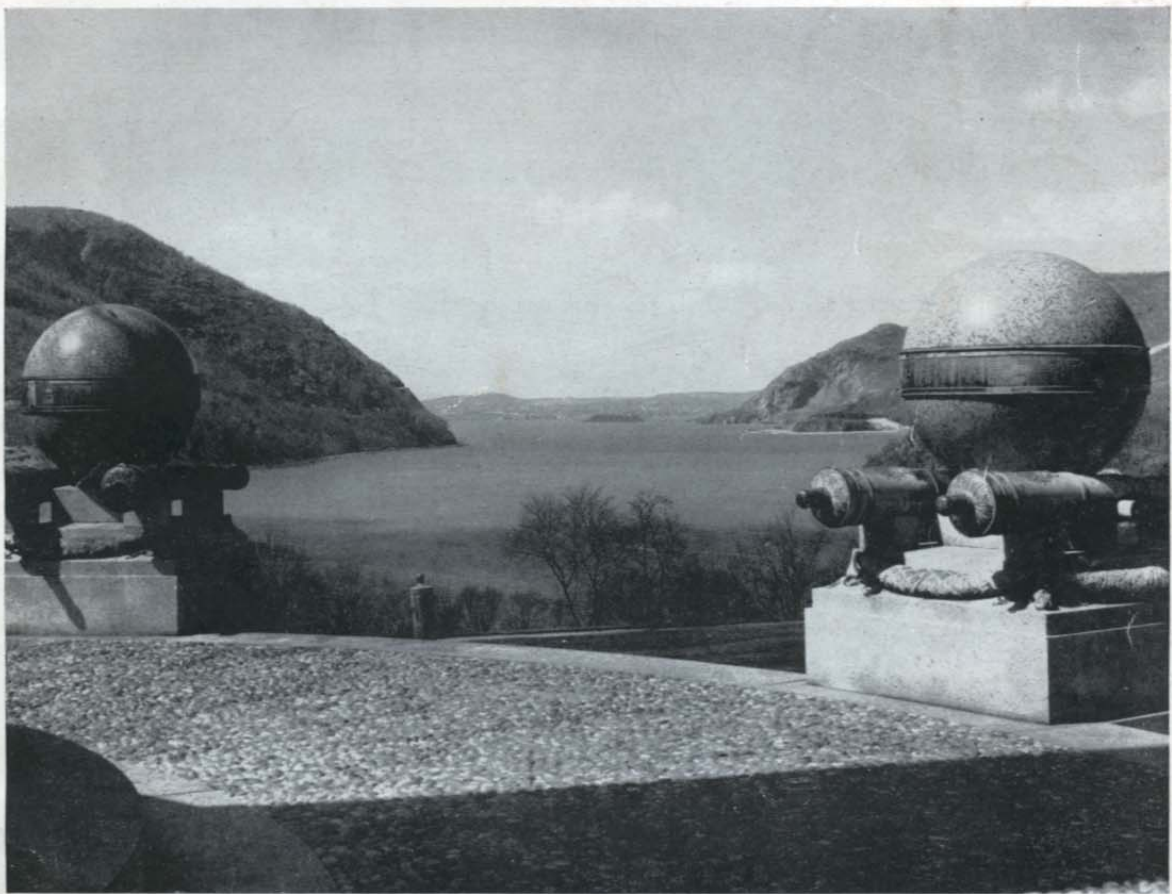


*The*  
**FIELD ARTILLERY**  
*Journal*



**WEST POINT LOOKS AHEAD**

by Major General Taylor, Superintendent

WITH A FOREWORD BY DR. KARL T. COMPTON


MARCH, 1946

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# The FIELD ARTILLERY JOURNAL

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

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

## COVER



Tourists and old timers, alike, invariably get a pleasing lift out of the view north up the Hudson from West Point. The Signal Corps photograph on the cover was taken from the base of Battle Monument on Trophy Point.

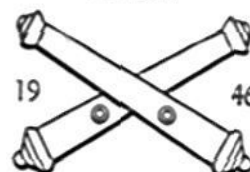


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MARCH



Volume 36, Number 3

# *The American Soldier*

## *As A Diplomat*

ON FEBRUARY 14th, President Truman announced that he had accepted the resignation of Mr. Averell Harriman as Ambassador to Russia and named Lieutenant General Walter Bedell Smith, USA, as his successor. This is the second time that the President has turned to a soldier for an important diplomatic assignment. More pertinent here is the unprecedented fact that the United States now has soldier-diplomats (Generals Marshall and Smith) in what are unquestionably the two most difficult and delicate ambassadorial jobs in the world—China and Russia. Notable success by either or both can go far toward furthering good will and peace among nations. The price of either's failure is not pleasant to contemplate.

These two appointments, one right after the other, are of considerably more than passing interest. The placing of soldiers in these high posts was not a decision taken lightly. Such decisions are of first importance in the conduct of our foreign affairs. Why did the President select soldiers? Are these two appointments but two special and isolated cases, or is there something deeper here? Lacking the full facts, this column cannot furnish conclusive answers to these thought-provoking questions. However, certain observations can be made; observations of significance to the military and non-military reader alike.

The essential attributes of a diplomat, let alone the specific qualifications for a particular diplomatic post at any given time, do not lend themselves to nice definition. Obviously, there are always many special and contributing factors to be considered in any diplomatic appointment; certainly, there are a-plenty in both Russia and

China today. No one will quarrel, however, with the contention that in any event an accomplished diplomat must have a *national outlook* and be well aware of the *instruments of power*, which include *force*.

Infrequently mentioned is the fact that regular Army officers invariably approach any problem with a *national outlook*. This national outlook is derived from the Army way of life, the character of duty performed, and the extensive travel it entails. These combine to bring about a weakening, early in an officer's career, of former ties and allegiances to a particular town or state or county. With lengthening years of service, in most cases this initial weakening develops into what is virtually a complete severance of "local" associations. Other than our brother officers in the Navy, and certain career men in the State Department, there is no other sizable group in America which maintains a national outlook consistently. That most Americans *think locally* is, of course, the logical and perhaps the most important single derivative of our federal structure of government. Our greatest strength in some ways, the "colloquialism" of our collective thinking makes for weakness in the pattern of the conduct of our foreign affairs. Incidentally, it utterly baffles foreigners, and particularly Europeans.

ALTHOUGH a digression from the primary thread of this editorial, it seems well here to note that, whereas in many ways this "drawing away" by the officers of the Regular Establishment from local ties and allegiances and the development of a national consciousness is a highly desirable thing, this tendency may

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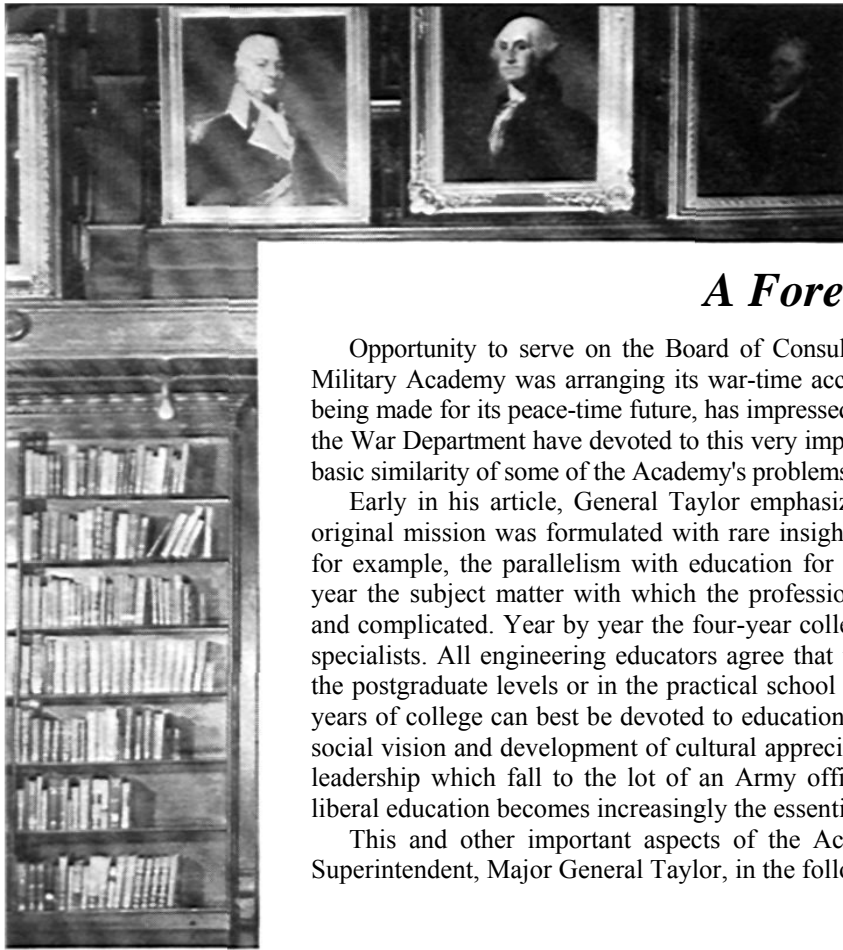
also lead to most unfortunate ways of thinking—or, perhaps, more properly, most unfortunate ways of *not* thinking. For many reasons, almost entirely quite beyond the control of the War Department, the pre-war Army way of life was somewhat conducive to cloistered thinking. In other words, through no fault of his own and entirely unaware of the grave implications thereof, a regular officer might spend many successive years of service in an isolated type of duty—*unwittingly growing apart mentally* from the general public he served.

There is food for thought here. Were we a militaristic people with an "upside-down" type of government and a great and continuing peacetime military establishment, this would present no problem. Our people would be *drawn mentally* to the Army both by service therein and daily contact with a widespread soldiery. However, this is not our way. Ours is a far greater problem: to maintain in peacetime a relatively small and democratic Army in a democracy, and to expand when war comes into a great *national* Army. Although it will alleviate immeasurably the confounding complexities of such a task, the acceptance by our people of the principle of universal military training will neither make them militaristic nor alter fundamentally the Army's mission, if war comes again. Ours will still be the job of giving direction to a *national democratic* Army. We have just finished such a job—training and fighting the Army that won the world's greatest war. Mentally as well as physically, this war drew the people to the Army and the Army to the people. All admit that at times the process involved a considerable grinding of gears. Despite our wishes and best efforts, war may come again. And the gears will grind again too—possibly more raucously—if the Army drifts apart mentally from the people it serves. The burden of preventing this rests primarily with the regular officer. He fails miserably his *trust* if he allows his *national consciousness* ever to degenerate into a *cloistered unconsciousness*.

**R**ETURNING now to the primary theme, in addition to thinking nationally, the more forward-looking regular officers find the underlying realities of international relationships a field not only of stimulating intellectual interest but also one that impels their close attention professionally. Being realists, these officers are acutely conscious of the role of *force* in the continuous interplay of the instruments of power in the world of diplomacy. It is not surprising, therefore, that many regular officers possess a peculiar appreciation of the numerous relatives that press upon, and must be balanced by, the diplomat.

Although the degree and extent of Mr. Truman's use of soldier-diplomats is entirely without precedent, the idea is far from new. Likewise, the use of Navy officers—Admirals Leahy and Kirk being the most recent examples. In the Army, the names of Generals Leonard Wood, John J. Pershing, Tasker Bliss, and Frank McCoy stand, perhaps, at the head of the pre-World War II list of soldier-diplomats. Of these, General Frank McCoy stood quite apart in this role. His most prominent assignment was as our representative on the Lytton Commission which investigated the Manchurian Incident of 1931. Recently, General McCoy took time off from being President of the Foreign Policy Association to serve again as a soldier-diplomat as the Chairman of the Far Eastern Commission.

As indicated at the outset, there are no firm conclusions to be drawn now from what was obviously something more than the merely coincidental use by our President of two outstanding American soldiers in the most difficult and delicate ambassadorial jobs in the world. It is most flattering to the Army, in any event, and should serve to stimulate an increased appreciation, particularly among the younger regular officers, of the challenging opportunities offered from time to time by their chosen profession for service in other than a purely military capacity.



## *A Foreword*

Opportunity to serve on the Board of Consultants on two occasions, one when the U. S. Military Academy was arranging its war-time accelerated program and again when plans were being made for its peace-time future, has impressed me with the care and skill which its staff and the War Department have devoted to this very important educational enterprise and also with the basic similarity of some of the Academy's problems to those of other collegiate institutions.

Early in his article, General Taylor emphasizes the basic mission of the Academy. That original mission was formulated with rare insight, as proven by subsequent trends. Consider, for example, the parallelism with education for other professions, like engineering. Year by year the subject matter with which the profession must deal becomes more highly technical and complicated. Year by year the four-year college course becomes less adequate to produce specialists. All engineering educators agree that this situation calls for specialized training at the postgraduate levels or in the practical school of postgraduate experience, and that the four years of college can best be devoted to education in the general fundamentals, enlargement of social vision and development of cultural appreciation. Because of the variety of duties and of leadership which fall to the lot of an Army officer, to provide a foundation of this type of liberal education becomes increasingly the essential mission of the Academy.

This and other important aspects of the Academy's program are ably discussed by its Superintendent, Major General Taylor, in the following article.

By Karl T. Compton, *President*  
*Massachusetts Institute of Technology*

# WEST POINT LOOKS AHEAD

By Major General Maxwell D. Taylor, USA

**Superintendent, U. S. Military Academy**

**L**IKE many other agencies of our national life, West Point is looking ahead. It is taking stock of the changes which have occurred during and following World War II, with the implied effects upon military policy. To what degree will West Point need readjustment to the new bents given the art of war by atomic energy? How will possible changes in the organization of the armed services affect the field of military education? Faced with such problems as these, the authorities of the United States Military Academy are weighing the changes and assessing the adequacy of past means to meet future requirements.

As is the case after every war, this is a time for criticism of our Army and of all our military institutions. The Congress and the nation are examining the conduct of the war and the character of our post-war military policy. Naturally, the Military Academy is embraced in this scrutiny. It must account for its record during the war years and explain its intentions and aspirations for the post-war period. Already, one hears of drastic proposals to reform or revise the Military Academy. It is apparent from many of these proposals that there is often a lack of understanding of what West Point attempts to do. The

latter is set down clearly in the following terms of the mission given the Academy by the War Department:

"(1) *Mission.*—The mission of the Military Academy is to instruct and train the Corps of Cadets so that each graduate shall have the qualities and attributes essential to his progressive and continued development throughout a lifetime career as an officer of the Regular Army.

(2) *Supervision and control.*—The Military Academy is under the immediate supervision and control of the War Department, exercised through the Superintendent in whom is vested the immediate government and military command of the Academy.

(3) *Courses of instruction.*—Courses will include academic instruction and military training covering a period of 4 years, and of such scope and content as is determined by the War Department upon the recommendation of the Superintendent. In general, courses of instruction and training will be designed to develop character and the



personal attributes essential to an officer, to provide a balanced and liberal education in the arts and sciences, and to provide a broad basic military education rather than that individual proficiency in the technical duties of junior officers of the various arms which is of necessity a gradual development, the responsibility for which devolves upon the graduates themselves and upon the commands and schools to which they are assigned after being commissioned." (Par. 3a, Cir. No. 109, WD, 3 October 1940) (Ch to AR 350-5, 26 Jun 36)

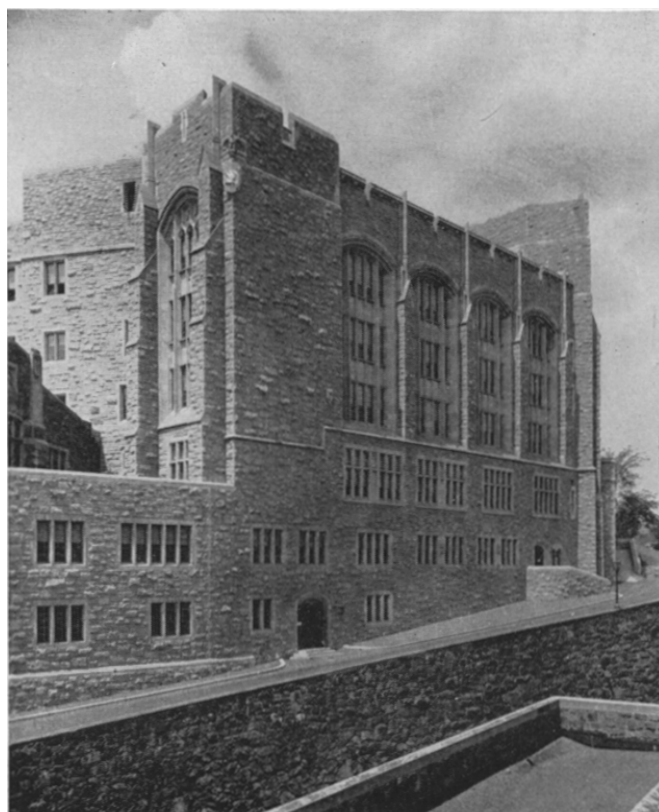
It is to be noted that this mission does not make the Military Academy a mill for producing second lieutenants of any arm of the service. Rather, full emphasis is placed on giving a broad foundation of culture, affording the graduate a base upon which to erect a rich and full life of service. It is against this mission that the accomplishments or shortcomings of West Point should be measured. In looking ahead, West Point assumes that this mission will remain substantially unchanged.

THE principal steps being taken to develop the post-war Academy fall under the following heads:

- a. Reversion to a four-year course.
- b. Outside criticism of the new curriculum.
- c. Reinforcement of the faculty.
- d. A long-range permanent building program.

Anticipating the need for a prompt reversion to the four-year course following the war, the then Superintendent, Major General Wilby, and the Academic Board began work on a new four-year curriculum as early as 1943. This curriculum was submitted to the War Department and was approved in September, 1945. Its principal features are worthy of note. While retaining a strong mathematical-scientific character, it devotes between a third and a fourth of a cadet's academic time to liberal subjects. The major expansions in this field will be in the Department of Economics, Government and History and in the Department of Military Art and Engineering. The former is adding a course in geography and a sub-course in military government while extending its work in international relations. The course in military art fulfills what is deemed a particularly important function—that of impressing the principles of

leadership upon the First (graduating) Class. On the scientific side, there is a considerable expansion in the fields of electronics and communications in the course in electricity. Atomic energy receives a general treatment in the Department of Physics. An administrative change transfers the teaching of chemistry to the Department of Physics, which will become the Department of Physics and Chemistry. Finally, there is a revised objective for aviation training. Instead of dividing the Corps into Air and Ground Cadets, with the former following a modified academic course to permit their pilot qualification prior to graduation, henceforth all cadets will receive a broad orientation in aviation without specialization to the point of obtaining wings. This is a most happy reversion to the fundamental principle that the Academy does not try to make specialists of any one arm of the service, but rather gives a broad foundation of culture applicable to all.



At right, new wing of the East Academic Building, taken from the Riding Hall, which is projected for conversion to academic uses. Below: football in Michie Stadium; the Cadet Mess Hall: air training—not specialized to the point of obtaining wings.





*Graduates were elated last autumn when Major General Taylor became Superintendent. Scholar, athlete, leader of men—his brilliant career, both on and off the battlefield, meshes perfectly with his own objective appreciation herein that the overriding purpose of the Academy is "to produce broad men of character, capable of leading other men to victory in battle." Graduates will be somewhat saddened to learn that the Superintendent's quarters (left) may soon give way to provide space for additional cadet barracks.*



Recognizing that excellence of curriculum is unavailing without a strong faculty, the Academy is seeking reinforcements in personnel. The war-time faculty which rendered the Academy outstanding service was two-thirds civilian in background. Its members are being replaced progressively by young officers, usually from overseas, with a view to having a majority of graduates in the faculty eventually, but with sufficient civilian instructors retained to lighten the military lump. Furthermore, the heavy administrative burden now carried by the head of each academic department, prevents these professors from devoting adequate time to their fundamental job of teaching. To correct this deficiency, we are seeking legislation authorizing one additional permanent professor in each of the nine principal departments. The position of Dean is also recommended with the grade of brigadier general. Meanwhile, Colonel Roger Alexander has been relieved of his duties as Professor of Military Topography and Graphics and designated as Acting Dean.

**H**AVING prepared this new academic program, the Academy sought objective criticism from sources outside its own walls. On September 8, 1945, the Secretary of War invited a Board of Consultants, consisting of distinguished civilian educators and general officers representing the principal components of the Army, to criticize the new curriculum. The Board met at West Point under the chairmanship of Dr. Karl Compton, President of the Massachusetts Institute of Technology. The Board has recently submitted its report to the Secretary of War.

In their report, the Consultants commented most favorably upon the methods of instruction, the progressiveness of the teaching staff, and the modern equipment in the Academic Departments. The program of physical education and intramural athletics also drew their praise. The general conclusion was that the academic program at the Academy was thoroughly sound and provided the "balanced and liberal education in the arts and sciences" directed in the War Department statement of the Academy mission.

The mission itself received their oblique commendation when the Board came out vigorously for the maintenance of the undergraduate character of the Military Academy. It

recorded thoroughgoing disapproval of any departure from the fundamental conception of West Point as a place to provide a broad basic education without specialization in any branch of the service. The business of qualifying graduates for immediate duty with troops belonged, they felt, to the special service schools as a part of the postgraduate work of junior officers.

The Consultants went beyond the local proposal for an addition of nine new professors, recommending a total of 19 above the present complement. They felt that these additional professors would allow greater flexibility in departmental work, permitting department heads to participate in many associated educational activities at West Point and elsewhere from which they are now debarred by lack of time.

A final recommendation of great importance was the repetition of one made by a previous Board of Consultants in December 1942, that members of Congress be invited to designate four appointees to the Military Academy as at present, but without designation as to principal or alternate. If Congressmen were willing to accept this change, the final priority among the appointees would be determined by the Academic Board. The latter has had considerable experience in selecting desirable candidates in the application of Section 2 of the Act of Congress approved 3 June 1942, which allows the Academic Board to pick the most likely alternates who have not received principal appointments in order to fill the vacancies remaining at the Academy at the time a new class enters. The visiting educators felt that such a change would increase the academic efficiency of the Military Academy and decrease the loss of time and money expended at present on inferior cadets.

The Superintendent and Academic Board are in essential agreement with all the recommendations made by the Board of Consultants. It is felt that the realization of their suggestions will go a long way toward fitting the Military Academy to meet its mission in the post-war world. Meanwhile, all arrangements are being made for the return to the four-year course next year. The additional class will be produced by the division of the present Third Class. In effecting this division, the cadets will be allowed to express their choice which will be followed in so far as possible.

Some arbitrary transfers will be inevitable as it is necessary to divide the class squarely in half to avoid an unduly small class one year. We also hope to avoid any wide difference of ability between the two classes. When it becomes necessary in the interest of the service to transfer cadets against their choice, maturity will be the yardstick used, the cadets who are considered the more mature being allowed the three-year course. It is expected that the division will be completed and the results announced some time after the first of the year.

**I**N ADDITION to preparations on the curricular side, West Point must look to the future of its physical plant—the buildings, laboratories and training areas. The present plant is designed to accommodate a Corps of 1,960 cadets, there having been no major construction since 1938. Consequently, we have fallen well behind in the war period in meeting the essential requirements of the Corps of 2,496 presently authorized. As the Corps has expanded to its present size, the facilities have become crowded and markedly inadequate to meet the essentials for housing, mess and training facilities. These deficiencies were acceptable in the war period but with a return to peace and the normal four-year course, prompt action must be taken to restore the Academy to its maximum operating efficiency.

With this in view, the Superintendent has submitted a permanent construction program to the War Department which, when completed, will provide amply for the present Corps. The principal features of this proposed program are as follows:

- a. Additions to the Cadet Mess, Gymnasium, and Thayer Hotel.
- b. 25 Divisions of barracks, probably on the site of the Superintendent's house and Professors' Row.

Each Sunday at the Cadet Chapel—majestic sentinel overlooking the "plains of West Point"—the cadets dedicate themselves, *in the name of the Great Friend and Master of men, to guard against flippancy and irreverence in the sacred things of life, to show no fear when truth and right are in jeopardy, and to acquit ourselves like men in our effort to realize the ideals of West Point in doing our duty to Thee and to our Country.* (Italics, from the Cadet Prayer.)

- c. Quarters for the Superintendent, Commandant, and Dean of the Academic Board on the site of the Old Observatory.
- d. A new academic building by a conversion of the Riding Hall.
- e. A Memorial Hall near the spot where the Old Hotel stood on Trophy Point.
- f. An Auditorium, probably located near the Ordnance Compound below Trophy Point.

The entire program is a large one with the estimated cost approaching \$50,000,000. If approved by Congress, the construction will extend over five or six years.

**I**N CONCLUSION, let it be said that West Point is deeply conscious of the need for continuing self-criticism. Just as modern war pervades all phases of national life, so West Point must survey a field of equal breadth. The cadets should not live in a mental cloister; their interests must be catholic, avoiding the small horizons sometimes attributed to the military mind. At the same time, in our concern to give the cadets the scientific tools needed in the new age, we must not forget that West Point is essentially a school for leaders. What it teaches its graduates from books is important but is not everything. There is no academic department at West Point which is not excelled in size or scope at some civilian school. Other colleges offer more advanced scientific and liberal courses to special students. We err if we measure West Point only by the yardstick of curriculum. West Point succeeds or fails in the future to the degree it continues to produce broad men of character, capable of leading other men to victory in battle.



# ARTILLERY in the ARDENNES

by Lt. Col. Joseph R. Reeves, FA



(Although cuts and plates are new, this article is reproduced substantially as it appeared originally in the May, 1945, issue of the

## Introduction

THIS is the story of the Artillery with the First US Army during the German counteroffensive in the Ardennes in December 1944. It covers the period between the German attack on the 16th of December and the resumption of the offensive by the First US Army on 3 January 1945. This is not a complete report dealing with all aspects of the operation. That is, the actions of other arms have been described only to the extent necessary to show their effect upon the employment of the artillery. Because this treats only with the First US Army, major artillery operations of other forces, for instance those centering at Bastogne, have been omitted.

## 15 December

ON THE 15th of December, the disposition of the Artillery with the First US Army varied widely in the several corps sectors (Plate I, p. 141). To the north the Artillery with the VII Corps had just completed a series of forward displacements in support of the Corps drive from Aachen (See Gazeteer, p. 174, for coordinates of place names referred to in this article) to the Roer River. While a portion of the artillery continued to support the clearing of the west bank of the Roer, reconnaissance was underway for forward position areas from which to support the projected continuation of the attack to the Rhine. Control of the Corps Artillery was centralized, with only nominal attachments to the divisions. The sector was narrow and fire possibilities permitted massing of almost the entire Corps Artillery at any point on its front.

In the center, the Artillery with the V Corps was also disposed offensively. The attack of the Corps to capture the critical Roer River dams was in its fourth day; the advance through the Hurtgen Forest was slow; and extremely heavy

artillery fires were counted upon to keep the attack moving. Corps Artillery was located in two major groupings, one in the north and the other in the center of the Corps sector, with practically all of its fires capable of being converged on the area of the dams. The 99th Inf Div Artillery with attached medium battalion and heavy battery, supported a defensive sector on the south flank of the Corps.

To the south, the extended front of the VIII Corps could not be reinforced along its entire length by the artillery available to the Corps. A mixed group had been attached to the 4th Inf Div Artillery to support its sector at the southern Army boundary. The remainder of the Corps Artillery had been kept to the north prepared to defend the penetration of the Siegfried Line which the VIII Corps held in that area.

The 32d FA Brig, under Army control, was located in the VII Corps sector. Direction of fire of a portion of the 32d FA Brig Artillery had been shifted south to support the V Corps attack.

## Attack

### 16 December

THE first indications of unusual enemy activity came at 0530 hours on December 16th, with a heavy artillery program commenced along the entire Army front and continued unabated for approximately two and one-half hours. During this period forward elements, battery positions, command posts, and rear communication centers were shelled. Deep-in fires were received at Verviers, Malmedy, Eupen, and St Vith.

The Artillery with the VIII Corps replied immediately to the enemy preparation, and, despite the disruption of communications which had been caused by the enemy fires,



First U. S. Army Artillery Information Service.)

initial successes were scored in countering the German fire.

The enemy then struck in force along the entire VIII Corps front, overrunning forward OPs and sound bases, and depriving the Corps Arty of most of its observation and counterbattery facilities—a particularly severe loss since weather was not

favorable to Air OP operations. Despite these reverses the artillery continued extremely active and along the most of the front succeeded in checking (if only temporarily) the initial impetus of the attack.

To the south, the 4th Inf Div Arty, ably supported by the 422d FA Gp, caught the advancing enemy columns with well placed concentrations which limited a strong attacking force to local gains. In the center, the 28th Inf Div Arty, occupying positions well to the rear, was not forced to displace by the initial enemy penetrations. Although unable to mass fires at any point on its front, it so effectively harried the enemy as to appreciably slow his advance. Further north, in the 106th Inf Div Arty sector of responsibility, the enemy attack was not to be denied. At the V-VIII Corps boundary the enemy uncovered a soft spot held only by a reinforced cavalry task force. After penetrating this cavalry screen, a strong armored force turned and exploited to the south. A similar penetration was made to the south of the 106th Inf Div sector. Faced with heavy enemy pressure from the front and enemy infiltration from both flanks, the forward position of the 106th Inf Div Arty shortly became untenable. Southwest of Auw, the position areas of the organic artillery, less one battalion, and the attached 275th Armd FA Bn came under small arms and mortar fire and were temporarily surrounded. By midnight counterattacks had somewhat relieved the pressure, and all but the 590th FA Bn 105H and one battery of the 589th FA Bn 105H had started a fighting withdrawal; however, the 591st FA Bn 105H was cut off by armor in Winter-spelt. Corps Arty started displacing to prepared positions in the rear as forward units also came under direct enemy attack.

The Artillery with the V Corps had likewise replied to the early morning German artillery preparation, with most of its counterbattery fires emanating from the 406th FA Gp at Monschau, and the 2d and 99th Inf Div Arty to the south thereof. These two divisions also felt the weight of the attack and their artillery was extremely active with defensive fires on enemy threats at Hofen and Bullingen respectively.

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#### Accompanying Remark

*By the First Army Commander, General Courtney H. Hodges, USA*

Early in December 1944 the German High Command assembled two panzer armies with great speed and secrecy, and, on the 16th, launched against the First U. S. Army an all-out offensive which achieved a breakthrough on a front of thirty-five miles to a depth of sixty miles. The broad plan of the enemy was to strike toward the Meuse and on to Brussels and Antwerp, with the main effort driving through Liege.

Ten days after the initial assault the enemy had been fought to a standstill. Four main thrusts had been made by panzer spearheads followed by infantry divisions. The northern spearhead (initially the main effort) had been checked and deflected by the stand of the V Corps at Monschau and Malmedy. The secondary thrust directed at Namur had been delayed and split at St. Vith by the left of the VIII Corps. Its northern column, reenforced to become the main effort, had been held by the timely introduction of the XVIII Airborne Corps at Werbomont and stopped in the Marche-Hotten area by the rapid and decisive shift of the VII Corps. The southern column, continuing as the secondary effort, had been stopped at Bastogne by the

center of the VIII Corps, later reenforced by Third Army. The diversionary attack toward Luxembourg, against the right of the VIII Corps, had been turned back at the outset.

In this operation of the First U. S. Army all arms and services combined to inflict a disastrous defeat upon the enemy. This defeat left the last powerful German force in the West exposed and vulnerable to immediate attacks which undoubtedly shortened the war in Europe. Of the principal arms which could be brought to bear directly upon the enemy, infantry, armor, and air were seriously handicapped by weather and terrain. Through all, however—day and night, good weather and bad—the flexibility and power of our modern artillery was applied unceasingly.

