn't even know it until the next day.

By the morning, all contact was lost; Jerry had faded away during the night. At noon, a radio message told us that General Patton's tanks had barrelled through the hole we'd made and were many miles ahead. We were alerted to entruck the next morning and follow for the mopping-up.

That afternoon, in the glorious fear-free sunshine, we sat on top of the hill and watched the stream of tanks and armored vehicles, mile after mile of them, roll past on the highway below. It was a pleasant sight.

AERIAL FIRE MARKING

By Major Erdie O. Lansford, FA, and
Capt. H. P. Rand, FA

REALISM during maneuvers is a problem that has undoubtedly concerned generation after generation of military men all over the world. Among the most difficult problems has always been the marking of fires. To see an umpire place a colored flag in the ground or wave it in the air has not satisfied the ground soldier who is required to stop his movements because of the umpire's actions. It is believed that the solution found during the European Command maneuvers in September 1948 has greatly improved this method.

It is part of the European Command legend by now that the bar in the Europa Hotel in Heidelberg is really responsible for introducing liaison aircraft into the fire-marking business. The story goes that two of the high-ranking officers connected with the maneuvers met at the famous bar one day and gave birth to this brainchild. It it not part of the official record what type beverage is responsible for the ingenious innovation.

The procedure for marking fires is generally the same as that outlined in paragraph 34 of FM 105-5, the "Umpire Manual." The basic difference is that, in lieu of vehicular fire-marking details, there were airborne details who operated from L-5 liaison planes. Instead of using flags, the air fire markers used colored-smoke grenades. To be certain of continuous fire marking, the normal vehicular-borne details were also utilized; this was necessary because weather conditions often made the employment of aircraft impossible. Alternate radio channels were established for the ground and air fire-marking echelons.

The procedure used at the EUCOM maneuvers was that the umpire control officer (UCO) with each field artillery battalion S-3 section picked up fire missions as they were processed through the fire-direction center and broadcast the appropriate data to the division artillery UCO, requesting that the fire be marked. From there the call was relayed to the airborne markers who, after receipting for the message, proceeded to the indicated coordinates, dropped the smoke grenades, and reported the accomplishment of their mission back over the radio. Many times this procedure was simplified by eliminating the relay through division artillery, the battalion UCO contacting the aircraft direct.

The first maneuver phase produced 62% fires marked. During the second phase of the maneuvers, when the procedure was refined and simplified, statistics indicated that an average day resulted in 131 requests for fire marking, of which 125 were fulfilled, an average of 95%.

Needless to say, the realism was there. Depending on the skill of the pilot, the planes would swoop close to the ground before unloading their missiles. The ground troops felt the realism distinctly when the "fire" approached them in the form of a grenade weighing over one pound, heaved from a fast-passing plane. They unfailingly "hit the dirt," being pinned down as they would be by actual fire. It should be mentioned that not a single accident to any ground troops through grenades was reported, although thousands of grenades were thrown, all close to the troops.

In order to indicate various volumes of fire, three different colors of smoke were used; green for battery, yellow for battalion, and red for division artillery. The action of the ground umpires alloting casualties and delays in movement would be based on the amount of "fire" placed upon the troops. This was indicated by the number and color of grenades dropped.

The following data were required by the observer in the airplane to mark fires properly:

1. Concentration number
2. Time when concentration was to be fired
3. Type and amount of fire (battery, battalion, or division artillery; how many rounds)
4. Type of target
5. Terrain features in the vicinity of target to assist air observer in locating target
6. Coordinates of the target

Based on the experience collected during the September maneuvers, it is believed that it would be well to include in the above data information on whether the fire was observed or unobserved. In case of observed fires, the observer in the airplane might well disregard the coordinates to the extent of a few hundred yards to bring fire upon an identified target and report the fire back as effective. However, in the case of unobserved fires, should the air observer see no installation or troops, whichever the case may be, on the ground, he can save his "ammunition" and report the fire back as not effective. The observer's report after "firing" a mission should include:

1. Concentration number
2. Whether it was marked or not
3. Time at which concentration was fired
4. Whether or not the fire was effective
5. Whether the fire fell on friendly or enemy troops (if this information can be given)

A typical fire mission will go something like this:

(UCF 90 is division artillery umpire; UCF 91, battalion umpire; UCF 95, airplane)

UCF 91: UCF 90, this is UCF 91. Over.
UCF 90: UCF 91, this is UCF 90. Over.
UCF 91: This is UCF 91. Request fire marking, concentration one, immediately, yellow, riflemen in edge of woods near road junction, coordinate 016305. Over.
UCF 90: This is UCF 90. Wilco. Out.
UCF 90: UCF 95, this is UCF 90. Over.

UCF 95: This is UCF 95. Over.
UCF 90: This is UCF 90. Mark artillery fire, concentration one, yellow, riflemen in edge of woods near road junction, coordinate 016305. Over.
UCF 95: This is UCF 95. Wilco. Out.

After marking the fire at the designated coordinates, the pilot reports back through the same stations, his report being as follows: "Concentration number 1, marked at 1305. Fire was effective on enemy troops."

The above procedure can be modified by excluding the use of station UCF 90, the division artillery, and having the battalion UCO contact the fire-marking plane direct.

Where feasible, scheduled or prearranged fires should be made available to the fire markers prior to their take-off from the air field. This will eliminate much traffic over the air, making it easier for other fires to be requested.

In order to evaluate the effectiveness of fire marking, each aerial detail maintained a log of its activities. A form of this log is shown below. These logs were turned in to umpire headquarters daily and they were checked against the logs kept at battalion and division fire-direction centers. After this new system had been in effect a few days, it was working so effectively that the average elapsed time between the plot of a target in the fire-direction center and the marking was three minutes. Obviously this is far superior to any results vehicular marking could achieve.

The number of airplanes employed depends on several factors. Among these are the size of the artillery force employed, the restriction placed on the airplanes by the extent of the maneuver area (i.e., can they maneuver freely in the given space without endangering one another?), and the weather. In the Grafenwohr maneuver area as many as eight planes were flying over a very restricted space simultaneously (this number included normal artillery observation planes).

Some of the unexpected observations made include the following. When the troops fully understood the meaning of the smoke grenades, they were known to run up to a grenade just dropped, dig a hole and bury the grenade. This would prevent the umpire from assessing casualties or delays against them. Others, much displeased at being bombarded, took countermeasures and threw rocks at the planes which resulted in some good-sized holes in the planes' fabric. When a grenade exploded prematurely in an airplane, it caused no damage since it was thrown overboard before it could smoke up the cabin and blind the pilot.

Incidentally, it was found that the easiest way for the pilot and observer to share the load of navigating, preparing and throwing the grenades, keeping the log, and working the radio was for the pilot to do the navigating only, and the observer to take care of the rest.

By having the fire-marking planes in the air the umpire headquarters had the opportunity at all times to request special reports or obtain photographic coverage of certain phases of the maneuver, or direct any other mission within the capability of the 2-man airplane crew. The practice during the EUCOM maneuvers was to have as observer a trained ground-force officer or enlisted man who had experience in navigating and who was familiar with flying in L-5's. This made for a well-working fire-marking team.

The results achieved at Grafenwohr were generally praised by all concerned, and an official recommendation for incorporating the new system in FM 105-5 has gone forward through official channels.

AIR OBSERVERS FIRE-MARKING LOG

Observer_____ **Airplane Call Sign**_____ **Date**_____

Rec'd from	*Concentration No.*	*Color*		*Target Description*	*Coordinates*	*Effect*	*Friendly or Enemy Troops*	*Time Marked*

The Battle of the Hemp Bales

By Capt. William W. Barnett, Jr., Inf.

YOU WILL NOT find the "battle of the hemp bales" in many history books. Most that do mention it will devote only a sentence or two to the Battle of Lexington (Missouri) in September of 1861. Yet this seemingly unimportant siege provides several interesting bits of information which lift it above other small scale operations during the Civil War. Of primary interest are the tactics employed by the attacking forces to take advantage of the terrain, and the capabilities of the enemy weapons and defenses.

Events leading up to the battle began with a build-up of Union troops in Lexington during August, these to be further reinforced about September 1 by Colonel James A. Mulligan's "Irish Brigade." As an incident of the occupation of the town, the Federal force removed $900,000 from the local Farmers Bank. Colonel Mulligan's command (he as senior officer took charge of all the Federal troops, numbering perhaps 3,000) prepared a defensive position around the Masonic College building which served as headquarters. Entrenchments surrounded this building, and continued all the way around a point on the high bluff above the Missouri River at Lexington. Thus steep slopes formed the approaches to most of the earthworks; cavalry charges against the fortified position would be possible only from the town side.

The rebel troops, approximately 15,000 men commanded by Major General Sterling Price of the Missouri State Guard (Confederate), arrived in the vicinity of Lexington about September 9. This was reported to the next higher Federal headquarters as Colonel Mulligan asked that reinforcements be sent. For several days only scattered outpost fighting took place. General Price was waiting for ammunition wagons; the Union soldiers continued to improve their fortifications. On September 18, usually considered the first day of the battle, the Federal positions were taken under heavy fire. The Southern troops had been able to throw their lines completely around the Northern position, but generally were on lower ground. Main success for the Confederates the first day was the capture of a house close to the Federal entrenchments. Although this house was nominally a hospital, its position was such that Union troops were firing from a very close proximity to it if not actually from within it. The house changed hands twice more before the Confederates were able to hold it. Other than this minor engagement, artillery fire was the order of the day. Reportedly the Confederate rifles were of too short range to be effective.

On September 19, the heavy firing was continued and a column of General Price's force made a frontal assault on the earthworks, only to be repulsed. It is apparent that with his superior force General Price could have continued frontal assaults and eventually overrun the Federal position by sheer weight of numbers, though not without heavy losses. The stage was set, then, for the tactical move that would bring the fight to a close the next day. In an unofficial report (no official report reached higher headquarters; Colonel Mulligan's daughter furnished the Lexington Historical Society with what was said to be a copy of the report), the leader of the besieged force gives us this version: "The rebels appeared with an artifice that was destined to overreach us and to secure to them the possession of our entrenchments. They had constructed a movable breastwork of hemp bales, rolling them before their lines up the hill, and advanced their artillery under the cover. . . . Round shot and bullets were poured against them but they would only rock a little, and then settle back. Heated shots were fired with the hope of setting them on fire, but the enemy had taken the precaution to soak the bales in the Missouri and they would not burn." Colonel Mulligan's reference to artillery moving up under cover of the hemp bales seems doubtful; apparently a firing line was built up by pushing a few bales ahead at a time. (The later writer who called the hemp bales "Civil War tanks" may not have been far off in his language.) At any rate, it can be seen that General Price had done the unexpected in several ways. He had attacked up a slope in the face of dug-in defenders. He had attacked where cavalry support was impossible. He had provided his men with mobile protection as they moved forward. And if a legendary account can be accepted, he took advantage of a shortcoming of the enemy artillery — the story goes that the cannonballs rolled out of the cannon when they were depressed to fire down the slope!

Without doubt hemp-bale tactics hastened the end; supply made it certain. Part of Colonel Mulligan's force consisted of 600 cavalrymen with good mounts but not yet armed with carbines. These men apparently were not used mounted during the actual siege, and the horses made a severe drain on a water supply already limited. As the water supply became critical, ammunition also ran low, and here was the enemy coming closer and closer behind moving breastworks. It is no wonder a white flag appeared, though by whose orders no one seemed to know. Firing ceased, and a situation was presented which with a Federal victory might have made Colonel Mulligan a famed figure. General Price sent a note saying: "Colonel, why has the firing ceased?" Colonel Mulligan's reply is said to have been: "General, 'pon my honor I don't know, unless you have surrendered." Brave talk this, but no relief came; indeed, it seems that despite these words of resistance, the fighting was over. General Price accepted the surrender of Colonel Mulligan's entire force.

The political effects of this victory were not as great as General Price had hoped. He had thought that a success at Lexington, following close on Wilson's Creek, would bring Missouri into the Confederacy. He did succeed in getting some recruits for his force, but one of his officers noted that most of these scattered when word came a few days later of the approach of Federal troops. General Price had to withdraw on September 30, leaving Lexington and the hemp-bale battle site to the Union, Oh, yes, about that $900,000—General Price's men recovered most of it—and returned it to the bank!

FDC SIMPLICITY

By Maj. Robert B. Smith, FA

IS IT possible to keep a division artillery fire-direction center simple? It is!

It is erroneous to believe that a maze of telephones, an assortment of from five to ten "military strategists," with the inherent confusion of ringing bells, flashing lights, and shouting people, are necessary to get the job accomplished. While it can be and was done in this manner by many outfits during combat, fire-direction operation can be accomplished much more easily and more efficiently in a very simple way.

The solution to FDC simplicity is simplified communications. The fewer telephones and radios or remote controls, the fewer personnel are required to operate them. It enables better centralization of control through the division artillery 3 and a resultant saving in wear and tear on FDC personnel.

The 83rd Division Artillery FDC equipment consisted of 2 firing charts, 2 trunk-line telephones to the switchboard, one simplex telephone to the switchboard, one remote-control line to the radio truck for the 608 division artillery radio net, and one field desk. Personnel consisted of two officers and three enlisted men for 24-hour operations. (See Figure 1.)

"PARTY LINE SIMPLEX"

Communication control to four organic battalions was simply and efficiently handled by a "party-line simplex." (See FM 24-5.) Direct simplexes off the trunk lines between the division artillery FDC and the battalion FDCs were tied together at the division artillery switchboard and grounded, and one line was run into the FDC.

Confusion, you say? The "party line" didn't cause nearly the confusion present in a radio net, but a modified radio procedure was practiced. A system of rings was devised—one for each battalion, one for division artillery, and an "Attention, all hands" ring.

This is how it worked:

Division Artillery .... 1 long ring
322 FA (Light) Bn... 2 short rings
323 FA (Light) Bn... 3 short rings
324 FA (Med) Bn .... 4 short rings
908 FA (Light) Bn... 1 long, 1 short ring
All Hands..... 3 long rings

This last call brought all battalions onto the net regardless of where the call originated. It was normally reserved for division artillery as an outgoing call, however. On this call, the battalions answered, in numerical sequence, with their telephone code name, thus: Blackberry, Blood, Blank and Blackdog. If one battalion failed to answer, the next line responded after a reasonable pause and a direct call was made to the missing unit.

The simplex was used on special missions for fire control between two or more of the battalions. This contingency often arose when the medium battalion was in general support and was assigned for a particular firing mission to a light battalion in direct support. This line was not used for reinforcing missions, unless the line between battalions was not working.

The observance of courtesy and correct operating procedure, and a little practice, enabled two missions to be fired simultaneously over the simplex without difficulty. The system worked quite satisfactorily, and the efficiency was increased because the battalion S-3s and the division artillery 3 normally operated it themselves, enabling quick and personal contact among the fire-direction experts. This resulted in a speed up of operations and closer cooperation, coordination, and control of mass-fire missions.