A lesson, then, from the Battle of the Bulge—*Artillery constitutes a most formidable striking power continuously available to any commander of combined arms for application wide and deep over the battle area.*

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**FIRST ARMY ARTILLERY ORDER OF BATTLE, 15 DEC 1944**  
(Organic divisional artillery battalions are *not* included)

V CORPS	VII CORPS (continued)
V Corps Arty Hq & Hq Btry	83 Inf Div Arty
17 FA Obsn Bn	193 FA Bn 155H
Btry A 285 FA Obsn Bn	951 FA Bn 155H
187 FA Gp Hq & Hq Btry	104 Inf Div Arty
5 FA Bn 155H (From 1 Inf Div Arty)	188 FA Bn, 155H
187 FA Bn 155H	3 Armd Div Arty
953 FA Bn 155H	58 Armd FA Bn
190 FA Gp Hq & Hq Btry	991 FA Bn 155G SP
190 FA Bn 155G	5 Armd Div Arty (-95 Armd FA Bn)
997 FA Bn 8H	Btry A 987 FA Bn 155G SP
406 FA Gp Hq & Hq Btry	400 Armd FA Bn
Btry C 272 FA Bn 240H	
186 FA Bn 155H	<b>VIII CORPS</b>
955 FA Bn 155H	VIII Corps Arty Hq & Hq Btry
941 FA Bn 4.5G	16 FA Obsn Bn
200 FA Bn 155G (-Btry B)	174 FA Gp Hq & Hq Btry
95 Armd FA Bn (with CCR 5 Armd Div)	965 FA Bn 155H
16 Armd FA Bn (with CCB 9 Armd Div)	969 FA Bn 155H
62 Armd FA Bn (with 102 Cav Gp)	770 FA Bn 4.5G
2 Inf Div Arty	333 FA Gp Hq & Hq Btry
Btry C 987 FA Bn 155G SP	333 FA Bn 155H
196 FA Bn 105H	771 FA Bn 4.5G
8 Inf Div Arty	402 FA Gp Hq & Hq Btry
1 Plat 987 FA Bn 155G SP	559 FA Bn 155G (-Btry C)
76 FA Bn 105H	561 FA Bn 155G
78 Inf Div Arty	578 FA Bn 8H
7 FA Bn 105H (From 1 Inf Div Arty)	740 FA Bn 8H
987 FA Bn 155G SP (-Btry A & C)	4 Inf Div Arty
99 Inf Div Arty	422 FA Gp Hq & Hq Btry
Btry B 200 FA Bn 155G	Btry C 559 FA Bn 155G
776 FA Bn 155H	81 FA Bn 155H
	174 FA Bn 155G SP
<b>VII CORPS</b>	28 Inf Div Arty
VII Corps Arty Hq & Hq Btry	687 FA Bn 105H
13 FA Obsn Bn	106 Inf Div Arty
Btry B 285 FA Obsn Bn	275 Armd FA Bn
87 Armd FA Bn	9 Armd Div Arty (-16 Armd FA Bn)
18 FA Gp Hq & Hq Btry	
183 FA Bn 155H	*32d FA BRIGADE
751 FA Bn 155H	32 FA Brig Hq & Hq Btry
195 FA Bn 8H	285 FA Obsn Bn (-Btry A & B)
142 FA Gp Hq & Hq Btry	*18 FA Bn 4.5R
240 FA Bn 155G	79 FA Gp Hq & Hq Btry
188 FA Gp Hq & Hq Btry	Prov FA Bn 10.5H
172 FA Bn 4.5G	551 FA Bn 240H
980 FA Bn 155G	552 FA Bn 240H
981 FA Bn 155G	268 FA Bn 8G
1 Inf Div Arty (-5 & 7 FA Bns)	179 FA Gp Hq & Hq Btry
9 Inf Div Arty	Prov FA Bn 10.5H
957 FA Bn 155H	256 FA Bn 240H
	272 FA Bn 240H (-Btry C)
	253 FA Bn 8G

\*The heavy battalions of the 32d FA Brig were operating at one or two battery strength in order to provide personnel with which to man two provisional battalions which had been armed with captured German 10.5-cm howitzers. The 18th FA Bn, armed temporarily with 4.5" rockets, was under operational control of the V Corps.

Minor adjustments of position areas were made, and, as the threat to the south and east grew, the 406th FA Gp shifted a portion of its fires to the threatened area. In the lightly held sector of the 102d Cav Gp (between the 78th and 8th Inf Divs) observers from the supporting 62d Armd FA Bn reported alarming indications of pending enemy action, and adjusted fires against this build-up.

The northern group of the V Corps Arty, the VII Corps Arty, and the 32d FA Brig continued to support the attacks of the VII and V Corps. Although the artillery was plentiful in this sector and despite the severe threat developing in the south, it was decided that no major shift of artillery should be made until the enemy intentions in the Monschau and Julich areas had clarified. Consequently, only the 1st Inf Div Arty and the 751st FA Bn 155H were dispatched south at this time.

*17 December*

THE morning of the 17th broke clear with unlimited visibility along the entire Army front; Air OPs, Arty/R, and ground observers were confronted with so many targets that only the most lucrative could be attacked. Ammunition rationing was abandoned and expenditures reached a peak. Despite this, the enemy elected to accept his losses and pressed his day-old attacks while launching new ones. Meanwhile, artillery units in all sectors were active in rounding up enemy parachutists which had dropped during the night.

In the southern sector of the VIII Corps, fighter bombers and the combined observed fires from the reinforced 4th Inf Div Arty and a battalion each of the 28th Inf Div Arty and the 9th Armd Div Arty, caught the panzer columns and partially dispersed them before they could press home the attack. The second German bid to take Luxembourg was slowed, halted, and then turned back as infantry and armor counterattacked behind heavy supporting fires to retake lost ground. In the center, the 28th Inf Div Arty kept up effective support while executing a series of successful withdrawals, most of them in the face of enemy small arms fire. In this instance terrain was a vital factor; although weak, the artillery could interdict the few good roads, there-by jamming the enemy columns and providing excellent targets for the Air. The over-extended line bowed but did not break. Further north the German double envelopment of the Schnee Eifel was complete; elements of 106th Inf Div Arty which had not withdrawn the preceding night were surrounded together with two combat teams of the division. The units which had withdrawn suffered additional losses of five 108-mm and one 155-mm howitzers before reaching temporary safety three miles west of St Vith; personnel and other equipment losses had seriously reduced the efficiency of the units; no contact could be made with the Division FDC. To the south the 591st FA Bn still fought its lone fight. The VIII Corps Arty, which had started its displacement the previous night, was forced to withdraw en masse; the extent of the enemy penetration was so great that no stop could be made at previously prepared positions. During the period of this movement, which lasted the better part of the afternoon, the operational Corps Arty consisted

*Graduating from the Military Academy in 1939, Lieutenant Colonel Reeves served successively, as a battery and battalion staff officer, in the 2nd, 9th, and 30th Infantry Divisions, before becoming S-3 of the First Army Artillery Section late in 1943. He served in this highly responsible capacity throughout the entire period of First Army operations in Europe, including the planning stage for the cross-channel assault.*



solely of two batteries of 155-mm howitzers and one battery of 4.5" guns. By 2100 hours most of the units had closed in their new firing positions, approximately 10,000 meters southwest

of St Vith, and had reestablished communication with the Corps FDC. Direction of fire had been altered so that approximately one-third of the Corps Arty

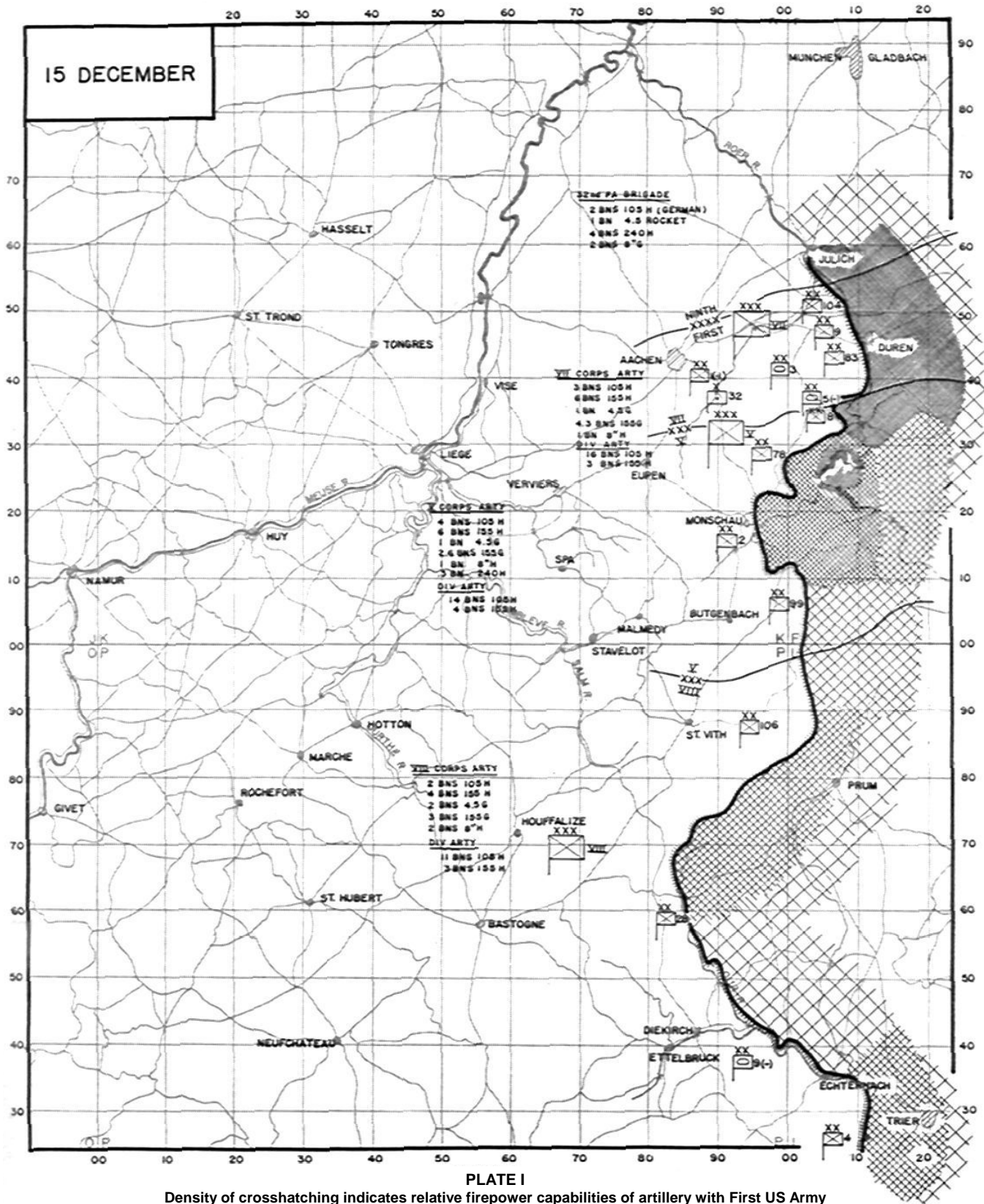


PLATE I

Density of crosshatching indicates relative firepower capabilities of artillery with First US Army

was now capable of firing against the German pincer to the north.

Although the major German effort was evidently directed at exploiting the penetration further to the west along the V-VIII Corps boundary, armored columns also turned north into the artillery position areas of the V Corps south flank. The V Corps ASP near Waimes was abandoned as the main supply road was cut and German infantry infiltrated into the ammunition dump itself. By this time, the situation for the 99th Inf Div Arty, with attached 776th FA Bn 155H and Btry B 200th FA Bn 155G, had become critical; position areas in and around Krinkelt were practically isolated; ammunition was running out, one train had been lost to the enemy at Bullingen and the others could not get back to their units; Air OPs took off before day-break barely clearing the field as it was overrun by tanks; and both the 371st and 924th FA Bns 105H had lost heavily in personnel and equipment in the withdrawals of the previous days. Since effective support could no longer be rendered the infantry, a cross country displacement was made to Camp Elsenborn, during which additional losses were sustained.

As the 99th Inf Div Arty fought its way back through infiltrating enemy infantry, the 2d Inf Div Arty shifted half of its fires almost 3200 miles to cover the withdrawal. These fires were also instrumental in the defense of the Division FDC at Wirtzfeld; observers from an OP at that point adjusted fire on advancing armor to finally stop it just 800 meters short of their location. In this action, the 2d Inf Div Arty airstrip was surprised by enemy armor before the Air OPs could be evacuated. All personnel were cut off but evaded capture and eventually returned to their units. Later, artillery fires were placed on the airstrip to ensure the destruction of the lost planes. By now the threat from the south had been temporarily checked but further enemy action from that direction would imperil the forward positions of the 37th and 38th FA Bns 105H and the two attached batteries of the 987th FA Bn 155G SP north of Wirtzfeld and Krinkelt. Withdrawal of these units to rejoin the remainder of the division artillery at Elsenborn was accomplished without incident. The attached 196th FA Bn 105H at Kalterherberg continued in support of the division sector south of Monschau. Throughout this and the succeeding days' action, artillery units continued to supply themselves from the abandoned ASP, despite its being in the front line and partially controlled by the enemy. By late evening all of the 2d Inf Div Arty and the 99th Inf Div Arty (less the 371st FA Bn 105H—then reequipping) and attachments were back in action. Reinforcing fires from the re-oriented 955th FA Bn 155H of the 406th FA Gp joined the divisional battalions in heavy TOTs on the recently vacated position areas. The 1st Inf Div Arty arrived in the sector and started occupying positions in the vicinity of Sourbrodt.

Of all the artillery operations covered by this report, the action centering in the Monschau sector best illustrates the decisive effect of massed artillery fires. Here a thin cavalry screen with adequate artillery support stopped an all-out German armored and infantry attack and caused the German Command radically to alter the plan for a double envelopment

of Aachen. Action started at 0500 hours with a two hour counterpreparation by the 62d Armd FA Bn; this delayed the German attack for more than four hours. The first and second attacks came in rapid succession shortly after daylight. Neither was successful. By this time the fires of the 187th and 406th FA Gps of the V Corps Arty, the 78th Inf Div Arty, and a portion of the 32d FA Brig (totaling in all 4 Bns 105H, 6 Bns 155H, 1 Bn 4.5G, 2 Bns 155G, 2 Bns 240H, and 1 Btry 8G) had been added to those of the 62d Armd FA Bn. The third attack was made in much greater strength but was so decimated by artillery fire that only one battalion of infantry succeeded in breaching the cavalry line. It was mopped up in short order. Further artillery reinforcement arrived as the 84th FA Bn 105H, with the 47th RCT of the 9th Inf Div, took position northwest of Monschau.

By nightfall major shifts of artillery were nearing completion. During the day the 7th Armd Div Arty, marching in one column, had moved south from Ninth Army to the VIII Corps, cutting across and through the German spearheads below Malmedy in a grim race of hide and seek. The enemy was well within range as the battalions took initial firing positions between Vielsalm and Ville du Bois. The 30th Inf Div Arty, also from Ninth Army, had assembled under V Corps control at Eupen, and was preparing to meet the enemy threat which had reached as far west as Malmedy and Stavelot. The 10th Armd Div Arty was en route to VIII Corps from Third Army. From V Corps, the 16th Armd FA Bn with CCB of the 9th Armd Div had moved to reinforce the 106th Inf Div Arty. The 58th Armd FA Bn and the 285th FA Obsn Bn had been released by VII Corps and had moved to further reinforce the center of the VIII Corps sector. In this latter move most of the personnel of Battery B of the 285th FA Obsn Bn were ambushed, captured, and then murdered by SS Panzer units near Waimes. (See "*The Massacre at Malmedy*," page 80, THE FIELD ARTILLERY JOURNAL for February, 1946, for graphic description of this atrocity, written by a survivor.)

### Crisis

*18 December*

**B**AD weather, which was due to last for the next five days, set in on Monday the 18th. All tactical reconnaissance aircraft were grounded as overcast skies cloaked the shifting of enemy reserves. With a limited range of visibility, however, Air OPs, and to some extent ground OPs, were able to observe close-up deployments. The loss of observation was a serious blow but, in compensation thereto, the immediate employment of the Pozit (VT) fuze was to prove a significant factor in maintaining effectiveness of artillery fires. A crisis was in the making as the enemy exerted all efforts at expanding and joining the penetrations achieved both north and south of St Vith.

Although the situation which confronted the 7th Armd Div was critical as it moved into battle at St Vith, it could have been worse from an artillery viewpoint. In that general area, four field artillery battalions were already supporting

*(Continued on page 173)*



# The Principle of Universal Military Training\*

By Col. W. A. Graham, Rtd

## Part I

### *An Integral Part of America's Original Military Policy*

A great debate now engages the attention of the people of America. Shall we, or shall we not, adopt Universal and Compulsory Military Training of the nation's youth as a fundamental of our future military policy? The issue has been joined before the bar of public opinion: the decision lies with the representatives of the people—the Congress of the United States.

It is proposed here to discuss the subject from the viewpoint of legal and historical fact, and by stressing certain aspects of the matter that have hitherto escaped attention, to make manifest to the common man some phases of our military history that the drifting sands of time have long obscured.

The present age, whether rightly or wrongly, has come to be known as the era of the common man, and it is to him, whose hard common sense and ability to grasp and to act upon realities have made him the backbone and the strength of this America of ours, and not to the idealist whose vision is clouded by dreams of everlasting peace, that this discussion is in the main addressed. His is the greatest stake in the country's future, for he forms the great majority of our people; and to him will always fall, as it always has, the duty and the burden—and the honor—of fulfilling the basic purposes of the Constitution, among the chiefest of which is to provide for the common defense.

Ever since the days of General Emory Upton, a distinguished veteran of the Civil War, whose *Military Policy of the United States*, compiled during the late seventies, was long regarded by professional soldiers as infallible, it has been the fashion to decry the Militia Law of May 8, 1792—the initial legislative pronouncement of American military policy following adoption of the Constitution—as an ill-conceived, fantastic scheme of national defense, because it failed to produce the results envisioned by its framers, and brought not success but disaster in the nation's hour of need.

Few of its critics, however, have thought it necessary to go beyond the fact of failure, regarding that alone sufficient to condemn it: and fewer still have accorded to its authors credit for their assertion of an all-important, vital principle, which, had it but been feasibly applied and implemented, and administered with competence, might have produced a

\*This article was published and distributed, in pamphlet form, in November 1945 by the American Legion Defense Division of Indianapolis, Indiana.

Colonel Graham has been a student of military subjects since his graduation from the University of Iowa in 1897. He enlisted in the Iowa National Guard in 1912, and retired from the Army in 1939. A member of the Bar in Iowa, he lectures on military law and government contracts at Loyola University School of Law.



Repository of the original documents in the Library of Congress.

military structure that would have met the nation's needs: a principle which, after the lapse of a century and a half, has been revived in the plan lately considered favorably by a Select Committee of the Congress, and which proposes, as a measure of national security, that every youth, some time between the ages of 17 and 22, be required to undergo one year of military training. This plan, insofar as it has yet reached concrete form, is embodied in a bill introduced January 3, 1945, by the Chairman of the Military Affairs Committee of the House of Representatives, and designated as H. R. 515.

The notable feature of the Act of 1792, in its relation to the pending plan, was that part of its first section which contemplated Universal and Compulsory Peacetime Military Training, not alone of youths of military age, but of adults also, for by its terms every able-bodied citizen between the ages of 18 and 45 was required to enroll in a military organization, and to appear for "exercise," a term then in standard use in the sense of training or drilling of troops, whenever ordered out by his commanding officers.

It was the Second Congress of the United States, acting under the lately ratified Constitution, that enacted this law; a Congress that numbered among its members many distinguished

men who had previously attended the Constitutional Convention of 1787 as Deputies representing the several states. Chief among these was General George Washington, who as first President signed the Act;<sup>1</sup> while James Madison of Virginia, "Father of the Constitution," Rufus King of Massachusetts, Thomas FitzSimmons of Pennsylvania, George Read and Richard Bassett of Delaware, Pierce Butler of South Carolina, and William Few of Georgia, as members of the national legislature, all cast their votes in favor of the measure.

To those persons—and they are legion—who believe and who are accustomed to assert with emphasis and assurance that Universal Military Training is "un-American"—that it is an alien idea, a departure from American principles and tradition—the provisions of the Act of May 8, 1792, should be enlightening, for it demonstrates in a manner that denies dispute that the men who wrote the Constitution and to whom fell the duty of its earliest applications, entertained neither doubt nor hesitation in laying upon every citizen of military age the duty and the obligation of peacetime training for the national defense. Not only did the law establish the principle of universal *training*, but in accord with ancient Anglo-Saxon custom it contemplated also actual military service on the part of all such citizens upon call, for any purpose designated by the Constitution as a proper federal use of the Militia,<sup>2</sup> and upon each and every person subject to its terms, as likewise did those ancient customs, it laid the duty also to furnish his own arms, an obligation which a few years later, by the Act of April 23, 1808, the Government shifted to itself in order to ensure uniformity of weapons and equipment.

The Act of May 8, 1792, was, of course, an exercise by the Congress of its powers under the Militia clauses of the Constitution; and when scrutinized with care and in conjunction with subsequent Acts of other early Congresses, it indicates with clarity that the framers of that historic instrument, in formulating the Militia clauses, had in mind, primarily, a *national* rather than a *state* Militia,<sup>3</sup> whose organization, entrusted to the states under the supervision and

direction of the Congress, should be followed by a course of training in the military art according to a discipline prescribed by Congress; a force which should at all times be available to the National Government if needed. When not employed in active federal duty, the Militia remained, as always, at the service of the states of origin.

The language of these early Acts is instructive, and to one of the author's profession—for many years that of a military lawyer—it fairly teems with significance. Consider, for example, the terms of this Congressional mandate, enacted May 9, 1794—one of numerous similar Acts of the early Congresses, couched in almost identical language—all of which empowered the President to transform militiamen from the status of trainees to that of soldiers of the Republic:

"Be it enacted, etc., that the President of the United States be and he is hereby authorized to *require* of the executives of the several states, to take effective measures, as soon as may be, to organize, arm and equip, according to law, *and hold in readiness to march at a moment's warning*, the following proportions, respectively, of 80,000 *effective* Militia, officers included, to wit:" (Then follows an apportionment among the several states.) The italics are the author's.

The Act of June 24, 1797, which likewise provided for induction into federal service of militiamen, vested similar authority in the President "at such times as he shall deem necessary"; that of March 3, 1803, "whenever he shall judge it expedient"; those of April 18, 1806, and March 30, 1808, "at such times as he shall deem necessary." The Act of April 10, 1812 (the first to include Militia from the territories), provided that the number called be "apportioned by the President" from "the latest Militia returns in the Department of War," the Congress, early in 1803, having made obligatory upon the Adjutants General of the several states, each year to make returns of the Militia directly to the President.

The word "*require*," as used in all these Acts of the early Congresses, means to demand something authoritatively or imperatively as a right. It is so defined in numerous decisions of the courts and by the *Oxford Dictionary*. Its use in these statutes seems to place beyond cavil that the founders of this nation considered the executives of the several states constitutionally bound to obey, when called upon by the President, to prepare and "hold in readiness to march at a moment's warning" the fair manpower share of their respective states toward the national defense. The word "effective" also must be accorded meaning. What other could it mean than that the men included in each quota should be trained and efficient soldiers; not raw, undisciplined recruits?

For twenty years they did obey. Then came a time, in 1812, after the Congress had authorized the President to induct one hundred thousand men of the Militia, when the executives of two New England states, Connecticut and Massachusetts, in the very midst of war refused, upon the alleged ground that they, and not the President, were the proper judges whether an occasion for a constitutional use of the Militia had risen. The War of 1812 was unpopular in New England, and this denial of the President's authority, disloyal and incongruous as it now appears, was imitated in aggravated form by the Governor of Vermont in 1813. It became, indeed, a principle cause of the breakdown,

<sup>1</sup>The word "signed" is used advisedly, for it cannot be said that Washington *approved* the provisions of the Act, which, for reasons later set out in this text, fell far short of his conception of sound military policy.

<sup>2</sup>General Upton, while roundly condemning the Act of 1792, nonetheless had this to say: "The first section of the Act, however, laid down the truly democratic doctrine that every able-bodied male citizen owed military service to his country, . . ." He overlooked, apparently, the language of that section which made obligatory upon all enrollees that they "appear, so armed, accoutered and provided, *when called out to exercise* . . ."

<sup>3</sup>Several sections of the Act of 1792 contain internal proof of the intent of Congress that the militia should be primarily under national control. Section 6 directs the appointment of an Adjutant General in each state, and prescribes his duties in considerable detail, among which is that of "perfecting *the system of military discipline established by this Act.*" Section 10 prescribes the duties of Brigade Inspectors, among which are "to superintend their *exercise and manoeuvres* and introduce the *system of military discipline before described* throughout the Brigade . . ." These provisions refer to the "discipline" prescribed by Section 7, which is set out in Note 5. Such references as these could only mean that the Congress regarded the several states bound to obey the mandates of the Act, with especial emphasis upon the system of Universal Training established by it. The weakness of the law lay in the omission to provide machinery to enforce its mandates, which the states, by minimizing training, practically nullified.

one year later, of the whole Militia system. For half a generation the question thus raised by three recalcitrant state executives remained unsettled, until in 1827, in the case of *Martin vs. Mott*, the Supreme Court of the United States unanimously held that in the President, and in him alone, resides the power to determine, and to determine finally, the fact of constitutional exigency. But in the mean-time the Militia system had collapsed, never to be revived, though the Act of 1792 *remained the law of the land until 1903*, when in the so-called Dick Act it was repealed and replaced by the beginnings of the present National Guard system; a system that, abandoning the principle of universal training upon which the old Militia law was based, substituted for it dependence upon the enrollment of volunteers alone.

But in the heyday of the Militia system established by the Second Congress, the United States possessed—on paper—a potential National Army both imposing and impressive. In the year 1814 the state of Virginia alone boasted four divisions of infantry, six regiments of artillery, six of cavalry, and a battalion of flying artillery. Four Major Generals—John Pegram, James Williams, John Smith and Alexander Parker—headed the list of "Brass," followed by twenty glittering Brigadiers. The First Division contained four brigades, two of which comprised sixteen regiments; the other two, thirteen. The Second Division likewise contained four brigades, divided among twenty-two regiments. The Fourth Division, four brigades with twenty-nine regiments. The Third Division was of formidable proportions. It counted eight brigades and forty-three regiments. Each regiment then consisted of ten companies; each company of sixty-four men, exclusive of its commissioned and noncommissioned officers. Virginia's infantry divisions, therefore, presented a paper Army of 123 regiments of 640 men each, which totalled, including officers, a force of nearly 80,000. Add to these the four regiments of cavalry and four of artillery—which together comprised some five thousand more—and the grand total of organized (and supposedly trained) Militia of this one state exceeded 85,000 men, to say nothing of the battalion of flying artillery. The roster of the *General and Field Officers* alone of Virginia's paper Army of 1814 covers four closely-printed sheets. The entire Regular Army of that day numbered less than 40,000.

When one considers that the able-bodied citizenry of all the other states and territories, as in Virginia, were enrolled for military training during the early years of the Republic, and that the populations of such states as New York, New Jersey, Pennsylvania and Massachusetts were comparable with that of Virginia, it is possible to estimate, at least, the numerical paper strength of the potential National Army of the United States throughout that period.<sup>4</sup> It could not have fallen short of half a million men, exclusive of Regulars. It may well have risen far above that number.

Yet, despite all the elaborate set-up, the Militia system inaugurated by the Act of 1792 failed—and failed miserably.

<sup>4</sup>In 1790, Connecticut's militia enrollment was 30,000, while Massachusetts boasted nine divisions of infantry, 29 troops of cavalry and 254 corps of artillery, which totaled about three times the Connecticut figure. Maryland in 1808 reported an enrollment of 39,000; and that same year the total of enrolled militia for the Union numbered 674,827 men, as shown by the consolidated returns. The author's estimate of half a million in 1814 is, therefore, much too modest.

The fiasco—and the tragedy—of Bladensburg in August 1814, which preceded the capture and the loot and the burning of Washington, the destruction of the National Capitol and the pell-mell flight of the President and his Cabinet, tolled its death knell: and while its livid corpse remained unburied, exposed to public contempt for almost a hundred years, the Militia system of the founders, to all practical purposes, became a nullity after 1814.

The training intended by the authors of the law, and prescribed in Section 7 of the Act of 1792,<sup>5</sup> was that set forth in the "Regulations for the Order and Discipline of the Troops of the United States," which were formally adopted by the Continental Congress in 1779 and to which all troops of the revolutionary states were ordered to conform. These regulations, published at Philadelphia, consisted of 154 pages of detailed military instruction, which covered the entire field of the military science of that day. The book comprises twenty-five chapters, each dealing with a basic military subject, and contains clear and definite directions for the instruction of recruits, the drilling and maneuvering of companies and of battalions and regiments; the marching of corps and armies in line or column; the passage of defiles; fire control, advancing or retreating; the laying out and entry into camps; the disposition of brigade field pieces; the transportation of baggage; camp and personal sanitation; the care of the sick; sentinel and guard duty, and inspections and reviews. It concludes with a separate section containing precise instructions for military personnel from regimental commanders down to privates.

Had the system of training exhibited in these regulations been systematically and conscientiously observed by the Militia, as contemplated by the Act of 1792, and with frequency sufficient to make such observance something more than pastime, it is reasonable to suppose that worthwhile results might have been achieved and the debacle of 1812-14 at least minimized if not entirely obviated. But the regulations and the rules for training so carefully devised were all but wholly disregarded, the discipline omitted and ignored. Company assemblies, almost from the beginning, were held but twice a year, while battalions were called together only once.<sup>6</sup> Training soon became so scant as to

<sup>5</sup>Section 7 of the Act provided "that the rules of discipline, approved and established by Congress in their resolution of the twenty-ninth of March, one thousand seven hundred and seventy-nine, shall be the rules of discipline to be observed by the militia throughout the United States, except such deviations from the said rules as may be rendered necessary by the requisitions of this Act or by some other unavoidable circumstances. It shall be the duty of the commanding officer at every muster, whether by battalion, regiment, or single company, to cause the militia to be exercised and trained agreeably to the said rules of discipline."

<sup>6</sup>Neither the amount of training nor the frequency of assemblies for that purpose having been prescribed by the Act of 1792, the states by local regulations controlled both. A characteristic state law was that of the New Hampshire Act of December 28, 1792, which decreed that "it shall be the duty of the captain or commanding officer of each company, twice in every year . . . to call forth his company for inspection of arms and instruction in military discipline . . . and at such other times as he shall think best; and that each commanding officer of a battalion shall call his battalion together once in every year." As merely nominal fines were imposed for unexcused absences, militiamen could thus excuse themselves from training for about \$4.50 a year at most.

be farcical until, aside from annual musters, which meant little more than that the men fell in once each year for roll call, no drilling or maneuvering was done—no instruction given or received. Even that one day was given over after muster to shooting matches, to foot racing and wrestling and other forms of sport, including barbecues and picnic dinners of Gargantuan proportions. The author vividly recalls descriptions of "Exercise Day," as annual muster came to be known in upstate New York, recounted during his childhood days by oldsters who as youths had taken part in their anything-but-military doings. The veterans of the Revolution, who during its first years furnished the Militia such stability as it had, were now past the age of military usefulness, and by 1812 no longer was there leaven in the lump.

In view of the recital that has just been made, one may well ask with lifted eyebrow—why? *Why*, if a well-regulated Militia was requisite to national security, did its discipline and training thus shrivel to the point of vanishment? Was it because of any lack of patriotism among the people? Was it because they regarded training as unnecessary and discipline a vain ordeal? No. The cause is rather to be looked for in the mandate of the law itself, which, in its project to develop *all* of the Militia, overshot its mark. The Militia, then as now, comprised every able-bodied male between the ages of 18 and 45, and thus included not alone the youth, whose participation in frequent military "exercise" and training would affect but little the habitual life of a community, but included also those of mature years, whose enforced absences from professions, from occupations and employments must inevitably disrupt the economy of the nation.

In enacting such all-inclusive measures, the Congress set its judgement against that of every military expert the country then possessed. It by-passed the views of Washington and Steuben, of Knox and Hamilton, and many others of that galaxy of leaders who won the Revolution.

Washington, in 1783, had submitted to the Continental Congress his "Sentiments on a Peace Establishment," together with the views of many of his Generals. While recommending that all members of the Militia be enrolled, he laid especial emphasis on training; *but*—mark well—on "training *only the youth and younger men*." To accomplish this, he recommended the formation of what he termed "select corps," to be chosen from the then existing regiments of Militia. These "select corps" in time of national emergency would be merged to form a trained and disciplined force, ready and equipped for instant action. The great body of the Militia, consisting of the older men, would be held back in reserve and, thus afforded time for assembly and for preparation, would form the "dernier resort." In 1784 Washington endorsed a plan evolved by Steuben, which called for the organization of "legions"—bodies similar to divisions—composed of young militiamen, who, as volunteers, would receive each year one month of training in the field. Again in 1786, General Knox, Chief of Artillery during the Revolution, submitted to the Continental Congress his ideas, which were based upon the principle of universal enrollment and training; the latter, however, to be confined to

the nation's youth who had not yet attained majority. In 1789 Knox became Secretary of War in Washington's initial cabinet, and his plan, revised and endorsed by the first President, was submitted to the First Congress of the United States.

It will be observed that every scheme of action that looked to the establishment of a national military policy, advanced during the period of the nation's infancy by any person whose knowledge and experience entitled him to speak upon the subject with authority, emphasized and laid especial stress upon the restriction, of peacetime training to the youth and younger men.

The reason is not far to seek. During the debates that preceded ratification of the Constitution, James Madison, Alexander Hamilton and John Jay produced, in collaboration, a series of open letters that were given general circulation and have ever since been known collectively as *The Federalist*. In his letter of January 10, 1788, signed "publius" (*The Federalist* XXIX) Hamilton, to whose committee of the Continental Congress Washington's "Sentiments on a Peace Establishment" had been submitted in 1783, deprecated any attempt to discipline *all* of the Militia "as futile as it would be injurious."

"To oblige the great body of the yeomanry," said he, "to be under arms for the purpose of going through military exercises and evolutions as often as might be necessary to acquire the degree of perfection which would entitle them to the character of a well-regulated Militia, would be a real grievance to the people and a serious public inconvenience and loss. . . . To attempt a thing which would abridge the mass of labor and industry to so considerable an extent, would be unwise; and the experiment, if made, could not succeed, because it would not long be endured." He recommended, therefore, that the effort of the Government "be directed to the formation of a select corps of moderate extent, upon such principles as will really fit them for service in case of need." In this advice he but followed the lead of Washington, of whose convictions he had long been cognizant.

The Congress of 1792, however, chose to disregard the wise counsel of the nation's military leaders and its foremost statesmen, and by including all males from 18 to 45 within the compulsory provisions of the First Militia Law, thus attempted to discipline *all* of the Militia—a project which, as Hamilton had predicted, *could not succeed*—and did not! By attempting far too much, the Congress succeeded only in accomplishing far too little.

The purpose of this discussion, however, is not to indict the old Militia system, but to demonstrate that the principle of universal training was an integral part of the initial military policy of the United States, and that it failed to produce results because the Congress, the states and the people all combined to make it fail by un wisdom, by omission, by indifference and neglect. The success of any military system depends first upon its feasibility, and next upon the centralization and implementation of authority. These factors were wholly absent both in the scope and the administration of the Act of 1792. It was, therefore, bound to fail—and it did fail.



# THE STORY OF THE GUN

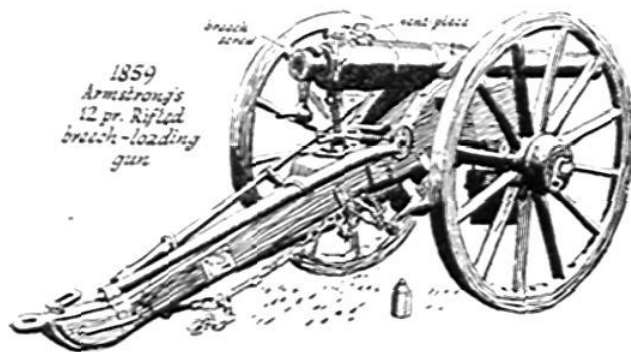
By Lt. A. W. Wilson, RA

## Part IV: 1854 to 1899

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### THE AWAKENING

The years 1859-60 can be said to mark the greatest step forward in artillery equipment, for these two years saw our adoption of wrought-iron built up rifled breech-loading guns



discharging cylindrical projectiles instead of the old cast iron or bronze, smooth bore, muzzle-loading ordnance discharging round shot or shell.

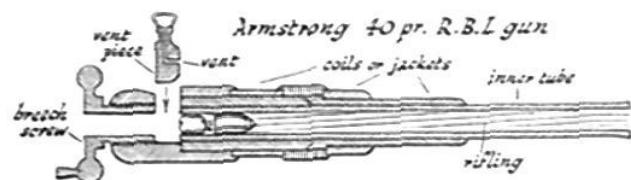
### RIFLED GUNS

Rifling the piece had been experimented with on the Continent as far back as the 17th century, and was forecast by Benjamin Robbins in a book published in 1742, in which he suggested that a rotating projectile remains true in its flight, with consequent greater accuracy at the target end, but the backward state of metallurgy and lack of suitable materials had made realization impossible. In 1841 the Prussians introduced a rifled musket, the "needle gun," which was very successful, but the rifling of ordnance was not seriously considered until the French attempt to make them in 1846, and in the Crimean War, 1854, when we converted cast iron, muzzle-loading smooth bore 68-prs. and 8-inch guns into rifled ordnance on the Lancaster principle. In this principle the rotation of the shell was achieved not by grooves in the bore of the gun but by the shape of the bore, which was oval and made one turn in 360 inches. The projectile was of course oval and of elongated type. Though the comparatively great range of 2,600 yards of these guns and increased accuracy made the bombardment of Sevastopol a "very hideous thing," for some reason the gun did not come up to expectations and its use was discontinued.

### MR. WM. ARMSTRONG

In this year (1854) Mr. Armstrong, a Tyneside civil engineer brought out a 3-pr. breech-loading rifled gun which was built on an entirely new principle. Instead of cast iron he had used thin wrought iron coils or layers shrunk on to an inner tube giving increased strength to the bore. After several tests had been made he was asked to produce a 9-pr. and 12-pr. on the same lines. In 1859 these two guns, the 12-pr. for the Field artillery and 9-pr. for Horse artillery, were accepted for issue and England took the lead in furnishing her mobile artillery with a first-class weapon.

Armstrong used the polygroove system (as we know it today) for his rifling, which consisted of a number of shallow grooves in the bore of the gun. The elongated projectile was coated with lead and made slightly larger than the bore so that the whole of the shell acted as a driving band. The bore at the breech end was slightly larger to enable the shell to be loaded into the chamber.



The breech was closed by means of a "vent-piece" (nowadays the breech-block), which was dropped into place from above and pressed against the chamber by a breech screw. This was bored to allow the charge and shell to be loaded. Due to the great weight of the vent-piece this arrangement could be used only on our lighter pieces, but two years later a side closing device was invented for use on 40-prs. and 64-prs. The tangent scale, introduced at the end of the 18th century, was another feature of this gun, the principle being the same as that of rifle sights of the present day.

### MR. J. WHITWORTH

At the same time that Armstrong brought out his new equipment, the scientist and inventor Mr. J. Whitworth introduced a gun which, though differing in construction from Armstrong's, was also breech-loading and rifled. This was not quite so successful as Armstrong's, the breech being closed by a screw which had to be removed when loading

the gun. The bore was hexagonal in section and the projectile so shaped that it fitted the bore mechanically. Some trouble was experienced with these projectiles, for they had a tendency to jam in the bore. Though this gun represented an interesting experiment in rifling it did not come up to expectations and never became part of the British armament.

#### DOUBTS ON BREECH-LOADING

Within ten years of the introduction of breech-loading guns, a movement had begun to revert to muzzle-loading. Such a complete about face is so startling that some explanation is necessary in order to understand it, but the real reason was, of course, that manufacturing methods still lagged behind the work of the scientist and inventor.

The French plan for rifling consisted of shallow grooves in the bore of the gun with corresponding studs let into the side of the projectile. The advantage of this method was that the projectile could be used with muzzle-loading guns, whereas Armstrong's lead-coated shell was limited to breech-loaders. We experimented with the French method and found it so satisfactory that even before we had equipped the whole of the horse and field artillery with the new 9-pr. and 12-pr. breech-loading Armstrong guns, the system of wrought iron, built-up muzzle-loading rifled guns heavier than



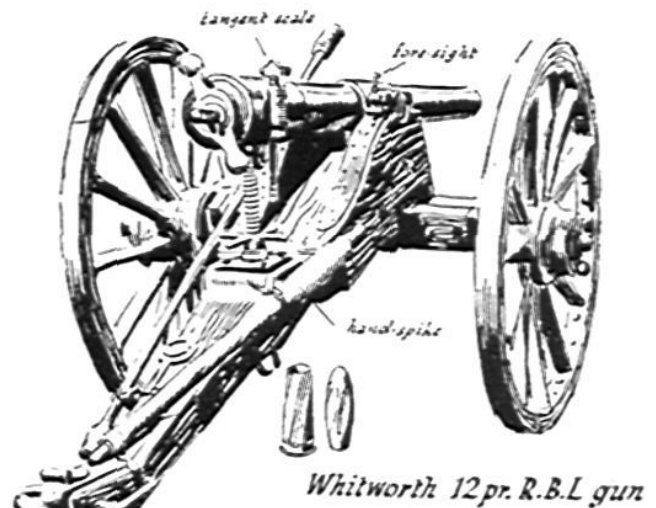
*French system*

40-prs. was finding favor. This was increased when it was found that the Armstrong 7-inch rifled breech-loader was a failure and that the breech action even on the lighter pieces was cumbersome and sometimes insecure.

In 1865 a committee was set up to decide between breech-loading and muzzle-loading and reported "that the breech-loading guns are far inferior to muzzle-loading as regards simplicity of construction and cannot be compared to them in this respect in efficiency for active service." The report helped to establish the principle that ordnance of the heavier nature must be of the muzzle-loading type with few grooves for rifling in the bore and with studded projectiles, after the French pattern. The final plan adopted was that of three grooves only (called the Woolwich system) and was a wide departure from the polygroove system favored by Armstrong.

"The 'newfangled' ideas that had gained approval in the regiment with regard to rifled guns were frowned upon by some members of its ranks, older members looking on them with suspicion." One very distinguished veteran, who had performed good and gallant service in the Kaffir and Crimean Wars and who had played a prominent role in the Mutiny, used to grumble: "First of all they insisted on having a *lot* of grooves in the bore of the gun. Now they are only going to have *three* grooves in the bore of the gun. Please Goodness they will next have no grooves at all and we shall get back to the good old smoothbores which did all that was necessary to beat the Russians and smash the Mutiny" (*Callwell*).

On another occasion Sir A. Noble, an advocate of rifled guns, trying to convince an eminent artillery officer that rifled guns were more accurate than smooth-bore, drew a diagram



showing that shot from a rifled gun fall into a much smaller area than those of smooth-bore. "That only proves what I have always maintained," replied the eminent gunner, "our smooth-bore is the best in the world. With your newfangled gun firing at me I have only to keep outside that small area and I shan't be touched. But with the smooth-bore firing at me I'm not safe anywhere." This argument apparently completely defeated Sir Andrew.

#### THE REVERSION

A new committee was set up in 1866 to make further investigations and reported "that the balance of advantages is in favor of muzzle-loading field guns" and then recommended their adoption. It is difficult to understand that at a time when the rest of Europe were beginning to realize that breech-loading was a great step forward in the manufacture of guns, we were to revert to muzzle-loading, but the trials had been conducted fairly and muzzle-loaders had held their own in range, accuracy and rapidity of fire, and finally, not least important, simplicity and cost.

The conversion did not take place at once, owing to the enormous cost involved, but by 1869 a 9-pr. rifled muzzle-loader of bronze was approved as field gun for India where, incidentally, smooth-bore was still in use. Bronze was used on this occasion because it was intended that India should make her own guns, the casting of bronze guns being more simple than the manufacture of wrought-iron built-up guns.

By 1870 smooth-bore had disappeared, except in India, and rifled muzzle-loading types established both for land and sea. All this time controversy had raged as to the merits of muzzle-loading and breech-loading. A fresh committee carried out tests in 1870 and reported strongly in favor of muzzle-loading, and when force was added to their report by a statement by the Director of Artillery that "the majority of R.A. officers were convinced that no system of breech-loading was necessary in the field" Armstrong's breech-loading equipment was doomed. In 1871 a 9-pr. rifled muzzle-loader with a wrought-iron carriage was adopted for horse artillery and a 16-pr. R.M.L. for field; the

decision was felt to be justified when it was found that 200 Krupps guns (all breech-loaders) had failed owing to crude mechanism.

Within ten years the great improvements made in propellants and the adoption of the gas-check had caused considerable modification in gun design. Ordinary black gunpowder had served its purpose well during the years of smooth-bore, the spherical shell being very light considering the size of the bore of the gun. When rifling and elongated projectiles were introduced, a slower burning powder was required in order to achieve maximum velocity with the heavier projectile, and this was achieved by increasing the size of the powder grain. It was then discovered that due to the short piece some of this powder was ejected from the muzzle unburned. The solution was obvious and from this time pieces were made relatively longer.

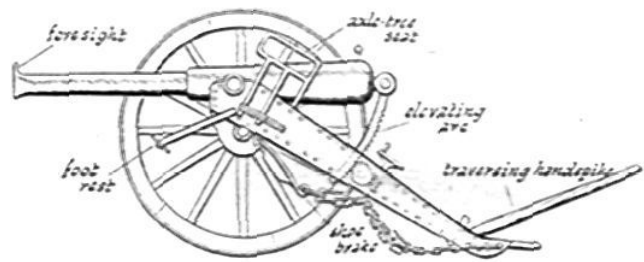
THE GAS-CHECK

The use of studded projectiles, in place of Armstrong's lead-coated shells, proved to have one serious disadvantage: they caused excessive erosion in the bore of the gun due to windage. Some means had, therefore, to be devised to prevent the forward escape of gases when the gun was fired, and this was provided by a papier mache cup placed between the base of the shell and the cartridge, called a gas-check. After several experiments it was found that copper formed the best check and was adopted in 1878. At this time the gas-check was not fixed to the base of the shell but rotated independently, but when it was suggested that it might, by being fixed to the shell, impart rotation, the studs on the shell were dispensed with and the gas-check became the driving band. A short time later the copper driving band had been introduced as a component part of the shell and was essentially the same as the driving band of today. It is interesting to consider that a device intended primarily to eliminate windage and therefore erosion in the bore, ended by considerably increasing the range of the shell, imparting rotation to it, and also resulting in a reversion to polygroove rifling.

In 1878 it was realized that our 9-pr and 16-pr. R.M.L. guns were out of date compared with foreign armament and in order to make good our deficiency a 13-pr. R.M.L. gun was designed for both horse and field, while at the same time a 2.5" R.M.L. was designed for mountain artillery. Both these guns represented a great advance in design, being the first to possess the greater length of barrel brought about by slow burning powder. The 2.5" possessed the novel feature of being in two parts which screwed together and it thereby became famous as

the "screw" gun, remaining the armament of the mountain artillery until after the South African War.

The 13-pr. on the other hand became unpopular, due to excessive recoil, and was superseded before re-armament with it had been completed. A feature of this gun was an elevating arc in place of the old elevating screw. It was also fitted with axletree seats, this idea having been introduced in 1870, following a desire to give increased facilities to the field



Elevating Arc on 15 pr. R.M.L 1879

gunner. It was now possible for two members of the gun detachment, in addition to the No. 1, to remain with their gun and, if necessary, work it alone while waiting for the remainder of the detachment.

RETURN TO BREECH-LOADING

By the '80s the improvements in breech construction and the difficulties attending the loading of muzzle-loading guns due to longer barrels had profoundly altered the situation with regard to M.L. and B.L. guns. Experts were beginning to realize that muzzle-loading was obsolete and quite suddenly a movement was begun to revert to breech-loading. By 1885 the horse and field artillery had been issued with a 12-pr. B.L. gun of 7-cwt., but this proved to be too heavy for the R.H.A. and a new 12-pr. B.L. gun of 6-cwt. with a simple and light carriage was introduced in 1894. At the same time experience was showing that the common shell of the 12-pr. of 7-cwt. had little or no effect on earthworks and a cry arose for "one shell and one fuze." It was held also that a field gun ought to fire a projectile heavier than 12 lbs. A committee was assembled in 1892 to consider the question, shortly after cordite had been adopted. This new smokeless propellant was much more powerful than gunpowder and provided an opportunity of adding to the weight of the shell, without such increase demanding



DEVELOPMENT OF GUN PROJECTILES

any very important alteration in the actual gun. The committee therefore recommended that the 12-pr. of 7-cwt. should be converted into a 15-pr. The recommendation was adopted and the field artillery was issued with the converted gun with shrapnel as its only shell, common shell having been abolished for field artillery. The 12-pr. of 6-cwt. and the 15-pr. constituted the armament of the horse and field artillery (apart from field howitzer batteries) when the forces were mobilized for the South African war in 1899.

#### HOWITZERS

Abolition of common shell for field guns brought to a head the demand for some form of artillery which would give greater shell power in the field. In the smooth-bore days of limited range and "happy-go-lucky" control, all batteries had worked with both guns and howitzers, but following the introduction of rifled guns howitzers had dropped out of use.

The attempt to employ guns for curved fire by the use of reduced charges had failed. The need was met by the formation



of field howitzer batteries, the first being organized in 1896 and armed with a 5" B.L. howitzer, firing a 50-lb. shell. For siege artillery a 6" B.L. howitzer took the place of the muzzle-loading guns and howitzers, and became practically the sole weapon of the siege train.

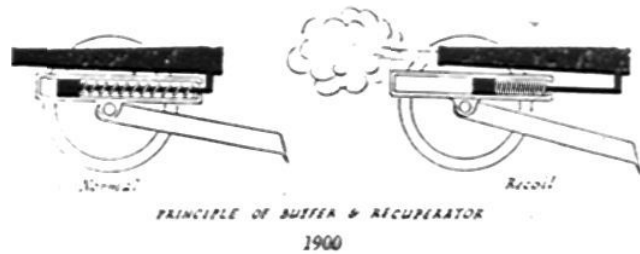
#### COAST DEFENSE

From the time of the introduction of the first breech-loading guns in field and horse equipment the rearmament of our coast defenses had made very slow progress. Due mainly to the fact that funds for this purpose were not available, a plan was proposed in 1863 by Captain Palliser to line the old cast-iron S.B. guns with wrought-iron rifled tubes, and during the next five years several guns were experimented with. By 1870 many of the more important batteries in our coast fortresses had been armed with these improvised pieces. S.B. 32-prs. and 8-inch guns became R.M.L. 64-prs., and S.B. 68-prs (10-inch) became R.M.L. 80-prs. In this way hundreds of obsolete guns were given a new lease of life and could perform useful service.

Nevertheless these pieces, mounted upon every description of carriage and slide—common standing, casemate, dwarf, etc.—could not compare with the up-to-date equipment of the land artillery. Fortunately the naval maneuvers of 1887-88 and 89 included the raiding of commercial ports along the English coasts, and as a result three millions were devoted for coast defense. The B.L. guns provided were for the most part 6" and 9.2", but some were 10".

#### QUICK-FIRING GUNS

For many years the slow rate of fire caused by the difficulty of checking recoil had been a sore trial to the authorities, but by 1892 an attempt had been made to speed up the fire of the lighter coast defense guns, in order to deal with raids by torpedo craft, by the introduction of a 12-pr. Q.F. gun mounted on a pedestal set in a concrete bed; and later by the 4.7-inch and 6-inch Q.F. guns mounted in the same way. These guns were breech-loading, but with a difference—the charge was contained in a brass cartridge case (instead of silk cloth bags) which, when the gun was fired, expanded and acted as a seal for the gases at the breech. This resulted in a much simpler and more easily operated breech mechanism which, together with the control of recoil, made a higher rate of fire possible. In the smaller natures of ordnance the cartridge case and projectile were joined, being loaded simultaneously (fixed ammunition), but this had few advantages over the method of loading the cartridge case and projectile separately (separated ammunition) for, though this latter method was slower, it exacted less effort from the loader,

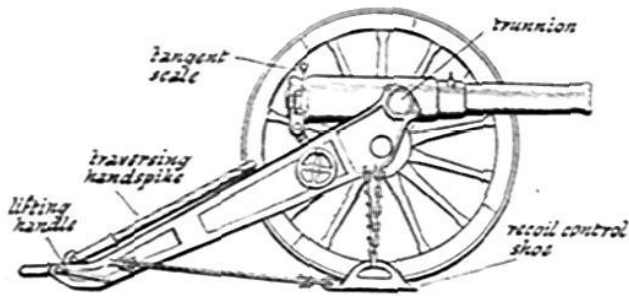


particularly in the case of heavier guns.

The term Q.F. will be seen, therefore, to derive from the use of the cartridge case; but this originally was not justified for use in equipment where recoil could not be controlled, the term Q.F. meant both the use of cartridge cases *and* recoil control. Today the terms Q.F. and B.L. seem somewhat confusing, since all equipment of either designation is loaded from the breech end and has some form of recoil control. Broadly the term Q.F. today is applied to all equipment where a cartridge case is used for containing the charge and sealing the gases, whether fixed ammunition or separated ammunition and variable charges; while B.L. equipment applies to all those where the charge is contained in bags and the sealing of the gases at the breech effected by a pad fixed to the face of the breech screw.

Although the merits of Q.F. equipment for horse and field artillery were realized, a suitable traveling carriage which would control recoil could not be found. A hydraulic buffer had been experimented with in the navy and coast defense as early as 1869, following a suggestion that the resistance of water flowing through a small orifice might be employed to check recoil. Later strong spiral springs were used for the same purpose, but the possibility of applying the principle to mobile artillery was out of the question, since the cumbersome contraption would have robbed that arm of all its mobility. A shoe-brake which was used in the early 12-pr. M.L. 7-cwt. guns had only partially solved the problem, for though the gun was prevented from running





*Recoil control shoe on 12 pr. B.L. 6 cwt.*

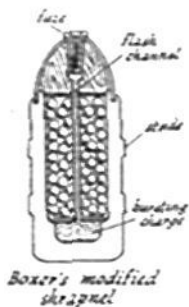
back, the rigidity it imparted to the whole of the piece and carriage resulted in a violent kick when the gun was fired, thus necessitating relaying the gun for each round. The shoe-brake remained the only means of checking recoil in the lighter field pieces until 1899, when it was replaced by the axle-spade. This was only a slight improvement, but it was the best we could do at that time and the device was fitted to some of the equipment used in the Boer war. This checking of the movement of the carriage along the ground had been a great worry for a number of years, placing, as it had in the past, terrific strain on the gunners in having to run the gun up to its original position after each firing. It is recorded that at Waterloo the gunners were so tired toward the end of the battle from manhandling their guns that they could no longer do it.

#### AMMUNITION

Considerable progress in ammunition was made during 1860-69. Spherical shot and shell gave place to elongated projectiles made necessary by the new rifled guns. Shrapnel shell was much improved by Col. Boxer. Armstrong introduced segment shell, common shell, and case shell, and finally an armor-piercing shell was invented due to improved armor on warships, H.M.S. *Warrior* (the first iron ship) having been launched in the Thames in 1860. At first it was found impossible to harden the nose of the shot sufficiently to pierce iron plates, but Major Palliser overcame the difficulty by casting the projectiles head-down, a process which, though primitive, chilled and hardened the nose. Segment shell was constructed of thin cast-iron, inside which were rows of cast-iron segments enclosing a bursting charge. It was of course a cross between case and shrapnel and had an all-round effect.

Common shell were explosive, the filling being gunpowder, and were nose-fuzed or base-fuzed.

Due to the partial elimination of windage in the bore, Col. Boxer's time fuze could no longer function. It was therefore adapted for use in R.B.L. guns by a detonating device which would start the fuze burning on shock of discharge. The idea was not a success and was given up with the return to muzzle-loading. Between 1870 and 1883 great progress

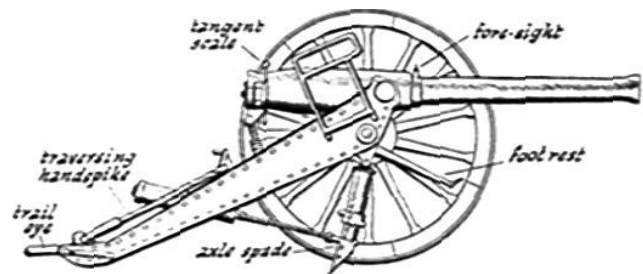


was made in fuze design. A wooden time fuze with a trustworthy detonator, for instance, was introduced for use with projectiles fitted with the gas-check, and a little later a metal "time and concussion fuze" was adopted in place of the old wooden time fuze.

Following the replacement of gunpowder (as a propellant) by cordite in 1891, a new high explosive in the shape of "lyddite" was introduced in 1898 to replace gunpowder as a shell filling. It was adopted for the bursting charge of common shell for all natures of B.L. guns and howitzers of over 4.7" caliber.

#### WROUGHT IRON AND STEEL

The Armstrong R.B.L. guns were the last to have wooden carriages, for before ten years had passed manufacturers were recognizing that wrought iron was preferable to wood as material for the axletree and trail of the traveling gun carriage. The carriage for the 9-pr. R.M.L. for India was constructed almost entirely of iron. But only a few years were to pass before steel had replaced iron, the 13-pr. R.M.L. and 2.5" R.M.L. being among the first to possess steel carriages.



*Axle-spade recoil control on 15 pr. B.L. 1899*

Steel also replaced wrought iron in the manufacture of guns. It will be remembered that Armstrong's method of built-up guns relied on many *thin* coils or layers. In 1867 this was superseded by a few *heavy* coils which gave the same strength but were easier to manufacture. By 1884 the popularity of steel resulted in the heavy coils' being replaced by steel hoops, which in their turn gave place to steel wire. In this principle (known as wire wound) the strength in the piece was obtained by winding a length of steel wire, especially tempered, onto a steel inner tube, and though first experiments concerned the breech only it was later extended to cover the whole of the piece. This method was a distinct advance because it ensured absolute soundness of material and gave a greater tensile strength.

Although projectiles in 1880 were, for the most part, constructed out of cast iron, a move in the direction of steel had been made in the case of shrapnel for the 2.5" gun, which was of cast steel. From then on steel continued to replace iron for most purposes in the construction of guns and projectiles.

#### RANGE-FINDERS

After the Franco-German war the increased interest in gunnery soon led to a need for a reliable range-finder for field artillery. The old system of "guessing" ranges was obviously incompatible with the great progress made in

equipment. By 1890 a reliable range-finder had been adopted and proved successful.

For coast artillery the problem was a simple one and the Watkin "depression range-finder," introduced early in the '80's, was followed by a "position-finder." By the end of the century all first class fortresses had been furnished with this instrument.

#### EMPLOYMENT

In spite of the remarkable changes that had taken place in armament during this half-century, the tactical employment of artillery had not kept pace. "In studying the records of those eventful years, and analyzing the many changes they brought, the most puzzling enigma is the strange slowness of the generation that first received rifled guns to grasp the potentialities of their new weapons. How was it that the Royal Artillery—alone of European artilleries—made no effort to suit its gunnery or its tactics to its new armament?" (Headlam).

(To be continued)

The following table shows the principal natures in the field army artillery during the latter half of the 19th century:

DECADE	CATEGORY	HORSE	FIELD	MOUNTAIN	HEAVY
The 50's	S.B.	6-pr. gun	9-pr. gun	3-pr. gun	18-pr. gun
		12-pr. gun	24-pr. how.	12-pr. how.	8" mortar
The 60's	R.B.L.	9-pr. gun	12-pr. gun	6-pr. gun	40-pr. gun
					8" mortar
The 70's	R.M.L.	9-pr. gun	9 and 16-pr. guns	7-pr. gun	40-pr. gun
					6.3" how.
The 80's	B.L.	*13-pr. gun	*13-pr. gun	2.5" gun	40-pr. gun
		12-pr. gun	12-pr. gun		6.3" how.
		(7-cwt.)	(7-cwt.)		
The 90's	B.L.	12-pr. gun	15-pr. gun	2.5" gun	40-pr. gun
		(6-cwt.)	5" how.		6.3" how.

\*The 13-pr. gun was in fact the R.M.L. gun introduced to stave off a reversion to breech-loading. It was superseded by the 12-pr. B.L. gun.

## NON-DIVISIONAL ARTILLERY IN BURMA

By Maj. Robert C. Taber, FA\*

In November 1944 the India-Burma Commander, Lt. Gen. Dan I. Sultan, verbally ordered the Artillery Officer of Northern Combat Area Command to form an American Artillery Headquarters to command the non-divisional artillery operating in Chinese New First Army Sector. The decision to form this unit was made after it became apparent that while the Chinese batteries could communicate, move, and perform service of the piece in a satisfactory manner they were not able to handle fire direction or observation. Previous to this, British and Chinese Artillery in the British 36th Division Sector south of Mogaung had been operating under American Command and had made an excellent record.

Someone gave the new Headquarters the misnomer "Corps Artillery." Actually it was more nearly equivalent to an undersize American Group Headquarters. The Headquarters was set up with eleven officers and thirty enlisted men. The following units made up the Corps Artillery: an American Sound and Flash Ranging Platoon, one Battalion (Chinese) of 105s, one Battalion (Chinese) of 4.2 mortars, two batteries (Chinese) of 155-mm howitzers, and, later, one platoon (American) of M-4 medium tanks. The Sound Ranging Platoon of two officers and fifty-three enlisted men was composed of a sound section and two survey sections, either or both of which could operate as Flash Sections.

The Chinese Army (corresponds to an American Corps) we were supporting was composed of two American-trained and American-British-equipped Chinese divisions. One division was the first in action in the North Burma Campaign and had been in almost continuous action since. The other had had its

first taste of battle in the fight for Myitkyina. The T/O and T/E of each was generally about the same as that of our infantry divisions. However, the Divisional Artillery consisted of only one battalion of Pack 75s.

#### OPERATIONS

The Corps Artillery was formed at Myitkyina and saw its first action at Bhamo in December, 1944. When we arrived there the 38th Division was attacking the town on three sides. The Irrawaddy River secured the Jap rear.

On 8 December the Corps Artillery fired a 2,000-round preparation on the southeast corner of Bhamo. Elements of the 113th Infantry Regiment were supposed to follow the artillery in. They neglected to capitalize on the artillery support, however, and made only slight gains. Later examination showed that the area had been almost completely devastated and the infantry should have been able to take the area with few casualties had they acted aggressively.

Next day the artillery shifted to the north end of town where it fired in direct support of the 114th Regiment. This regiment very quickly learned the value of well directed artillery, and within two days the infantry-artillery team was operating very efficiently. Each evening a conference was held at which were present the Division Commander, the Regimental Commander, the Corps Artillery Commander, and their staffs. The plan for the next day was discussed. Enemy bunkers were pin-pointed by reports from infantry reconnaissance patrols, air observers, and forward observers. The terrain necessitated that these attacks be on a narrow front. The Japs had very strong positions in this area so the objectives were limited to a few

\*Northern Combat Area Command

hundred yards a day. Corps Artillery, using air observation, would knock out each bunker by precision fire, using the 155-mm howitzers with fuze delay. Then a heavy preparation would be fired by all batteries. An officer in Fire Direction would call off the minutes and finally the seconds left in preparation, over a phone to a liaison officer with the infantry. The instant "cease firing" was given the infantry would jump off. Thus they were able to catch most of the remaining Japs in their shelters. A few bunkers that were in artillery dead space were knocked out by flame throwers. The objective set for this regiment were reached in every case. Casualties were relatively light. On 15 December, the day before Bhamo fell, the infantry was nearing the central defenses of the town. If this could be taken, the town would have to fall. Using this logic Corps Artillery fired mass concentrations on the area all through the day. It is believed that this influenced the Japs to leave Bhamo that night. They never made a stand in their final defense zone even though food and ammunition were sufficient.