Normal telephone traffic was conducted to the battalions over the trunk-line telephones, and the two FDC outlets were found to be adequate in the majority of cases. The few problems that required additional communications were solved by pressing one of the S-2 telephones into FDC service temporarily.

TYPICAL MISSION

Let us take a typical fire mission for an example of how the system worked:

Assume that two of the light battalions are in direct support. The third is in general support, reinforcing the fires of one of the direct-support outfits, and the medium battalion is in general support.

One long ring and the division artillery 3 has a fire mission on his hands. "Counterattack, crossroads at 67.560-88.448, request all available support."

Copying the information down on a concentration log attached to the firing chart, the S-3 quickly plots the target to check fire possibilities and finds it is within range for all four battalions.

Three long rings and all battalions report on the net. "Fire mission, all battalions, coordinates 67.560-88.448, 3 volleys, Fuze Quick, TOT 1017."

While this information is being given to the organic battalions, the S-3 motions to his assistant to relay the coordinates

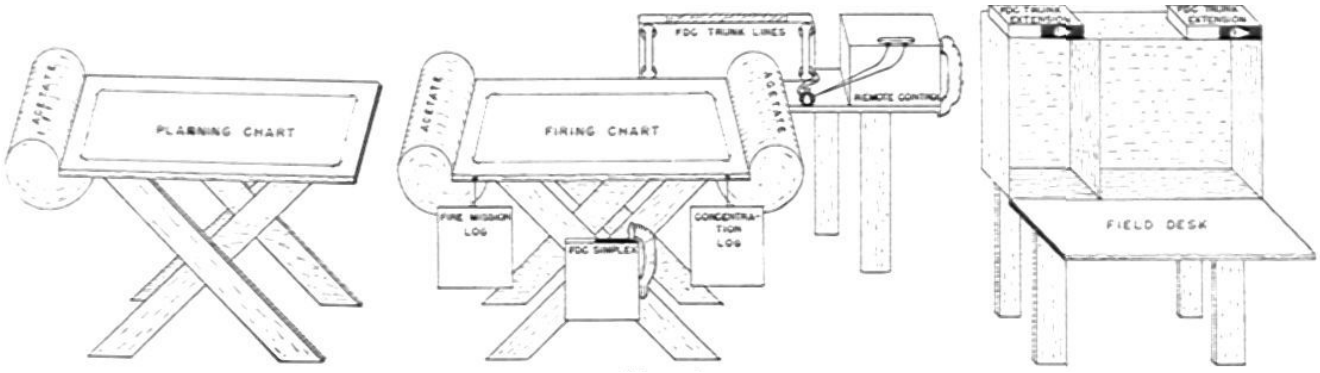


Figure 1.

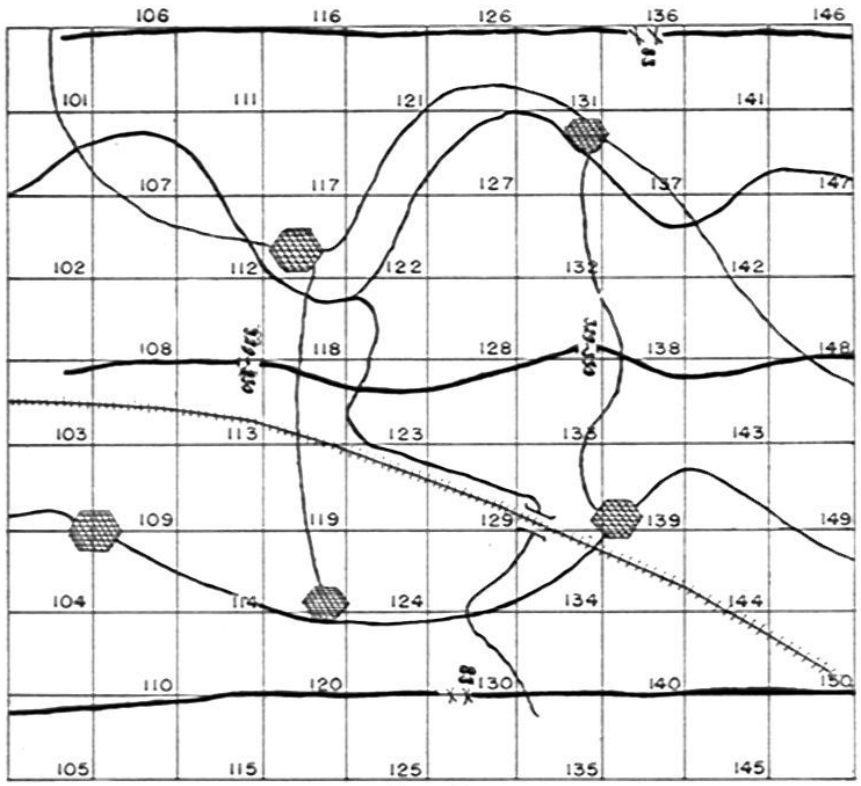


Figure 2.

to corps artillery, requesting additional support and to fire when ready.

If this had been an adjustment mission, the coordinates would have been identified as "warning coordinates" for preliminary data and the battalions requested to stand by for adjusted coordinates. These were reported direct by the adjusting battalion to the others and a request for "TOT" or "Fire When Ready" given by that battalion.

It's as simple as that. Normal time allowed from receipt of call for additional fire to TOT was five minutes. No elaborate hookups necessary, no pulling or pushing of plugs, no combination of persons to handle a complicated conference call. One person handled all four organic battalions, and only the request to corps required the aid of a second person.

SAFETY FEATURE

Another time-saving and important safety feature was the obtaining of fire clearances from adjacent battalions over the simplex. Division artillery 3 was able to follow the conversation and to obtain the information, but allowed the actual clearance to be given by the direct-support battalion. "No Fire" lines were transmitted over this facility to all concerned at one time, as were metro messages.

A lot of conversations and superfluous messages? Maybe, but when you consider the speed with which these data were transmitted, there was more time available for this usage. Efficient use of the system and the exercise of common sense by all concerned made the "party-line simplex" work — and work quite well.

How about distances for this type simplex? This arrangement worked in Luxembourg at a time when no battalion was closer than three miles to another, and, including the attached 9th Armored Division Artillery, their entire front extended well over 30 miles. The trunk line to the 9th was nearly 60 circuitous, winding miles, with a ground return of about 15 miles. Trunk lines to the organic battalions averaged from 6 to 15 miles, with the ground returns from 6 to 10. It worked quite satisfactorily utilizing commercial lines for trunks.

On numerous occasions, attached battalions were added to the "party-line" burden. These "guests" were assigned two longs rings and oriented into the mechanics of country telephoning. There was no noticeable drop in efficiency.

RADIO-TELEPHONE HOOKUP

To make remote control operation even better, a smart and enterprising communications officer put into working shape a simple request for the division artillery 3 that enabled direct radio-telephone communications from air observer to any person on the telephone net.

One trunk-line FDC telephone was set up next to the 608 remote-control unit. Two short pieces of copper wire between the terminals of the telephone set to the terminals of the remote-control set, with a toggle switch to effect the connection, was one-half of the setup. An amplifier at the radio trunk end of the remote-control line and a fire-mission-wise radio operator on the 608 completed the set up. (See Figure 1.)

This gadget was of invaluable assistance on numerous occasions, one of which is illustrated here:

An infantry mission required the "artillery bombing" of a German village near Zerbst, just outside the Barbe bridgehead over the Elbe river, which was used as a concentration and assembly point for counterattacks against the bridgehead troops. Corps artillery loaned a 240mm howitzer battalion for the mission, which was contacted by telephone. The air observer on patrol was contacted by 608 remote control and requested to adjust the heavy battalion on the designated target. When the observer was ready to observe, the battalion was notified to stand by. The toggle switch was thrown and division artillery stepped out of the picture until the mission was over. Thus the mission was efficiently and effectively handled without prior arrangements or unnecessary relay of sensings.

GRID CODE

A problem confronting any division artillery on rapidly moving situations, such as the 83rd's wild dash from the Rhine to the Elbe, is that of a grid-coordinate code system to quickly and easily identify grid squares without undue

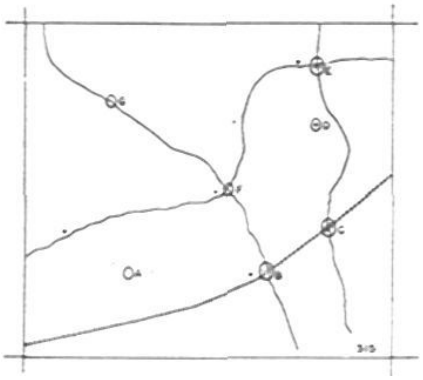


Figure 3.

complexity. This was easily solved by numbering alternate grid squares in the division zone in a checkerboard fashion (See Figure 2). The unnumbered squares were referred to in relation to a numbered one. Coordinates were given thus: "Square 115, coordinates 57-66," or "Square North of 150, coordinates 675-432."

Overlays of the grid-square numbering, covering the division sector, were sent to each battalion FDC and to the Division Artillery Air Officer. The Air Officer was responsible for briefing all observers and seeing that their maps were properly marked.

These overlays were issued sufficiently far in advance to insure receipt by using battalions before the area covered by the overlay was reached by the infantry elements. Use of the system enabled relative ease in reporting target designations, setting rendezvous points, reporting advance elements, announcing new objectives on the run, or assigning battalion position areas without having to physically contact each battalion.

Concentration numbers assigned by division artillery were designated by the grid-square number plus a letter. The first concentration number in square 315 became "315A," the second "315B," etc. It was marked on the firing chart by simply placing an "A" beside the target within the proper square. (See Figure 3.)

Division artillery reports and records were kept to an absolute minimum consistent with the requirements of higher headquarters.

FEW PERSONNEL REQUIRED

Operating personnel was kept to a minimum, enabling the efficient use of shifts during the day or night. Normally, one officer plus an operations non-commissioned officer were sufficient. The officer controlled the simplex and fire control, while the non-commissioned officer answered the trunk lines and remote control.

One firing chart was maintained in the FDC. (Figure 1.) A large folding table was utilized, using two pieces of heavy acetate which covered the entire table, one being hinged to each side of the table. One acetate was used to carry boundaries, objectives, "No Fire" lines, and battalion position areas, showing each battery location. The second acetate contained the fire-possibilities chart for each battalion and gave detailed information as to centers of fire, base points, check points, and battery locations. Concentrations were plotted directly on the firing chart itself and were logged on a concentration log with the appropriate data.

A second table was used for planning purposes, normally reserved for the Commanding General. A field desk was utilized for records and files.

Simple, isn't it?

The Sentry's Shorthand

By Jerome Kearful

IN 1900, Theodore Roosevelt attended a Rough Riders' reunion in Las Vegas, New Mexico. It was the home town of Ralph McFie. McFie had been a soldier in the Spanish-American War. At a gathering of the Rough Riders, Roosevelt said: "There, gentlemen, is the lad responsible for the American victories at San Juan Hill and Santiago." McFie earned this high praise because he knew shorthand and used it at just the right time!

One day, during the campaign in Cuba, McFie was assigned to sentry duty. Nothing out of the way seemed to be happening as the studious youth from New Mexico carefully patrolled his post. Then, as he paused quietly for a moment, he heard sounds in the underbrush. Surely several men were approaching in the direction of the American camp. McFie, scarcely daring to breathe, waited without stirring a muscle. Soon, he heard faint sounds of Spanish spoken.

When the Spaniards were almost on top of him, they paused. By this time, the American soldier could hear them quite plainly. The group was apparently composed of a Spanish officer and several of his subordinates. Then, while McFie listened with growing astonishment, the officer began to outline to his men the Spanish plan of battle for the ensuing moves in the campaign!

The young American realized that, by chance, he had come upon something very important. Fortunately, he could understand Spanish, but he could not trust himself to remember what was being said. Quickly he pulled a small notebook and pencil from his pocket and started taking the conversation down in shorthand.

McFie waited in concealment until the Spaniards had passed on their way. Then, he hastened in excitement to the Rough Rider Headquarters. When he arrived there with his news, he was charged with deserting his post! However, Roosevelt soon heard what had happened, and he at once sent for McFie. He soon straightened things out for the young soldier, and assured him that what he had learned would prove to be of the greatest value.

It was! With the information about the Spanish plans that McFie had quickly and accurately written down in shorthand, the American forces were able to make their moves with great success. Roosevelt attributed the defeat of the Spanish at San Juan Hill, and later at Santiago, largely to the information gained by the young shorthand student from New Mexico. No wonder that the colonel of the Rough Riders singled him out for particular praise!

PARACHUTING ISN'T GETTING EASIER

By Lt. Comdr. Malcolm W. Cagle

YOU'VE PROBABLY held your hand out of your car at sixty miles an hour. By flattening your palm and extending your fingers, you could plane your hand through the air on an imaginary roller coaster. And if you've flown in the rear seat of a small plane and stuck your head out in the slipstream, you experienced a sucking feeling on your eyes, and had your mouth blown open. But nobody can tell you how it feels to stick your hand or face out in a 600-mile-an-hour breeze — for nobody has actually done it and lived.

The advent of the jet aircraft and transonic speeds has produced some perplexing problems — none of them more baffling than how to get out of a fast-flying aircraft. Doctors aren't sure, but they believe that the blast effect of a 600-mile-an-hour slipstream striking an unprotected body would snap bones, burst lungs, rip eyes from sockets, and flesh from the face. Standard parachutes aren't much help at present, since none of them can withstand an opening speed of more than three hundred miles an hour. What's more, neither can the pilot. Engineers estimate that opening an ordinary chute at six hundred miles an hour produces a deceleration of around fifty "G's" (one G is equal to weight)—more than twice what anatomical limits can stand. It's small wonder that most of our military and experimental pilots are flying their speedy steeds with their fingers crossed.

In the first World War, the Allies never got around to accepting the parachute for airplane pilots, although the Germans used them briefly but successfully. In fact, it was not until 1922 that an order was issued by our Army making mandatory the wearing of a chute. A great many of the brass hats, and the infant airlines, thought that if a pilot were given such an easy and foolproof way of abandoning a plane in flight, a great many planes would be needlessly lost. These pioneers reasoned that if the operator had no chute he would have no alternative but to stick with the damaged or weather-bound plane, and try to set it down in safety.

But this reasoning was fallacious, especially to an American. We have always upheld the worth of the individual and reckoned him more important than the machine. The recent war amply vindicated this theory. While the Japanese omitted such items from their airplanes as armor plate, bullet-proof glass, self-sealing gasoline tanks, and even parachutes themselves, our aviation designers calculated that if the pilot were given every protection and consideration for living to fight another day, he would be a *better* fighter. The sooner a safe and reliable method can be developed for our military pilots to abandon a damaged or defective high-speed plane, the faster our entire aeronautical progress will be.