Counterbattery was fired on enemy 75-mm and 70-mm positions in Bhamo. Some of these positions were located by the Sound Ranging Platoon, and on four of these positions the platoon adjusted Corps Artillery by sound. We later learned that on the first night we fired with this method a direct hit on a Jap 75 was scored. Other counterbattery fires were fired by transfer and air observer.

Harassing fires were put down several nights, but the bulk of this type of fire was accomplished by the divisional artillery.

On the night of 11 December a determined Jap counterattack on the 113th Regiment was broken up by a concentration from our 105-mm batteries. Defensive fires had been previously registered all the way around the perimeter.

It is interesting to note that after our first day of firing for the 114th Regiment, the infantry chose to stay close to our fire. At one time they were only 25 yards (defl) from some of our bursts. They tried pulling back the first day, but the Japs immediately moved into the positions they had temporarily vacated. After that experience they chose to stay well dug in on the edge of the barrage.

On entering the town we found that one shelter which was wrecked by 155-mm fire contained 33 dead Japs.

The next artillery action took place in the Namhkam Valley. To reach this area sixty-five miles of twisting narrow mountain roads had to be traveled. Many bridges were out, and there were several landslides. After about 10 days' work by an engineer company attached to the 1st Tank Group, the road



*Counterbattery against Namhkam resulted in the almost complete destruction of this large Burmese temple in the center of the city.*

was barely passable for motorized artillery. In some of the really bad sections of road the 155-mm howitzers had to be shuttled through with TD-18 tractors. The Diamond-T 4-ton prime movers could get through only without towed loads, and often had to resort to winching. Fortunately there was little rain during this period.

Enemy artillery activity was very light in the Namhkam area. Corps Artillery activities consisted mainly of providing intelligence (truck movements, etc.) to the divisions and adjusting division artillery on targets picked up by sound and flash ranging. However, about 2300 on 14 January two enemy 150-mm howitzers started firing from positions in the vicinity of Namhkam town. Sound ranging located it and we out a 155-mm battery on it. After the first volley the Jap gun was silenced and did not fire again. The next morning Namhkam fell without resistance. Corps Artillery units were always in supporting distance, but their fire was not needed until we reached Mu-se on 22 January.

Near Mu-se the Sound Ranging Platoon had its sound base manned, and plotted the location of a Jap 150-mm howitzer which fired late in the evening. The 155s and 105s were put on the target by sound adjustment. When checked later it was found that the center of impact of this fire was very close to the target. The gun stayed in position, however.

Next morning all batteries were massed on the suspected area. No activity could be seen in this vicinity by the air observer. When we finished our mission and the plane started to gas up, the Jap 150-mm opened up on the Corps Artillery position areas. The first round hit in the middle of the sound ranging CP. All the other rounds were either

right in the position of either the 8th Battery or the 5th Battery. All of these rounds were on the target, but there was surprisingly little damage. Only two men were wounded. A tire on a 155-mm howitzer was blown and a powder dump was burned. Several vehicles had holes of assorted sizes in them. It is obvious that the enemy had excellent observation. The hills ahead of our positions had been patrolled, but apparently a few Japs with a radio had been able to slip back unnoticed. Later in the day Corps Artillery Headquarters displaced. The Japs followed it with 150-mm fire.

The following day the artillery air observer flew over the suspected gun position but could see no activity. He started back to the strip but kept watching over his shoulder to the rear. When he had gone about two miles he detected a cloud of smoke billow out from the position. A moment later he saw another puff. He went back immediately and adjusted two batteries on the gun. About 600 rounds of 105-mm and 155-mm ammunition were dropped on the position during the day. The gun did not fire again. Later inspection showed that our fire had devastated the area. Twenty-six dead mules, several graves, blood-stained clothing, and parts of the piece (a Model 96 150-mm howitzer) were found.

This gun position was in the town of Mong Yu and was about four hundred yards from the junction of the Ledo Road with the old Burma Road. The next day the troops from Burma joined up with the Chinese troops who had fought down from the Salween, and the land route to China was open.

At Kutkai the 30th Division was given the mission of clearing the road to Hsenwi. On this drive Jap 75s and 150s located in the vicinity of Hsenwi attempted to counterbattery Corps Artillery batteries when they came in range. Two of these Jap positions were located by sound ranging and air observation, and fired upon. Later inspection showed this fire to be very accurate. The Jap

guns did not fire from the Hsenwi area again. The nearest gun positions we could get to Hsenwi were out of map range of the target area, but as the site averaged about minus 60 we were able to fire effectively.

At Kutkai a platoon of six medium tanks was attached to Corps Artillery. These tanks were crewed by Americans. Used only as artillery, they were effective on lightly dug-in positions and troops in the open. They were particularly suitable for long range harassing fires as they could be moved close to the front lines and ammunition supply was comparatively easy.

After Hsenwi the artillery moved to support the 38th Division, which was taking over the drive on Lashio. This phase of the campaign was notable in that it was the first time that the New First Army had had adequate and coordinated artillery fire during a period of fairly rapid advance. Jap artillery began to appear in greater quantity.

Often all batteries were massed on Jap strong points which were delaying our infantry. One of these concentrations was fired with its short limit only 50 yards from friendly infantry. During this period Corps Artillery was very active on counterbattery fire. Jap gun positions were fairly easy to spot, and a few volleys from the 155-mm howitzers would neutralize the enemy for some time.

The culmination of the operations of the 38th Division was the fight for the area adjoining the town of Lashio. In this area for the first time Japs were observed leaving their positions and running when massed fires were placed on them.

The day before Lashio fell the artillery had a field day. Using data furnished by sound ranging, the air observer was able to spot three enemy gun positions within twenty minutes. Massed fire of all available artillery was placed on these targets. A precision adjustment was made on a Jap 100-mm howitzer, and later examination showed that four 155-mm projectiles had struck within 5 yards of the howitzer.

During this period our fire damaged six enemy guns. This was verified by the finding of critical parts of the guns still in position.

After the fall of Lashio one Regiment of the 38th Division continued south toward Hsipaw on the Burma Road. Corps Artillery continued in support.

While making a base point registration on a road intersection south of Lashio, the observer noticed that an erratic over had hit what was apparently an ammunition dump and personnel were seen running in all directions. Closer examination showed this area to contain many camouflaged buildings and wheel tracks. This area was covered thoroughly with



*Lashio's business section was completely devastated in the routing of the Japs.*

all calibers. Later examination showed this to be an area devoted primarily to artillery and motor supplies. The results of our fire were satisfying.

The next day the air observer located a Jap gun position. A few volleys knocked off the camouflage and revealed two 75-mm field guns. A precision adjustment was made on each piece and the guns were almost completely destroyed. One received a direct hit on the left trunnion. The other had wheels knocked off and the recoil cylinders damaged. This gun was buried in a trench behind the gun position but the first gun was left where it was hit.

A 100-mm howitzer position was counterbattered the same day. Two 155-mm hits were scored within ten yards of the position, but there was no evidence of the gun's being damaged.

#### FIRE DIRECTION

The Corps Fire Direction Center controlled the fire of all batteries. The Chinese FDC setups were not used. All personnel in the FDC were American, and the commands went to the guns in English. At each battery position an American officer and enlisted man supervised the fire of the battery. An interpreter or English-speaking Executive repeated the fire commands in Chinese.

All wire was laid by the communications sections of the Chinese batteries. The Chinese maintained wire communications in a superior manner throughout the campaign. All FDC personnel had to learn enough Chinese to be able to give a satisfactory answer to linemen making line checks.

Our fire direction was operated strictly on Fort Sill procedures.

During most of the campaign excellent 1/20,000 photos were available. We had 1:5,000 pin-points of each town in our sector; when gridded they were helpful in designating targets and picking up bunkers and other pin-point targets. It was necessary to run a complete grid sheet survey in only one position.

The only maps available were 1/63,360, and were useful only for rough initial data and sometimes for vertical control.

#### JAP ARTILLERY

The Jap usually used a two-gun battery. Only once did we see a four-gun position. He kept his guns well forward but well dispersed.

His observed fire was extremely accurate but his map shoots were erratic. His ammunition supply seemed plentiful: he would often open up on one or two people moving in the open. We observed Jap time fire only once, and the height of burst was well over 100 yards. During the whole campaign it was observed that Jap artillery ammunition gave very few duds.



*Demolished bridges, heavy rains, and swollen streams made for heavy going in the drive for Lashio.*

The calibers and models of Jap artillery encountered were: Model 92, 70-mm howitzer; Model 41, Model 38, and Model 94, 75-mm howitzers; Model 91, 100-mm howitzer; and Model 4 and Model 96, 150-mm howitzers.

It was apparent from time to time that the Jap understood our tactics and techniques. The night after we established our flash base at Bhamo we started a high burst adjustment. After three rounds had been fired the Japs opened up on two of our three flash stations with heavy machine gun and mortar fire.

The stations were close to the front and in prominent positions. The Jap may have observed the survey parties or the personnel manning the posts before dark. At any rate he apparently realized that those OPs were handling the adjustment.

#### CONCLUSIONS

1. Chinese infantry is not accustomed to artillery support in the American manner. However, with a little patient instruction and demonstration the COs soon learn the capabilities and limitations of artillery.

2. The 75-mm howitzer or gun is of little value except for harassing, against troops in the open, and on horse parks.

3. A precision adjustment is the most economical way to destroy bunkers and enemy guns which are clearly visible. This method takes time, but a hit or near miss with a 155-mm delay fuze will usually damage an earth and log bunker. At Bhamo we found a shelter with sixty inches of teak wood beams on the roof. Two direct hits did not damage this roof.

The only way to fire effective precision fire is by strict adherence to Field Manual 6-40 methods. An attempt to



*A shattered straw and bamboo warehouse furnished good concealment and shade for this 105-mm howitzer manned by Chinese troops.*

estimate and correct range errors of individual rounds in fire for effect is a waste of time. This lesson was hard for inexperienced observers to learn.

4. Engineer personnel and equipment must accompany truck-drawn units in this type of terrain. The road net was poor and the Japs made every effort to destroy bridges and block or mine defiles. Corps Artillery kept three TD-18 Tractors (one with a bulldozer) well forward at all times. We had to construct most of our own landing strips but used roads whenever possible.

5. Extreme care must be taken to check the perimeter defense of non-divisional artillery. We always had a platoon and sometimes a company of infantry to supplement the perimeter defense of gun position and truck park. In this campaign there were often as many Japs behind us or on the flanks as there were ahead of us.

6. White phosphorus was often necessary to find initial rounds of 75-mm and 105-mm in thick brush or jungle. It also proved valuable to burn off tall grass in which the Japs camouflaged supplies and gun positions. We did not have base ejection shell, and smoke pillared so badly that it was difficult to fire screening missions economically.

7. Forward observers were sent out but they were mainly used for liaison with forward troops and surveillance of fires.

The targets were often relatively small and the air observer was able to quickly and accurately adjust when the target designation had been radioed to him by the FDC or the FO. We were able to keep at least one plane in the air throughout the daylight hours.

8. Some good lateral OPs were found and some flash bases established, but this type of OP was difficult to find and the Jap usually put his strong points and gun positions in the areas of dead space.

9. Sound ranging was very useful. Even when plots of enemy gun positions were quite inaccurate it was still helpful to give the air observer a small area which he could search carefully. Often we were able to neutralize Jap guns during the night by sound adjustment. The Sound Platoon operated with stop watches, but later received the Oscillograph GR-3-C.

10. The L-4 observation plane was not suitable for artillery observation in this area. We found the L-5 plane very satisfactory. Its gas capacity enables it to stay up an hour longer than the L-4. It is faster getting to and from the target area (important when it is not possible to get to a strip well forward) yet will cruise at slow speed with the flaps down. The air was very rough in this part of Burma, and the L-5's greater steadiness permitted the observer to make use of field glasses. Practically all of our missions were flown over the target area with the plane flying in circles around the target at 1,800 to 2,500 feet altitude. Some machine gun and rifle fire was experienced, but it was very infrequent. No enemy air opposition was encountered. Artillery planes often flew intelligence mission for Army divisions. We had at least two L-5s in Corps Artillery Hq. during the entire campaign. One observer logged over 300 hours during this period.

11. A few rounds of HE and WP would sometimes stir up activity in an apparently deserted area. We often found supply and concentration areas by this method. The observer would fire a few rounds here and there in the suspected zone and watch for activity.

12. The SCR-300 radio was generally satisfactory for air-ground communication. It was quite erratic, however, in mountainous country. In very mountainous terrain we sometimes had to use a 284 on the ground with the Air Corps radio in the plane.

13. After a conference with the Base Ordnance Officer we had very little trouble with lot numbers or damaged rounds.



# NOTES OF INTEREST TO ARTILLERYMEN

CIVIL SCHOOLING FOR OFFICERS. The following extracts are taken from an Army Ground Forces letter, dated 5 February 1946, to the major subordinate commands:

1. "In order to keep abreast of scientific developments, evaluate them and apply them to the use of the Army, a large number of officers highly educated in the basic sciences is required. To provide such officers, it is planned, as a part of the postwar educational system of the Army, to provide postgraduate instruction at selected educational institutions for as many officers as possible.

2. "The program for education of Army Ground Forces officers is as follows:

a. Courses generally will be of two years' duration, starting with a term of refresher training usually during the summer session. \* \* \*

b. The options as to specialization and the universities tentatively selected to conduct the courses are shown below. The list may possibly be changed or expanded.

<i>Option</i>	<i>Institution</i>
Communications Engineering Electronics	University of Illinois Massachusetts Institute of Technology
Automotive Engineering	University of Pennsylvania
Optics and Light	Illinois Institute of Technology
Acoustics	University of Michigan
Meteorology	University of Rochester
Guided Missiles (Propulsion and aerodynamics of)	University of California (Los Angeles)
Guided Missiles (Guidance of)	University of California (Los Angeles)
Atomic Energy	California Institute of Technology Johns Hopkins University University of California (Berkeley) University of Chicago Princeton University

c. This program applies only to officers commissioned in a basic arm of the Army Ground Forces, i.e., Infantry, Cavalry, Field Artillery, Coast Artillery, Tank Destroyer and Armor. Other components of the Army have their own programs for the higher education of officers.

d. It is planned to start the first courses with the summer sessions of 1946. Most summer sessions start in June or early July.

e. Enrollment is limited to officers of the Regular Army and to officers of the National Guard, Organized Reserve Corps, and the Army of the United States who have submitted application for commission in the Regular Army or who are Category I volunteers and who indicate their willingness to continue on active duty for a period of at least four years subsequent to completion of the course, unless commissioned in the Regular Army prior to the expiration of that period.

3. "Attention is invited to the fact that the education to be provided under this plan is at the graduate level and that universities will not admit applicants to their graduate schools without carefully checking the previous academic record and experience of the applicant. \* \* \*

4. "To be selected for detail as a student, the officer must:

a. Be commissioned in a basic branch of the Army Ground Forces.

b. Be a volunteer for schooling under this program.

c. Have a current efficiency rating of at least excellent.

d. Have a minimum of one year of commissioned service.

e. Have the degree of Bachelor of Science or its equivalent, with a good foundation in mathematics.

f. Not have passed his 28th birthday on 1 June of the year he is to begin the course. This requirement may be waived in the case of very well qualified applicants who are under 35 years of age, or even older, if the applicant has been engaged in work specially qualifying him as a student. The length of time away from study is the final governing factor."

\* \* \*

ARTILLERY CONFERENCE AT THE FIELD ARTILLERY SCHOOL. In accordance with a directive given the Commandant of

the Field Artillery School last November, an artillery conference will be held at Fort Sill during the period 18-30 March 1946, "for the purpose of discussing subjects with regard to Field Artillery organization, equipment, and technique which are now in controversy." Attendance will be by allotment assigned the major commands, both at home and overseas.

The following is the tentative program for the conference:

March 18, AM—Opening Remarks by the Commandant. Orientation and Organization of Committees.

PM—Committee Study.

March 18, AM—Lectures by Scientists.

PM—Demonstration I: GUNNERY

a. A demonstration of the technique, materiel, and ammunition to be used in direct assault firing for pin-point accuracy and maximum effect—to include firing with the 155-mm How (SP), 155-mm Gun (SP), 8-in How (SP), and 240-mm How (SP).

b. A demonstration of the mass of fire and the area coverage accomplished by the 4.5-in rocket.

March 20, AM—Presentation of Ground Force Policies and Actions.

Lectures by scientists.

PM—Demonstration II: GUNNERY

a. A demonstration of the advantages and disadvantages and practical uses of the VT fuze.

b. A demonstration of the revised forward observer procedure. The purpose of this procedure is to standardize methods within all branches of the armed forces.

March 21, AM—Committee Study.

PM—Demonstration III: AIR TRAINING

a. A demonstration and discussion of the practical uses of the Brodie Device.

b. A demonstration of emergency resupply by liaison type aircraft.

c. A discussion of illuminating flares dropped from liaison aircraft for night observation, and a display of equipment used.

COMMUNICATIONS AND AIR TRAINING

A discussion and demonstration of wire laying by liaison aircraft.

COMBINED ARMS

a. A demonstration of air fire power to include strafing, rocket firing, 75-mm firing, bombing and skip bombing, napalm and smoke. Demonstration of air forward control system.

b. A demonstration of airborne and parachute artillery and infantry including a drop, assembly of men and equipment and occupation of position.

March 22, AM—Demonstration IV: COMMUNICATIONS AND AIR TRAINING

A discussion and demonstration of television equipment and its application for artillery purposes.

OBSERVATION

a. A demonstration of adjustment of artillery fire, location of hostile artillery pieces and detection of vehicular movement with the use of radar.

b. A display and demonstration of the latest type metro equipment.

PM—Committee Study

NIGHT—Demonstration V: AIR TRAINING

A demonstration of the dropping of illuminating flares from liaison aircraft for night observation.

GUNNERY:

A demonstration of the adjustment and practical use of the 155-mm illuminating shell.

March 23, AM—Committee Study

PM—Demonstration VI: MATERIEL

A demonstration to display and discuss new types of weapons. Approximately 20 weapons will be displayed.

March 25-30—Committee Study. Presentations. Round Table Discussion. Preparation of final reports.



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THE UNITED STATES FIELD ARTILLERY ASSOCIATION

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## Artillery Conference

The forthcoming conference at the Field Artillery School (see page 157 for tentative program) offers a splendid opportunity for artillerymen to reach a "meeting of minds" on numerous controversial matters. The directive for the conference indicates that discussion will cover Field Artillery organization, equipment, and technique.

There are undoubtedly numerous matters of importance, now in controversy, in connection with our current and projected equipment and the changing techniques for their employment in campaign. This column is of the opinion, however, that the problems of Field Artillery organization, particularly above the division level, far outweigh the others in importance. As a glance at any one of the several plates and battle orders accompanying the article, "Artillery in the Ardennes" (page 138) will show, the number of corps and army artillery battalions outnumber the divisional artillery battalions on the battlefield. The proper handling of this mass of artillery, both during the training stage as well as during combat operations, necessitates a better organizational concept than was available to us in the war just won.

Many artillerymen feel that a single step would solve the problem—namely, the reestablishment here in Washington of the Office of the Chief of Field Artillery. Although these words reflect but one officer's views, this column does not agree that the problem is that simple. The problem is very comprehensive indeed, and embraces the myriad of details incident to the supply and administration and training of hundreds of artillery units scattered over wide areas. As stated in an earlier issue, this column believes most firmly that the best interest of the Service will not be satisfied until an organizational change results in the establishment, *not only in Washington but also through and within all higher command echelons at home and overseas*, of a "suitably integrated artillery guidance"—give it any name you will—appropriate to and consistent with the decisive role of artillery in battle. The British and Russians had it in the late war and will have it again. The United States lacked it, along with the Germans and the Japs.

A great opportunity will be lost if the conferees at Fort Sill do not face squarely up to this over-riding problem and produce a series of recommendations that, if approved, will give us the "suitably integrated artillery guidance" believed essential.

## Changes of Address

A distressing number of JOURNALS are returned each month by the Post Office due to changes of address that have not been reported by subscribers. *This costs our Association money*, not to mention the fact that the subscriber does not get his copy. The prompt reporting of changes in address by subscribers will be appreciated.



## Forgotten Men

Dear Sir:

This is a plea for the forgotten men of the war—the unsung and unrewarded Field Artillery Group Commanders. \* \* \*

It was of interest to read of the recent awards of the Legion of Merit to various staff officers at AGF and also of the same award being made to many officers of the ASF. No one denies their right to recognition for their services, but what about our own Group Commanders? They trained four or more battalions and took them into combat. Is the work of these officers of less consequence than those who sat at desks during the war?

Most division artillery commanders, with an equal or less amount of artillery than many group commanders working under them, received the Legion of Merit as a matter of course for their duties performed. These awards were for pre-combat training as well as for combat. Corps artillery commanders were likewise taken care of by their commanders, with whom they were closely associated. In contrast, the Field Artillery Group Commanders, working under the far-away supervision of several different corps, were overlooked. A few received Bronze Stars from divisions which they supported in combat, but most were passed over because their groups were attached to different corps for such relatively short periods of time. \* \* \*

If a check were made it would be found that there were less than one hundred group commanders who did successfully train these superior groups for combat. Many who started with groups were failures and were relieved of their commands. Those who succeeded deserve much credit. Awards of the Legion of Merit would do much to overcome the bitterness which many of these officers feel at present.

Without a Chief of Field Artillery to whom we former group commanders might appeal, I am making this plea to you to act as our spokesman and if possible to present our case to some competent authority.

Colonel, FA

The Editor brought the foregoing letter to the attention of competent authority and has been advised informally that the subject matter is under study at the present time.

Data are not available to the Editor either to substantiate or disprove the allegations made in this letter. It is considered a specific case in point, however, of the need both in and out of combat for the "suitably integrated artillery guidance" discussed under "ARTILLERY CONFERENCE," above.

— — —  
The Secretary  
IMPERIAL WAR MUSEUM  
Lambeth Road, London S.E.1

28th January 1946

Dear Sir,

I should be grateful if you would allow me to appeal through your columns for copies of *Combat unit histories*, to be placed in our library alongside other publications relative to the part played by the American Fighting Services in the last war. Such unit histories are not always issued through the leading publishers and are therefore not readily traced through our usual sources of information; some, in fact are privately printed and would thus be not obtainable without the cooperation of the issuing authorities.

As you are probably aware, the Library of this Museum, the only one of its kind in this country, is devoted entirely to the records of the two World Wars, and we are naturally anxious that it should include a comprehensive documentary record of our gallant American ally.

Yours faithfully,  
H. FOSTER,  
Librarian.

— — —  
THE FIELD ARTILLERY JOURNAL is pleased to publicize the desire of the Imperial War Museum for copies of the unit histories of American artillery units. In so doing, however, it is desired to stress that the FIELD ARTILLERY Association *itself is most anxious to build up a library of the histories of artillery units*. Many have already been received. The forwarding of copies of histories by units which have not done so will be appreciated.



### EDITORS COME AND GO—

It is high time that *Miss Lenna Pedigo*, our Business Manager, got her picture in the book! No other person has served our Association so long or so well. Hundreds and hundreds of artillerymen have received her friendly letters—yes, and with *checks* in them too. She joined the JOURNAL staff in June, 1928, and has seen a goodly number of editors come and go. Among them were: Major Harleigh Parkhurst 1926-1928, Major John M. Eager 1928-1932, Major Dean Hudnutt 1932-1936, Captain Michael V. Gannon 1936-1939, Lt. Col. W. S. Nye 1939-1942, and Lt. Col. John E. Coleman 1942-1945. Our business is not a big business but there are a thousand details to be kept in order. A major credit is due Miss Pedigo for the prompt and courteous service this office seeks to render our members.

# Let's Protect Our Cannoneers' Ears!

By Maj. H. S. Howard, FA<sup>1</sup>

"All cannoneers have hairy ears," goes the old saying, carrying with it the erroneous implication that nature thus provides an effective protective device against the shock of muzzle blast. This of course is not so. Although it does include certain natural protective devices, the human ear is not designed to withstand such a severe shock.<sup>2</sup> Many cannoneers, it is true, use cotton or fingers in their ears, or open their mouths, or try other methods to afford relief from the temporary discomfort of muzzle blast. But the problem is much more than a matter of temporary discomfort—witness, for example, the number of older artillerymen with a permanent loss of hearing. What can be done to insure our cannoneers protection from this danger? This article suggests an approach to this problem.

The advent of peace is no reason why the problem is not still with us; every day irreparable damage is being done to some cannoneer's ears, even at our service schools. This is largely because of a lack of proper recognition of the problem and the failure to include an adequate appreciation of the danger and of the safeguards which should be practiced as part of the professional training of all artillerymen.

First, let's examine the problem generally. The muzzle blast created by a shell being propelled from a modern artillery weapon creates sudden and intense pressures, more so in certain areas surrounding the weapon than in others. In which of these areas is the human ear endangered by even a single exposure, and in which by exposure only over a period of time? The results of studies which have been made to answer this question, while not conclusive or exact, do delimit in a general way certain areas surrounding a piece according to the degree of danger to the ear. With the 105-mm howitzer, for example, it is estimated that there is a *danger area*—"one in which organic injury to personnel *equipped with cotton ear plugs* might be possible"<sup>3</sup>—beginning about halfway between the muzzle and the breech and extending from the muzzle forward 20' or more and *laterally* 10' or more (see sketch). It

is further estimated that there is an *excluded area*—"where a person could not work efficiently during long continued fire"<sup>3</sup>—which *includes* the *breech* area and extends forward 30' to 40' therefrom and laterally some 30'. Note that this breech area includes the position in which the gunner and cannoneer No. 1 perform their duties. Of course the effect of muzzle blast in both areas will vary with the type of shell, powder charge used, atmospheric conditions, position of shields, and susceptibility of the cannoneer's ears. It seems reasonable to assume that these "danger" and "excluded" areas are greater for higher caliber weapons.

Regarding the "danger area," as described above, the uninitiated may comment that no one would be so foolish as to be in front of the guns when they are firing. How many times, however, have you seen batteries in position receive a target on their flank, and shift trails so that some pieces are firing so as to place cannoneers of adjacent pieces in their "danger area," at least laterally if not longitudinally? Or how about eager wire crews laying wire through the "danger area" from the gun position to a forward observation post? And what protection is *assured* cannoneers who have to work in the "excluded area" so that over a period of time they will not develop permanent hearing difficulty?

At this point it seems pertinent to inquire into the present state of knowledge in the Field Artillery regarding this subject. What is included in our training literature and training programs, and what practices are actually followed in the field? As to the general state of knowledge—make a test. Inquire of the next artillery officer you meet how close he would permit pieces to fire so as not to endanger personnel. What is the prevailing practice in his battery as to use of ear plugs or other protective devices? Ask him whether continued exposure to artillery fire in the breech area can lead to permanent hearing difficulty. In all probability you will get an indefinite answer, or a frank statement that not much thought had been given the subject. Repeat the experiment ten, twenty, or thirty times—I am confident the answers will be "confusion confounded." At least that was the experience in making an unofficial test at a service school. Now draw upon your own observations. You will undoubtedly recall many instances in which firing was accomplished not only with personnel in "danger areas" but also with personnel in "excluded areas" over extended firing periods either with no protective devices available, or where the matter of use of ear plugs or cotton waste was left up to the individual cannoneer's choice.

Nor does our training literature or program contribute any great help. The nearest pertinent item recalled is the provision in A.R. 750-10 (Range Regulation) that "if any part of Area D (the area just in front of the muzzle) is to be occupied, the trajectory must clear any personnel or material

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<sup>1</sup>With over 15 years' service in the Field Artillery, including Organized Reserves, National Guard and AUS duty, and having suffered a permanent hearing loss as a result of exposure to Field Artillery weapons, the author a presently a hard-of-hearing patient at Borden General Hospital. Consequently, he feels personally motivated and qualified to write on this subject.

<sup>2</sup>For a scientific discussion of this subject see "The Effects of Explosions on the Acoustic Apparatus" by H. B. Perlman, M.D., Transactions American Academy of Ophthalmology and Otolaryngology, July-August, 1943.

<sup>3</sup>"The Area About a 105-mm Howitzer to Be Excluded to Personnel Due to Muzzle Blast." Ballistic Research Laboratory Memorandum Report No. 249, Aberdeen Proving Ground, 19 November, 1943. Italics inserted by author.

object by 5 yards and 2 forks" (par. 9a), which does not afford protection from muzzle blast in the "danger area."

The foregoing is in the nature of destructive criticism. What should be done? For one thing, this danger is certainly of sufficient magnitude to justify reference to it in our training literature—for example in the field manuals "F. A. Firing" and "The Firing Battery." All artillerymen should be thoroughly familiar with this problem so as to prevent personnel from being in "danger areas" during firing or in "excluded areas" over extended periods of time without adequate protection.

As to adequate protection, industry has been experimenting for some time with fitted ear plugs in such occupations as welding, riveting, chipping and comparable activities.<sup>4</sup> Composition ear plugs have been manufactured which, while permitting normal conversation, are claimed to "exclude unwarranted noise." It is understood that one type has been adopted by the Navy and by some branches of the Army. It is submitted that if the claims made for them can be substantiated, these ear plugs should be adopted forthwith for Field Artillery use, and all cannoneers—or at least those who have to work in "excluded areas"—should be required to wear them.

Finally one step should certainly be taken at once. No individual entering the service with a hearing difficulty should be assigned to the Field Artillery or other comparable branch. To do so subjects such an individual unnecessarily to the probability of a greater and perhaps permanent hearing impairment as a result of exposure to Field Artillery weapons.<sup>5</sup>

<sup>4</sup>See "The Prevention of Ear Disability in Industry" by David A. McCoy, M.D., The Journal of the American Medical Association, April 24, 1943, Vol. 121, p. 1330. In his article on "Prevention of Traumatic Deafness" in the Archives of Otolaryngology, June, 1943, pp. 757-767, Capt. Wm. H. Wilson, Medical Corps, AUS, points out that "Dickson and associates, in a thorough study of protective devices for the ears, found that the most effective single means was an ear plug composed of some solid but pliable substance." and gives as a reference: Dickson, E. D. D., and Ewing, A. W. G. "The Protection of Hearing," J. Laryng. & Otol. 56:225-242 (July), 1941.

<sup>5</sup>"Persons with impaired hearing are more susceptible to acoustic trauma than are those with normal hearing." from "Prevention of Traumatic Deafness" by Capt. Wm. H. Wilson, Medical Corps, AUS, Archives of Otolaryngology, Vol. 37, No. 6, June 1943, p. 767.

<sup>6</sup>See p. 17, The Annals of American Academy of Political and Social Science, May 1945, "The Physically Disabled," by Tech. Info. Div., Office of Surgeon General, U. S. Army.

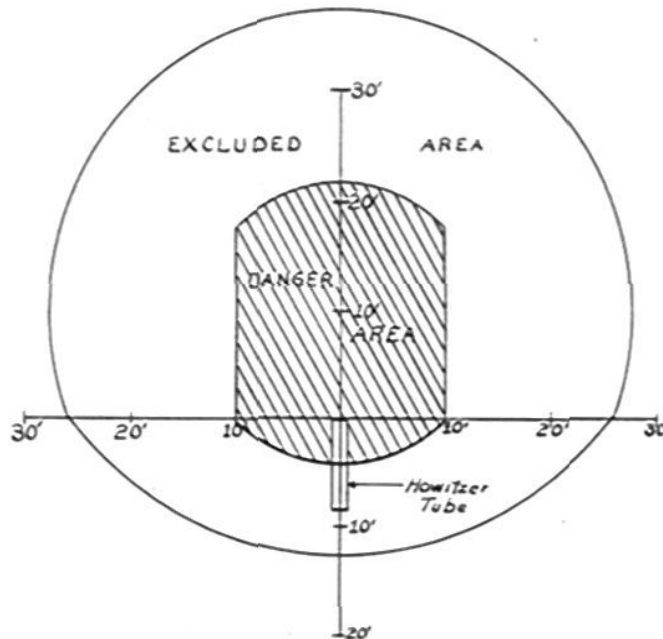
This is not a mere academic question—over half of the hard-of-hearing cases treated at Army general hospitals involve hearing defects which existed prior to entry into service.<sup>6</sup>

To accomplish this recommended step at the time of enlistment or induction will require that the quality of ear examination now given be improved. The audiometer, the standard device for the measurement of hearing, should be available to examiners to measure any suspected hearing impairment accurately. This recommended step assumes great importance at this time in view of the prospective new training program wherein all young men would receive a year's training even though not physically qualified for combat troop duty. Not only do new soldiers or trainees deserve an adequate ear examination and proper classification and assignment but also considerable future expense to the government would be averted thereby through the reduced need for later auditory treatment and pensions.

This whole problem involves many technical matters entirely beyond the scope of field artillerymen. To develop the proper framework for such a program, close coordination with the Ordnance Department and Medical Corps will obviously

be necessary. It is interesting to note that the Navy has a Gun Blast Committee (Taylor Model Basin, Navy Department, Cardarock, Maryland) with which valuable liaison could undoubtedly be accomplished. As was mentioned above, studies made to date of the "danger and excluded areas" are not conclusive or exact, and further research in this field seems desirable, particularly for higher caliber weapons. Close coordination and consultation with auditory specialists to include, perhaps, some audiometric research at the Field Artillery School might prove very helpful.

In summary, then, since "all cannoneers *do not* have hairy ears" a four point program is recommended to protect them from the harmful effects of shell blast: (1) inclusion in the professional knowledge of artillerymen adequate information as to the nature and extent of this danger through proper incorporation in training literature and by insistence upon proper practice in the field; (2) the mandatory use of scientifically designed ear plugs, at least by all personnel required to work in "excluded areas"; (3) proper examination of the ears and proper classification of personnel upon entrance into the military service so that no individual already having hearing difficulty will be assigned to the Field Artillery, and (4) continuous study and research by field artillerymen in collaboration with auditory specialists.



Approximate "Danger" and "Excluded" areas surrounding 105-mm howitzer firing charge seven.



# For Heroism and Service



## MEDAL OF HONOR (POSTHUMOUSLY)

First Lieutenant JAMES E. ROBINSON, JR., Battery A, 861st Field Artillery Battalion, was a field artillery forward observer attached to Company A, 253d Infantry, near Untergriesheim, Germany, on April 6, 1945.

Eight hours of desperate fighting over open terrain swept by German machine-gun, mortar, and small arms fire had decimated Company A, robbing it of its commanding officer and most of its key enlisted personnel when Lt. Robinson rallied the 23 remaining uninjured riflemen and a few walking wounded, and, while carrying his heavy radio for communication with American batteries, led them through intense fire in a charge against the objective. Ten German infantrymen in foxholes threatened to stop the assault, but the gallant leader killed them all at point-blank range with rifle and pistol fire and then pressed on with his men to sweep the area of all resistance. Soon afterward he was ordered to seize the defended town of Kresbach.

He went to each of the 19 exhausted survivors with cheering words, instilling in them courage and fortitude, before leading the little band forward once more. In the advance he was seriously wounded in the throat by a shell fragment, but, despite great pain and loss of blood, he refused medical attention and continued the attack, directing supporting artillery fire even though he was mortally wounded. Only after the town had been taken and he could no longer speak did he leave the command he had inspired in victory and walk nearly two miles to an aid station where he died from his wound."

## DISTINGUISHED SERVICE MEDAL

Maj. Gen. LEWIS B. HERSHEY, for exceptionally meritorious and distinguished services in the performance of duties of great responsibility as Chief of Selective Service.

Brig. Gen. EDWARD S. OTT, for exceptionally meritorious and distinguished services in the performance of duties of great responsibility from 30 August 1944 to 29 April 1945.

## MERITORIOUS SERVICE UNIT PLAQUE

Service Battery 315th FA Bn, 80th Division Artillery has been awarded the Meritorious Service Unit Plaque for superior performance of duty, achievement and maintenance of a high standard of discipline during the 80th "Blue Ridge" Division's campaigns in France, Luxembourg, Germany, and Austria from 8 Aug 44 to V-E Day.

## SILVER STAR

Pfc. ELWOOD H. COSLETT, Battery C, 412th Armored Field Artillery Battalion, 5 June 45.

Capt. EDWIN C. JOHNSON, Battery C, 412th Armored Field Artillery Battalion, 5 June 45.

Capt. JOHN F. MITCHELL, Salem, Oregon, Battery C, 687th Field Artillery Battalion, 28th Infantry Division. For gallantry in action in connection with military operations against the enemy on December 16, 1944, in Luxembourg.

Lt. ROBERT W. KEAN, JR.

## SILVER STAR

(Posthumously)

1st Lt. JOHN A. LARKIN, JR., for exposing himself to intense enemy fire while a forward observer in Kirchlinde and adjusting artillery on German positions with devastating effect.

## OAK LEAF CLUSTER TO LEGION OF MERIT

Maj. Gen. GEORGE P. HAYS

Brig. Gen. THOMAS E. LEWIS

## LEGION OF MERIT

General THOMAS T. HANDY

Maj. Gen. RENE DER. HOYLE

Col. ALBERT R. S. BARDEN

Col. GEORGE A. BONNETT

Col. GILES R. CARPENTER

Col. HARRY C. CHUCK

Col. VORIS H. CONNOR

Col. CHAS. H. DONNELLY

Col. CLYDE M. HALLAM

Col. ROBERT CLYDE JORDAN

Col. STANLEY S. KOSZEWSKI

Col. DONALD G. McLENNAN

Col. JO ZACH MILLER, III

Col. WM. H. QUARTERMAN

Col. WILBERT E. SHALLENE

Col. FREDERICK D. SHARP

Col. VICTOR A. ST. ONGE

Col. GORDON J. WOLF

Lt. Col. ASA C. BLACK

Lt. Col. JOSEPH B. COLLERAIN

Lt. Col. EDWARD C. GREENE, JR.

Lt. Col. FILLMORE K. MEARNS

Lt. Col. CHAS. E. WAKEFIELD, JR.

Major GILBERT D. SUSSKIND

## LEGION OF MERIT (Posthumously)

Col. NEWTON W. JONES

## OAK LEAF CLUSTER TO BRONZE STAR

Lt. Col. MILFORD W. WOOD

## BRONZE STAR

Capt. GABE D. ANDERSON, JR.

1st Sgt. NOEL B. AUSTIN

1st Lt. ROGER L. BAKER

Cpl. EMMETT D. BROOKS

Capt. DONALD R. DUNLAP

1st Lt. JACOB M. ESHLER

2nd Lt. MAURICE G. FARR

Sgt. CECIL L. FEOCK

Pfc. FRED GARZINO

Pvt. JOHN W. GUNNARSON

CSapt. ROBERT S. HANSEN

1st Lt. HENRY L. JANSSEN

Maj. BILLY H. KERR

Cpl. GEORGE C. KOBYLKA

2nd Lt. WILBON C. LIPSCOMB

S/Sgt. WILLIAM J. MEIGHAN

Capt. JOHN S. MOORHEAD

1st Sgt. GEORGE PERETTI

T/Sgt. JOHN J. STAPP

Cpl. HAROLD W. WEIR

Pfc. ELMER G. WESSEL

Lt. Col. JOSEPH M. WILLIAMSON

## THIRD BRONZE OAK LEAF CLUSTER TO THE AIR MEDAL

1st Lt. PHILIP R. TOALE

## AIR MEDAL

2nd Lt. JOHN W. VESSEY

## CROIX DE GUERRE WITH "ETOILE DE VERMEIL"

Lt. Col. CLIFFORD M. SNOW



# PERIMETERS in PARAGRAPHS



(BASED UPON LATEST INFORMATION AVAILABLE AT DATE OF WRITING, AND SUBJECT TO CORRECTION AS MORE COMPLETE REPORTS ARE RECEIVED.)

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

## THE MILITARY SITUATION IN EUROPE (19 Dec 45 to 18 Jan 46)

### GERMANY

According to the Potsdam Conference proclamation dated 2 August 45, a Control Council was provided to sit at Berlin, composed of representatives of the United States, the British Empire, Russia and France, with authority to control Germany under the rules prescribed in the Potsdam declaration. This stated:

**"For the time being no central German Government shall be established. Notwithstanding this, certain essential central German administrative departments, headed by state secretaries, shall be established, particularly in the fields of finance, transport, communications, foreign trade and industry."**

Since each of the four members of the Control Council has a veto on all decisions, it requires unanimous agreement to get anything done.

The Russian radio has been unusually active in urging the prompt establishment of a central German Government, at least to the extent contemplated by the Potsdam Declaration. There seems to be agreement on this by both the United States and the British Empire. The failure to do anything in this line so far—and no central government has been started—is due to the veto of France. This is partly for military reasons and partly for economic ones.

It is clear that if a Central German Government is established it can be completely controlled by the Allies through their Council in Berlin, provided that the Allies are always in harmony with one another. Unfortunately this is not always the case; witness, for example, the veto of France which is preventing the central government.

The economic reasons apply particularly to the disposition of the Ruhr, normally a great mining and industrial area. Although not practicable right away while all of the Allies are watching, if the Ruhr remains part of Germany there will be a constant possibility of Germany rearming when Allied vigilance relaxes or a disagreement develops among themselves.

The Ruhr is solidly German. Therefore, according to the principles of the Atlantic Charter, its people should be allowed to remain with Germany, which they apparently wish to do. France would like to annex the Ruhr, as she needs the resources of that area to supplement her own deficient industrial capacity. If France gets the Ruhr, she will be independent of other countries for war manufactures, and for coal, iron and steel, besides other valuable materials, and might again qualify as a great Power.

The British now occupy the Ruhr and are governing it somewhat like a colony. The industrial potentialities are being integrated into the British economy. Thus, there is no competition between British industry and that of the Ruhr. They operate as a single combination. The British have shown no enthusiasm about assigning the Ruhr to France. In view of this, France is willing to agree to assign the Ruhr to an international organization, which will see to it that Germany is deprived of its resources, less such items as a Control Council may approve of. None of the other Allies has yet consented to this solution.

The division of Germany into four zones, each one of which is occupied by a different Ally, is not working well. Each Ally administers its zone differently. Nearest approach to similarity is between the British and Americans, who maintain good liaison with one another. The Germans note the differences between the occupying powers and make invidious comparisons. Although the Germans lack transportation, have no free press, have only local postal service, they do have an Underground and have a fair idea of what is going on. So far, however, there is no organized German resistance.

In the United States zone, 26 large German industrial plants have been made ready for delivery as war reparations and 58 others were so earmarked, during this period. All of these are private property, the confiscation of which is forbidden by the Hague Treaties of 1899 and 1907, of which the United States is a signatory. It would seem to be better to denounce those Treaties, or appropriate parts of them, as no longer applicable to modern warfare. Failure to do this affords an opportunity to charge the United States with not abiding by its signature.

Coal production in Germany is roughly one half of normal. Due to lack of transportation at the end of December nearly two million tons were stacked at the mines with no prospect of its early movement to consumers.

According to Russian reports, their seizure of German property is nearly completed. What is left to Germans is going into use, and production by various plants is claimed to be at a higher rate than in the other occupied zones.

### AUSTRIA AND HUNGARY

Both Austria and Hungary held elections during the last weeks of 1945, and each elected conservative governments. The Communists fared badly in both elections. This is the more noteworthy, since the Communists were supported by

Russia which occupied all of Hungary and a large part of Austria. To aid the Communist vote, moreover, the Control Councils had prescribed that no one who had formerly belonged to the Nazi Party, or who had been associated with it, was eligible to vote. This measure disenfranchised a large conservative element.

During the Nazi regime, all employees of the public services were required to belong to the Nazi Party. A large, and possibly a major proportion, joined and paid dues to keep their jobs and to avoid trouble, without in any way actively supporting the Nazis. None of these could vote. In spite of the advantage so gained, the Communist Party lost its relative position.

Hungary has been anti-Russian for years. Austria on the other hand had a large and vigorous Communist Party, mostly in Vienna, which was in sympathy with Russia. The behavior of the occupying Russian troops has alienated the hitherto widespread sympathy for Russia. Although a setback for Russia and a moral victory for the people, actually these elections are not decisive, since Russia continues to occupy the same areas as before.

The United States has recognized the new Governments.

#### RUSSIA

The military situation of Russia is not good, nor is it likely to be for some time to come. Russia could not wage a major war now with any reasonable prospects of success. In the late war, her impressive offensive efforts were made possible by tremendous quantities of materiel and supplies furnished by the United States and the British Empire. This flow ceased upon termination of the war, and Russia is now on her own. She can not even produce enough food and supplies for immediate needs, let alone those that would be required for war. This condition is a result of the recent war. Prior to the organization of the Soviet Union, Russia was primarily an agricultural state, with small farms and hand labor. The Soviet industrialized the country. To accomplish this some ten millions of peasants were transferred, by order, from farms to industries.

To enable farm production to be kept up, and even increased, farms were consolidated into what were called collective farms and mechanical farm machinery replaced manual labor. Using mechanical farm machinery the agricultural production was maintained at a satisfactory figure prior to World War II.

During the war there was an enormous destruction of farm machinery; there is now a great deficiency for collective farming. Recourse to manual labor is impracticable since there is also a deficiency of hand tools. Further, to return ten million men from industry to agriculture would be most disruptive. This condition is further complicated by appalling war losses. The number of able bodied Russians killed has never been reliably reported. Estimates vary between ten and twenty millions. There are said to be several other millions confined to concentration camps, where their labor is only of limited value. To sum up, Russia faces a critical shortage of labor, supplies and food.

To meet this situation, which is very serious, a new Five-Year Plan has been adopted, to be completed by the summer of 1950. The full details have not been made public, but it has

been announced that the Plan envisages a restoration of the previous food level, an increase over the prewar industrial production, and a building of a Navy plus naval bases, particularly in the Far East. The immediate problem is to tide over the first year or two, until food for everybody is available.

The shortage of labor has been partly made up by German slave labor, the number of which has been reported to be as great as five millions. There are probably at least three million. It has been stated that it is intended to keep this number of German slaves working during the entire Five-Year Plan, and possibly longer. This only partly solves the extraordinary labor shortage.

An obvious solution would be to import free labor, from that part of Europe, including the Balkans, occupied by Russian troops. The objection to this is that the standard of life in all of occupied Europe has been greater than that normally attained in Russia. To introduce people under such circumstances might lead to discontent. Besides free labor would want decent wages, the right to send money home to their dependents, and occasional visits to their own country. As Russian citizens have had no such privileges, to grant them to foreign laborers might cause considerable resentment at home.

Russian soldiers have come in contact with the armies of the Allies and have seen the higher standard of life prevalent in western Europe. This has been a great surprise to the Russians, who had been assured previously by their own government that living conditions in Communist Russia were greatly superior to that in the capitalistic states. In view of the resultant disillusionment and discontent, it is by no means certain that the people will continue strongly to support their present government and its latest Five-Year Plan. For this Plan requires that there be no increase in the Russian standard of living until after the Plan is completed. There is no assurance that it will be then. The objectives of the Russian Government appear to be, (1) a return to normalcy (i.e., minimum standard of living) at home, (2) the development of military power, adequate—if need be—to see the country through another major war, and (3) the production of sufficient food and goods for these purposes, as well as the minimum goods requirements of the Russian occupied countries, which are to be completely integrated into the Russian economic and military establishments.

The Russian people have been promised improved standards of living upon completion of earlier 5-year plans. There never has been much improvement; consequently, there is less faith in present promises. The Government is apparently taking measures to keep the people in line, which is absolutely necessary if the new Five-Year Plan is to succeed. Due to the black-out on news from interior Russia, it is impracticable to determine just what has been accomplished in this direction.

A great help to Russia would be a large loan. She could well use much food and much machinery right away, especially farm tractors, locomotives, trucks, etc. Although such supplies are needed for industrial and agricultural purposes, they are also very useful for war purposes.

To ease the food situation, a large part of the Russian armies continue to be billeted in occupied countries. It has been charged that the presence of a large mass of Russian troops in the Balkan area is for political purposes. This may be partly true, but the possibility of finding food there, and paid for by the occupied peoples, is a prime factor.

With the measures under way, it seems that Russia will get by the present crisis in labor and supplies, provided her own people will stand for the necessary continued sacrifices. In the meanwhile undertaking a major war appears to be out of the question. Russia's current assurances that she is sincerely desirous of maintaining the peace are undoubtedly correct.

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For information, the following partial description of the deployment of Russian armies in Europe is given.

The number of troops in Germany is unknown. British reports from Austria estimate the Russian garrison in that small country as about 500,000. The support of this force is a heavy burden on the Austrians. As there seems to be no military necessity for such a great army, the Americans and British have proposed a reduction of all foreign armies to equal numbers, the force of each nation not to exceed 50,000 men. The Russians have not accepted this proposition. As explained above, their own food situation is so bad that to withdraw troops to Russia would increase home difficulties.

About one quarter of the Russian troops are first line troops deployed with their right at Vienna, and their left on Neusiedler Lake. This is a 40-mile front. These troops have excellent equipment, receive some supplies from Russia, and have good discipline. The 375,000 remaining troops are Mongolian second line troops. They receive no supplies from Russia, and discipline is reported as unusually poor. This latter defect can be expected to be bettered in time. These troops use animal drawn transportation.

There is a Russian school at St. Poelten for Austrian Communists. It must be presumed that the Russians are well informed of the dispositions of the western Allies.

In Hungary, there has been a Russian re-deployment. Numerous second line units have been replaced by first line troops. The first line holds the front: Győr—Pápa—Keszthely—Nagykanitza. This is a 100-mile front in rear of the Rába River, which seems to be an advance line. A strong force of armor and heavy artillery is massed in rear of the right on the Bakony hegység (plateau). This appears to be a mass of maneuver, whose right is covered by the troops in Austria, previously mentioned, and the left by YugoSlav

formations. The strength of this Russian line has not been ascertained. However, the total strength in Hungary is reported as 1,200,000 men. For an army of that size, the mass of maneuver should be at least 400,000 men.

A second line holds the Danube River crossings from Esztergom in the north, past Budapest to Dunaföldvár on the south. This seems to be a garrison line to cover the very important defiles over the Danube.

In rear of the Danube, and in the plain between that river and the Tisza River is a mass of troops, reported as 250,000 strong. This presumably is the GHQ reserve, ready to go forward, or if necessary cover a withdrawal.

East from the Tisza River are other Russian forces, the nature of which has not been ascertained, but they are believed to be services and supply units. However, one report has been received that it includes some amphibious troops, engineers (bridge trains) and naval units.

The Hungarians resent the presence of the large mass of Russian troops in their country, feeling themselves in the same position as when dominated by the Nazis. They hate the Russians as much as they hated the Nazis. Their status as an occupied country remains—only the masters have changed.

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South of Hungary is YugoSlavia. According to reports from recent visitors, 17 divisions have been identified as in line as follows: Nagykanitza (Russian)—Drava River—Dravinja River—Celje—southwest to Delnice. This is a 125-mile front, with about 250,000 troops covering it. It faces directly the British zone of Austria, toward which there are four good lines of approach. The left flank is toward Giulia, Italy, with only two good lines of approach across high and rough mountains.

The YugoSlav divisions have received excellent equipment, largely captured from the Germans. An intensive training program is being conducted.

#### COMMENTS

**From Vienna on the north to opposite Fiume in the south—200 miles in an air line—are grouped nearly two million Russian and YugoSlav troops. Their front is on an arc curving inwards having a 250-mile extent.**

**Ordinarily such a concentration and deployment might lead to fears. However, in the light of the explanation given above, while the Russian Balkan Armies do have a political effect, the desire to subsist an important body of troops due to lack of supplies within Russia should be kept in mind.**

## THE IRAN, CAUCASIA AND TURKEY AREA (19 Dec 45 to 18 Jan 46)

The frontiers of Turkey, Soviet Russia and Iran come together in the vicinity of Mt. Ararat, which is a few miles inside the Turkish side of the boundary. Since November, 1945, this area has become the location of minor military events. Although they have so far been strictly minor, their

location and nature indicates a possibility of future serious complications. The United States and the British Empire have united in an attempt, as yet unsuccessful, to limit the trouble.

The trouble started last November with an uprising in

the northern part of Iran in the province of Azerbaijan. As was explained in this column last month, Iran has been garrisoned since 1942 by Russian troops in the north, which included Azerbaijan, and by British and American troops in the center and south.

When the uprising started in Azerbaijan, Russian troops prevented Iran troops from entering the province for the purpose of restoring the situation. The reason given was that as long as the occupation continued, Russia was responsible for the maintenance of peace. Obviously there would be no peace if Iranian troops arrived and started suppressing the insurgents. Consequently the insurgents were not suppressed, and have established a government of their own. Such Iran troops as were in Azerbaijan were allowed to go south into Iran. As far as known, there are no Iran troops left in Azerbaijan. The new Azerbaijan Government has proclaimed itself autonomous, which includes the right to make such arrangements as it sees fit directly with Russia.

In normal times, Azerbaijan was a food exporting country, its products going in part north to Russia, and partly south to Iran. Russia needs food, and could readily absorb all of the local production. Azerbaijan is believed to contain oil, although there are no fields at present. A Russian application to develop oil was refused by Iran on the ground that concessions to foreign nations would no longer be granted.

The general opinion is that Russia has favored the insurgents, and possibly instigated the autonomy movement.

Under current treaties, both Russian and British occupation are due to cease by 2 March, 1946. The United States suggested that this date be advanced to 31 December, 1945, and withdrew its own troops by that date. Russia declined to withdraw prior to March.

On the Russian side of the boundary from Iran is the Azerbaijan Soviet Republic. This is a little state carved out of Iranian Azerbaijan in a series of conquests during the last half of the 19th century. In this state are the extensive and valuable Baku oil fields, one of the great production centers of the world.

Iran Azerbaijan is roughly twice as large as the Russian republic of the same name, but has only half as many people. In both Azerbaijan, the inhabitants are of the same race, language and religion, which is not the same as that in Iran beyond Azerbaijan. Those Iranians belong to the Persian race.

In view of the foregoing facts and past history, a union of all of Azerbaijan into a single state appears logical. As matters stand, this would be under Russia. At the Moscow Conference which was completed on 26 December, 1945, the United States and the British Empire, through their representatives, sought to have Russia agree to permit Iran to send troops into her revolted province to restore her sovereignty. Russia refused. The revolted province is therefore assured of having until 2 March, 1946, to consolidate.

At the beginning of January, a counter revolutionary movement was reported by Iran as having spontaneously occurred near the south end of Lake Urmia. Minor fighting was reported. Results are unknown.

\* \* \* \* \*

#### A NEW PROBLEM

On 20 December, Russian newspapers gave prominence to an article signed by two professors in Georgia. Georgia is another small Soviet Republic, adjoining Azerbaijan on the west, and with it forming a band across the isthmus between the Black and Caspian Seas. It adjoins Turkey on the south for a distance of 100 miles in mountainous country. For another 100 miles and a little more the east boundary of Turkey is the Soviet Armenian Republic having 1,300,000 people.

The article published alleged that Georgia, as incorporated within Soviet Russia, did not include all the territory which naturally belonged to it. To bring all of Georgia within the jurisdiction of Soviet Georgia, a demand was presented for the cession to Russia of a strip of territory now in Turkey extending 180 miles along the Black Sea, from the Russian boundary westward to beyond Trabzon (Trebizond on many maps), thence south to include Guemesane, thence eastward to include Bayburt, Ispir, Oitu, to point where the boundaries of Turkey, Soviet Georgia and Soviet Armenia come together.

As the Russian press is controlled by its government, and as the Russian leader, Marshal Stalin, is himself a native of Georgia, it has been assumed that the article was a trial balloon representing Russian intentions. Russia has done nothing to dispel this view.

The area claimed from Turkey is divided into the strip bordering the Black Sea, and the interior. The Black Sea coast is narrow but has a mild sub-tropical climate. There is a good road but no railroad along the coast. Back of the coast, the mountains rise steeply. Back of the mountains is a plateau with a wintry climate and few agricultural possibilities. There are only two roads across the mountains within the disputed area. These are at the extreme ends. The one on the east is so close to the Russian boundary that it would probably be unusable in case of war. The coastal strip could be defended were it attacked solely by troops advancing from Russia. However, amphibious troops could land anywhere; if landed at or east of Trabzon, they would cut off all Turkish troops defending the frontier. As long as control of the sea remains with Russia, which is the case at present, a successful defense of the coastal strip would seem unlikely to succeed. To guarantee success, aid from the British or American navies would be necessary.

That part of the claimed strip which is on the plateau includes on the east Kars. The Turkish General Staff considers the defense of Kars of primary importance, and a Turkish army is regularly stationed there. There is a fair network of roads about Kars and a motor road and a railroad back into the interior.

Turkey is allied to Iran. There was a common frontier through Iran Azerbaijan. This has now been severed and is actually occupied by Russian troops. There is a good road from Azerbaijan to Erzurum, which avoids the Kars plateau to its north.

Russian occupation of Iran Azerbaijan separates Turkey's armies from those of Iran, and should war occur, would permit the defeat of each of these armies separately



instead of jointly, as had been believed possible when the alliance of Turkey and Iran was accomplished.

In view of this situation, Turkey has taken alarm at the Russian presentation of claims for cession of territory. Unless she receives heavy assistance from the Allies, it would be difficult for Turkey successfully to defend the disputed area.

Turkey has been mobilized since the beginning of World War II. No new mobilization is now required. A redeployment of troops is taking place to meet the threat in the east. This is complicated by previous Russian demands for cession of Istanbul at the opposite end of Turkey and 700 miles west from the Kars area.

According to a speech by the Turkish Prime Minister, the population of the disputed territory is 1,750,000. The 1935 census showed that of that number about 57,000 spoke Georgian. Turkey claims that 42,000 of these are Turks, who used to live in Georgia, and there learned that language. They came to Turkey as refugees. Only 15,000 or so, or less than 1% of the population, are admittedly real Georgians.

#### IRAQ

Iraq has a common boundary with Iran Azerbaijan for about 160 miles. On 18 December, the Prime Minister of Iraq announced that the establishment of a pro-Soviet autonomous government in Azerbaijan had given his government very much concern.

Great Britain maintains two airfields in Iraq, and keeps a careful eye on activities in that area. Iraq is an Arab state. Due to fear of Russia, Iraq has been quite friendly to the British,

differing in this regard from the other Arab states to the south, which are becoming increasingly hostile.

The boundary area between Iraq and Iran Azerbaijan is peopled by the Kurds, a warlike race who are partly nomad and whose tribes extend into Turkey and Iran. They raided into Iraq early in 1945. This led to the Iraq Army attacking them. This army does not exceed 8,000 men, but has been equipped and trained by the British, and is fairly efficient. It includes a small air force. The Iraq forces advanced in several columns too widely spaced apart. One of the columns was defeated by the Kurds in August. Thereupon the other columns combined, and drove the Kurds across the border into Azerbaijan. The Kurds are supposed to have lost more than one-half of their number. Their present force which has been reconstituted is estimated as 500 rifles, a machine gun company of 6 pieces, and an artillery of one 75-mm gun.

According to Iraq G-2 this small Kurd force is being outfitted as a nucleus by Russia. The object appears to be a new claim that the Kurds are a mistreated minority in Turkey, Iraq and Iran, and are entitled to form a state of their own. This would include territory now assigned to Syria as well as substantial segments from Turkey, Iraq and Iran.

#### COMMENTS

**Russian activity in Azerbaijan has led to a general unrest throughout the area commonly known as the Middle East.**

**The American and British Governments are making earnest efforts to prevent the development of new complications, caused by fear of Russian intentions.**

## THE SOUTHEAST ASIA COMMAND (19 Dec 45 to 18 Jan 46)

#### GENERAL SITUATION

On 19 December, the State Department issued a communique relating to the Southeast Asia Command, which has been assigned the responsibility of accepting the Japanese surrender within its area, and of assuring the safety of more than 100,000 civilians interned by the Japanese.

That task has been complicated by differences between Indonesians and the Netherlands authorities, which have made it necessary for the SEAC to assure such order as required in order to accomplish its mission. Never having a thought of extending the Allied mandate beyond the specific missions assigned, the United States has viewed recent developments with increasing concern. It earnestly hoped that by means of conversations a peaceful solution of the conflict in the Netherlands Indies would be arrived at.

Nothing thereafter happened toward resolving the conflict referred to. There was also a conflict going on in Indo-China. The United States thereupon, on 6 January, withdrew its participation in the SEAC by an order from our Joint Chiefs of Staff, except for a liaison detachment. The order stated:

**"The United States does not envisage participating in the future operations incident to the disarmament of Japanese troops and the restoration of civil government in the territories under SEAC. . . ."**

The SEAC includes Burma, Siam (or Thailand), Indo-China (south of Latitude North 16°), Malaya and the Netherlands Indies. In compliance with the order, the ATC air bases at

Rangoon, Batavia, Saigon, and Kunming were discontinued. Kunming is in China, but the closing of the other bases rendered the Kunming base unnecessary.

To maintain the American air line to Manila, the following bases have been retained: Karachi, New Delhi, Calcutta, Singapore, and Bangkok.

The SEAC is now entirely British. Lord Louis Mountbatten remains the Commander-in-Chief, with headquarters at Singapore.

#### SIAM (OR THAILAND)

There has been no fighting. The British concluded a treaty with Siam, signed on 1 January. This is the first treaty made with an enemy of the late war. Main provisions are:

1. **Siam cedes back to the British territory annexed from Malaya during the war. (Note: That territory had been taken from Siam previously by the British.)**
2. **Siam restores all British rights and pays indemnity for all losses to British interests during the entire war, including interest.**
3. **Siam agrees to cooperate in the defense of Malaya, Burma, India and Indo-China. (Note: This provision places Siam under military control of the SEAC.)**
4. **Siam prohibited from building a canal across the Kra peninsula. (Note: Should this be built it would shorten navigation routes to south China and the Philippines from Ceylon by over 1,000 miles, by-passing Singapore. The prohibition assures that shipping will continue to pass by the British base at Singapore.)**

5. **Effective 1 September 1947, Siam is to prohibit the export of rice, tin, rubber and tea except as authorized by a Combined Board at Washington. (Note: There is no Combined Board as yet. This article enables the Board, when established, to prevent Siamese competition.)**
6. **Siam agrees to furnish to the British all rice not needed for local subsistence free at Bangkok, not to exceed 1½ million tons. (Note: This is reparations.) All rice available over the 1½ million tons to be similarly delivered to the British, but to be paid for. All this rice delivery to be completed by 1 September, 1947.**
7. **Declares the war is over, and normal relations are to be established.**

On 19 December last, the State Department announced that it had intervened in negotiations with Siam with a view to scaling down the British demand for rice. The United States originally took the position that the rice demand was an unauthorized form of reparations. Siam contended that the economic situation was such that she could not finance furnishing more than 240,000 tons of rice free. The British stuck to their demands, and the United States thereupon withdrew its opposition, and suggested compromising on 800,000 tons. This the British refused to agree to. They pointed out that Burma and Malaya were desperately short of rice and faced a famine, and that it was only fair that Siam give the rice as a gift in reparation for her participation in the war.

The new treaty places the British in economic and military control of Siam. Should military operations hereafter develop in Burma or Malaya, the British have a treaty right to the cooperation of Siam. The strategical position of the SEAC has been materially strengthened.

During 1941, Thailand attacked Indo-China. The reason for this small war was to recover certain territories which the French had seized in an earlier war. Japan mediated between Siam and France, then represented by the Vichy Government. The latter returned the disputed territory to Thailand, which bordered Laos and Cambodia.

On 16 January, our State Department announced that the United States would not recognize Siam's right to the recovered territory and that it was expected that they would be restored. Just now Laos and Cambodia have announced their independence. They have not yet been occupied by French troops, except for minor areas adjacent to Cochinchina.