Parachuting from a plane is no longer the simple Hollywood technique of standing up in the cockpit and making a graceful swan dive over the side. Nor does the pilot crawl out on the wing and slide off. Such jumping techniques are as old fashioned as high-button shoes and hoop skirts. Jet aircraft must operate at high altitude; if they stay low, their fuel consumption goes as high as the cost of living. Thirty or even forty thousand feet is a comfortable and economical altitude for them. If a pilot suddenly loses control of his plane six or seven miles up, or loses an engine, or his plane catches on fire, or is damaged by enemy action, he must face two other formidable problems beside the hazards of actual jumping—oxygen starvation and freezing. At forty thousand feet, the temperature is almost seventy degrees below zero. At twenty-one thousand feet, there's so little oxygen a candle will not burn. At thirty thousand feet, a healthy individual will faint from anoxia. At forty thousand feet without oxygen, the average person will die in less than 5 minutes. Since it takes almost 20 minutes in a chute to float from 40,000 feet to the ground, the escapist losing a glove or a shoe in the snap of the bailout (which occasionally happens), stands an excellent chance of freezing a hand or a foot. The problem, then, is not only how to get the pilot safely out of the plane, but to get him back to the ground with enough oxygen to keep him alive, and enough warmth to keep him mobile. It appears likely that the military aviator of the future will carry his own portable oxygen bottle and have a pressurized and heated flying suit.

A great amount of experimentation is being done on the parachute, the oldest and most reliable of all aviation safety devices. The parachute hails back, in theory at least, to the pages of Leonardo da Vinci's sketch book. The first recorded public jump happened in Paris, France, on 22 October, 1797, when a Frenchman by the name of Garnerin jumped out of his captive balloon from two thousand feet. His parachute was a big twenty-three foot canopy of white canvas, in the top of which was a ten-inch wooden disc with a hole in its middle to allow the captured air to escape. Surprisingly enough, his parachute design was approximately the same that is used today a century and a half later. The standard silk or nylon chute has a 24 diameter, can withstand a sixteen "G" opening, and will let a 200-pound man fall at the rate of about fifteen miles an hour. But if this chute is used at speeds in excess of two hundred and fifty miles an hour, the fabric is shredded, shroud lines popped, and the poor pilot violently jolted when the canopy "blossoms."

The US Navy has come forth with several good ideas for improving parachutes. One recent development is a

new nylon fabric which has so far escaped both clothes horses and the glare of the "New Look." It is a waffle-weave material called 'rip-stop" nylon which raises the permissible chute-opening speed by more than fifty miles an hour. To lessen the danger of tearing and shredding, a tough cross-thread is sewn into the fabric every quarter inch. If a tear develops, it tends to restrict itself between cross threads. Another chute undergoing trial, which has been successfully tested to over four hundred miles per hour, is a two-piece affair consisting of the main canopy and a "cap." The cap is attached to the rest of the chute with heavy elastic cords, and at high speeds opens from the rest of the canopy and lets the entrapped air escape. Neither of these two, however, is the desired answer. Fundamentally, the ideal chute is one which can withstand an opening shock of 600 or more miles per hour, open slowly enough to prevent injury to the pilot, and descend slowly enough to allow an easy landing.

The Germans made considerable progress the last years of the recent war in parachute design. One of their innovations was the so-called "ribbon" chute. As the name suggests, this chute was made of silk ribbons, sewed closely together in concentric circles. Instead of the air escaping out a vent-hole in the top, the air was squeezed out between the ribbons. This chute had several advantages that the Navy was seeking — it could be used for much higher opening speeds, it did not tend to oscillate as much as the standard chute, and once streamed, it opened with a less severe snap on the pilot — a mild three "G's" as compared to the standard chute's fifteen or sixteen. But the ribbon design had faults too. It was slow in opening— which meant that a low-altitude bailout would probably be fatal; it fell at the much faster rate of forty-three feet a second — a man hitting the ground in it would probably fracture both legs; it was twice as bulky and more difficult to construct; and when packed for a long time in damp weather, the ribbons tended to stick together.

Whatever changes are made in parachute design, the chute will probably be only a part of the escape mechanism in future high-speed planes. The most promising idea to come forth thus far has been the "capsule" or "escape-egg" plan. The idea is not new — merely a refinement of the daredevil stunt of riding an oaken barrel over Niagara Falls; or the escape "bell" used on damaged submarines. The pilot detaches himself with one part of the plane (usually the cockpit section) from the rest of the plane. This is not as simple as it sounds, for in addition to the separating mechanism, some means of severing electrical wiring, control cables, and fuel, hydraulic, and oxygen lines must be provided. Moreover the escape egg must fall freely after detachment without tumbling or spinning. If it tumbles or spins the pilot may be thrown against the sides and injured, dazed by vertigo, or pinned inside by centrifugal force. Tests in the wind tunnels are expected to solve these stability considerations. When the "capsule" has slowed sufficiently to permit parachuting, the pilot makes a standard exit. This method has already been built into several American planes, but never yet actually tested. The Navy's Douglas "Sky-streak," holder of the world's speed record, has this type of escape mechanism.

Another method which the Germans innovated, and which their records reveal was used successfully sixty times, was the "hot-seat" method of bailout. In this, the pilot's seat was made detachable, built onto guide rails, and a small explosive charge provided in a chamber beneath, to actually shoot both seat and pilot out of the plane and into the clear. This was used on at least six German jet aircraft, principally Messerschmitt 163's and 262's. For power, in addition to gunpowder, the Germans used hydraulic and air pressure. The US Air Force's F-80 "Shooting Stars," F-84 "Thunderjets," and experimental Bell XS-1 "Needle Nose," all incorporate this type of pilot ejection. Our doctors are just beginning to find out what forces of acceleration and deceleration a man can stand in this escape method. The nearest thing to it that had ever been done in America before was the clown in the circus sideshow who got "shot" out of a fake cannon into a rope net. Tests were made, and it was found that about twenty upward "G's" was the limit. Any more sudden force caused bones of the body to give way. One of the doctors suggested that the pilot be shot *downward* and eliminate the extra force required in an upward shot to clear the plane's high tail surfaces. It was found that only about one fourth as much *downward* force could be withstood— mainly because a man's head, neck and shoulders don't have the padded pushing area which his bottom has.

The Navy has made only one actual jumping experiment using the "hot-seat" method. The Air Force has made two. The Navy's test was made several months ago at Lakehurst, New Jersey, from a twin-engine attack-type aircraft flying at 250 miles per hour. The volunteer was LT (jg) Furtek, who luckily wore two chutes for the occasion. The explosion mechanism worked perfectly, for Furtek was shot clear of the vertical tail of the plane nicely — but the automatic attachment releasing the chute failed. Furtek cracked his emergency chute and made the descent safely.

Detaching one part of the plane from another part also has its headaches. Whenever a safety device is added to any piece of machinery, human nature can always find a way to beat the system. Even today, pilots still land occasionally with their wheels up, despite howlers, horns, buzzers, flashing red lights, radio warnings, danger rockets, and a dozen other safety devices. The Germans recorded at least one case of the pilot inadvertently working the escape egg mechanism during flight, and dividing his airplane in two. Like death and taxes, human error will always be with us.

The speed-of-sound age has arrived. It brought many headaches when it came, all of them as tough and thorny as this high-speed bail-out problem. Each will be solved; but the solutions will take time, research, ingenuity, and money. If you're interested, membership in the Caterpillar Club is still open. But business isn't rushing and applicants are not so frequent these days.

THEY CALLED HIM A FLAG-FLOPPER

By Emmett E. Robinson

ATOP a sun-baked mesa in New Mexico a lone Comanche raised his war lance and waved it. His comrades, battling some miles away with another tribe, saw the movement. They halted their charge, wheeled their mustangs, and retreated over the buffalo grass at top speed. That one movement of the lance had told them the enemy was being reinforced.

On another hill stood a tall, erect young man. His piercing eyes took in every detail of the skirmish with an interest equal to that of the Comanches. He was already known as a man who would take hold of an idea and follow it through its length and breadth, developing all there was in it or to it.

The Indians disappeared. The young man returned to camp and began work on an idea which carried him through nearly thirty years and a series of successes and defeats. Today the idea, as developed by him, affects the daily life of people all over the world.

The man was 24-year old Lt. Albert James Myer, an assistant surgeon in the U. S. Army. Out of Myer's original idea—that such motions as those used by the Comanche warrior could be utilized for connecting adjacent military posts or units—came the U. S. Signal Corps, U. S. Weather Bureau, International Storm Signal Service, and the flag signal systems used by the U. S. Navy and Boy Scouts.

A former apprentice telegraph operator and heir to a considerable fortune, Myer became interested in the art of motion telegraphy as a student at Buffalo Medical College. In doing research for his thesis, "A Sign Language for Deaf Mutes," he probed into its military aspects. Myer found that from the remotest times the maintenance of communications by transient signals had stumped military commanders. When simple, the signal was inefficient; when efficient, it was so unwieldy as to be impractical. Myer believed there was an answer somewhere.

After graduation Myer established himself as a physician. He practiced successfully for three years before he asked for and received a commission in the army. He was sent to New Mexico, where he found the answer—in the movement of a Comanche lance.

The young surgeon devoted all his leisure hours to his idea. By 1856 he developed a simple yet efficient system for military signalling. He headed east and took out a patent on his invention.

When Myer presented it to army officials, he met with stiff opposition. They scoffed when he said he had devised a method by which he could write any sentence by means of three motions of a flag, or of a torch at night, and that this could be read at a distance of many miles. "What," the officials asked, "would a noncombatant know about military affairs?"

Undaunted, Myer still believed in his system. He struggled for two years before a board finally directed him, through the Secretary of War, to conduct experiments. The experiments, much to the surprise of army officials who had belittled the "flag-flopping" and "wig-wagging," proved successful.

Secretary Floyd commended the system to Congress, which then appropriated $2,000 for equipment. The bill added to the staff of the army one signal officer with the rank of major. Myer became the major.

It looked like a victory for Major Myer. But the real test was yet to come. Myer received orders to try the system under actual field conditions in the Navajo campaign in New Mexico. In this campaign, as in later years, he found his main opposition came, not from the real enemy, but from army officials. Military commanders turned cold at the thought of detaching officers and men from the fighting forces to flop flags and wag torches. To aid him in the Navajo tests, Myer asked for three officers to whom he had given some previous training in signalling. He received none. However, one of the three, Lt. E. P. Alexander, later came to Myer's aid, but in a completely unexpected way.

Major Myer finally received two officers, both inexperienced in signalling. He trained them for a month and entered the field against the Navajos in the country below Zuni. The terrain was rough. Frozen streams cut off the water supply. But the expedition proved that, as an auxiliary in Indian warfare, signalling was successful.

After the expedition Myer asked his men for suggestions or improvements. He moved with his men. He saw what each did and made a note of it. Nothing escaped his attention which might enable the signal system to serve the country. The chance to serve came soon—in the Civil War.

Soon after the war started, Myer opened a school of signal instruction for the Union Army at Ft. Monroe. He

ran into two difficulties—getting supplies and trained instructors. One signal officer, on presenting a requisition for horses to the quartermaster, cooled his heels eight hours before receiving them. "Even then," the signal officer said later, "the man acted as if the horses were his private property." The other difficulty was equally serious. When a lieutenant entered the signal service, he gave up all hope of promotion. He was condemned to stand still, although performing hazardous acts with brilliant courage.

Myer knew that brave men readily accept a position of danger when it becomes a necessity, and reward is never the consideration anticipated. But few desire to risk their lives when it is a certainty that all honors will accrue to others. The solution lay in the organization of the signal service on an independent basis, with its own table of organization and ratings. This Myer set out to do. Here, again, he met with opposition. High officers claimed the service and its men had too much independence as it was.

One general in command at the upper Folly Island happened along just as a signal officer was calling the steamer *Mary Benton*. The general asked the lieutenant what he was signalling. The lieutenant said he was saying a few words to a Lt. Town.

"What are you going to say to him?" asked the general.

"That some signal stores have arrived at Pawnee Landing, sir."

"Well, that's all right," said the general, "but you mustn't send any messages without submitting them to me for approval. You must give me a copy of all messages you receive."

The lieutenant explained that he was not allowed to disclose the content of official messages, except to the parties to whom they were addressed and the Chief Signal Officer.

"What!" cried the general. "Do you think that you, only a lieutenant, are going to dictate to me, a general? Go to your quarters in arrest!"

On another occasion, a lieutenant on General Burnside's staff rode up to a signal headquarters. He jumped off, handed the reins to a flagman, and said, "Orderly, hold my horse."

"No orderlies here, sir!" said the flagman, saluting.

"And what are you, an officer or a man?" asked the surprised officer.

The flagman stared straight ahead. "A man, sir!"

The enraged lieutenant reported the matter to General Burnside, who went to the Chief Signal Officer. The flagman was put on the unassigned list. This deprived him of his horse, so he asked to be returned to his regiment. The signal service had lost another good man.

The situation grew worse before it was solved. The answer came in the very early morning. A man stood at his station on a hill near Union Mills Ford, watching the flag of another station at Stone Bridge. Suddenly, the man tensed as the gleam of polished brass field pieces caught his eye. Observing more closely, he saw an enemy column crossing Bull Run in the open field north of Sudley's Ford. It was fully eight miles away, but he could tell it was an attempt to flank the Confederate forces. The observer, by waving his flag, warned Confederate generals, who hurried in that direction. They successfully delayed McDowell, the Union general, until the tide of the first Battle of Bull Run was turned by the arrival of troops in the afternoon. The man on the hill near Mills Ford was E. P. Alexander, the same young officer Albert Myer had trained in signalling.

At the outbreak of the war Alexander reported to Jefferson Davis, who refused several applications for him by officers of different departments. Davis gave Alexander a free hand to organize and introduce a signal service into the Confederate army.

Union officers realized the importance of a well-organized, stable signal service after Bull Run. Officers who had once called Myer a flag-flopper now asked for signal officers. That was the way Alexander helped his former teacher.

Myer supplied as many trained signal officers as possible. However, he was still plagued by one thing—the withdrawal by generals of men detached to him. To end this practice, Myer drew up a plan for the organization of the signal service on a permanent basis. It failed to pass Congress. The objection was that a new and expensive addition would be made to the army which would not be warranted after the war was concluded.

Undaunted, Myer wrote Secretary Stanton in April 1862, and urged him to support the bill in Congress. It passed the House but was postponed indefinitely in the Senate. Major Myer sent another letter to Stanton in January 1863, informing him that the Confederate Congress had organized a permanent Signal Service. "The contest," Myer wrote, "is not a fair one."

Then success came. In the last hours of the 37th Congress, the Signal Corps was organized on a permanent basis for the remainder of the war. On September 18, 1863, Myer was appointed Signal Officer of the Army with the rank of Lt. Colonel.

Barely two months later a crushing blow was delivered to the man who had fought so hard through the years. He was ousted as the head of the Corps which he had created!