#### INDO-CHINA

Due to the French censorship very little reliable information is available as to the progress of the campaign being waged by French troops against the natives, led by the Viet Minh Party.

According to American correspondents, the British troops have practically withdrawn from Saigon, and the French are in complete control. They are unwilling to grant independence, insisting upon complete subjection to France. The correspondents claim that French citizens have beaten and maltreated Indo-Chinese who were unarmed, and apparently without cause. Mass arrests have been made. The sight of large batches of natives tied together and being led off to confinement has been common. The general brutality

of French methods is stated to have completely alienated all hopes of a peaceful settlement.

Immediate military operations are directed to salvaging over 110,000 tons of rubber scattered throughout Cochinchina. About 12% of this rubber is in Saigon, now securely held by the French 2nd Armored Division, and is destined for shipment to the United States. The remaining 88% of the rubber is largely in the territory not yet reconquered. The Indo-Chinese are adopting a scorched earth policy, and are burning the rubber when necessary to withdraw before the better armed and equipped French.

In north Indo-China, Chinese troops under Lt. Gen. Ma Ying are in control north of Latitude 16°. There seems to be no fighting in this area. The Chinese have not "recognized" the Viet Minh which is in administrative control. They have disarmed all French liberated troops, on the ground that the Chinese are responsible for law and order, and that obviously to permit armed French forces into their occupied area would immediately lead to violent breaches of the peace. (This argument, incidentally, is the same as that made by Russia in preventing Iran troops from entering Azerbaijan.)

In view of this Chinese action, the Viet Minh is consolidating in the north.

The leader of the native party appears to be Ho Chiminh, whose CP is in Hanoi, a Chinese occupied town. He has long been prominent as an advocate of independence, and was well known to French authorities. He has a high reputation for honesty and sincerity. He desires an arrangement with France acknowledging native aspirations for independence, and is willing to compromise on economic questions to the extent of granting France commercial advantages.

#### NETHERLANDS INDIES

*The General Situation.* Java is the center of the independence movement against Dutch rule. That island has a population of some fifty millions out of eighty millions in the entire archipelago. It is also commercially and economically more important than all of the other islands put together.

The Javanese appear to be unanimous in their demand for abolition of Dutch rule. Except where British troops enable some semblance of Dutch authority to be present the Javanese control all of Java.

Indonesians control virtually all of Sumatra, which is the next most important island. Borneo, which is the third great island, is relatively thinly settled; there, the British and Dutch control certain areas, and the natives others.

Sumatra and the independent part of Borneo are in liaison with Java by radio and through liaison detachments. As the Indonesians have neither a navy nor an air force, there is no military coordination between the islands.

Dutch rule has been reestablished in Biliton, which is valuable for tin mines, and in Celebes and Ambon. In the remaining islands, including Bali and Lombok, Japanese troops are still in control.

In the islands where the independence movement is active, the native leaders had been seeking independence for years. Previously, nearly all of them had either been held in confinement by the Dutch authorities or had been in exile. Favoring the independence movement, the Japanese released those in custody, permitted the exiles to return, and had

arranged for elections at the date of surrender. The native aspirations, although fostered by Japan, were not the result of Japanese propaganda. The present native leaders collaborated with Japan openly, and admit it, claiming that this was necessary as a means of accomplishing their independence. Years of effort had shown that independence was impossible under the Dutch. Although Japan was responsible for starting the present native governments, the natives dislike the Japanese, who they feel are overbearing and are guilty of looting.

Recently evidence has appeared that Japan is partly responsible for certain secret terrorist societies. Unfortunately, such societies are common throughout Malay territories, including the Philippines.

*Sumatra.* This island (population about ten millions) is governed by natives under an Acting Governor named Amir. In December, Amir made a liaison visit to the native government of Java and arranged for cooperation, in so far as this is possible, without having either sea or air control. The natives have a few planes which assure liaison. The Acting Governor is a college graduate and an intelligent and able man.

British troops hold Medan, Padang and Palembang, ostensibly to evacuate Japanese troops still in those areas. Around each of these posts there has been minor fighting. The British have evacuated Europeans from Padang to Medan, without thereby stopping the minor warfare. The Japanese are aiding in the defense of Medan and of Palembang.

All of the rest of Sumatra, which is 1,200 miles long, appears to be peaceful and under the control of the native government.

*Borneo.* On 19 December, an expeditionary force of Javanese landed on the south coast of Borneo with the mission of arousing the inhabitants of Borneo to join in the insurrection against the Dutch. Dutch naval ships thereupon blockaded the south coast. No further news has been available, other than a report dated 14 January to the effect that native organizations were active along that coast.

*Java.* The native government has been reorganized with Sutan Sjahrir as Prime Minister. The cabinet includes men who were not collaborators with the Japanese. The chief of state is Soekarno, who is a distinguished orator and has considerable influence with his people. This Javanese Government is in liaison with the British; it claims a desire to avoid hostilities, and to settle differences with the Dutch peacefully. The Dutch refuse to consider independence and the Javanese refuse to consider a settlement which does not admit their right to rule themselves. They are willing to conserve all Dutch property rights, and to negotiate an economic treaty favorable to Holland. To date, no progress has been made toward such an agreement.

At the beginning of the period, a British force under Lieut. General Sir Philip Christison held Batavia and Bandoeng with the 6th Airborne, 5th India and 26th India Divisions. The 23d India Division held Semarang and Soerabapa with one brigade at each place. The Navy and Air Force assured communication and liaison. The Japanese 16th Army held

posts in the interior, with a total strength estimated at 50,000 men. Except for the garrisoned post, the native Javanese Government controlled the entire island.

On 19 December, the Javanese were active near Semarang, where their artillery shelled the airfield, while minor harassing infantry attacks were made about Bandoeng and Buitenzorg in the Batavia area. Next day a Javanese attack captured the water source of Semarang. On instructions from London the British commander passed to the tactical defensive, pending further instructions.

The Javanese continued their harassing attacks, and severely treated natives accused of collaborating with the British. The RAF was called into action to blast road blocks, which prevented supplies from arriving, and the Navy shelled the Javanese at Semarang. By the 23d, the Javanese had extended their activities to the vicinity of Batavia.

Three battalions of Dutch troops en route to Java were stopped at Singapore on the 24th and there debarked. On the 26th, Japanese troops rescued 1,200 Europeans and Eurasians in the vicinity of Bandoeng, and these were evacuated. On the same day, the official car of the Javanese Prime Minister, whose CP had been in Batavia, was fired upon by Dutch troops within the city. The Prime Minister was rescued by British MPs, and the Dutch later submitted an official apology.

On the 27th, the British commander, presumably having received the expected additional instructions, announced that operations would commence to clear Java west of Batavia. He invited the Javanese Government to cooperate with their troops. No Dutch were to participate. Mission was to suppress bandits and secret terrorist societies. Operations commenced in the immediate vicinity of Batavia and led to light fighting. The Javanese agreed to protect two convoys a week carrying supplies to refugees at Bandoeng.

Two thousand Dutch Marines arrived at Batavia on 30 December. These Marines had been trained at Quantico and at Camp Pendleton, Oregon, and had complete American equipment. The coming of these troops aroused violent protests from the Javanese. The British permitted the new troops to debark, but they were not allowed to enter line, or take part in field operations.

On the 31st, the British released the Japanese Major General Yamamoto, Chief of Staff of the 16th Army. This officer had been in confinement at Singapore, awaiting trial for alleged war crimes. It was decided that his presence was needed in Java to round up large Japanese forces which had not surrendered.

Although consisting of actions between forces not exceeding a half battalion in any one place, the fighting around Batavia continued daily, and involved the destruction by fire of certain areas, including part of Batavia where the Javanese infiltrated in. At Semarang and Soerabaja, the Javanese used artillery to harass the British.

The release of the Japanese Chief of Staff brought its first results on 4 January. The Japanese issued an order providing for the evacuation from Java, via Cheribon, of 1,400 Japanese troops, plus 900 POWs and refugees, which

were to be delivered to such destination as the British might indicate.

The Javanese closed their CP at Batavia on 6 January and reopened on the same date at Jogjakarta, 300 miles to the east. Dr. Soekarno broadcast a speech stating that the Javanese Government was in fact already independent and operating, and that it was determined to defend its freedom at all costs. The British Air Force dropped thousands of leaflets threatening retaliation by bombing and shelling if the Javanese did not stop their shelling of Semarang and Soerabaja, which was a decided nuisance.

The British threats re Javanese artillery activity had no effect. The Javanese artillery extended its operations to include counterbattery of British artillery near Soerabaja, and caused casualties. They planted mines in roads and destroyed an

armored patrol. They closed in on the Batavia airport, and machine gunned incoming planes. All these events constitute only minor warfare but have had the effect of confining the British to garrisoned posts.

A new Javanese unit, known as the Black Cats, appeared in line with about a battalion near Batavia on 16 January. From prisoners taken, it was ascertained that this organization included a number of Japanese and about 20 deserters from British Indian Divisions. The Black Cats are reported as well trained, with khaki uniforms for the men and black uniforms for officers. They wear Japanese helmets, and are well disciplined. Upon investigation it developed that some Indian troops had sold arms and ammunition to the Javanese in exchange for food. How far this breach of discipline has extended has not been ascertained.

## CHINA (19 Dec 45 to 18 Jan 46)

### THE GENERAL SITUATION

The differences between the Nationalist and Communist Parties, known respectively as the *Kuomintang* and the *Kungchintang*, were settled on paper, at least, temporarily, during this period through mediation by the United States. The new American ambassador, General of the Army George C. Marshall, arrived at Chungking in December and immediately initiated conversations with the leaders of the two rival parties, with a view to bringing about a general cessation of hostilities.

As General Marshall's mission was known of in advance, the Communist Party on 27 December expressed a willingness to cease hostilities on the following terms:

1. **Both sides to cease firing, with troops remaining at their posts.**
2. **Disarming of Japanese, including pro-Japan Chinese troops, disposition of liberated areas; and similar problems to be settled by peaceful discussions.**
3. **To safeguard the 1st term, and the progress of the 2nd, fact-finding inspection groups composed of representatives of all parties to be established.**

On 31 December the Nationalist Party broadcast its proposal, which also consisted of three terms:

1. **Cessation of hostilities, provided there be a concrete understanding on the procedure to be followed, and that autonomous armies be dissolved as such.**
2. **Admission to the Kuomintang Government of representatives of other parties, provided such representatives remain a minority, so as to retain Kuomintang control.**
3. **Reopening by the Communists of all lines of communication held by them.**

General Marshall duly held conferences with the party leaders—General Chang Chun representing Generalissimo Chiang Kai-shek, and General Chou En-lai representing the Communists. An agreement was arranged on 9 January and published the next day. This provided that both sides would issue identical orders directing:

1. **Hostilities to cease immediately.**
2. **All troop movements to cease. (Exception: movements for demobilization, re-deployment, supply, administration, and security; all movements in Manchuria, and south of the Yangtze River.)**
3. **Road blocks to be removed, and destruction or interruption of lines of communication to cease.**
4. **A joint executive CP to be established in Peiping (both sides with separate lines of signal communication) to deal with problems relating to cessation of hostilities.**
5. **American representation at the Peiping CP to aid in solving problems.**

Illustrating the lack of confidence between Chinese leaders of the two factions, the Communists broadcast that on 9 January they had intercepted the following official message of the Kuomintang directed to their commanding general in north China:

**"Marshall, Chang Chun and Chou En-Lai, in a 3-man committee, have agreed for a complete cessation of hostilities until the holding of the Political Conference. A cease fire order will reach your units on the night of 10 January.**

**"As swiftly as possible, have all your units seize strategic points, especially in Jehol. It would be best to occupy Chengteh before publishing the cease fire order. Failing that Kupehkow, Chienping and Lingyuan should be promptly seized."**

Chengteh is the capital of Jehol; the other places mentioned are on lines of approach to that city.

On 11 January, the Communists announced that, since the agreement had not been ratified by the proper authorities, they would withhold ratification until they ascertained what was going to happen. The National Party made a similar declaration.

The National Party published their plan for ending the political upheaval in China on the same day. It has become known as the Sun Fo Plan, since Dr. Sun, the president of the Legislative Committee, made it public.

The Sun Plan, which, if carried out, insures Kuomintang control, provides:

1. **The creation of a State Council with a minority representation thereon of non-Kuomintang parties. The Generalissimo could veto its acts, but the Council by a 2/3 vote may override a veto.**
2. **The National Assembly will be convened on 5 May 1946. Its functions are limited to writing a new Constitution and selecting the date on which this is to take effect.**
3. **There will be no elections, although the present members of the National Assembly were elected prior to the war in 1936. In view of criticisms that this Assembly is completely out of date, and not truly representative, the Government will appoint "certain" additional members.**
4. **After a Constitution has been adopted, an election will then be held.**

Negotiations have been under way in Manchuria between Kuomintang China and the Russians. The original treaty between China and Russia provided that the latter should withdraw all troops from Manchuria by 3 December 1945, less Port Arthur, which remains as a Russian naval base. Dairen is to be a free commercial port. As China was unable to relieve the Russians at the beginning of December,

she requested that Russian troops remain for another two months, with the mission of preventing the Communists from occupying the key points. This Russia agreed to do. It is reported, but not verified, that for this service Russia was granted certain privileges in Manchuria. Russia made the point that a considerable part of the heavy industry which Japan had built up in Manchuria had been with the intent of war against Russia, and that for this reason, it is only reasonable that, having recaptured all of Manchuria, Russia should retain a half interest in these valuable plants.

#### NORTH CHINA

At the beginning of the period the Kuomintang was engaged in active operations to oust the Communists from north China and at the same time to relieve Russian troops who occupied all of Manchuria except for the coastal strip along the Liaotung Gulf west shore.

The disposition of troops was in part: the 5th Infantry and 13th Armored Armies along the aforesaid coastal strip, northeast of Chinwangtao; the 94th Airborne Army at Peiping, with 92nd Airborne Army coming up by air. Chinese Armies normally have two divisions each. Those mentioned were American trained and equipped. The airborne armies had been flown in by American transport planes, and the other armies brought up from the south by the U. S. Navy. Land communications were assured by the American 1st Marine Division, Japanese troops, and 1 Manchukuo (pro-Japan) division, which guarded the railroad lines from Peiping through Tientsin to Chinwangtao. Mukden was held by Russians.

The general but unofficial opinion of the Marines was that the Kuomintang troops would be unable to operate except where protected by American and Japanese forces. The Communists made a special point of avoiding hostilities with American troops. They contented themselves with occupying the country, generally outside of the big garrisoned cities. From there they made an average of 5 raids a day, interrupting circulation on roads and railroads by means of the demolition of bridges and the wrecking of trains, particularly beyond Chinwangtao.

North of Peiping, the Communists held Jehol Province with their main line of resistance near Kupehkow. They were faced by a Kuomintang force estimated as one division, which on 18 December had captured the advanced post of Shihsia.

Another Kuomintang force, estimated as two divisions, had advanced northwest of Peiping, and on 19 December was at Yangfang.

The mission of the Kuomintang forces was to clear Manchuria of Russians by agreement, and Jehol and Chahar of Communists by force. This required operations on divergent lines, respectively northeast, north and northwest—a dangerous maneuver unless superiority is overwhelming. The Kuomintang was dependent upon the United States for supplies, since the Communists had all lines leading from north China southward to Kuomintang territory in the Yangtze valley blocked, while air and sea communication was all American, less unarmed Communist junks and similar craft which the U. S. Navy had not interfered with. However, the United States

had established an amphibious school at Tsingtao and was training Kuomintang personnel there. A certain number of LCs and other required materiel had been given to the Kuomintang. Nothing had been given to Communists, and the new Kuomintang naval and amphibious forces were not ready to operate. Pending this the Communist junks were free to move as they pleased. Communist GHQ claimed that the American Air Force regularly scouted for the Kuomintang, but this had not been confirmed.

Due to the war economic conditions in north China were bad. Under Japan's rule, the population of Tientsin had more than doubled in the past 10 years, and a heavy industry had been established there. This was now dead; no exports at all were being made.

The Marines relieved 5,000 Japanese troops at Tangshan on 22 December, leaving in the area between Tientsin and Chinwangtao only one Jap division of about 9,000 men. The relieved Japs were sent to ports for repatriation. Besides Jap soldiers, numerous Jap civilians were employed as technicians to operate the railroad. On the same date, the Communists made extensive raids and burned villages and carried off supplies within 15 miles of Tientsin.

On 25 December, a Kuomintang force which had been stationary west of Mukden, waiting for the Russians to move out of that city, commenced operations westward from the Kowpangtze area, with a view to clearing Jehol in connection with a simultaneous advance by the troops opposite Kupehkow. The Chinese general announced that Jehol would be cleared within 10 days.

The foregoing plan for clearing Jehol may have been suggested by American officers. It was sound, and there seemed to be at least three divisions, of which two were armored, near Kowpangtze; at least two divisions were available around Kupehkow. The U. S. Navy had recently delivered to Hulutao 5,000 Chinese replacements and 428 motor vehicles. Under a competent commander, Jehol might have been cleared within 10 days. In August, 1945, the Russians advancing from the north and west (instead of the south and the east) accomplished the same mission within that time.

As practically no progress was being made by the Kuomintang in relieving the Russians in Manchuria, the American C-in-C, Lt. Gen. Albert C. Wedemeyer, announced on 29 December that the United States would help pour Chinese troops into Manchuria by furnishing transportation, supplies and other unspecified aid.

As the year 1945 came to a close, it was announced that thus far approximately 32,000 Japanese troops had been repatriated from North China, and about half that number of Jap civilians. It was estimated that there remained 190,000 troops and over 250,000 civilians.

The Kuomintang campaign against Jehol was started. The armored troops moved to Fusin without opposition and then followed the railroad leading to Chengteh, also against light opposition. By 5 January the advanced elements were at Chaoyang. The force at Kowpangtze was still there. No advance was reported by the force opposite Kupehkow.

In order to put some energy into the Kuomintang forces operating against Jehol, General Wedemeyer authorized American transportation to move the 6th Chinese Army by water from Nanking to Hulutao on 5 January. This army has two divisions of about 10,000 men each. With services and army troops, the aggregate strength was 26,000. In order to supply the transportation, the repatriation of Japanese was suspended. In view of the expected reinforcement, the Chinese advance into Jehol was postponed.

On 10 January, the cease fire order, which followed the Chungking mediation of General Marshall, was received. On the next day, a Communist force estimated as 5,000 men, coming from the Liaotung peninsula, attacked the rear areas of the Kuomintang force operating near Kowpangtze and captured the base at Yinkow. Due to the fact that Communist raids had limited transportation by rail and road, Yinkow was a main source for supplies which came by sea. With this exception, hostilities seem to have ceased.

Chinese troops entered Mukden on 17 January with Russian permission. On the same day, leading elements of the 6th Army embarked at Shanghai for the Liaotung Gulf. These troops have winter clothing, which had not previously been issued to troops already in Manchuria.

#### MISCELLANEOUS OPERATIONS

On 27 December, the Japanese garrison at Tsinan, which is a railroad center in west Shantung, formally surrendered to the Chinese. This Jap force of about 70,000 men had been on active duty guarding the railroads in Shantung. They were relieved by the 8th Chinese Army from Tsingtao and elements of three other armies along the north and south railroad through Tsinan.

In north Honan, the Communists are in control and are engaged in drafting men into their armies.

Minor hostilities, with no material change in the situation, have taken place in the area northwest of Hankow, in southeast Shansi, and in south Shensi.

## KOREA (19 Dec 45 to 18 Jan 46)

The United States continues to hold that part of Korea south of Latitude 38° North, while Russia holds the country to the north. The Russian half contains the major industrial, power and raw material resources, other than food. Absence of trade across the artificial boundary is a major source of difficulty and discontent.

To correct that situation, the American, British and Russian representatives agreed, at the Moscow Conference last December, to reestablish Korea as an independent state. Everybody, including 54 Korean political parties striving for independence, agreed on that decision. However, the Big Three decided that, in order to develop democratic principles, a provisional Korean government be set up to develop industry, transport, agriculture and culture. A Joint Commission consisting of representatives of the American and British forces now in Korea will supervise the provisional Korean government.

The Joint Commission is to consult with the provisional Korean government and submit proposals and recommendations which will not be effective until approved by the Soviet Union, China, the United Kingdom and the United States. Mission is to draw a plan for a four-Power trusteeship over Korea for a 5-year period.

Pending a solution to the foregoing arrangement, which may easily require much time, the American and Russian Commanding Generals in Korea are to confer with each other for a provisional arrangement. In compliance with this agreement, on 15 January a Russian commission reported at Seoul, which is within the American zone, for the purpose of consultation. As this account closes, the results of the conference are unknown.

In general, the Moscow decision has been disappointing to the Koreans within the American sector. They had been expecting independence immediately.

## THE PHILIPPINES (19 Dec 45 to 18 Jan 46)

There has been no change in the situation as regards the armed secret societies, of which that known as the *Hukbong Bayan sa Laban sa Hapon*, commonly called the Huks, is the principal one.

The secret societies have not surrendered their arms as required by the Proclamation of President Truman on 26 October, 1945. On the contrary, they have raided small towns which were unguarded, and have searched them for arms and munitions which they have carried off.

The U. S. Army retains temporarily the responsibility for maintaining law and order within the provinces of Batangas (south of Manila) and Bataan, Pampanga, Tarlac and Nueva Ecija, which are adjacent to one another and north from Manila. In these provinces the Huks are estimated as having over 40,000 armed members. American patrols reconnoitering off the main roads toward the hills and jungles have been fired upon, but in general the Huks have avoided conflict with United States troops.

Usual Filipino tactics are to conceal weapons and munitions in the jungle, woods and mountains, and camouflage the members of combatant organizations in civilian clothes. Thus, they avoid combat, unless surprised. It would be possible for the native population to identify members of the Huks to the Military Police, and other law enforcement orders, but they are terrorized into silence by the Huks, who threaten them with death in case they do so. This condition is normal in Malay countries, and can only be overcome gradually by capture of arms illegally possessed, and of course by preventing further capture of weapons and ammunition by Huks and similar organizations.

General opinion is that the Huks will not undertake any major operations until after the U. S. Army has withdrawn and the Philippines are given their independence. These are due to take place on 4 July, 1946. What will happen then is anybody's guess.

## Artillery in the Ardennes

(Continued from page 142)

elements of the VIII Corps divisions which had dropped back on a quarter-circle to defend St Vith from the southeast. The 591st FA Bn 105H (106th Inf Div Arty) had finally withdrawn from below Winterspelt and occupied positions at Gruflange; just to the north was the 16th Armd FA Bn (9th Armd Div Arty); the 275th Armd FA Bn was still at Sart-lez-St Vith (elements of the 106th Inf Div Arty, previously at this location, had withdrawn further to reassemble); and the 229th FA Bn 105H (28th Inf Div Arty) was dropping back on Beho with its combat team. This general area, and in particular the towns of St Vith, Poteau and Recht, were of paramount interest to the enemy. Through these towns ran the only two major roads in the sector; failure on the part of the enemy to control them would split his forces and prevent a rapid lateral shift of troops to exploit the more successful of the two penetrations. Without stopping to pick up its artillery, CCB of the 7th Armd Div marched directly on St Vith and contacted the enemy 2000 yards to the east thereof. As CCB moved to the attack, forward observers from the 275th Armd FA Bn, already firing in that sector, joined the forward units and immediately began furnishing much needed artillery support. CCA and CCR, deploying in defense of Poteau and Recht, received prompt supporting fires from the 489th and 440th Armd FA Bns, respectively, which were still in their original firing positions. Artillery fires were complicated by the fluid front which made evaluation of the jumbled mass of reports extremely difficult. Reinforcing artillery, two groups of which had been allotted from the VIII Corps Arty, was temporarily contacted, but could not be controlled, since no common radio frequencies existed and the situation prohibited the establishment of wire lines.

The 7th Armd Div Arty was not, however, without corps artillery support. Heavy massed TOTs from the VIII Corps Arty had been placed on enemy armored columns between Schonberg and St Vith, slowing them sufficiently to allow the 7th Armd Div to win the race to St Vith. Corps Arty fires, though not integrated with those of the direct support artillery, joined in sealing off the southeastern sector of the St Vith salient. The Corps FDC was now back in the fight, losses of weapons and equipment were being replaced rapidly, and sound bases were expected to be operational by the morning of the 19th. It appeared that the establishment of communications

with the 7th Armd Div Arty to the north would ease the situation on that flank.

In the center of the Corps sector, however, the artillery situation was deteriorating rapidly. After joining the 28th Inf Div Arty, the 58th Armd FA Bn had come under direct attack and had lost most of its primary weapons in a fighting withdrawal to the west. Centralized control by the 28th Inf Div Arty had ceased and the battalions fell back with their separate combat teams. Combat commands of the 9th and 10th Armd Divs and a combat team of the 28th Inf Div were digging in for a perimeter defense of Bastogne while their artillery kept up continuous fires to the front and both flanks. The 101st AB Div Arty was closing in an assembly area west of Bastogne but could not be expected to enter the fight with the division until sometime on the 19th.

Meanwhile, the situation had improved in the sector of the 4th Inf Div to the south. Not only had artillery support aided that division, but also the counterattacks by elements of the 9th and 10th Armd Divs had restored the original lines at Echternach and established a general east-west line screening Luxembourg from the north.

While the VIII Corps fought desperately to stop the onslaught, the V Corps became more and more embroiled in the battle. North of the penetration above St Vith, German armored columns struck for gasoline dumps and other supply installations in the Malmedy-Stavelot sector. A series of meeting engagements with the 30th Inf Div ensued. As artillery arrived in the sector, it "dropped trails" and immediately opened fire. The 118th FA Bn 105H, the first to arrive, took position north of Stavelot and aided the infantry in partially clearing that town; the 230th FA Bn 105H, from just north of Malmedy, placed heavy fires below the town; the 113th FA Bn 155H, at Ster, was in general support of both actions. Some 15 kilometers to the west at Trou, the 197th FA Bn 105H took advance enemy columns under fire as the 119th RCT it supported made contact at Stoumont and Werbofont. Below Spa, in the gap between the 30th Inf and its 119th RCT, only engineer road blocks and service units, without artillery support, opposed the enemy column which had reached La Gleize. Despite the overcast, Air OPs of the First Army Artillery Section were sent aloft, located the enemy columns and guided fighter bombers of the IX TAC into the attack;



1st Inf Div



2d Armd Div



2d Inf Div



4th Inf Div



3d Armd Div



8th Inf Div

as a result, the enemy columns halted and turned back. Southwest of Eupen the 406th FA Gp was assembling units of the V Corps Arty to reinforce the sector. The 82d AB Div Arty was enroute from the rear to Werbomont to plug the gap between

the V and VIII Corps.

To the east of the Malmedy front, fierce fighting continued at the Bullingen-Butgenbach-Faymonville shoulder. Having been denied the Monschau-Eupen axis on the preceding day, the enemy had shifted his reserves south and sought to cut the Liege-Aachen road net by driving north over the only other route leading through the swamps and forests south of Eupen. From positions astride this route at Elsenborn, defensive fires of the 1st, 2d, and 99th Inf Div Arty broke up three major enemy attacks while their supported infantry counterattacked and dug-in for a stable defense.

Enemy attacks of diminishing intensity continued in the Monschau sector. The artillery fires which had stopped them the previous day still proved more than a match for the attackers. The 18th FA Bn, armed with 4.5" rocket launchers, had been held at Kalterherberg waiting for the enemy to come within range. The chance to employ the rockets defensively came early in the morning as the enemy assembled an attacking force in Rohren. The 18th FA Bn moved forward from assembly areas to prepared positions and fired three volleys of over 1000 rounds into the town, leaving it burning and of no further use to the enemy.

While the battle was being fought major changes had been made in the artillery order of battle (Plate II). A shift in the V-VII Corps boundary had made the VII Corps Arty responsible for supporting the 8th and 78th Inf Div Arty sectors. However, with position areas in its sector at a premium, the V Corps Arty Commander elected for the time being not to displace his artillery from the new VII Corps sector. The 187th and 190th FA Gps were placed under operational control of VII Corps Arty while attachments to divisions remained unchanged. The VII Corps released the 400th Armd FA Bn to the V Corps where it was attached to the 30th Inf Div Arty. The 9th Inf Div Arty moved south from the VII Corps to join its 84th FA Bn between Eupen and Monschau. The VIII Corps Arty was being further reinforced by Btry A of the 290th FA Obsn Bn and the 755th FA Bn 155H from Ninth Army, and the 776 FA Bn 155H from V Corps. The latter was intended to serve as the medium battalion of the 101st AB Div Arty. The XVIII Airborne Corps was destined to become operational under First Army shortly; artillery units for this Corps would have to be drawn from those presently with the corps, or from other armies. Thus far, the 290th FA Obsn Bn (less Btry A) and the 254th FA Bn 155H had been made available from Ninth Army.