Myer's downfall grew out of his desire to extend the services performed by the Signal Corps. After the Battle of Bull Run, unit commanders were quick to realize the value of good communications. They asked Myer to string telegraph lines between their units which could not be reached by his torch and flag signals. This Myer proceeded to do, stringing 5,000 miles of lines on a small budget. The telegraph lines proved successful after Union soldiers realized what they were. One soldier was found cutting away at a line. When asked what he was doing, he said the thought it was some "infernal rebel machine" and that he was cutting off little pieces to send home as souvenirs.

The lines were not popular in other quarters. To combat this, Myer sent all signal officers a circular in which he stated that an attempt was being made to throw the management of the lines into the hands of a private telegraph company. He urged all officers having control of lines to maintain their rights to that control.

As a result, Myer was ordered before the Secretary of War. The Secretary retired him to Cairo, Illinois, to await orders. He spent the remainder of the war as Signal Officer of the Division of the West Mississippi. Another man

might have given up, but not Albert Myer. He wrote a friend, "I am hard at work but making little progress. Never mind; secretaries are not immortal." Part of this work included the writing of his *Manual of Signals*, published in 1866.

As early as January, 1865, Myer began his battle to be restored to what he considered his rightful position. He wrote the Senate, President Johnson, and Generals Grant, Sheridan, Sherman, and Thomas, showing his connection with the origin and development of the Corps, stating his grievances, and asking for simple justice. Most of the generals, remembering the service rendered them by Myer's flag-flopping, came to his aid.

Four years after being demoted Myer won the battle. In August, 1867, he again assumed charge of the Corps. Almost immediately, Myer began working out a course of usefulness for the Signal Corps in peacetime. For some years prior to the Civil War, the Smithsonian Institute has issued weather predictions and storm warnings based on telegraphed weather reports. A fire prevented them from resuming the practice, so Myer proposed that the Corps enter the field of weather reporting.

Myer's plan passed Congress in 1870. On November 1 of that year, for the first time in the history of meteorology, simultaneous observations and simultaneous reports were issued from twenty-four stations over the United States. From this beginning our present day bureau developed.

"Old Probabilities," as Myer came to be called during his ten years as head of the bureau, represented the United States at Meteorological Congresses in Vienna (1873) and Rome (1879). He succeeded in his efforts to establish a uniform system of simultaneous meteorological observations the world over. He received the rank of Brigadier General in 1880, a few weeks before his death.

It was during these last weeks that an anxious friend urged him to take a rest. Myer's reply summed up his entire life. He said, "What rest would it be to me if I left my work unfinished?"

The British Went to Dinner

By Jerome Kearful

THE fortunes of war once turned upon a dinner-party! It happened in the War of 1812.

When the War of 1812 started, the young American Republic had to look to the defenses of its Northwest frontiers to guard against an invasion from Canada that might prove highly disastrous. Security from attack by the British required command of the Great Lakes, and that was a responsibility of the American Navy. The British were in practical control of the Lakes at the start of the war, and it was up to our men to drive them off. It was a tough assignment for any commander to undertake, particularly when the ships to do it were practically nonexistant!

That task went to a young officer, Oliver Hazard Perry, in the early days of 1813. The port of Erie, on Lake Erie, was to be his base of operations, and he arrived there to take command in March. The discouraging situation was a challenge to Perry's enthusiasm and ability. He rushed the ships that were building towards completion and used every possible device of persuasion and official channels to increase the tiny trickle of recruits that he was receiving.

As the ice began to clear out of the port, it became just a question of how and when Perry's fleet would meet the British. By construction and purchase, he had by this time nine ships. Of these, only two, the brigs *Lawrence* and *Niagara*, were large enough to meet the British on equal terms. On the Lake, a sizable British fleet under Admiral Barclay cruised in security, keeping an eye constantly on the port of Erie.

Just outside of Erie was a sandbar. The *Lawrence* and *Niagara*, because of their draft, could not pass it with their full equipment and mountings. Unless Perry could get them over, his task was hopeless. The only way in which it could be done would be by floating the heavy equipment over the bar in barges and small vessels and then replacing it when the brigs were safely across. But that was impossible as long as the British fleet was cruising outside the port. They would swoop down on the heavy brigs while defenseless and make short work of them! The dilemma appeared to be insoluble.

Perry could do nothing but wait, instruct and drill his men, still insufficient in numbers. For several weeks the Americans remained fretfully inactive, impatient with so unpromising a situation. Then came the break, and Perry took quick and full advantage of it! Here is how it happened.

Some citizens of the town of Port Dover, Canada, loyal to the British cause, despatched a message to the British commander Barclay requesting his presence and that of a number of other officers for dinner for a few hours on a certain day. The British, worn out by their fruitless weeks of blockading Perry, decided they could safely slip away for just a short time. They took sail for Port Dover and a bit of social relaxation. Perry, on the alert, acted immediately!

The *Lawrence* and *Niagara* were immediately dismantled and taken safely over the bar. There, with frantic haste, they were refitted. The smaller ships crossed with no difficulty. The refitting of the two brigs was scarcely completed when the British hove in sight again, returning from their dinner party. In their amazement, the British avoided the inevitable battle for a time.

But not for long. There followed shortly the bitter and dramatic battle of Put-In-Bay. Perry's intrepid move in a smallboat to a new flagship in the thick of conflict eventually turned the wavering tide of battle. Finally, came victory, and Perry's message, "We have met the enemy, and they are ours!"

A dinner-party contributed to a success ranking high in the episodes of naval history!

The Postwar Russian Army

By Lt. Col. Jerry S. Addington, FA

ONE doesn't read much about what goes on in Russia these days. One reads less about what takes place in the Russian Army. Ye author has what might be called the hot poop, if you haven't heard it before, re: Post-war Activities of the Russian Army. Don't ask me yet how I found out all of this. I just hope I can get it all by the censor.

The Russian army, by demobilizing some 30 classes of conscripts shortly after the end of WW II, depleted itself down to a mere shadow of 3,800,000 men in 1947. Most of these classes would, if they were in our Army, be called "basics," which means that by discharging them their army lost very little of what we have come to call "know how." This naturally means that the remaining force has many of its original technicians. Also by punching and lifting out the proper personnel cards, or whatever it is they punch and lift out, they have retained quite a few armored-force troops. The result is that the Soviet Union has an army with positive capabilities when it comes to armored warfare. Apparently they didn't have to recall their counterpart of General Hershey . . . they kept him right on the job to operate a selective service which conscripts 800,000 to 1,000,000 men yearly into their army for a two-year training period. At the end of this period these Umtees a la Kremlin are placed in the reserves. Calculations show that by 1955, which is nearly six years away, Russia will have 15 to 20 million trained reserves.

During the recent war I remember having to crawl through a combat course, once by day and once by night, before I could be declared ready for combat duty. The Soviet soldier has to have an entry on his card also; by that I mean that he has to go through a course of indoctrination in Marxist philosophy before he is fit for occupation duty in Germany. This is necessary so he will not become contaminated by contact with the outside world, the outside world being a way and products of a way of life, known to him as bourgeois, that exist from two inches outside the "iron curtain" in Europe westward around the world to Sakhalin. After the recent war the combat veterans were screened on their return to Russia and those contaminated were reindoctrinated before being discharged or placed in the professional cadre of their army. This cadre is not something to be lightly mentioned. It consists of some 2,000,000 officers and men, and it is in addition to the conscripts that come in for their two years of training.

The Soviet army has been able to have divisional and corps maneuvers since the war because of the large number of men on occupational duty. They have employed a lot of armor in these exercises. The Soviet GI is getting broader military training now than he did during WW II, when he only learned discipline, the ubiquitous political ideology, his weapon, and squad and platoon tactics. The narrow training of the wartime years stood out like a sore thumb when Ivan Skivar was placed on occupation duty. They have increased the firepower of their armored units and have assigned at least one tank regiment to each rifle division. It is more than a rumor that they are developing special units trained in breakthrough operations.

Not much is known about the disposition of the Soviet ground troops, but it would be reasonably accurate to say that from 75 to 80 divisions are on occupation duty in eastern Germany, Poland, Rumania, Bulgaria, Austria, and Hungary. Twelve to fifteen divisions were on duty in Northern Korea in 1947. Not to be overlooked is the little matter of instructional groups left by the Soviet army in Yugoslavia; in view of the recent Tito-Moscow relationships, it is probably a safe bet that these troops are due for a refresher course in Methods of Instruction. In Poland many army officers are in Polish uniform; there is nothing unusual about that—in fact, it would hardly be worth mentioning except that many of their pay vouchers are figured in rubles, not zlotys. The Soviets have six armies of about twenty divisions each located in the following general areas: Leningrad, Minsk, (no, I am not going to say Omsk), Odessa, Tiflis, Tashkent, and Vladivostok. Before you grab your atlas, Tashkent is in Turkestan, and Tiflis is in the Caucasus area.

Since the war the Soviets have also given quite a bit of attention to developing a professional corps of officers. Whether this development includes a policy of sending them to civilian colleges, as is the case in this country, remains doubtful until one realizes that in Russia there is no such thing as a civilian college as we know it. At any rate, since the war the officers have been given new privileges, higher pay, and increased authority. As a matter of fact there are signs of a resurrection of tsarist officer uniforms and traditions among the commissioned personnel of the Russian army.

In 1947 the Russians spent over $1,200,000,000 on military research. In addition to this, about $9,000,000,000 was spent on new equipment. Their military research includes their atom bomb project, a factor of no small concern in international diplomatic circles. What they lack in scientists at home they make up for in German scientists imported for their technical and theoretical skill. There were over 400 German scientists working on research projects in Russia last year. They have done considerable work on guided missiles, aircraft, and tanks. Regarding tanks, they have developed what is reported to be the largest in the world.

Now you may ask how I know all this inside dope about the Russian army activities. When I tell you, you will also know why it is that I got it all by the censor. The plain truth is that I too read encyclopaedias that solicit material from the intelligence service in Washington. I wonder if there are any other "hot poop" artists who do the same thing?

PERIMETERS in PARAGRAPHS

By Col. Conrad H. Lanza, Ret.

THE COLD WAR

Prepared by a widely-known military scholar and writer, PERIMETERS IN PARAGRAPHS is a recurring feature dealing with the military, political and economic realities in world affairs. Whereas an understanding of these realities is deemed essential to the American soldier, it is emphasized that PERIMETERS IN PARAGRAPHS reflects the opinions of the author, alone. This installment covers the period 1 January - 28 February 1949.

THE NORTH ATLANTIC ALLIANCE

THE major strategical factors affecting the nations of West Europe have included:

1. A horror of being absorbed by Russia.
2. The fact that the West Europe states were either disarmed, or insufficiently armed, and consequently unable to protect themselves against invasion.
3. The general impoverishment of West Europe, which made it impossible to finance defence measures which would suffice against such a powerful antagonist as Russia and its satellites.
4. Distrust of Germay. There was general agreement that Germany must be kept disarmed for fear that she might join Russia, which, if it happened, could be expected to result in the disappearance of liberty throughout West Europe.
5. A doubt as to whether the United States could, and/or would aid West Europe in case of war.

To solve a very difficult problem, five nations—Great Britain, France, Belgium, the Netherlands, and Luxemburg, in March 1948, signed the Brussels Treaty. In that document it was agreed that an attack against any member would be considered as an attack against all. The treaty provided for coordinating military and economic dispositions with united action in view.

A GHQ was thereupon established at Fontainebleau, France, to assume control of all forces, ground, air and naval, belonging to the member states. The British Field Marshall B. L. Montgomery was appointed C-in-C. A General Staff has been set up with separate sections for Joint, Ground, Air, and Naval forces.

The Brussels Alliance from the beginning received the blessing of the United States. An American liaison detachment has cooperated with it. Studies indicated that the defense of West Europe could only be accomplished provided the West Europe nations were given funds and armaments to enable them to rearm, and further that the United States would guarantee to come to their support when, and if, war came. This decision was not so much an American desire to secure allies as it was a desire of small nations, unable to defend themselves, seeking the only help available.

If the United States did not respond to the call for aid, it seemed certain that it would be but a question of time until West Europe became conquered, or was absorbed, by Russia. That would bring all of Europe under a single totalitarian state, openly hostile to the United States, and one which during the past year has missed no opportunity to display that hostility.

With Europe would probably go Asia, resulting in an immense mass of people with extraordinarily large resources being united under communist rule. During 1948, communism did in fact advance in Asia. The problem was real.

The United States therefore commenced negotiations with a view to joining with the Brussels Powers against the common danger. If West Europe's falling under the Red banner endangered the United States, Canada was in equal danger. Canada volunteered to join in whatever measures were necessary.

It was decided that the Brussels Treaty should be replaced by a North Atlantic Alliance, with original missions unchanged, but with the United States and Canada as additional members; and that the two American nations would aid in financing the rearming of the West Europe nations. The new alliance would be open to other West Europe nations who were acceptable to the charter members and who desired to join.

Italy and Norway have expressed such a desire. It is probable that Denmark will also do so, and possible that Sweden may ask to join. These nations together have strong military possibilities. After rearming is complete, and under a single commander operating through a Joint GHQ, and with the aid of the American states, it should be possible to preserve the independence of the member states.

The danger is that war may come through an enemy striking before West Europe has been rearmed and reorganized. That danger is very serious and very real. The communist press in Europe during February has discussed the advisability of doing just that. Such action would be following the precedents of World War II, when both Germany and Japan struck suddenly when threatened by efforts to establish strong coalitions which, had they been formed, were intended to prevent

war. It would be a serious error not to be prepared for a sudden war.

However, if steps are not taken to preserve West Europe as a land of free states, they will fall to the communists by default. Both North and South America would then be confronted with the greatest of threats to their liberty. If no enemy strikes before West Europe is rearmed, it may well be expected that a long era of peace may follow. That is the hope of the whole of the noncommunist world. And for that the risk will be taken.

Russia has expressed her disapproval of the projected North Atlantic Alliance. She has taken the position that the Alliance is a mere camouflage for a proposed war of aggression against Russia and its satellites. The Russian press and radio spreads that idea. Whether the Polit Bureau, which controls Russia, really believes this, or is making the alleged threat an excuse to cover its own plans, is yet unknown.

The Sochi Conference. Sochi (Sotchi on some maps) is a beautiful semitropical resort on the north shore of the Black Sea, east of the Crimea. A top secret conference ended there on 20 September 1948. Not a word was released about that. However one of the secretaries later escaped to American-held territory in Germany and revealed what happened.

The conference was attended by the Premiers and/or Foreign Ministers of Russia and all the satellites except Poland. Why Poland was unrepresented is unknown, but plans made included Poland.

The conference decided that war with the Western Powers was at that time not imminent. Consequently the major task was to improve the economic conditions of Russian-controlled territory and intensify the consolidation of satellite states by suppressing all opposition. Yugoslavia presented a special problem. Its secession from the true communist fold had resulted in loss of face and formed a bad precedent. Plans were made to intensify the Cold War against Yugoslavia. It is suspected, but not known, that the cold war will be followed at the proper time by harsher measures.

Exterminating opposition was to have first priority in the satellites bordering on Yugoslavia. Major opposition was believed to center in the Christian churches, which refused to laud communism and represent it as the savior of humanity. It was decided not to attack religion directly, but to destroy the churches by accusing their leaders of spying for the United States. It was intended that this should also convince the local populations that the United States was actively engaged in preparing to overthrow Russia and the satellites by force, and that war might be near.

The Moscow Conference. On 25 January, 1949, Russia issued a communiqué announcing the closing of a conference between Russia and all satellites including Poland. It was alleged that only economic measures against the Marshall Plan had been discussed.

It is highly improbable that political and military matters were not considered and planned. Later events indicate that they were. At this conference it was evident that the United States was rapidly forming the North Atlantic Alliance, and that the Scandinavian states, which had theretofore been neutral, were obviously interested and might join the Alliance. If the Alliance went through, Russia would be confronted with a powerful West Europe capable of defending itself. What to do about it?

What the decision was is not entirely known. It will appear in time. Certain measures which were decided upon have already occurred and seem to be preliminary measures for later action. These are given below under sections on Consolidations and Political Measures.

CONSOLIDATIONS

Opposition among the satellites against Russian domination has increased. It is becoming organized, and includes the Ukraine. It receives daily encouragement by the *Voice of America*, broadcast in native languages, which refutes Russian propaganda and disseminates correct news. It is eagerly listened to and the contents of the broadcasts, although received by but a few, quickly become known through wide areas.

To overcome the opposition to its rule, the Sochi Conference prescribed renewed activity against the Christians. Considerable progress had already been made on this line in Romania, but it was extended immediately to Hungary and later to Bulgaria. These three states are those where military bases would be needed if Yugoslavia is attacked. For Russia, consolidation of Romania, Hungary, and Bulgaria has first priority.

Notwithstanding that the peace treaty limits the size of the military forces of the satellites, not much attention is paid to this, and the limit for Romania of 100,000 men is reported by escaped officials as exceeded by at least several times that number.

The religious persecution in Romania commenced in August 1948 and was directed against the Catholic Church, whose members number about 10% of the population. All bishops and about 200 priests have been arrested and have disappeared.

Persecution in Hungary started immediately after the Sochi Conference. First directed against the Lutherans, who number about 1/3 of the population, it was soon extended to the Catholics, numbering the remaining 2/3. The Lutheran bishop, heading his church, and Cardinal Mindzenty, heading the Catholics, were arrested and convicted. With them went the leading men of those two faiths.

The Protestant churches in Bulgaria were attacked last. Protestants in this state form a small but highly respected minority. The leaders of four different churches have been convicted.

In all cases the charges against the clergy have alleged treason, the specification covering alleged incidents when information was given to American or British agents. Dates and names were given. The charges were admitted by the accused, following a preparatory period of not less than 30 days in a prison. Exactly what happened to the accused while undergoing this confinement is secret. In no case has any documentary evidence been produced to substantiate the charges, nor have witnesses testified that they either saw or heard of any treasonable acts. As far as can be determined the charges are imaginary.

Examples. It was charged that Cardinal

Mindzenty at Chicago, on 21 June 1947, entered into a conspiracy with Archduke Ctto and an unnamed American official to use U. S. troops to overthrow the present communist government of Hungary and install the Archduke as King. Cardinal Mindzenty was in Canada on the date specified, and the Archduke was not in or near Chicago at any time during 1947.

The Protestant Ministers in Bulgaria were charged with giving information (nature not stated) to members of the Allied Control Commission supervising Bulgaria prior to the peace treaty. It would seem that the Allied Commission had a right to demand information. However, the American members named have denied the incidents alleged. Moreover, most of them had either not yet arrived in Bulgaria, or had already left permanently, on the dates specified.

POLITICAL MEASURES

On 29 January, or immediately after the Moscow Conference, Russia announced its current policy in an official communiqué as follows:

"The Soviet Union is compelled to reckon with the fact that the ruling circles of the United States and Great Britain have adopted an openly aggressive political course, the final aim of which is to establish by force Anglo-American domination over the world. That course is fully in accord with the policy of aggression, and the policy of unleashing a new war, being pursued by them.

"In view of this situation the Soviet Union has to wage an even more vigorous and more consistent struggle against each and every war-monger, and against the policy of aggression and of unleashing a new war, (in favor of preserving) a world lasting democratic peace."

On the same day Russia presented a note to Norway asking for an explanation of her intention regarding the North Atlantic Alliance, and reminding her that there was a common frontier between Norway and Russia. Norway replied on 1 February, stating that it had no hostile intentions against Russia, hoped for peace, and was taking appropriate steps how best to secure it. On 6 February Russia replied:

"Inasmuch as the Atlantic Union is being created by a certain group of Great Powers and is not aimed at uniting all peaceful states, but is directed toward setting up one group of countries against other states, it is quite obvious that the Atlantic Union is a restricted grouping of states which do not aim at consolidating peace and international security.

"Inclusion of Norway into the grouping not only can not serve the consolidation of Norway's security but on the contrary can lead to Norway's being involved in the policy of a particular grouping of Powers pursuing far-reaching aggressive aims.

". . . in reality the Atlantic Union is being created outside and in circumvention of the United Nations and serves the interest of the aggressive policy of certain Great Powers . . . Drawing of small countries into this Union has precisely the aim of using their territories for the establishment of military bases, which in this case is of particular significance for the Soviet Union, since Norway and the USSR are neighbors with a common frontier."

At the same time that pressure was directed against Norway, secret instructions were issued for 5th Columns operating among the Western Powers. What these were has not been ascertained, but upon their receipt, the leader of the French Communists, Maurice Thorez, on 6 February, issued his secret order. This prescribed that, in case of war, the Communist Party would aid the Russian armies. In the meantime sabotage on a mass scale was to be conducted against industries connected with the national defense. A copy of this order having been captured by the French Police, suitable measures were taken and nothing unusual happened.

Thereupon new orders came, presumably through the Cominform, which has a section supervising 5th Column operations. This ordered open declarations in favor of Russia. In compliance, Thorez on 22 February in a speech stated:

"If later our country should be dragged against its will into a war against the Soviet Union, and if the Soviet Army, defending the cause of freedom and socialism, should pursue the aggressors onto our soil, could the workers and people of France have any other attitude toward the Soviet Army than has been that of the peoples of Poland, Romania, and Yugoslavia?"

On 26 February the leader of the Italian communists, Palmiro Togliatti, in a speech stated:

"American millionaires would like to wage a war on the Soviet Union . . . in that case the Italian people, who can not but condemn all aggressions, would have the evident duty of helping the Soviet army in the most effective way possible."

At the end of February the Communist Party in Norway issued "warnings." These represented that, by seeking to join the North Atlantic Alliance, Norway was inviting the fate that came to Finland in 1939 (invasion by Russian armies). If this time the Russian army moved into north Norway in "self-defense" against American threats, Norwegians (less members of the Communist Party) could expect rough treatment.

On 28 February, the British communist leader, Harry Pollitt, issued his declaration in which he stated that in event of war British communists would side with Russia and **"organize strikes and councils of action to prevent the war from being carried through."**

On 2 March, the American communist leaders, William Z. Foster and Eugene Dennis, "emphatically" indorsing the statements of Thorez and Togliatti, added:

"If, despite the efforts of the peace forces of America and the world, Wall Street should succeed in plunging the world into war . . . so would we communists cooperate with all democratic forces to defeat the predatory war aims of American imperialism and bring such a war to a speedy conclusion on the basis of democratic peace."

All of the foregoing declarations and warnings follow the Russian communiqué of 29 January in alleging that if war comes it will exclusively be due to aggressions by the United States, which is represented as seeking war. The British and American communist declarations omit reference to invading Russian armies and direct main communist aim as sabotage, while the main mission in France, Italy, and Norway is stated to be to aid Russian armies advancing to head off Americans.

Promptly after the Moscow Conference, A. Y. Vishinsky, at the time absent sick from duty as Russian ambassador to the United Nations, was ordered to the Karlsbad General Hospital, Czechoslovakia, for observation and treatment. He duly reported about

1 February. According to Associated Press dispatches from nearby Prague, Vishinsky at that date really was sick, although the nature of his malady was not ascertained.

On 3 March, Vishinsky was released from the hospital and returned to duty. He at once flew to Moscow, and on 4 March was appointed Foreign Minister vice V. N. Molotov, relieved, who had held that post uninterruptedly since May, 1939.

The dates of these events indicate that the change in Foreign Ministers was determined upon, or resulted from, the Moscow Conference. At that conference a plan was certainly decided. Naturally it is secret, and its nature will only develop with time. The plan is probably of top importance.

COMMENTS

Russia is troubled with internal opposition among the satellites (including the Ukraine), which is showing itself in sabotage, desertions to zones occupied by the Western Powers, and Underground movements which operate armed forces in the Ukraine, Slovakia, and Poland, and may soon appear elsewhere. Opposition political parties have been outlawed; religious bodies are in process of being exterminated. Yet the spirit of liberty remains and is unsuppressable. The people are crying for liberty and for relief from a police state of servitude.

Two propositions are open to Russia. One is that if war came at an early date it would cement the satellites to Russia, by affording excellent opportunities to suppress the last vestiges of opposition, and that it would be dangerous to delay. The other is that it would be best to postpone a war until after the satellites are fully consolidated. Former Russian estimates are that this can not be expected prior to about 1960, by which time the young generation trained in communist schools will be old enough to direct their people along the Party line.

Regardless of what decision Russia may make on this problem, it is realized that the Russian people do not want war, and would not fight well if Russia obviously starts it. It is psychologically preferable to appear to be the victim of an unjust war, provoked at the instigation of the United States on orders from the wicked Wall Street capitalists. If that idea can be put over, it might be possible, at a selected time, and under claim of some threat of aggression, to launch a war involving invasion of West Europe with the support of the Russian people. When that date will be is unknown. It is quite probable that no date has been selected, this being intentionally left open to be determined when opportunity offers.

The communist declarations quoted in this report point to a war plan which includes invasions north and south of the Alps into France and Italy, with a minor force seizing north Norway, where an excellent harbor at Tromsoe would provide a good submarine base.

GREECE

GENERAL SITUATION

At the beginning of the year the main communist force, estimated as 14,000 men, held a fortified position around Mt. Vitsi, near where the boundaries of Albania, Yugoslavia, and Greece come together. The left (east) flank was covered by a force of about 4,000 men, who maintained liaison with Bulgaria and conducted harassing expeditions in the Salonika area. The right (south) flank was protected by about 5,000 men, who were active in conducting raids in central Greece north of Lamia. A detached communist force, perhaps 5,000 men, operated in the Peloponnesus, raiding as opportunity offered. The commanding general was Markos Vafiades.

The communist policy for the winter months was to attack weakly defended places by surprise. If successful, likely young men were seized as recruits, while terror was instilled among the inhabitants by killing leading men opposed to communism, kidnapping children, taking men and women away as hostages, burning supplies and industries, and destroying farms. In this way it was intended to impart a feeling of defeatism and terror which would lead to accepting a communist-dictated peace.

Best evidence indicates that about 15% of the Greeks favor communism. This minority suffices to maintain an efficient 5th Column which operates everywhere. It furnishes information as to military operations, points out the individuals who are to be the objects of communist vengeance, furnishes guides to communist forces, and engages in sabotage and demolition of bridges, railroads, etc., to prevent movements of Greek troops.

The Government forces had a T/O strength of 165,000. They were well organized and equipped, supervised by American and British missions, whose governments gave Greece funds, weapons, and munitions, for military operations and for economic recovery. The commanding general was Stylianos Kitrilakis.

The plan for winter operations was to exterminate the communists in Peloponnesus, while containing the main communist forces in the north. To accomplish this the bulk of the Government troops was concentrated in Peloponnesus, distributed around the perimeter and with intent to then advance toward the center. No operations were intended in the north because of poor lines of communication, snow, cold weather, and mountains. For reasons of security the exact deployment of the Government troops has not been released. It seems, however, that the communists are fully informed as to the Greek order of battle.

The Government forces outnumber those of the Communists by about 5 1/2 to 1. It would seem that with such a superiority, plus the advantage of having air and naval forces which the communists do not have, that the Government should win easily. That

would be the case if the communists could be brought to battle. The latter refuse to engage in combat unless they are locally superior, or when they hold a position along the frontier of a friendly state into which they can withdraw if necessary. The Mt. Vitsi position rests on frontiers of both Albania and Yugoslavia. It can not be turned without operating through those two states. As Greece does not desire to risk starting a Balkan war, which might well become World War III, only frontal operations can be undertaken against frontier positions. It is intended to do this, but not before spring arrives. This usually occurs about the commencement of April.

The Peloponnesus area has a milder climate and winter operations were there considered practicable. It was believed that it would be possible to suppress that center of disturbance before it became time to transfer troops northwards for the main campaign.

CHANGES IN COMMANDERS

On 10 January the Government relieved Lieut. General Kitrilakis, who had been recommended by the American Military Mission last August for the position, and appointed Field Marshal Alexander Papagos as his successor. The Field Marshal entered objections to serving under the Defense Council, of which the American ambassador Henry F. Grady and the Chief of the U S Military Mission, Lieut. General James A. Van Fleet, were members. A compromise was agreed to by 21 January, to the effect that, while the Americans remained free to volunteer advice, the Field Marshal would be under no obligation to accept it. He thereupon assumed command.

On the communist side there was also dissatisfaction with the High Command. The war has so far been a stalemate, neither side having accomplished its assigned objective of winning it. It was not therefore surprising that the communist High Command on 4 February relieved General Markos Vafiades as C-in-C. Two names have been reported as the new commander, but neither has been yet verified.

It is uncertain who controls the communist High Command. It is suspected but not known that the Russian Cominform exercises that function. The Cominform has a Military Operations Section, of which the Russian General Fedor A. Kovpak is reported to be at the head. Little is known about the interior workings of this secret organization, but it is presumed that its functions would include military operations outside of Russia. It is noted that the head of the section has been identified as in Moscow, although the Military Operations Section functions elsewhere. This would indicate that close liaison is maintained with the Russian General Staff, and that General Kovpak may be only an executive. However, the change in Greek commanders indicates that there will be some change of policy. The nature of this may not appear before the spring campaigns start.

MILITARY OPERATIONS

Peloponnesus. The Government started its campaign on 3 January. The Greek Minister of War and Lieut. General Van Fleet were present at the jump—off. Nothing particular happened. The enemy was estimated as 3,000* strong. It was believed that a concentric advance would drive the enemy to Mt. Mainalon, which is close to Tripolis and is practically the geographical center of the area. It was expected that that location might be desperately defended.

In this area the communists followed the same tactics as Mosby's Guerrillas, who operated in northern Virginia from 1862 to 1865. Mobsy's men wore uniforms only when on duty; otherwise they were citizens occupied with peaceful pursuits. Through an Underground organization Mosby issued orders for a rendezvous, from where raids were initiated, followed by prompt dispersal of the participants, including the commander. Greek guerrillas operate similarly and, when pressed, dissolve and are indistinguishable from other citizens. The latter, partly through fear, but sometimes because communists themselves, seldom disclose who among them are the guerrillas. Mosby operated amidst vastly superior forces and never was captured. Knowing about these tactics the Greek troops took special measures to arrest known and suspected members of the 5th Column.