19-20 December

**A**CTION on the 19th and 20th of December was a confused repetition of that of the 18th. The crisis continued without decisive action on any front. As the principal

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#### GAZETEER

Aachen, Germany	K8343	Leignon, Belgium	P1389
Arlon, Belgium	P6122	Liege, Belgium	K4729
Auw, Belgium	L0090	Lierneux, Belgium	P6189
Baillonville, Belgium	P2990	Maastricht, Holland	K5652
Basse Bodeux, Belgium	P6497	Malmedy, Belgium	K7804
Bastogne, Belgium	P5558	Manhay, Belgium	P5390
Bovigny, Belgium	P7082	Marche, Belgium	P2983
Beho, Belgium	P7681	Modave, Belgium	P2606
Bra, Belgium	P5793	Mohivilie, Belgium	P1994
Brombach, Belgium	P8185	Monschau, Germany	K9418
Bullingen, Belgium	K9501	Namur, Belgium	J9711
Butgenbach, Belgium	K9104	Neufchateau, Belgium	P3541
Camp Elsenborn, Belgium	K9008	Noiseux, Belgium	P3292
Celles, Belgium	P0584	Odrimont, Belgium	P6291
Chardeneux, Belgium	P3199	Ottre, Belgium	P6485
Cheneux, Belgium	K7302	Poteau, Belgium	P7791
Cheran, Belgium	P6678	Provedroux, Belgium	P6985
Chesson, Belgium	K5902	Prum, Germany	L0779
Ciney, Belgium	P1291	Recht, Belgium	P7994
Commanster, Belgium	P7685	Regne, Belgium	P6185
Dickirch, Belgium	P8742	Remouchamps, Belgium	P5610
Durbuy, Belgium	P3797	Rochefort, Belgium	P2176
Duren, Germany	F1246	Rockerath, Belgium	K9705
Echternach, Belgium	L0535	Rohren, Germany	K9717
Elsenborn, Belgium	K9207	Salmchateau, Belgium	P6986
Erria, Belgium	P6094	Samree, Belgium	P5081
Ettelbruck, Belgium	P8340	Sart-lez-St. Vith, Belgium	P8189
Eupen, Belgium	K8027	Schleiden, Germany	L1015
Faymonville, Belgium	K8602	Schonberg, Belgium	P9588
Francorchamps, Belgium	K7307	Somme Leuze, Belgium	P3195
Froidville, Belgium	P5900	Sourbrodt, Belgium	K8709
Givet, Belgium	O9275	Soy, Belgium	P4189
Goronne, Belgium	P6689	Spa, Belgium	K6711
Gouvy, Belgium	P7278	Stavelot, Belgium	K7201
Grandmenil, Belgium	P5290	Ster, Belgium	K7408
Gruflange, Belgium	P8282	Stoumont, Belgium	K6302
Haid, Belgium	P1786	St. Hubert, Belgium	P3161
Harre, Belgium	P5296	St. Trond, Belgium	K2050
Hasselt, Belgium	K3162	St. Vith, Belgium	P8588
Hierlot, Belgium	P6192	Ternell, Belgium	K8621
Hinderhausen, Belgium	P7987	Tongres, Belgium	K4045
Hofen, Germany	K5916	Trier, Germany	L2129
Hotton, Belgium	P3888	Trois Ponts, Belgium	P6798
Houffalize, Belgium	P6172	Trou, Belgium	K5303
Humain, Belgium	P2381	Verviers, Belgium	K6723
Huy, Belgium	K2217	Vielsalm, Belgium	P7089
Joubieval, Belgium	P6586	Ville du Bois, Belgium	P7189
Julich, Germany	F0459	Vise, Belgium	K5639
Kalterherberg, Germany	K9214	Waha, Belgium	P2982
Krinkelt, Belgium	K9805	Waimes, Belgium	K8403
La Chapelle, Belgium	P6292	Werbomont, Belgium	K5400
La Fourche, Belgium	P5494	Winterspelt, Belgium	P8091
La Gleize, Belgium	K6503	Wirtzfeld, Belgium	K9504
Larqche, Belgium	P4678		

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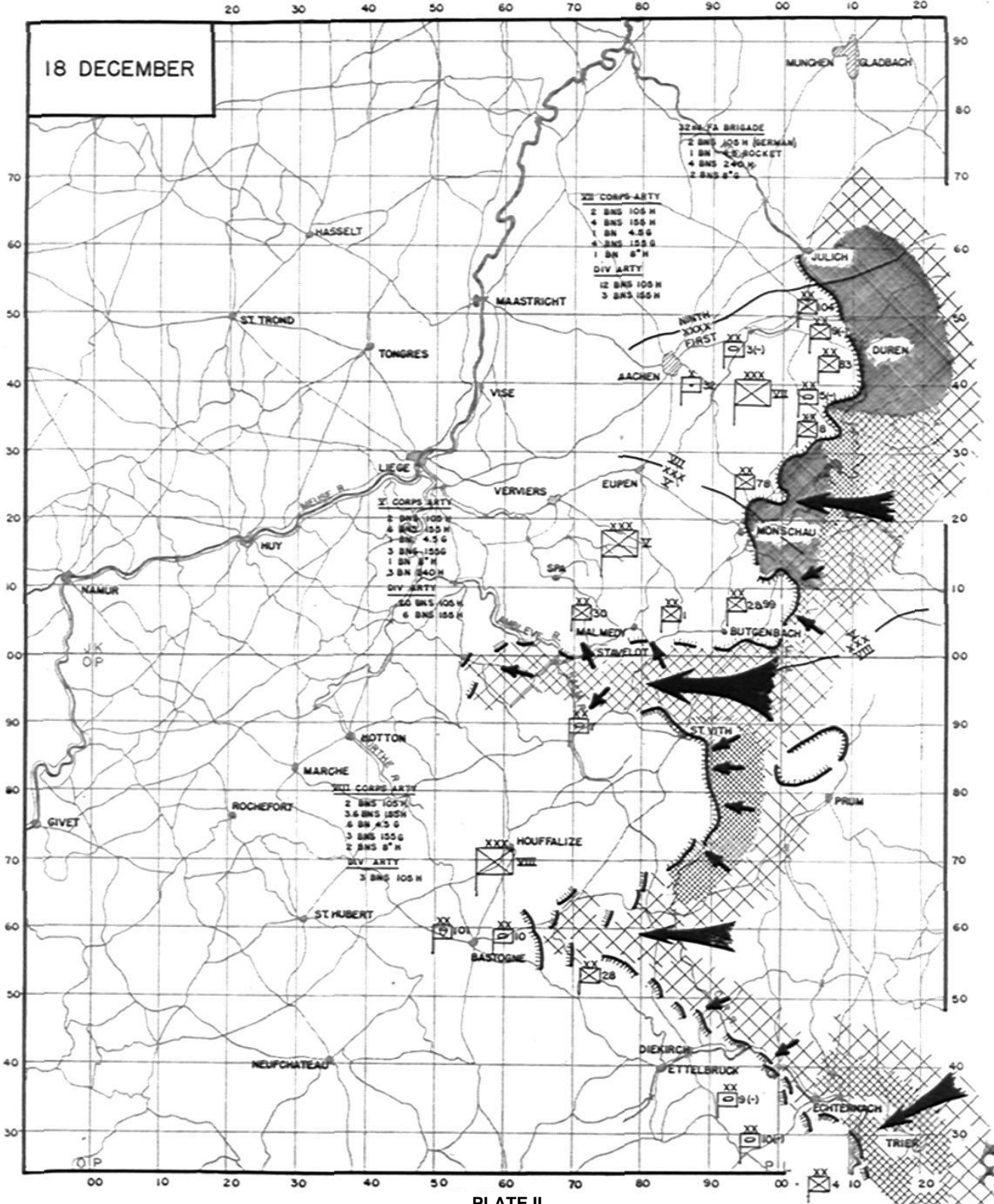


PLATE II

Density of crosshatching indicates relative firepower capabilities of artillery with First US Army

battle swirled north and south of St. Vith, the First Army front stabilized temporarily in the north around the firm shoulders at Butgenbach and Monschau. The XVIII AB Corps Arty Hq & Btry arrived in Bosson on December 19th

and became operational the next day. All VIII Corps troops south of the line St. Vith- Givet passed to Third Army control at 1330 hours on the 20th. At the same time the remainder of First Army north of that line was attached

## FIRST ARMY ARTILLERY ORDER OF BATTLE, 21 DEC 1944

V CORPS	VII CORPS (Continued)
V Corps Arty Hq & Hq Btry	188 FA Gp Hq & Hq Btry (2)
17 FA Obsn Bn	957 FA Bn 155H
200 FA Bn 155G (-Btry B)	172 FA Bn 4.5G
79 FA Gp Hq & Hq Btry	980 FA Bn 155G
272 FA Bn 240H	75 Inf Div Arty (3)
552 FA Bn 240H	84 Inf Div Arty
187 FA Gp Hq & Hq Btry (1)	2 Armd Div Arty (3)
751 FA Bn 155H	XVIII AIRBORNE CORPS
953 FA Bn 155H	XVIII AB Corps Arty Hq & Hq Btry
190 FA Gp Hq & Hq Btry (1)	290 FA Obsn Bn (-Btry A)
190 FA Bn 155G	187 FA Bn 155H
997 FA Bn 8H	30 Inf Div Arty
406 FA Gp Hq & Hq Btry (2)	Btry A 991 FA Bn 155G SP
18 FA Bn 105H	391 Armd FA Bn (with CCB 3 Armd Div)
941 FA Bn 4.5G	400 Armd FA Bn
987 FA Bn 155G SP	82 AB Div Arty
62 Armd FA Bn (with 78 Div, XIX Corps)	460 Prcht FA Bn
76 FA Bn 105H (with 8 Div, XIX Corps)	254 FA Bn 155H
1 Inf Div Arty	3 Armd Div Arty (-391 Armd FA Bn)
Btry B 200 FA Bn 155G	83 Armd FA Bn
955 FA Bn 155H	991 FA Bn 155G SP (-Btry A & B)
2 Inf Div Arty	7 Armd Div Arty
99 Inf Div Arty	16 Armd FA Bn (with CCB 9 Armd Div)
9 Inf Div Arty	275 Armd FA Bn
196 FA Bn 105H	229 FA Bn 105H (with 112 RCT, 28 Inf Div)
186 FA Bn 155H	591 FA Bn 105H (with 424 RCT, 106 Inf Div)
VII CORPS	592 FA Bn 155H (from 106 Inf Div Arty)
VII Corps Arty Hq & Hq Btry	965 FA Bn 155H
13 FA Obsn Bn (3)	32 FA BRIGADE (1) (4)
18 FA Gp Hq & Hq Btry (1)	32 FA Brig Hq & Hq Btry
183 FA Bn 155H	240 FA Bn 155G
188 FA Bn 155H	Prov FA Bn 10.5H
981 FA Bn 155G	179 FA Gp Hq & Hq Btry
195 FA Bn 8H	Prov FA Bn 10.5H
142 FA Gp Hq & Hq Btry (3)	266 FA Bn 240H
Btry B 991 Hq & Hq Btry (3)	551 FA Bn 240H
Btry B 991 FA Bn 155G SP	153 FA Bn 8G
87 Armd FA Bn	268 FA Bn 8G
193 FA Bn 105H	
951 FA Bn 155H	

- (1) Reinforcing XIX Corps Arty.
- (2) Reinforcing XVIII Airborne Corps Arty.
- (3) Assembly Area.
- (4) Heavy battalions still operating at reduced strength.

for operations to the Twenty-First Army Group. (NOTE: No attempt has been made to trace artillery operations of the VIII Corps after it left First Army control at 201330 December.)

Resistance in the VIII Corps center was dissolving rapidly and, although no breakthrough in force was as yet apparent, separate penetrations menaced artillery position areas from St Vith to Bastogne. The VIII Corps Arty Commander was forced to make a rapid decision between one of two possible courses of action—namely, either to pull into the uncertain St Vith salient or to drop back west of the Arlon-Bastogne highway and seek position areas from which to support a future Corps front. Unfortunately, the magnificent stand which the 7th Armd Div was to make at St Vith could not be foreseen. Although continued enemy pressure prevented the fulfillment of this plan, the westward withdrawal was started on the 19th and 20th (more or less independently by each unit) with the hope that a

rendezvous could be made to the rear. At Bastogne the 101st AB Div Arty took positions within and around the city and prepared to support its defense. At the old south Army boundary the 4th Inf Div Arty and attachments still supported the counterattacking infantry, whose success had forced the enemy to the defensive by this time.

In the St Vith salient the 7th Armd Div Arty assumed control of all artillery in the area and organized it to support the conglomeration of units defending the town. The 965th FA Bn 155H (VIII Corps Arty) had displaced into the area and, less Btry C which was attached to the 229th FA Bn 105H (28th Inf Div Arty) at Beho, took positions near Braunlauf. As the 275th Armd FA Bn dropped south to Hinderhausen, the 434th Armd FA Bn moved forward to Brombach where a groupment was formed of these two battalions and the 965th FA Bn in support of CCB, holding east of St Vith. Missions of the 440th and 489th Armd FA Bns were not changed until December 20th, when the 440th moved to Provedroux with Task Force Jones to extend the southern defensive arc, and the 489th took over support of CCR, then west of Recht. The 592d FA Bn 155H had completed reorganization and moved up to Commanster to reinforce the fires of the 591st FA Bn 105H which was supporting the 424th RCT of the 106th Inf Div. The 16th Armd FA Bn continued to support CCB of the 9th Armd Div in the curve southeast of St Vith. Action on the 19th resulted in the formation of a firm defensive line and the liquidation of enemy pockets inside that line. Artillery fires were shifted and massed around the perimeter of the defense; however, only those targets which constituted a direct threat were engaged, since the ammunition shortage was expected to become acute. After a day of relative quiet, activity flared up again on the 20th, when twenty-one counterattacks struck from the north, east, and south. The artillery took a terrific toll as the enemy jammed the road; as a result, the front held and the attacks subsided and receded. Task Force Jones had moved to Gouvy and Cheran just in time; its 440th Armd FA Bn reached out to harass a new threat aimed at cutting the division's supply route to the rear. On the evening of the 20th, a final message was received from the 590th FA Bn 105H (106th Inf Div Arty) stating that the unit was surrounded together with other troops, in the Schnee Eifel but was still holding out.

Along the Malmedy-Stavelot line, the 30th Inf Div Arty laid down heavy Pozit (V-T) TOTs to help hold Malmedy and clear Stavelot. The 406th FA Gp continued assembling and added its weight to the fires of the division artillery—the 941st FA Bn 4.5G from positions just east of Spa on the 19th, and the 987th FA Bn 155G SP from north of Francorchamps on the 20th. Further west the enemy had recovered from the air blow of the previous day. Reconnaissance elements probed to the north from La Gleize, passed through Andrimont, and approached what would have been a great prize indeed—the large gasoline dump on the high ground south of Spa. By this time, however, the ridge had been organized for defense by what the press later dubbed "The Palace Guard" of the First Army Headquarters Security Force. Fires from its assorted weapons, however, were sufficient to turn back what proved to be the last threat to the Spa area. Artillery support for this action was provided by 90-mm guns of the 110th AAA

Bn and sundry artillery pieces which had been given to the partially equipped 740th Tank Bn; in particular a self-propelled 155-mm gun rendered support in a direct fire

role against tanks. West of Stoumont the 197th FA Bn 105H (30th Inf Div Arty) was reinforced by the 400th Armd FA Bn. The latter battalion had no sooner

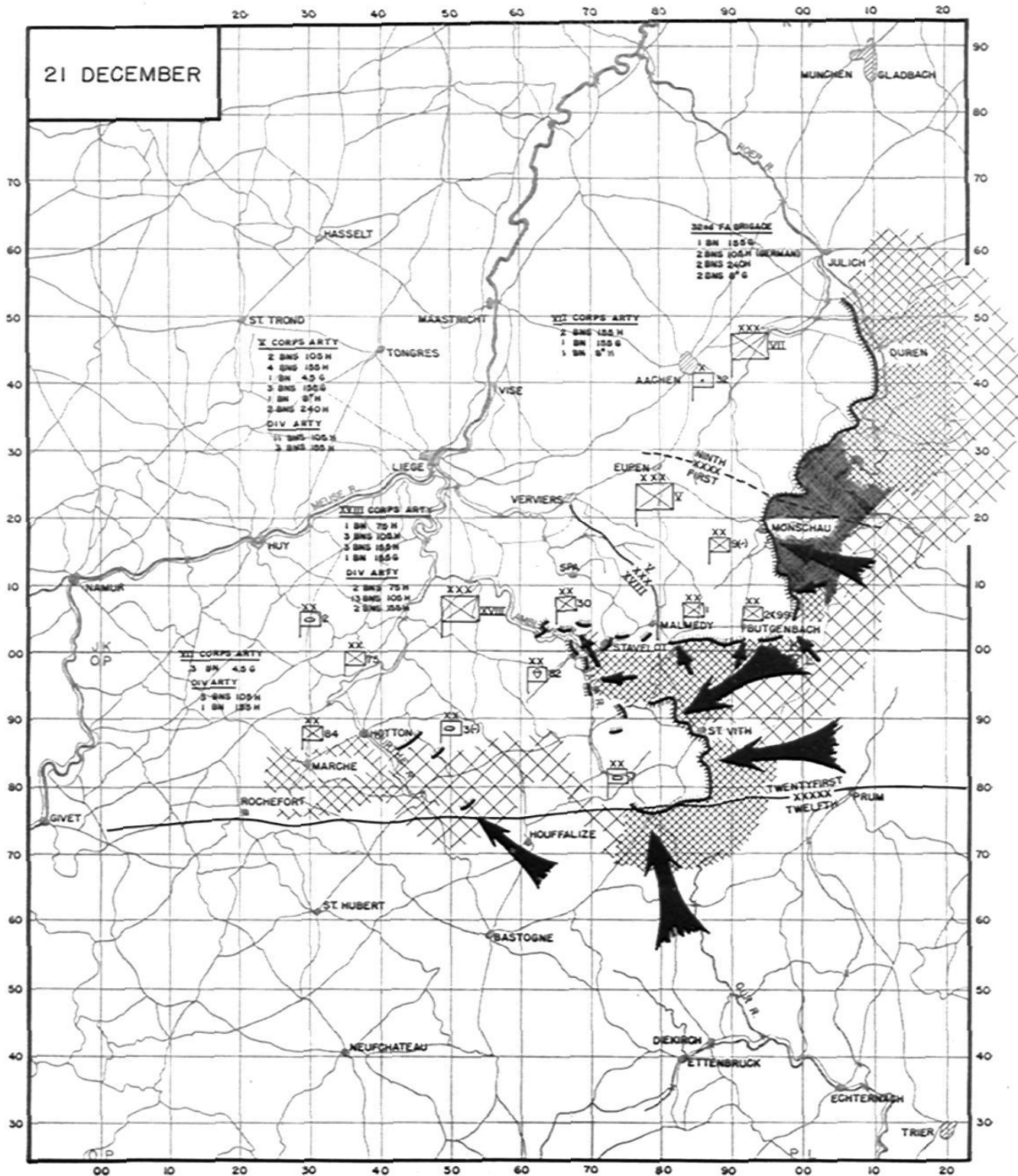


PLATE III

Density of crosshatching indicates relative firepower capabilities of artillery with First US Army

taken initial positions at Chesson than its M-7's were active in the direct fire role turning back German tanks. At the successful conclusion of this fire fight the unit withdrew to Remouchamps. On the 20th the 391st Armd FA Bn (with CCB of the 3d Armd Div) was attached to the 30th Inf Div, and occupied positions 5000 meters northwest of La Gleize to support an impending attack on the town; with it was Btry A of the 991st FA Bn 155G SP. At 1330 hours on the 20th, a change in boundaries placed the 30th Inf Div Arty and attachment under the XVIII Airborne Corps.

To the west of Werbomont, the 82d AB Div Arty with attached 460th Prcht FA Bn had completed its concentration in the new XVIII Airborne Corps sector by 0230 hours on December 19th. Shortly thereafter the 254th FA Bn 155H, which was to serve as the medium battalion for the division artillery, and the 290th FA Obsn Bn (less Btry A) closed in the area. Initial position areas were taken for the defense of the assembly area. On the 20th, the division artillery moved forward to support the division's limited objective attack which was designed to seal off the German penetration by connecting the 30th Inf Div and the 7th Armd Div lines. New position areas covered a front of 15000 meters running north to south from Froidville to Goronne and then east to Lierneux. Light contact only was made with the enemy as the 376th and 456th Prcht FA Bns fired on infiltrating patrols beyond Cheneux and Trois Ponts. Further west the 54th Armd FA Bn, with CCR of the 3d Armd Div, had closed in Hotten after a long march from the sector of the VII Corps. Its batteries moved out the morning of the 20th in three separate columns supporting the approach march on Samree.

In the V Corps sector at Elsenborn, the already overcrowded position areas of the 1st, 2d, and 99th Inf Div Arty were further congested by the arrival of the remainder of the 9th Inf Div Arty (less the 60th FA Bn 105H still with the 60th RCT under the VII Corps). Here in an area measuring only 10 kilometers from east to west and 7 kilometers from north to south, were 16 battalions of artillery with sectors of responsibility running from north of Monschau to just east of Malmédy. Further dispersion of units was impossible; to the north and west were swamps and dense woods; to the south and east, the enemy. The confused criss-cross pattern of fires was clarified by minor adjustments in position areas, and the assignment of zones of defense approximately as follows: the 1st Inf Div Arty, with attached 955th FA Bn 155H, from



9th Inf Div

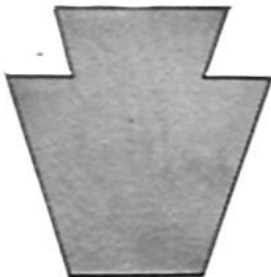
Malmédy to Butgenbach; the 2d Inf Div Arty, with operational control over the 99th Inf Div Arty, from Butgenbach east to Bullingen and then north to the center of the Monschau Forest; and the 9th Inf Div Arty, north therefrom to the Army boundary. The 9th Inf Div Arty operated in two groupments: to the north, from positions at Ternell (a small clearing in the Hertoginwald Forest), the 84th FA Bn 105H controlled the attached 186th FA Bn 155H in the next clearing toward Monschau, and the 196th FA Bn 105H still south of Kalterherberg; to the south, the 26th FA Bn 105H and 34th FA Bn 155H operated out of the FDC at Camp Elsenborn. All fires in the sector were coordinated by the 2d Inf Div Arty, to which the counterbattery section of the V Corps Arty had been attached. The action consisted of sharp localized attacks and counterattacks, and the artillery fires were generally light in comparison to those of the past weekend. By dark on December 20th, the infantry had reorganized and had withdrawn some 1000 meters to the north. The line now ran from Faymonville below Butgenbach to Wirtzfeld and Rockerath.

To the north the VII Corps Arty was relatively inactive at this time, engaging only in harassing and interdiction fires across the Roer River. On the 19th, the 32d FA Brig had been attached—part to the V Corps and part to the VII Corps.

### Counterattack

21-24 December

BY THE 21st of December it was quite clear that the great German counteroffensive was running into serious difficulties. It is true that (a) the German Army had achieved a major breakthrough in the Ardennes and in so doing had disorganized the VIII Corps and mauled two US divisions, (b) a considerable amount of precious time had been won—hence, the immediate American threat to the Rhineland had been removed, or at least delayed for some weeks, (c) and to the front, almost undefended, were the glittering prizes of Liege, Antwerp, and the beleaguered garrisons of the Channel ports. However, the overall German situation was not encouraging, because: (a) the attacks had been channelized to the area of the Ardennes where there was little to exploit, (b) the main communication centers of St Vith and Bastogne were yet to be taken, (c) few supplies had been captured and resupply—already most difficult—would become virtually impossible if and when the weather cleared so as to permit the full use of the vastly superior Allied air power, (d) the cost, to date, in personnel and



28th Inf Div



5th Armd Div



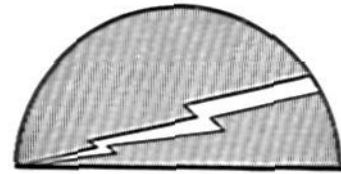
30th Inf Div



75th Inf Div



7th Armd Div



78th Inf Div

equipment had been enormous, and (e) major Allied countering troop movements were already afoot. Immediate success could be achieved only by breaching or outflanking the First Army front. The former was still being tried without success; the latter could not be accomplished until St Vith and Bastogne had been reduced. While the enemy fought for these two towns, the First Army initiated action to counterattack in strength.

From an artillery viewpoint the plan was as follows. The VII Corps Arty to be relieved in its sector by the XIX Corps Arty (Ninth Army) and to assemble in the Marche-Hotten-Modave-Mohiville area by midnight of the 23d, prepared to support a Corps counterattack to the south, southeast, east, or northeast. The incoming 84th Inf Div Arty and the 2d Armd Div Arty (from Ninth Army) and the 75th Inf Div Arty (newly arrived) to complete the Artillery with the VII Corps. The 32d FA Brig, less attachments to the V Corps, to revert to Army control and to reinforce the XIX Corps Arty until the Ninth Army could displace a comparable amount of heavy artillery into the area. The Artillery with the V Corps to continue close support of the defensive front of the Corps, while reaching out with long harassing and interdiction fires to deny the enemy free use of the road net running from Schleiden to St Vith. The Artillery with the XVIII Airborne Corps, as it became available, to support an immediate limited objective attack by the Corps. This attack was designed to gain contact with the Bastogne and St Vith defenders and to screen the assembly of the VII Corps.

During this period artillery operations in the V Corps sector gradually settled down to routine defensive fires with increased activity at irregular intervals as the enemy sought to find a weak spot in the line. That part of the V Corps Arty which had remained in the VII Corps sector operated temporarily under the XIX Corps Arty Commander. These units were gradually withdrawn until only the 187th FA Gp with the 751st FA Bn 155H and 997th FA Bn 8H remained. The Elsenborn artillery was reinforced by the remainder of the 200th FA Bn 155G to add more weight to its long range fires. The 953d FA Bn 155H and 18th FA Bn 105H (4.5" rockets temporarily stored) were attached to the 406th FA Gp, still under the V Corps Arty, but reinforcing the fire of the 30th Inf Div Arty of XVIII Airborne Corps. The V Corps FDC at Eupen controlled long range fires of the 190th FA Bn 155G and Btry C of the 272d FA Bn 240H. The 190th Gp was charged with planning and reconnaissance of rear position areas for the V Corps Arty, should enemy action force a further withdrawal.

In the XVIII Airborne Corps sector, the Artillery with the Corps was active initially on six widely separated, non-supporting fronts. The Corps FDC, although operational, exercised no direct control over the negligible amount of artillery then available to it. Until the arrival of the 240th FA Bn 155G on the 24th, this artillery consisted solely of the 187th FA Bn 155H.

Two of the six fronts of the XVIII Airborne Corps were in the 30th Inf Div sector. To the east, artillery fires were purely defensive in support of the stable front which continued from the V-XVIII Airborne Corps boundary generally along the Ambleve River to its juncture with the Salm River. To the west, artillery fires aided in the capture of Stoumont and were instrumental in trapping a strong enemy armored force awaiting gasoline resupply at La Gleize. While armor and infantry attacked to take the town, artillery and air concentrated on blocking the resupply routes and destroying the materiel. In this they were eminently successful, since the enemy abandoned the town leaving behind 39 tanks (6 of them Mk VI "Tiger Royals") and 172 other vehicles. All enemy having been cleared from north of the Ambleve River on the 24th, the 197th FA Bn 105H and the 400th Armd FA Bn displaced east to rejoin the remainder of the 30th Inf Div Arty.

A third center of activity was just south of the Ambleve River. Here the 376th and 456th Pocht FA Bns, at Froidville and Basse Bodeux respectively, with reinforcing fires from the 187th FA Bn 155H, were lightly engaged as their combat teams drove back infiltrating enemy patrols and generally reached the line of the Salm River from Trois Ponts to Vielsalm. On the 21st contact was made at this latter town with the St. Vith defenders.

Meanwhile enemy attacks against the fourth front—the St. Vith salient—increased in fury and number. For the most part these were turned back at heavy cost to the enemy as the artillery within the salient made good use of every round of its dwindling ammunition supply. However, penetrations were made from the east and south, forcing a withdrawal from St. Vith itself on the 21st. Artillery previously sited for the defense of the town was now concentrated against it; as long as these fires could be maintained, the enemy could make little use of his hard-won objective. By morning of the 22d there were less than 20 rounds of ammunition per piece, enemy artillery fire was being received in increased quantities, and as the artillery within the salient grew quiet the enemy struck to finish the job. Fortunately



82d A/B Div

the 82d AB Div in making contact had opened the supply roads and the long awaited ammunition trains arrived at 0930. The 5,000 rounds of 105-mm howitzer ammunition that they brought in was little enough when divided among the weapons covering the multi-points of attack; but it brought the artillery to life again in time to disperse the main effort of the attackers. The infantry and the armor had fought valiantly against superior odds and now under cover of their artillery they quickly closed the few gaps which had been driven in their lines. By evening the overcast of the past five days was beginning to clear and four Air OPs had arrived to provide the much needed observation for the artillery.

The fifth area of operation opened to the south on the 22d. The enemy shifted troops west below Bovigny and attacked north along both banks of the Salm River with intent to complete the encirclement of the St. Vith forces. On the east bank, the 440th Armd FA Bn dropped back on Salmchateau as Task Force Jones tightened its lines and stopped the enemy. On the west bank, elements of the 82d AB Div Arty had faced south. The 319th and 320th Glider FA Bns at Goronne and Lierneux, reinforced by the 254th FA Bn 155H near Odrimont, opened up against enemy armor in the Regne-Ottre-Joubieual area. This coupled with an audacious and almost barehanded stand by the airborne infantrymen bested the German "Tigers" and shunted their attacks on to the west.

A withdrawal of all forces across the Salm River had become mandatory by noon of the 22d, but plans could not be disseminated in time to move that night. Since a delay of another 24 hours might well prove fatal, a daylight withdrawal would have to be chanced on the 23d. It was judged that if the skies remained clear, artillery with Air OP observation could team with fighter-bombers to make the withdrawal a success. Fortunately, this proved to be the case. The 965th FA Bn 155H crossed the night of the 22d and went into position west of Vielsalm to cover the next displacements. Other attachments crossed early on the 23d, leaving only the 7th Armd Div Arty and the 275th Armd FA Bn in the salient. The critical phase of the withdrawal was at hand, as the division slowly folded within itself. The 275th Armd FA Bn crossed ahead of CCB and took position just west of Vielsalm, from which it covered the withdrawal of the 434th Armd FA Bn with its combat command; the latter battalion took position further to the rear at Hierlot. The 489th Armd FA Bn supported the disengagement of CCR and CCA, joining the rear of the latter column as it passed through the artillery position area; new positions were taken at La Chapelle. The 275th Armd FA Bn

also covered these crossings while assisting the 440th Armd FA Bn in holding the enemy away from the hard-pressed Task Force Jones. By this time all but one bridge across the Salm River had been destroyed, and this unfortunately was not the one which had been allotted to the 440th Armd FA Bn. This unit was forced to detour through heavy shell fire to the remaining bridge. Positions at Goronne were finally reached but the delay was costly to the elements of the Task Force still across the river. Firing was resumed and after four hours of desperate fighting the last of the task force withdrew to temporary safety and the bridge was blown.

As has been previously noted, the 82d AB Div Arty had effectively supported the 7th Armd Div Arty by blocking the south flank, west of the Salm River; but in so doing it had imperiled its own position. Further west, on the 21st, the 3d Armd Div had joined battle with strong enemy armored forces north of Samree—this was the sixth separate front in the XVIII Airborne Corps sector. Batteries of the 54th Armd FA Bn, with those of the newly attached 83d Armd FA Bn, supported their battle groups in the ensuing series of vicious tank battles for control of the roads leading north from Samree. East of this action another enemy column was moving with little opposition toward Manhay and Grandmenil. CCA of the 3d Armd Div, with the 67th Armd FA Bn, had been detached from the V Corps and was en route to reinforce the Hotton area. It was intercepted and directed south to meet the latest threat; the 67th Armd FA Bn occupied positions just north of Manhay, but found no targets. At nightfall CCA still held Manhay, but CCR had been forced back until the enemy sat astride the Hotton-Soy Road. On the 22d, CCR's Task Force Hogan counterattacked at Soy behind good artillery support and reached the town. The enemy retaliated by surrounding the task force including its attached battery of the 54th Armd FA Bn. CCA in the meantime withdrew from below Manhay, cut to the west above Hotton and then raced south to meet a more serious threat developing below Marche. By mid-afternoon the 67th Armd FA Bn was firing from new positions at Waha.