Little information has been issued as to this operation. It seems to have had some success for, by 31 January, Greek reports claimed that the enemy had lost 672 killed and 975 captured, plus 1,-138 5th Columnists arrested. As against this during the same period, a communist force of about 500 men attacked Mati, on the Gulf of Corinth, on the 14th. Another communist force successfully attacked Leonidon on the 21st, and held their gains for three days. This place is on the Aegean coast, 75 miles southwest of Athens. The Greek Navy furnished artillery fire from a destroyer and a gunboat and with this aid the enemy was repulsed, withdrawing to the west. Communist losses were reported as 85 killed and 50 POWs, against a Government loss of only 2 killed and 15 wounded.

Both of the places mentioned were in government rear areas, well behind the front. At the end of January the snow was reported 20 inches deep and operations appear to have come to a standstill. No operations have been reported for February.

The North Sector. The communists have been on the offensive. They have taken advantage of the fact that the bulk of the Government troops were absent in Peloponnesus, and that what reserves remained could not, owing to poor lines of communications, concentrate quickly at points attacked.

On 8 January a communist force of about 2,000 men attacked a Government outpost at Patoma, near Mt. Grammos, but failed to capture it. This attack may have been a diversion to withdraw attention from another more important one against Naoussa on 12 January, a town 15 miles south of Edessa on the Salonika road. It had a garrison of 400 men, and a population of 12,000. By morning of the 13th, the communists had captured Naoussa. Government reinforcements hastened from Salonika, 90 miles away, arrived late on the 13th. Some fighting took place, and more on the 14th. The communists held Naoussa until the 15th, when they withdrew. The entire garrison, less 7 men, had been

*Probably an underestimate.

either killed or captured. The communists were well led. They had taken the precaution to leave a covering force to watch a Greek garrison at Edessa, so as to assure their own retreat to the Yugoslav frontier.

During the occupation of Naoussa, the communists seized anti-communists pointed out by the 5th Column, and executed them in lots of 5 men or 5 women. The Mayor was convicted and executed on charges of being anti-democratic. It was proved that he had shaken hands with the American General Van Fleet when the latter had made an official inspection of the area. Total executions numbered 53. The hospital was set on fire without first removing the sick and wounded, resulting in the deaths of many patients. Stores were looted, and the one industry, a textile plant upon which the people depended for work, was destroyed. 524 young men were conscripted and taken to fill communist ranks. About 300 other men and women, with 250 children, were led away as hostages. Communists left 123 dead on the field. Greek losses among troops were given as 50 killed, 276 wounded, and 240 missing, a total of 666. This raid is a good example of communist terrorism.

On 18 January two communist battalions of about 300 men each attacked Phlorina simultaneously from opposite directions. The raiders entered the town and set fire to buildings. They then withdrew. This raid was probably mainly for diversionary purposes. For on the 19th, an important attack was launched by a communist combat force of 5,000 men against Karpenision, which is 22 miles southwest of Karditsa on the south slope of Mt. Velukhi (altitude 7,600 ft). This town has a normal population of some 20,000, but this had been swelled by 14,000 refugees. The garrison was a battalion of 650 men. Under a carefully prepared plan the 5th Column furnished the attackers with guides and demolished certain bridges on routes over which reinforcements might be expected to arrive. The defense collapsed, after resisting until the 21st. On this day a Greek reconnaissance plane, in which Lieut. Colonel Selden R. Edner, USAF, was a passenger, was downed near Karpenision by AA fire. Colonel Edner escaped death in crashing, but was wounded. He was thereupon hanged by the enemy and mutilated.

The Government sent reinforcements from Athens, 120 miles away, to Karpenision. Snow, bad weather, and 5th Column obstacles delayed making contact with the communists until the 24th. That latter counterattacked the relief column next morning and stopped it. The relief column, which included armor and was supported by artillery and planes, then moved around to the north and on the 26th secured some high ground northeast of Karpenision. Working from there, it drove the enemy out of the city by 8 February. The communists withdrew without being pursued. This fight is the first reported where the communists made a determined attempt to hold a captured town. How the communists managed to reach Karpenision, which is nearly 100 miles from Albania or the Mt. Vitsi position, without being discovered has been unexplained.

On 12 February a communist force of 4,000 men attacked Phlorina. Greek G-2 had predicted this attack. Air reports had been that long columns of enemy motor trucks, coming from Albania and presumably loaded with supplies and munitions, were directed to the Phlorina sector. The Government thereupon secretly moved in reinforcements. When the communists attacked they met a hot reception. Nevertheless the attack was continued. It was not until the 15th that the garrison felt able to counterattack. It was ably assisted by the Air Force with 100 sorties by day, using machine guns, rockets, and bombs. The enemy left 216 killed on the field and 264 POWs.

In the meantime a hit-and-run raid had been made on 29 January. This reached the airfield 8 miles north of Salonika, which it captured, together with the American owned and directed Farm School. 32 students and 3 others were kidnapped, the communists then retreating.

COMMENTS

The war in Greece should be treated as a communist invasion rather than as a civil war. The armed communists are invaders. They are supported by a 5th Column whose members come from the Communist Party, numbering approximately 15% of the Greek population.

The communists in France and Italy number from 25% to 33% of the voters. What is happening in Greece indicates what might be expected to occur should France and/or Italy be invaded by communist armies and be supported by the local powerful 5th Columns.

In Greece, communist troops withdraw across the frontier into adjacent states for rest and reorganization. For fear of spreading the war to unforeseeable consequences, Greece has refrained from following the invaders. Its troops remain at the frontier until the next invasion takes place. Thus the war keeps on.

CHINA

THE GENERAL SITUATION

At the beginning of 1949, the National (Kuomintang) Government, headed by President Chiang Kai-shek, held that part of China south of the Yangtze River. North of the river it held the territory west from Hankow as far north as the Wei River. Nominally it controlled the West and Northwest Provinces. The communists, whose leader is Mao Tze-tung, held the balance of China north of the Yangtze, including Manchuria.

The United States, which for years had supported the Kuomintang Government, has changed its policy. Following the defeat of the National armies during 1948, the United States discontinued supplying loans and arms, less those already promised. This action brought about the fall of the Kuomintang

Government under the President who had guided it for over twenty years.

The cause of the fall of the Chinese Government is debatable. There is no doubt that until recently it had superior forces as compared with the communists, and was better equipped. Yet they lost. In the opinion of this writer the major reason was that since the end of the war with Japan the major objectives of the Kuomintang armies were cities, supposed to be of great strategic importance. Until last year the communists did not seriously defend cities. Consequently most large cities were captured by the Kuomintang. Those gains were reported as great victories. The communists during that period kept to the country. They gradually built up their forces until by 1948 they were strong enough to undertake offensives. They profited by the Kuomintang armies' restricting themselves to defending the supposedly strategic cities. These were sometimes blockaded and reduced to starvation level, but several campaigns were fought in the field. The communists were successful and by the end of 1948 they had undisputed possession of all of northeast China.

In many cases Kuomintang forces were bought. Unfortunately this has been common practice in Chinese wars. The immense mass of illiterate Chinese have no comprehension as to the difference between communism and democracy. They are not interested in who wins the war. They would rather have no war and live in peace. But if there must be a war that side which pays the highest attracts the troops of the other side.

For example: A Chinese Kuomintang division of about 5,000 men was offered two silver dollars per man if they would join the communists. The division accepted. When the number of dollars available was insufficient to go around, 2,000 men who had received nothing returned and reported back for duty.

Entire divisions, equipped with American weapons, have gone over to the communists after no resistance, or only a token resistance. General officers at all levels have changed sides. As previously discussed in *Perimeters*, such action is standard practice among Oriental nations, and is based upon religious and philosophical rules. It is not likely to change and in Oriental dealings should be allowed for.

After three years and more of war against the communists the Kuomintang has failed. Until the end, its military chiefs insisted on attacking, or defending, large cities. They never made the destruction of the enemy their major strategical objective. The communists thus had three years to organize, equip, and train what are now substantial armies. They now form a major factor in the international strategical situation.

POLITICAL DEVELOPMENTS

On 8 January the Kuomintang Government, impotent to continue further the war against the communists, turned to the Great Powers—the United States, Great Britain, France, and Russia—for advice. All refused to give advice.

An informal bid for peace was then sent to the communist GHQ. This was rejected, but the communists proposed a peace on the following terms:

1. Abrogate the constitution adopted on Christmas day, 1946, as having been foreign dictated (constitution is similar to that of the United States).

2. Abrogate treaties with foreign powers, alleged to be treasonable but not further defined.

3. Surrender war criminals (a partial list enclosed was headed by President Chiang Kai-shek).

4. Confiscate capital held by individuals (the latter, expecting this, have already fled, mostly to Hong Kong).

The communist note read:

"It (Kuomintang Government) betrayed national rights wholesale to the United States and obtained several billion dollars from the US Government. It brought in US naval and air forces to occupy Chinese territory and to encroach on her air sovereignity. It concluded treaties of betrayal with the United States, and accepted the participation in the China civil war of the US Military Mission."

On 5 February the communists demanded the surrender to them, for retrial, of Japanese war criminals serving sentence. These POWs are in confinement in Japan.

After receipt of the communist terms, the Kuomintang on 19 January decided to reorganize the Government. It was decided that President Chiang Kaishek should go on indefinite leave, turning over the government to Vice-President Li Tsung-jen, and to close the capital at Nanking at the end of the month, reopening at the same time at Canton.

President Chiang left on the 21st, going to his home in Chekiang, his native province. The Premier, Dr. Sun Fo, moved the government to Canton as planned, but acting President Li refused to accompany it, and continued to govern from Nanking. [NOTE: President Chiang Kai-shek has twice before gone way from his headquarters on indefinite leaves, and then returned after an *ad interim* had failed to make good.]

The new government promptly made the following declaration of policy on 22 January:

"The Chinese nation's crusade against communism has in many ways been similar to its resistance against Japanese aggression. It continued to fight, always with the tacit support of the United States, with the result that the country ultimately was turned into a battlefield. It was not until America itself was attacked that the United States finally mobilized her full resources to take an effective part in the war and carry it to a successful conclusion.

"Unlike the fight with the Japanese, however, the Chinese are now tired of the futile self conflict in which no one but themselves gets hurt, and which has made it impossible for the country to get back onto its financial, economic, and military feet . . .

"If any prolonged resistance is to be made against communism, it will not be made in China."

On the 28th the new government detailed General Chang Chih-chung to proceed to Sinkiang without delay and open negotiations with the Russians through their Consul at Urumchi. It was explained that this emissary would try to convince Russia that it could do better by backing the Nanking Government rather than that of the communists. Russia was to be offered the right to occupy and exploit Sinkiang, provided Chinese sovereignty was nominally

preserved. Negotiations followed, but up to 1 March Russia had not accepted this bait.

In view of the foregoing events, the United States announced the withdrawal of its missions in China. The most important was the naval and air base and naval training school at Tsingtao, which was abandoned during February. The Economic Co-operation Administration withdrew from all stations north of Yangtze.

MILITARY OPERATIONS

The most important operation in progress on 1 January centered about Pengpu, a Kuomintang bridgehead 100 miles north of Nanking. About 40 miles northwest the 12th Kuomintang Army Group was encircled by communists, and 40 miles beyond to the north, the 2nd, 13th, and 16th Army Groups were likewise encircled. Besieged troops were supplied by air but made no effort to break out, and the besieging troops made no attempt to attack.

On 8 January the communists started an artillery preparation against the encircled troops. This led to a settlement on the 10th. The 12th, 2nd, and 13th Army Groups surrendered, while the 16th marched away to Nanking where it duly arrived, apparently without having been opposed. 20,000 troops at Pengpu abandoned the bridgehead and withdrew south.

In the north, General Fu Tso-yi held Peiping with 100,000 troops and Tientsin with 80,000. Light and inferior communist forces were in the vicinity. On 7 January, 8 Communist divisions, about 40,000 men, attacked Tientsin from the southwest, mostly with artillery fire. On the 15th, the Kuomintang garrison surrendered.

On 22 January, General Fu Tso-yi, in compliance with the Government directive of the same date, quoted above, announced that he would no longer oppose communism. His proposal to surrender was accepted, and the communists a few days later marched into Peiping. During February General Fu's troops were incorporated into the communist armies as 25 divisions of about 5,000 men each. Much of the equipment was American.

There is still one Kuomintang force in north China, holding Taiyuan in Shansi, under Marshal Yen Hsi-san. He is reported to have about 100,000 troops. Reports from missionaries at Taiyuan are that that walled city has a population of about 300,000, exclusive of 33,000 refugees who live in shacks outside the walls. Food is scarce and expensive but there is no starvation. The Kuomintang Air Force has been flying 200 tons of rice daily into Taiyuan from the air base at Tsingtao, which rice is used entirely for rations to troops. Some coal is available, and factories and utilities are operating. Lines are 8 to 30 miles out, and occasional fighting occurs. Owing to lack of medical supplies, the death rate among the wounded is high. Typhus is prevalent. Marshal Yen, who is 67 years old, has reported that he can maintain himself indefinitely, provided those 200 tons of rice arrive daily, otherwise he will surrender.

How long the airlift will continue is questionable. The Air Force combat units, as soon as the 22 January directive was issued, discontinued all missions, and flew away to Formosa or south China, except for a few planes whose pilots deserted to the communists. The Navy followed this example, their largest cruiser, the *Chungking*, deserting to the enemy. This cruiser had been donated by Great Britain in May 1948. As a result of all the desertions to the communists, a very large part of the American arms, munitions, and transportation supplied to China is now in Communist hands.

COMMENTS

The victories of the communists in China, notwithstanding strong American support given over many years, has led to both Chinese and American criticism of United States policies. It is alleged that the American support was insufficient. More specially, the defeat of the Kuomintang is alleged to have been due to the agreement made at Yalta to grant Outer Mongolia and Manchuria to Russia. It is represented that this resulted in the communists receiving large quantities of Japanese arms and supplies which should have gone to the Kuomintang. This explanation is too simple. The facts are that President Roosevelt secretly and without the consent of China did in fact consent at Yalta, in February 1945, to permanent severance of Outer Mongolia from China and its inclusion within the Russian sphere, and to the advance of Russian troops into Manchuria with the right to remain there for a restricted period, but to keep a permanent base at Port Arthur and special economic rights throughout Manchuria.

Perimeters will not discuss the ethics of that deal. But, from a military point of view, what should Mr. Roosevelt have done about Russia's demands? What could he have done?

Russian troops already held Outer Mongolia; had been there for years. It would have been impracticable for the United States to occupy Manchuria before the Russian troops could do so. At the date of Japan's surrender the Russians were in Manchuria. If Mr. Roosevelt had not consented to the deal, the Russians could have taken Manchuria anyway. They could not have been ejected without a war.

If Mr. Roosevelt had refused the deal offered to him, he ran the risk of Russia's making a separate peace with Germany and leaving the Western Powers holding the bag in Europe, while Russia remained free to seize and hold perhaps more Chinese territory than she asked for.

The main mission of the United States at the time was the defeat of Germany. President Roosevelt made an arrangement which ensured its accomplishment. He agreed to terms which he could not have prevented, and could not have later rectified without undertaking a war against Russia. Much less could China have prevented it. She lost nothing that she had not already lost.

Talk about the United States having sold China down the river at Yalta is unjustified, and without merit from a military viewpoint. It was impracticable in February 1945 to risk losing the war in Europe. We won that war by making certain that the Russian armies would cooperate until Germany surrendered. We now have a job of reconsidering the situation in the Far East.

* * * *

The American press has in part suggested that a new China Government under communist guidance might be

sympathetic to the United States, and that business could be done with it. This is improbable. It is only necessary to read communist declarations (broadcast daily), which constantly allege that the United States is seeking war and is exclusively responsible for wars currently in progress. The denunciation of the United States as a warmonger is so close to that appearing in the Russian press as to lead to a presumption that the Cominform is directing both sets of publications. The Cominform has a special section to supervise propaganda, and its hand is not difficult to recognize. Communist China must now be considered as one more area hostile to Western Powers.

SOUTHEAST ASIA

BURMA

The General Situation. One year has passed since the British granted independence to Burma, at its request upon representation that it could and would maintain law and order. Burma is now split into warring sectors. At least four parties are in the field, each at war with the other three. Burma is economically nearly ruined. Law and order does not prevail over much of her territory.

The total population is around 17,000,000. Arakan lies along the Bengal coast, west of the Irrawaddy River. It is in revolt, desiring independence. In general this revolt is passive. East of the lower Sittang lies the country of the Karens. They too are in revolt, but actively so. The remainder of Burma is inhabited mostly by Burmese. They are of the same race as the Chinese, although they do not like the Chinese. By religion they are Buddhists. They are not a warlike people. The Capital is Rangoon, which is the principal port of the country. Politically the government is of mixed parties, trying to overcome the opposition of two kinds of communists—Whites who are in liaison with Moscow, and Reds who are not.

The Arakans and the Karens each number about 1¼ million. Arakans govern their own province and so far have not undertaken military operations. Karens are warlike. They are Christians, converted mostly by American missionaries. Under British rule the Karens formed an important part of the local army, and the C-in-C was a Karen.

Military Operations. During 1948 the revolt of the Karens, who desire autonomy, had been passive. They have had a liaison office in Rangoon, where visas could be obtained for travellers desiring to visit Karen territory.

The Karens allege that Burmese MPs (Buddhists) on Christmas eve, without provocation, broke into a Christian religious service at Mergui and massacred about 200 men and women. The Karens immediately took to the warpath. With a force of about a division, they crossed the Irrawaddy north of Toungoo without opposition and marched west into Arakan. They made connection with the Arakans and on 11 January jointly occupied Ramree Island which was defended only by a small detachment. This operation resulted in the establishment of a line of posts extending east and west across Burma about 150 miles north of Rangoon. This interrupted all lines of communication of the government to the north and blocked supplies.

The Karens now closed in on Rangoon. The Government also had about a division. First contact came at Pantanaw, 45 miles from the city and across the Irrawaddy. The Government failed to prevent the Karens from crossing the river. The Karens pushed eastwards, and after some hard fights reached Insein, about 8 miles from Rangoon, by 1 February. They cut off the city's water supply, and commenced a close blockade.

The Burmese Premier Thakin Nu now invited the Karen leader, Saw Ba U Gyi, who was at Insein, to drive into town as his guest and talk matters over. This peace effort seems to have been declined. On 3 February, the Government was agreeably surprised by the White communists' sending several battalions to aid. With this reinforcement the Government counterattacked against the Karen line: Thamaing-Insein on the 7th. The ground troops were reinforced by planes. Both attacks failed, but were renewed next day, following an artillery preparation, and Thamaing was taken. However, the Karens fought savagely. They had some armor and AT guns. They counterattacked in turn and retook Thamaing on the 9th. The Government now relieved its division commander, and Major General Ne Win was appointed, with directions to attack again, for conditions in Rangoon were desperate. There was no water. Food was scarce and very expensive. The enemy had captured the airfields so that nothing came that way. Disease was rampant, with smallpox epidemic.

General Win lost no time. After an artillery preparation he attacked Thamaing on the 10th, but the attack broke down. The Karens ceased their attacks on the north, but maintained their lines. They commenced a new advance from the west and southwest, jumping off from Delaye, 45 miles southwest of Rangoon, on 16 February. A great crowd of refugees pushed on into Rangoon, while the government employees went on strike. The harassed government managed nevertheless to open a temporary source of water. Disregarding the new Karen advance, General Win renewed his attacks against Thamaing and Insein on the 16th, but they failed as before. By the 26th the Karens had established a line from Insein on the north to near Twante on the west, and were only from 7 to 10 miles from Rangoon, which was under close siege.

The Karens were strong enough to undertake a second operation, employing about a brigade combat group. On 27 January this struck west toward Toungoo, which was only weakly defended and fell. This appears to have been a raid. It was accompanied by burning of villages, murders, and cruel

tortures, which unfortunately have been standard practice in Burma wars. The raiders soon withdrew.

On 20 February, the Karen combat group struck again, this time seizing Meiktila without meeting opposition. At this place they captured an airfield on which a transport plane happened to be ready to take off. They embarked a patrol on the seized plane and flew to the Anasakan airfield, 30 miles north of Mandalay, finding this field unguarded. They now commenced to encircle Mandalay, second most important city of Burma, which had a Government garrison of perhaps 2 infantry regiments. By the end of the month, Maymyo and Myingan, respectively northeast and southwest of Mandalay, had been taken and passed.

The Government reports it has been reduced to poverty and no longer has funds to go on with the war. A loan from British sources has been requested. In doing so Premier Thakin Nu stated that he well realized that "lawlessness and terrorism have lowered Burma completely in world estimation." He estimated the loss of life to date as 30,000.

Comment. British reoccupation could probably restore order. It would be welcomed by many Burmese, who realize now that independence came too early. To date the British Government, struggling with its serious financial difficulties, has shown no desire to take on the added burden of a colonial war. This leaves the outcome uncertain.

MALAYA

The communist rebellion is continuing. It is maintained by about 5,000 Chinese communists seeking to spread chaos and terrorism from their hideouts in the mountains and jungle. British intelligence estimates that about 25 communists are Moscow-trained. Over 4,700 are imported Chinese of bandit origin. Their cruelties are resulting in the local Chinese beginning to lose sympathy with them. Trade has not been materially interfered with. Production of tin, rubber, etc., are at least normal. This trade is important for the British. Excepting South Africa, Malaya secures more American dollars from sales than any other oversea possession. Fighting has been limited to patrol actions.

INDO-CHINA

The rebellion against the French is partly communist. The leader is the Annamite Ho Chi Minh, now 57 years old. He used to be aide to the Chinese communist leader Mao Tze-tung, until captured by Generalissimo Chiang Kaishek in July 1927. He was then deported to Russia. After appropriate training he next appeared in the Russian Consulate at Boston, Massachusetts. From there he was transferred back to China and resumed his old connections. He was assigned to duty in Indo-China as communist commander in 1945, following the surrender of Japan, and has since organized the Viet Nam.

The Viet Nam controls most of Tonkin, Annam, and Cochin-China, less the large cities which have French garrisons. The French with 110,000 troops can not control the country, but they can hold certain vital centers. Recently fighting has been limited to patrol actions.

There are two other separate rebellions. That of Laos is headed by Prince Petcharat, a graduate of Oxford, who has his CP in Siam. Members of his command operate only as guerrillas in small bands. A rebellion in Cambodia is headed by Prince Pou Coun, also in Siam. His men are usually active guerrillas. They have made it quite unsafe for individuals or small parties to circulate within Cambodia.

All three rebellions are aided by the ability of bands to find shelter in Siam. There they keep their families and rest and reorganize, to commence raids anew according to circumstances. This situation is similar to that along the Greek border.

Viet Nam forces are largely Chinese. The French fear that if China goes completely communist the Viet Nam will join with China to organize a single communist state, which would ultimately include all of Southeast Asia.

France's solution to that problem is to grant local autonomy but to supplant the Viet Nam and its communist leader by the former Emperor Bao Dai, relieved as Emperor in 1945. Bao Dai has since lived in France, where he is now. Negotiations with him are in progress.

INDONESIA

The Dutch prohibit publication of military news other than that contained in official papers. News is therefore limited. A United Nations report of 14 January, made on the basis of a reconnaissance by its military representatives, stated:

"Destruction of roads, bridges, and property has been, and still is, taking place on a much greater scale than was anticipated by the Netherlands military authorities. . . . All RRs are completely blocked, owing to demolition of bridges and property. Many main roads in central Java are still not open and on those which are open travel is possible only in convoy. . . .

"The number of Netherlands troops in the newly occupied areas is insufficient to prevent roving bands of guerrillas from moving freely and from performing acts of sabotage, such as the destruction of newly repaired bridges. Netherlands troops are also insufficient to maintain law and order in the towns, and many Chinese merchants have suffered from looting."

On 21 January, the Dutch C-in-C, Lieut. General Simon Spoor, stated:

"Wonders could not be expected; some mishaps and disappointments would occur. The situation could not be ironed out over night. Time would be needed."

The general impression is that both in Java and Sumatra the Republicans have maintained an organization which is carrying on a guerrilla warfare.

A United Nations resolution of 28 January called upon the Netherlands to cease military operations and restore the Republican Government of Jogjakarta. Its leaders are held by the Dutch as POWs on Bangka Island. Without complying with this, the Netherlands Government on 26 February issued an invitation to Indonesian leaders (names not given) to meet at The Hague on 12 March for a Round Table talk with a view to organizing an Indonesian Federal Government. Two days later the Indonesian leaders (POWs on Bangka) declined to attend unless they were first unconditionally released and the Jagjakarta Government reestablished.

There are men that will make you books, and turn them loose into the world, with as much dispatch as they would do a dish of fritters.

—CERVANTES

Montgomery's Eighth Army

EL ALAMEIN TO THE RIVER SANGRO. By Field-Marshal The Viscount Montgomery of Alamein. E. P. Dutton. $6.50.

By Ceorge F. Howe

This volume is an American edition of a book first published in England. It is in effect a semi-official report of the British Eighth Army's exploits while under Montgomery's command, narrated throughout in the first person singular. Balanced against its good organization and concise, clear style is the omission of essential material. The reader must already be informed in the campaigns of which the Field-Marshal writes in order not to be led into some mistaken inferences.

Movements by the Eighth Army taken at considerable risk are indicated as responsible for luring Rommel's force back from the Kasserine area to the coastal plain. Actually, Rommel began the withdrawal before the movements of the Eighth Army to which reference is made. Again, the sluggish advance to the southern flank of the Salerno beachhead by the Eighth Army is explained as controlled by the necessity of avoiding undue risk in the already shaky supply situation; one would never recognize how near the Eighth Army came to suffering the far greater risk of having no support from the Fifth Army. Of the plans for attacking Sicily, one might suppose that Montgomery's reasoning produced the plan which was adopted, and one would never learn what hazards to its supply the Seventh Army accepted in order to protect the Eighth Army's western flank from the outset.

The book emphasizes the importance of the Battle of Alam Halfa, which stopped the German-Italian Panzer Army of Africa in September, 1942, before the Battle of El Alamein smashed it. It is rather vague concerning the British superiority of about one-third in numerical strength, and in guns, tanks, and planes, but very clear on the plans and their modification during the Battle of El Alamein. And it contains reflections of the commanding general after each of the major battles or campaigns has been described, reflections which present much unimpassioned wisdom.

Flying Tiger Foments

WAY OF A FIGHTER. By Maj. Gen. Claire L. Chennault, USA (Ret.). Edited by Robert Hotz. 375 pages. Index. G. P. Putnam's Sons. $4.50.

By Riley Sunderland

There are two points of major interest in this book. The first is General Chennault's exposition of the way he evolved and applied his theories of air warfare; the second, his account of his running fight with his superiors, particularly the late General Joseph W. Stilwell, his immediate commander. The first part is of lasting interest and value, but the second serves only to draw attention from the first.

Behind the spectacular success of the American Volunteer Group and the China Air Task Force, which General Chennault created and commanded in 1941-1942, lay what has accounted for the successes of great commanders in the past. Meticulous study of the warfare one expects to wage, knowledge of the enemy, insight and realism, and the chance to train one's command to one's own liking have brought fame to many a commander before, and they did to General Chennault in the last war. During the '20's, while in the Air Corps, General Chennault studied air war, argued about it with his contemporaries, and taught it in the service schools. Then he went to China, where he could observe his future enemy at first hand, study Japanese methods, and experiment with his own. When war came, he was in Burma with a fighter group custom-made for the job it had to do. It is significant of the man that he violated Siamese neutrality by flying patrols over Siamese airfields in the fall of 1941 so that the Japanese might not concentrate there and catch him by surprise. Such stark realism was not in fashion then among Allied commanders. It is interesting to note that Volume I of the Air Force history tells of efforts at Darwin in the summer of 1942 to improvise a system of fighter tactics to meet the Japanese very like the training General Chennault was giving at Toungoo, Burma, in the Fall of 1941, *before* war began. The Air Force history is silent on any attempts to prepare to meet the Japanese tactical system and the Zero fighter before Pearl Harbor, though the Zero's existence was reported in December 1940.

These efforts by General Chennault are an application of classic principles of war and so of interest to every professional. Applying them, he succeeded brilliantly in Burma when contemporary Allied air commanders in the Far East were going down like nine-pins before the Japanese. Later, in China itself, aggressiveness and mobility enabled him to fight successfully against extremely heavy odds, and at the end of a very poor supply line. His successes against the Japanese seem to have made him contemptuous of them, and by fall 1942 he was telling the late Wendell Willkie, for President Roosevelt's ears, that with 105 fighters, 30 mediums, and 12 heavies he could "cause the collapse

of Japan." These beliefs, plus his own urge to be first (fully described in this book), led him into a bitter feud with his immediate superior, General Stilwell, which he recounts at great length.

To be effective, such an indictment should be meticulously accurate, carefully documented, and delivered against one who can defend himself. *Way of a Fighter* meets none of these requirements. It strongly suggests that General Chennault is taking gossip, rumor, and hearsay as the gospel truth. The many errors with regard to spelling and order of battle information further suggest that neither his editor nor his publisher bothered to verify any of this. If what we read is a compilation of 14th Air Force Headquarters gossip plus General Chennault's recollection of his personal encounters with General Stilwell, it would explain the many errors that stud the account of the feud and rob it of its intended effect. It begins with a completely inaccurate account of the loss of Burma, and General Stilwell's "responsibility" therefor. General Stilwell did not cancel a projected offensive to throw everything into saving a British regiment, thus causing a weak spot through which the Japanese drove. General Stilwell was concentrating for a blow at the Japanese 33rd Division in the Irrawaddy when word came that far to the east of the Irrawaddy and Sittang Valleys the Japanese had destroyed the Chinese Temporary-55th Division, supposed to be holding the Mawchi-Bawlake Road, and were racing for Lashio. When they took it, Burma fell. Nor was General Stilwell in actual command of the Chinese troops in Burma. His radios of March and April 1942 to the War Department make that clear. Nor did the Generalissimo *ever* urge an offensive in Burma until August 1944, which is another story.

So begins the account of General Chennault's troubles with General Stilwell. With the publication of Robert E. Sherwood's *Roosevelt and Hopkins*, we are aware that General Chennault's account of the approval of his air plan at TRIDENT Conference, Washington, May 1943, is very misleading. General Chennault's plan was approved *before* the Conference, not at it; by Mr. Roosevelt alone, not by the conferees; and as a result of some very skillful efforts by the late Harry L. Hopkins and Mr. Joseph W. Alsop, the columnist. General Chennault is most reticent about his relations with Harry Hopkins and Mr. Alsop, and passes over Mr. Hopkins' efforts to have General Stilwell relieved. Curiously, General Stilwell seems to have been unaware of Mr. Hopkins' attitude.

General Chennault's informants confuse the 10th Air Force with the HALPRO project to bomb Japan; are unaware that Pacific and Burma operations were among the principal subjects of discussion at the Casablanca Conference of January 1943; forget that his staff and the Generalissimo were emphatic in their assurances that the Chinese armies, with no added equipment, could hold the East China airfields; consider that the Japanese mounted their 1944 China offensive to open a rail-line to Indo-China; say that the Dutch were members of the Combined Chiefs of Staff; say that the United States promised at QUADRANT Conference to give three divisions to Burma operations and then reneged (there is no record of such a promise, but many of Stilwell's efforts to get a Corps, before and after QUADRANT); and obviously do not know that Mr. Roosevelt's attitude towards the Generalissimo hardened steadily during 1944. In reopening the great controversy over the value of the Stilwell Road, General Chennault is unaware that General Brehon Somervell was the Road's most forceful and eloquent advocate. No supply expert, General Stilwell followed orders and cleared North Burma to open a secure line of communications to General Chennault. Perhaps the worst sin is the changing of a word in a quotation to alter the sense of the passage completely. In the radio on page 301, "face losing" should read "face lifting." Complete analysis of the argument of the memoirs would require many pages; these brief comments will suggest their general inaccuracy where General Stilwell, the Joint Chiefs, and the President are concerned.

Were General Chennault to write a text on air warfare, well illustrated by

passages from his writings of the '20's and '30's, and drawing on his wartime experiences, it would be of great value. Those passages in *Way of a Fighter* which treat that subject are a real contribution to the literature of war. The residue is part of the battle of the inkpots which follows every war, and should be taken as such.

Controversial Split Over Atoms

FEAR, WAR AND THE BOMB. By P. M. S. Blackett. 214 pages. Appendices, bibliography and index. Whittlesey House. $3.50.

By Alan Otten

This is an extremely important book. In it, a nuclear research pioneer, winner of the 1948 Nobel prize for physics, studies the military and political implications of the atomic bomb, and comes up not with the Baruch plan or anything close to it but rather with the Soviet belief that general disarmament must be considered and not control of atomic energy alone.

P. M. S. Blackett, professor at Manchester University and until recently member of the British government's Advisory Commission on Atomic Energy, has several times been accused of hewing too closely to the Marxist line. *Fear, War and the Bomb* has been quoted with approval by leading Soviet officials. Whether you believe that Prof. Blackett is a forthright, independent thinker or a Soviet apologist, you should read this book, for it certainly is the most cogent and complete presentation yet of the thinking that gives rise to the Soviet stand on atomic energy.

In barest outline, Prof. Blackett's thesis runs like this: The atomic bomb is far more powerful than any other weapon yet developed, but it is not a revolutionary weapon in the sense that it can be decisive in and of itself. This is especially true as applied to the only atomic war that might take place during the next 5 to 10 years—between the U.S. and the U.S.S.R. No such war is likely in the near future, anyhow, America will never get around to waging the preventive war it talks about, and Russia will avoid a showdown because time is on her side—the longer she waits the more her land will recover from the last war, the more likely she will be to have the bomb herself, and the more chance that the American economy will break down. Once Russia does get the bomb, she will have the upper hand over the U.S., due to her large population and mechanized army. It's to America's advantage, therefore, to try and work out a solution now, before Russia does get the bomb and the upper hand. Since Russia cannot possibly accept the Baruch plan so long as she does not have a stock of bombs approaching ours, and since the bomb is just a "bigger and better block-buster" anyhow, America must agree—for its own good and the world's—to a scheme acceptable to Russia—that is, general disarmament, in which we will give up so many bombs in return for Russia disbanding so many divisions, etc. International inspection will exist, but not international control. Complete abolition of the bomb and other weapons of mass destruction, as well as international ownership and control, must all come later—when the world political structure has changed.

This is the skeleton. On it, Prof. Blackett hangs huge quantities of flesh—an exhaustive analysis of the results of our bombing Germany and Japan as the basis for his conclusion that the A-Bomb will not revolutionize warfare, detailed consideration of the Baruch plan and the Soviet reaction, the importance to Russia of atomic energy for industrial development. For obvious reasons, the book provoked a storm of controversy in Great Britain, where it was first published. It would be a tremendous reflection on our boasts of political maturity and our claims for continued world leadership if it provoked any less discussion here.

Outstanding Panorama of Civil War

ORDEAL BY FIRE. By Fletcher Pratt. 404 pages. Index. Maps. William Sloane Associates, Inc. $5.00.

By Robert F. Cocklin

Few events in history have been more thoroughly dissected than our own Civil War. There have been hundreds of books written covering almost every facet of the conflict as well as the outstanding personalities involved. However, the best of these have confined their subject matter to certain specific events or persons in their particular roles, without attempting to present an

overall picture of the war. Fletcher Pratt has been eminently successful in his efforts to overcome this situation. *Ordeal by Fire* is indeed "the best one-volume history of the Civil War I've ever read"—if we may lean on Mr. Bernard Devoto for an assist.

This book was originally published in 1935, and while it was heralded with no particular acclaim at the time, during the ensuing thirteen years it gained sufficient audience as to be practically a collector's item until this recent republication. This later book has been completely revised and redesigned. The author has added a new introduction and it is illustrated with a series of excellent maps drawn by Rafael Palacios.

To bridge the four-year span of the Civil War in one volume, Mr. Pratt has, of course, confined himself to a discussion of the major engagements. Detail is not lacking in *Ordeal by Fire,* but it is given space only when it definitely contributes to the setting.

The book covers what our World War II soldiers termed "the big picture". It permits more clarity and understanding of the whys and wherefores of the Civil War than those books which are focused on particular individuals or events. The panorama of battle is viewed as one vast chessboard, and the reader is far more capable of assessing the merits and weaknesses of the players, the tactics, and techniques involved.

Few battles have been brought to a successful conclusion based entirely on the original plans of the commander. This was particularly true in earlier days before the great developments that have been made in communication. It was certainly true in the Civil War, and those who emerged as great commanders in that war were the ones who displayed the insight, courage, and adaptability to counter enemy moves that might upset earlier plans. It is this pitting of skill and daring that Fletcher Pratt captures so well in this book. He has truly grasped the real drama and suspense of the battlefield and has turned an historical account of military action into a thoroughly engrossing book.

It is not often that a reviewer can attribute fresh writing, fast pace, and absorbing text to a volume of history, but *Ordeal by Fire* proves an exception. It is interesting to note that this book was originally written at a time when Fletcher Pratt had not gained eminence as a military historian. In this book the reader senses an untiring enthusiasm and penchant for good writing that have not always been so readily apparent in some of his later works.

Dollar Detectives

THE TAX DODGERS. By Elmer L. Irey, as told to William J. Slocum. Greenberg: Publisher. 288 pages. $3.00.

By Alan Otten

The late Elmer L. Irey, former chief of the Treasury Department's enforcement agencies, has here set down—with the help of William J. Slocum—accounts of some of the T-Men's outstanding exploits since the unit was formed in 1919. And a fascinating book they make.

Prohibition, the unit's first target, proved an almost impossible nut to crack, but in later endeavors the T-Men compiled an exceptional record of achievement. Here are the stories of how they got Al Capone, Bruno Hauptmann, Waxie Gordon, Moe Annenberg, Bioff and Browne, Johnny Torrio, the Huey Long machine leaders, Tom Pendergast, Nucky Johnson and a score of others. The publishers call it "the inside story of the U. S. Treasury's war with America's political and underworld hoodlums," and the volume probably comes as close to that description as any book will for a very long time. Irey lets the chips fall where they may, and some very highly-placed persons don't come off too well here! Nor does the FBI and the Justice Department, obvious targets of a bitter T-Men feud. The actual writing of the book leaves much to be desired, often resembling the cliche-ridden dialogue of a "B" movie; an occasional attempt at deep-thinking goes sour. None of this can detract too much from the terrific raw material that Slocum has to work with. The result is an action-packed, fast-moving book, one that is also a good commentary and refresher course on some of the blacker spots of the recent American scene. This is highly recommended fare, calculated to please almost any taste.

BOOKS IN COLUMN

By MAJOR N. L DRUMMCND. JR., FA

Odd Nansen is an intelligent and keenly observant Norwegian who refused to compromise with the Nazi conquerors in 1942 and spent the next three years in a succession of progressively more hideous concentration camps. His book *From Day to Day* (Putnam—$5.00) presents a graphic, deeply moving selection of daily excerpts from the remarkably thorough diary which he maintained secretly through the entire period. An odd decision not to accept chances for escape and do something tangible to halt the German menace in wartime is now tempered by the great good which his book may accomplish during our troubled peace. For this is not merely another catalogue of Nazi horrors—although these are powerfully portrayed—but a varied, highly dramatic account of life in the camps, by a discerning mind which fully shared all hardships and abuse, yet maintained a remarkably dispassionate viewpoint to observe accurately the good and bad in jailers or inmates. There is irony, understanding and humor as well as stupidity, cruelty and death. The book not only records an unbelievably inhuman saga of our time, with its soul-searing spectacle of how deep in ruthless beastiality ordinary human beings can sink themselves, but is a high tribute to the human spirit's power to rise above injustice, cruelty, despair and death. For the benefit of all who enjoy somewhat relaxed memories (particularly those who would make common cause with Fascist remnants in Germany or elsewhere today), Nansen's objective measuring damns the Nazi system, its minions and all who knowingly rode with it, more vividly than the bitterest vituperation could achieve. Upon concluding the book, one is again chagrined and deeply disturbed to think that many Americans failed, and perhaps still fail, to find any satisfying motive for their recent fight against the Axis. Or perhaps might similarly doubt the necessity to oppose any other police state which in the future threatened to engulf the world. Yet the author—with a well-earned right to speak—cautions wisely against causing sons to suffer for sins of the fathers; let us hope that we may increasingly be able to consider human beings separately from the inhuman systems which sometimes dominate and degrade them.

● ●

Living With Crisis by Fritz Sternberg (John Day—$2.50) extends the main thesis of his previous book, *How to Beat the Russians—Without War:* the liberal socialists are Europe's only hope for political-economic unity and independence. He fears the current tendency to strengthen those reactionary elements which formerly evoked Hitlerism, arguing that the European people will no longer countenance it and be driven to communism as a lesser evil. It is certainly a partial thesis, somewhat oversimplified, but clear-cut organization of material and graphic, unadorned prose present this and many subordinate themes with telling effect. Sternberg particularly stresses that we seem dangerously optimistic concerning early results of the Marshall plan; he ably analyses current factors which may bring us economic rescession or collapse, tracing their intimate connection with the flux of world forces whose grave dangers may yet be changed to equally great hopes.

● ●

In an immensely broader and more dynamic book than his *Experiment in World Order*, Paul McGuire eloquently and effectively challenges our responsibility for causes and solutions of the present world crisis. *There's Freedom for the Brave* (Morrow—$4.00) deplores the last century's social, economic and political forces which have regimented humans, withering their inner faith, creative sense and independence. McGuire's keen commentary on the British, Russian, European, Asiatic and American peoples, the clashes and contributions to be expected from them, makes stimulating reading. He feels the immediate future is dark for good and carefully related reasons, but through urging greater individuality under guidance of basic Christian concepts we may escape the serfdom both of police state and paternalistic socialist regime.

● ●

John Gunther creates an inspiring memorial in *Death Be Not Proud* (Harper—$2.50), the story of his 17-year-old son's long, gallant and losing fight against death from brain tumor. This could easily have been an unbearably somber subject or a heavily sentimentalized record of personal anguish. Instead, Gunther forms absorbing drama from the ebb and flow of battle against a malignant enemy, waged by the combined resources of doctors, science and indomitable human will. In spite of the author's fine restraint (and at times because of it) some scenes and many implications rend the reader almost too deeply, yet there is high humor and greatly heartening human warmth throughout. The splendid young man who forms the core of the book will endear himself to all readers. The fine intelligence, generosity, courage and unconquerable faith with which he met an overwhelming tragedy should inspire us to meet squarely our own lesser tests. His spirit reaffirms the essential worth and upward reach of human life. In this book he still works and lives.

● ●

Ten years ago George Woodbury was an archaeologist at Harvard. Today he is owner, manager, and entire labor force of a water-power saw and gristmill originally built by his great, great, great, great grandfather. There his wife and his four children have made a home for themselves, and there he makes among other things "the only milking stools in southern New Hampshire that are individually rump-fitted by a graduate anatomist." *John Goffe's Mill* (Norton—$3.00) is the story of his adventures in turning an obsolete rural industry into a design for happy living. If you have ever had a desire for rural living, this hilarious book is right down your alley.

Worthy Stragglers

Volume Four of the *Album of American History* (Scribners—$7.50), edited by James Truslow Adams, finishes this pictorial history of the United States, running from the turn of the century to World War I. Scholarship, drama and humor are equally present in the photographs and sketches, with pungent accompanying text, which chronicle the early social, economic and scientific movements which gradually formed our national structure of today.

Virginia Reader (Dutton — $5.00), edited by Francis C. Rosenberger, collects outstanding pieces of writing from 1584 to the present, which sum up the traditions of a leading American colony and state. Descriptions of early life there, selections from monumental political documents, poetry and short stories form a well-rounded whole; of primary interest are the works of great Virginian political thinkers and leaders, who swayed the entire national scene.

William Faulkner's latest novel, *Intruder in the Dust* (Random House—$3.00) is a penetrating study of racial tension and individual or community integrity, involving a negro accused of murdering a white man, conflicting evidence, secretly exhumed bodies, and a young white man's compulsion to face death or community disgrace in attempting to establish justice and avert a mob lynching. Subtle characterization and gripping action in a novel more constructive in theme and tone than the author's former work.

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P. M. S. BLACKETT'S

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