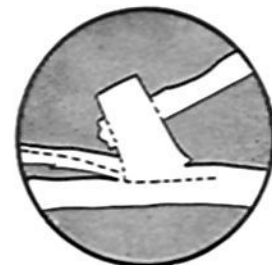
On December 23d, the 3d Armd Div was attached to the VII Corps and orders were issued for all elements of the XVIII Airborne Corps to withdraw and stabilize the front along the high ground Trois Ponts-Erria-Bra-Manhay. On the night of the 23d the 82d AB Div Arty withdrew accordingly to the northwest behind the new front. The 7th Armd Div Arty remained grouped at La Chapelle until late afternoon of the 24th, taking over the fires of the 82d AB Div Arty, as well as supporting their own front to



83d Inf Div



9th Armd Div



84th Inf Div

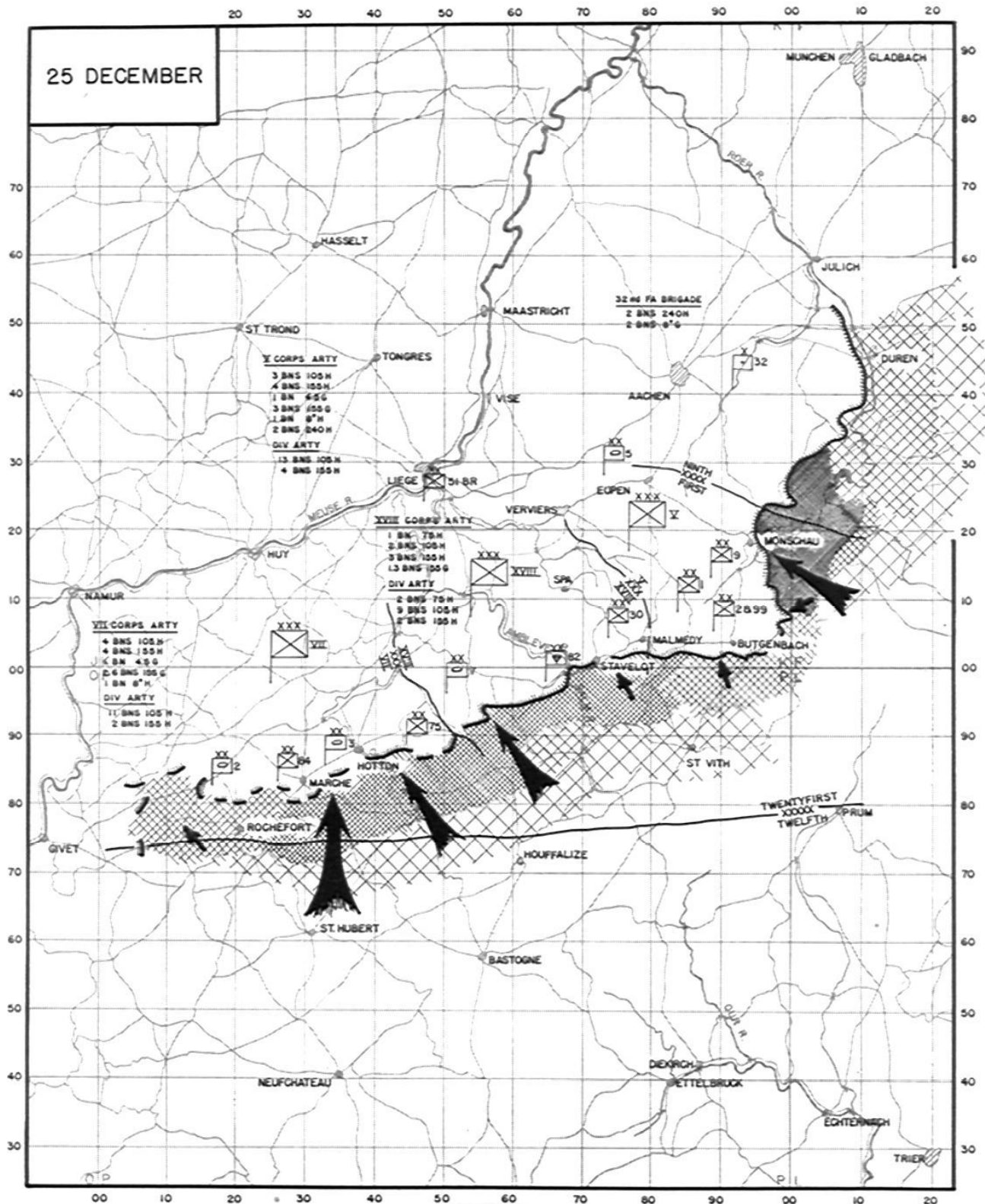


PLATE IV

Density of crosshatching indicates relative firepower capabilities of artillery with First US Army

the east and south; displacement was then made by echelon to the vicinity of Harre. The 489th Armd FA Bn remained at Odrimont until past midnight, with fires shifted to the

southwest to support CCA fighting its way back to Manhay from the southeast. Finding the bridge already destroyed in its reconnoitered route for withdrawal, the battalion

was forced to make a wide detour to the north before reaching its next position at La Fourche.

To the far west the VII Corps had started assembling as a counterattack force, according to plan. The 84th Inf Div Arty had moved south from Ninth Army and closed in the Marche-Hotton area on the 21st. It soon became embroiled in the fight supporting the combat commands of the 3d Armd Div on both of its flanks. Approximately one-third of the VII Corps Arty had been relieved in the Aachen sector on the afternoon of the 20th and had moved that night toward its new assembly areas. By night of the 21st, one battery of the 957th FA Bn 155H was in position north of Marche and the remainder of the unit in assembly area nearby. On the 22d, CRR's Task Force Hogan operating south of Soy ran almost out of gasoline and was surrounded by the enemy. Sufficient gasoline remained to keep the radios of the attached Btry C, 54th Armd FA Bn in operation and observers with this isolated point kept up continuous effective fire with their own weapons as well as observing for the Corps and Division Artillery until, to the

sorrow of the artillery, the unit was ordered to destroy its vehicles and infiltrate back to friendly lines.

By the 24th St. Vith was beyond effective artillery range and through it a steady stream of German troops flowed west, changing what had been reconnaissance-in-force into the main effort of the Fifth Panzer Army. The German Army was one day late. Plans for a VII Corps counterattack were scrapped, and its heretofore concealed strength was thrown into the defense of Liege. The 75th Inf Div filled the gaps in the lines of the 3d Armd Div north of the Hotton-Manhay road; together the two divisions counterattacked south and east to stop the German thrusts northwest of Grandmenil. Behind these attacks the 3d Armd Div Arty had grouped its own organic 54th Armd FA Bn with attached 83d Armd FA Bn, 183d FA Bn 155H, and 991st FA Bn 155G SP, and in addition directed the fires of the 75th Inf Div Arty. The 18th FA Gp (188th FA Bn 155H and 981st FA Bn 155G) was at Durbuy in general support reinforcing the fires of the 3d Armd Div Arty. The terrain over which the German attacks were directed was ideal to the artillery defense. OPs on the high ground south of Soy gave perfect observation down all primary north-south roads that hugged the deeply cut stream lines. Heavy artillery fire caught the armored reserves moving north and jammed the roads with burning vehicles.

In the center, fresh German SS Panzers struck in force along their main axis of advance—the Marche-Liege road. The 84th Inf Div Arty and the 67th Armd FA Bn leapfrogged north to the vicinity of Beillonville as their supported troops were driven back to the outskirts of Marche, where they dug in and held. Observation was almost entirely dependent on the Air OPs; pilots flew one mission after another with only time out for refueling. Targets, and artillery to counter them, were both plentiful. Behind the Division Artillery the 195th FA Bn 8H, operating out of the Corps FDC at Somme Leuze, and the 188th FA Gp, now controlling the 980th FA Bn 155G, the 951st FA Bn 155H, and the 941st FA Bn 4.5G, fired almost as many rounds as did the direct support battalions. That night prisoners of war reported that artillery fire had destroyed the "pride and joy" of the German Army.

On the right flank the remainder of the 2d Armd Div Arty with attached 87th Armd FA Bn and 957th FA Bn 155H went into action at Ciney. Forward displacements were frequent as the division counterattacked in two directions. At day's end there was still no firm front west of Marche. The 14th and 92d Armd FA Bns were at Haid firing southeast on an enemy column at Humain; the remainder of the division artillery was still north of Ciney firing southwest at another enemy column in Celles.

### Stabilization

*25 December—2 January*

EVENTS of the following nine days were to prove that the 24th of December was the highwater mark of the German breakthrough. The VII and XVIII Corps Arty massed fires at the Corps boundary, halting the German penetration north of Manhay on the 25th, and erasing it on the 26th. The First Army now presented a firm front from Marche to Monschau, supported at all points by an adequate amount of artillery (Plate IV). Meanwhile, the British XXX Corps had concentrated a force of five divisions behind the Meuse River with its 4th and 5th AGRA's forming a second line of artillery defense. First Army had the

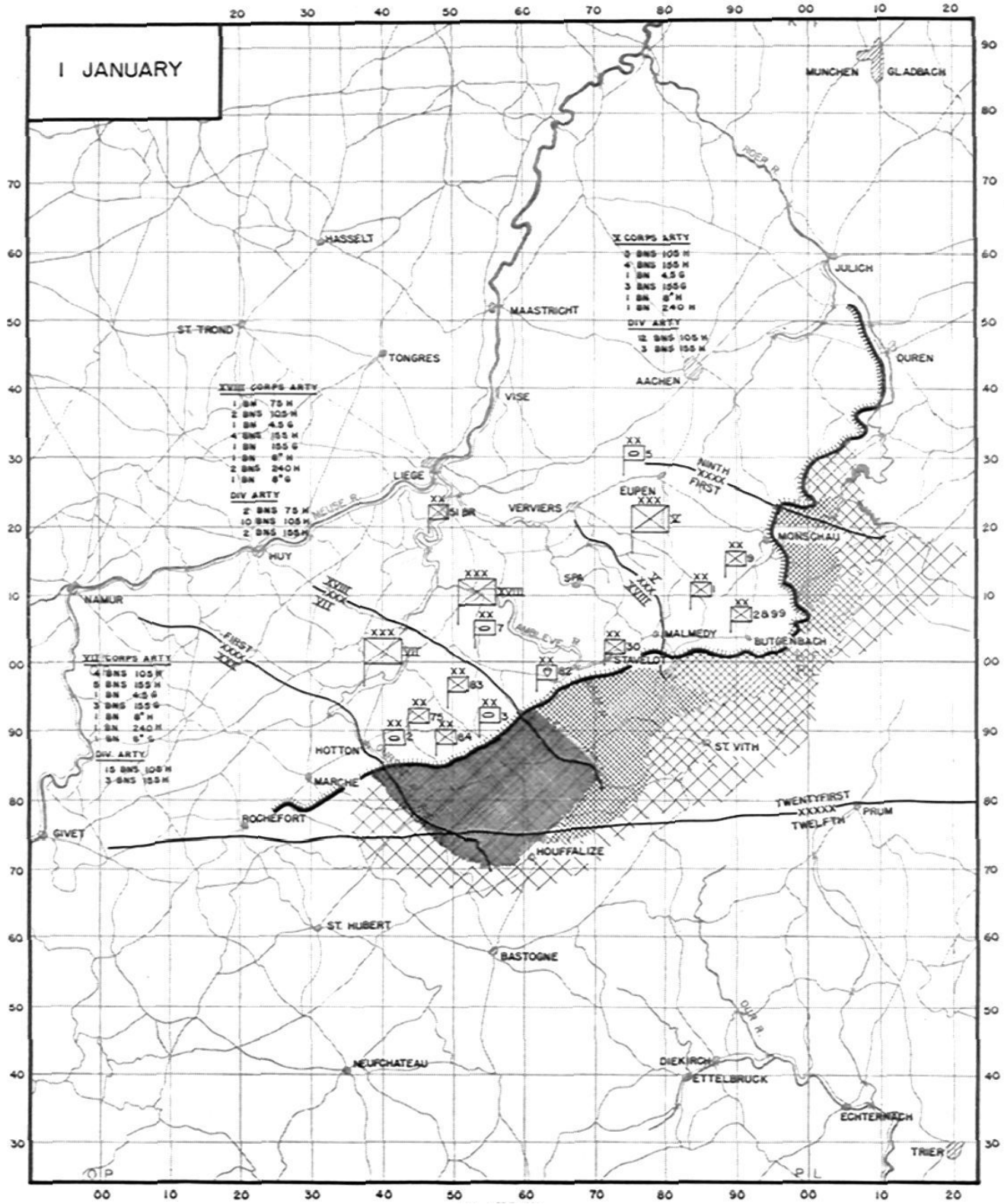
### FIRST ARMY ARTILLERY ORDER OF BATTLE, 1 JAN 1945

<b>V CORPS</b>	
V Corps Arty Hq & Hq Btry	84 Inf Div Arty
17 FA Obsn Bn	193 FA Bn 105H
190 FA Gp Hq & Hq Btry	2 Armd Div Arty
190 FA Bn 155G	87 Armd FA Bn
272 FA Bn 240H	957 FA Bn 155H
268 FA Bn 8G	3 Armd Div Arty
62 Armd FA Bn (with 78 Div, XIX Corps)	83 Armd FA Bn
187 FA Gp Hq & Hq Btry	183 FA Bn 155H
751 FA Bn 155H	991 FA Bn 155G SP
997 FA Bn 8H	<b>XVIII AIRBORNE CORPS</b>
406 FA Gp Hq & Hq Btry	XVIII AB Corps Arty Hq & Hq Btry
76 FA Bn 105H	290 FA Obsn Bn (-Btry A)
953 FA Bn 155H	460 Prcht FA Bn (with 517 Sep Prcht CT)
987 FA Bn 155G SP	32 FA Brig Hq & Hq Btry
941 FA Bn 4.5G	153 FA Bn 8G
1 Inf Div Arty	79 FA Gp Hq & Hq Btry
955 FA Bn 155H	551 FA Bn 240H
200 FA Bn 155G	552 FA Bn 240H
2 Inf Div Arty	179 FA Gp Hq & Hq Btry
99 Inf Div Arty	259 FA Bn 4.5G
9 Inf Div Arty	965 FA Bn 155H
196 FA Bn 105H	211 FA Gp Hq & Hq Btry
186 FA Bn 155H	592 FA Bn 155H (from 106 Inf Div Arty)
5 Armd Div Arty	240 FA Bn 155G
<b>VII CORPS</b>	264 FA Bn 8H
VII Corps Arty Hq & Hq Btry	229 FA Bn 105H (with 112 RCT, 28 Div)
13 FA Obsn Bn	16 Armd FA Bn (with CCB 9 Armd Div)
142 FA Gp Hq & Hq Btry	30 Inf Div Arty
195 FA Bn 8H	Btry A 290 FA Obsn Bn
266 FA Bn 240H	400 Armd FA Bn
18 FA Gp Hq & Hq Btry	401 FA Gp Hq & Hq Btry
666 FA Bn 155H	187 FA Bn 155H
188 FA Bn 155H	809 FA Bn 155H
981 FA Bn 155G	82 AB Div Arty
188 FA Gp Hq & Hq Btry	591 FA Bn 105H (from 106 Inf Div Arty)
172 FA Bn 4.5G	254 FA Bn 155H
951 FA Bn 155H	7 Armd Div Arty
980 FA Bn 155G	275 Armd FA Bn
75 Inf Div Arty	
18 FA Bn 105H	
83 Inf Div Arty	



5th Armd Div and the British 51st Highland Division as a mobile reserve with the artillery of these divisions not yet committed. West of Marche the front remained fluid until

December 27th, when elements of the 2d Armd Div, after clearing Celles, linked with British reconnaissance units further to the west. The German Army, however, still retained



Density of crosshatching indicates relative firepower capabilities of artillery with First US Army



99th Inf Div



104th Inf Div



106th Inf Div

the initiative and launched piecemeal attacks, at one time or another, against almost every unit along the front. Except for the overwhelming concentrations placed on these attacks, artillery fires were normal to a stable defensive front. Particular emphasis was placed on long range harassing and interdiction fires.

Orders for a resumption of the offensive by First Army were issued on the 27th and 28th of December. In general the plan was the same as that formulated on the 21st with a deeper objective. After joining with the Third Army the attack would continue to the east as far as its momentum would carry it. D-Day was set for the first fair weather day after the New Year. Several major changes in the artillery organization for combat were necessary to support the attack. Most important, the XVIII Airborne Corps Arty had to be considerably reinforced; it occupied the center of the Army sector and would be expected to support the VII Corps attack across its front. Additional corps-caliber artillery units were attached as they became available from Ninth Army or the Communications Zone. The 32d FA Brig was divided among the corps—the 266th FA Bn 240H to VII Corps Arty, the 268th FA Bn 8G and 272d FA Bn 240H to the V Corps Arty (as previously attached), and the remainder to the XVIII Airborne Corps Arty. The 75th Inf Div was shifted to the XVIII Airborne Corps and replaced in the VII Corps sector by the 83d Inf Div. The divisions of the VII Corps were relieved by troops of the British XXX Corps and side-stepped east into assembly areas behind the XVIII Airborne Corps sector, from which positions they would attack through the line of the 75th Inf Div. (A late change in boundaries returned this division to the VII Corps.) A portion of the VII Corps Arty kept up the normal

rate of fire from their old positions in order to conceal the shift of troops; the remainder occupied positions in the zone of attack with orders to remain silent until after H-Hour. Other minor changes were made in artillery organization and by the first of the year the Artillery with First Army was prepared to support the attack (Plate V).

### Resumption of the Offensive

3 January

**B**AD weather which had closed in on the 27th of December postponed the attack over the 1st and 2d of January. Heavy snowfalls blanketed the entire area of the Ardennes Forests, concealing the enemy's defensive works and creating a formidable obstacle to armored attack. The overcast had cleared by the morning of the 3d, and the artillery opened the offensive to the east with a carefully prepared and executed fire plan.

In the V Corps sector and the right of the XVIII Airborne Corps sector an intense 35-minute preparation preceded a strong demonstration against the most sensitive point of the enemy defense line—the shoulder of the penetration. At 0830 hours the VII Corps attacked without artillery preparation. Artillery was generally quiet until noon, when the volume of on-call missions had become sufficient to bring all of the weapons into action. Firing increased steadily as the enemy reacted to the attack. By nightfall, however, the main line of defense had been pierced, enemy reserves had been dispersed, and enemy artillery silenced. The First U. S. Army—well supported by its artillery—was back on the road to the Rhine—and beyond.

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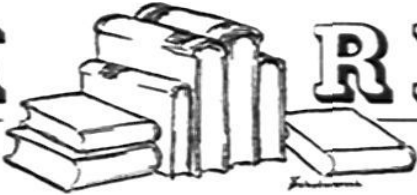
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# BOOK REVIEWS



*PATTON: FIGHTING MAN.* By William Bancroft Mellor. 240 pp.; index; photographs. G. P. Putnam's Sons. \$3.00.

Strong in body, strong in spirit, strong in character, and *strongest in action*—of many hundreds, the late George Smith Patton will unquestionably be remembered the longest as *the American general* of World War II. Salty of speech and a colorful showman, he was no clown and was without peer when results were dependent upon leadership and drive.

Patton always drove himself as hard as anyone else. From childhood he headed unswervingly for a military career. He analyzed the world's military leaders, and developed in himself what he considered their outstanding and essential qualities; he made himself an athlete of Olympic stature, and trained his mind and spirit as well.

As so forceful a person, Patton could not be ignored. People either admired him or intensely disliked him; none were neutral in their reactions. His men either idolized "Old Blood and Guts" or hated him. Which they did was of little concern to him, as long as they did their job. And he wanted their jobs done for the safety of themselves and their fellow-soldiers, every bit as much as for the survival of his country.

Patton's career in World War II can be likened to a Fourth of July set-piece which zooms brightly, dies away, suddenly revives in a flash of fire, and keeps repeating the cycle. It is unfortunate not only that his death was so untimely, but also that it came while he was in a period of eclipse because of unwisely chosen remarks. All who have served with General Patton or otherwise followed his brilliant career will welcome this careful, painstaking, very-much-alive biography that not only recreates the spirit of the man but also by delving into his background does much to explain why he ticked as he did.

J. E. C.

*THE BLACK ROSE.* By Thomas B. Costain. 403 pp. Doubleday, Doran & Co., Garden City, New York. \$3.00.

This is a peach of a book. It has all the best ingredients for a good story—love, adventure, pain, death, fear, hate and passion—stirred up by a master hand into a pot-pourri spiced with the subtle flavor of the Orient. Hearty fare, my lads and lassies, and (to muzzle this metaphor for good) you'll lap it up and wish for seconds!

In doing research for his historical novels, Thomas Costain became fascinated with the lives of three men who lived in the 13th century. They were completely different in their ways of thinking and modes of living. One was Edward the First, the "Lawgiver" of England; one was Roger Bacon, the great scientist suspected by most of his contemporaries of dipping into Black Magic; and one was Bayan of the Hundred Eyes, the greatest and most feared general of the powerful Mongol armies. A Chinese scholar and a research worker who could translate medieval Latin and French were called to help Mr. Costain, who read over 500 books and countless diaries and records to formulate his dreamed-of story. However, in the author's words "the story which grew out of my efforts refused to be subordinated to the narration of history. It took the bit in its teeth and left me no chance to do more than introduce my three enthusiasms at rare intervals . . ."

Whatever the author's original intent, no improvements could be suggested for this exciting romance of Walter of Gurnie, companioned by that skillful archer Tristram Griffen, who journeys over the spice trails of Cathay in the face of incredible hardships and dangers. Together they brave the savage Mongol horsemen,

defy the leader's anger, suffer ingenious tortures, watch the power of a mysterious powder vanquish the Chinese war junks, and *meet Maryam*, well-named after that most rare and pungent spice of the far east—the *Black Rose*.

To this earthy reviewer, the saint-like attitude of our adventurers is hard to reconcile with the accepted conduct of that age—an era which jeered at the old Crusaders with their hoary tales, and winked at youthful follies. Upon reflection, however, it may be that their unusual behavior added zest to the story. Certainly, we read on—intrigued, baffled, exasperated, and thrilled. After debating the merit of suing Mr. Costain for alienation of affections while watching the better-half immersed in this absorbing story for several evenings, the idea was discarded in favor of a warning to others. If you are the chatty type, come nightfall—hide *The Black Rose* from your spouse.

S. L.

*WE ARE THE WOUNDED: An Epic of American Courage.* By Keith Wheeler. 224 pp. E. P. Dutton & Co. \$2.50.

War correspondents' books usually suffer because their writers are spectators, not participants, and hence the experience they retail is, at best, secondhand. Keith Wheeler, however, was seriously wounded on the second day of the Iwo Jima battles and *We Are the Wounded* tells the story of the Americans who became casualties with all the authenticity of a Purple Heart.

A correspondent for the *Chicago Daily Times* with a long and outstanding record in coverage of combat in the Pacific, Mr. Wheeler has set down movingly and vividly the various facets of pain and courage displayed in the course of the evacuation of casualties from an island beachhead to the base hospital. His own story and the stories of other men in similar case shed new light—particularly for those of us fortunate enough to have come through the war unscathed—on the reactions and emotions of the wounded. It is unfortunate that this book could not have been published before the greater portion of our casualties had returned home. But even to the families and friends of the men who have returned as well as those of the men yet to come, *We Are the Wounded* will prove an invaluable aid to understanding and to comprehension.

K. S. G.

*THE ATOMIC AGE OPENS.* 252 pp.; illustrated. Pocketbooks. 25c. *ATOMIC ENERGY IN THE COMING ERA.* By David Dietz. 184 pp.; illustrated. Dodd, Mead & Co. \$2.00.

*ATOMIC ENERGY FOR MILITARY PURPOSES.* By Henry D. Smyth, 254 pp.; index; illustrated. Princeton University Press. In paper, \$1.25; in cloth, \$2.00.

The theories of modern science have been based upon two principles: the law of the conservation of mass (matter can be neither created nor destroyed) and the law of the conservation of energy (energy can be neither created nor destroyed).

Until very recently it was believed that for practical purposes these two laws were the separate pillars upon which the *corpus scientificam* rested, but within the last five years it has come to be believed that the separation between the pillars of the two laws was diminishing daily, for it has been discovered that matter can sometimes be converted into energy and energy into matter.

Some kind of a relation between mass and energy had long been suspected. Einstein as early as 1905 clearly stated that mass and energy were equivalent, and suggested the equivalence by the equation  $E=mc^2$ , where E equal energy; m, mass; and c, the



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velocity of light. Translated into figures this simple equation is stupefying. It "shows that one kilogram (2.2 lbs.) of matter, if converted entirely into energy, would give 25 billion kilowatt hours of energy. Compare this fantastic figure with the 8.5 kilowatt hours of heat energy which may be produced by burning an equal amount of coal."

With such deceptively simple equations as that of Einstein's, the scientists of the world began the search for atomic energy. The results of their labors were proved at Hiroshima and Nagasaki, and the day after August 6, 1945, everyone was asking everyone else: whatinell is this atom thing anyway? What's it do? How's it work? How do you know? And these questions kept on coming despite the fact that even a 16-year-old high school student had told the world early in 1942 (in *Youth Looks at Science and War*) and the National Defense Research Committee was working on the military use of atomic energy.

Actually, there is nothing new in atomic energy. There hasn't been anything but atomic energy since the world began. What is new is using not surface atomic energy, but nuclear atomic energy—the enormously potent store of energy crammed into the infinitesimally microscopic interior of the atom.

It was the Germans—Hahn, Meitner, Frisch, and Strassman—who first cracked the atomic nucleus in 1939 and turned matter into energy. It was the scientists of the United States and the British Empire who harnessed this nuclear energy first, fashioning the two bombs that may change the course of history and saddling themselves with the responsibility of deciding which way the change will lead.

The importance of the atomic bomb is not so much the mechanics of how it works, but in the theory of what makes it work and what changes it will bring to the world. The advances of science have every year become more a social force and less a purely scientific accomplishment. We live as we do because of the internal combustion engine, radio, and other achievements of science. These achievements are relatively foolproof. The biggest engine in the world could blow a cylinder head and damage no more than a few dozen people. The radio may drive you crazy but it doesn't do you any physical harm. But an atomic bomb on the loose is a world threat.

That is why we should know not so much how it works, but the physics behind what makes it work, and what changes the malicious use of atomic energy can bring.

None of these three books deals at any length with the social and political implications of atomic energy. They all deal at considerable length with what makes it work. The *Pocketbook* is a very competent potboiler, and will give you about as much as you'd want to know, or could hold, in an evening's reading. The book by David Dietz is several steps more advanced than the *Pocketbook*. It has the usual crystal ball chapter that peers into the future; others that cover the background of the atomic theory, the development of the theory through the experiments in atom smashing, etc.; and winds up with an account of how the \$2,000,000,000 was spent in producing the atomic bomb. The style is informal and clear, and though a little gee-whizish in spots the book is essentially sound.

Dr. Smythe's report, after the first few introductory pages, was frankly over my head. If you have had a good grounding in college and graduate physics and chemistry you'll be able to understand it. If not, try one of the other two books.

R. G. M.

*MOM, I'M HOME!* By Syd Hoff. Doubleday, Doran & Company, Inc., Garden City, N. Y. \$2.00.

If you want to brighten your corner with several deep belly-laughs and some 45 pages of chuckles, Syd Hoff's latest book of cartoons is the answer. Here is the soldier—home from the wars—in a rosy state of pleasant anticipation, apprehension and confusion.

Do you look for the "Small Fry" with his numerous Bronx relations in the *New Yorker*, *Saturday Evening Post*, *Collier's* and the *American*? If so, this is your meat; and if you don't it's high

time you got educated. Some of the pictures are better savored if your own small fry aren't breathing down your neck asking questions—note one disheveled large-eyed blonde in scanties inquiring over her shoulder "goodness! is that all you ever thought of?"—but the moppets share a large part of this book too, which is good news to those of us who have a warm spot for the big "little guys" and their small sisters who make a playground out of the New York sidewalks.

One generally hesitates before giving a present that even faintly smacks of the military to a guy who's been places and craves nothing else but an easy chair and comfortable clothes. This book is one of those exceptions. If he doesn't grin sheepishly or roar out loud as he sees himself and his thoughts in caricature, maybe you'd better look up *his* record!

S. L.

*A BASIC MANUAL OF MILITARY SMALL ARMS.* By W. H. B. Smith. 351 pp.; illustrated. Military Service Publishing Co. \$5.00.

This third and greatly expanded edition is the definitive book in its field. Its subtitle *How to Load, Operate, and Strip Small Arms of Every Nation* is no idle boast or advertiser's blurb, for that is precisely what this volume shows clearly how to do.

Nation by nation, caliber by caliber, weapon by weapon, all the small arms of every military force are taken up one by one. Each has its characteristics outlined, then is described in detail. Special features are also covered. The weapon and its method of functioning are illustrated by photos and cut-away drawings. Photos also illustrate the step-by-step procedure of stripping many of the guns. The book is complete in both time and caliber, even to including our 75-mm recoilless rifle—which will give an idea of the careful workmanship which has gone into it.

Unlike earlier editions, this one is bound in boards. Increased size alone would have made that necessary, but regardless of the reason this change makes the volume more convenient for bookshelf parking.

And that is a good move, for now its scope is so wide that an even greater variety of small arms people will find it a "must." It is a mighty good text on all United States service arms for anyone in or expecting to enter our armed forces. Law enforcement agencies will find it invaluable for identifying weapons. And collectors and gun enthusiasts will find here a wealth of information not to be had anywhere else.

All in all this is a fine example of the careful interest taken by this publisher in providing books that are truly of service to the military.

J. E. C.

*BEACH RED.* By Peter Bowman. 122 pp. Random House. \$2.50.

*Beach Red* is the story of an assault landing on a hostile beach somewhere in the Pacific and of what happened to a small group of American soldiers who were part of that assault. It is not the first story of its kind and it is not likely to be the last. But it is fiction and prose of a very high order and seems destined to be for some time the best story of action in the Pacific.

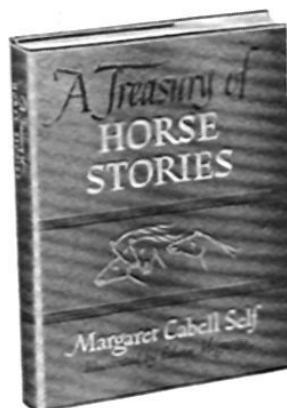
Styled in a prose that looks like and often reads like poetry, *Beach Red* is told in the second person and "you" are always the protagonist. Mr. Bowman, who is or has been a member of the amphibious engineers, is able to make his story continually exciting and always carrying the ring of truth. His hero is a GI, doing a GI's job—dirty, nasty, unpleasant, and very necessary. And Mr. Bowman's hero, as well as his other characters, speak the GI's language. Hence the continual "you" becomes an identification no soldier will resent—and some of us may well be proud of it.

Reminiscent to some extent of Harry Brown's *A Walk in the Sun*, *Beach Red* far surpasses it in quality of writing and the depth of feeling it arouses. I do not know whether or not this war will produce a great war novel and certainly Mr. Bowman has not written it in the present volume. But until the great novel arrives, *Beach Red* must top the list.

K. S. G.

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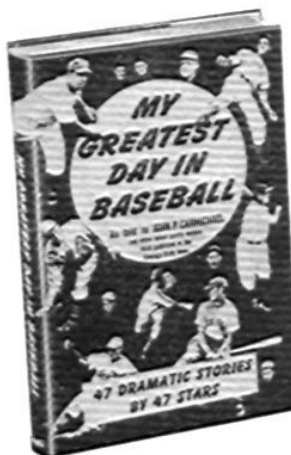
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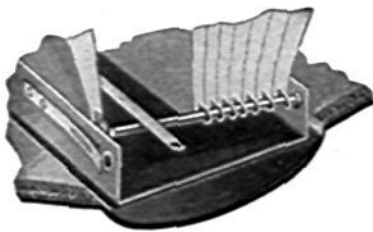
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*OFFICIALLY DEAD: The Story of Commander C. D. Smith. By Quentin Reynolds. Random House. \$2.75.*

The combination of Commander Smith's hair-raising experiences and Quentin Reynolds' brilliant reporting has resulted in one of the best war books to date. Like the perfect accompanist who never steals the show, Quentin Reynolds knows who should have the spotlight. It is his masterful touch that keeps the lucky reader on the edge of his chair from the first thrilling page to the last.

Occasionally the newspapers gave us a glimpse of Smith's story—his flight from an "escape-proof" jail and the follow-up that he had been caught and executed. Although this latter bit of Jap propaganda was officially accepted by our government, it was done to safeguard Smith during his long trek to freedom.

Even before we follow Smith's fantastic nightmarish journey, we have realized that this is no ordinary man. From the age of 16 when he went to sea on a sailing vessel, his life reads like a Joseph Conrad character.

During the first World War, Smith enlisted and at its close realized that his future lay with steam. In 1935 he became a member of the Shanghai Pilots' Association—the pay was excellent and "There were only 40 of us with a waiting list of 35,000. No ship could sail up the Wangpoo River and enter Shanghai unless one of us piloted it."

Smith was re-inducted into the Navy in March '41 and commanded the river gunboat U.S.S. *Wake*, which was seized by the Japs on Dec. 8. He was captured that same day.

After making the rounds of several prisons, Smith was held for "investigation" in the notorious Bridge House in Shanghai. That he was never tortured may be due both to his knowledge of the Japanese language and his captors' mentality. His own observations are interesting in that he stresses the fact that he does not hate the Japanese people as a whole despite his own suffering as their prisoner and the appalling treatment he witnessed being meted out to others. However, he does make a clear distinction between the officers of the Japanese Navy and their Army—the former generally living up to a rigid code of ethics and the latter unspeakably stupid and brutal.

After receiving a ten-year sentence for "deserting the Japanese Army," he and his good companion, Commander John B. Woolley of His Majesty's Navy, were committed to the Ward Road Jail in Shanghai. It was 27 months later before they and a young Marine, J. B. Storey, were able to make their escape.

Their long starvation diet, which caused Smith to have a double rupture, the incessant rain and the necessity for walking on feet cut to ribbons of raw flesh, make it seem incredible that these three brave men managed to cover 600 miles of Jap-held territory.

Much praise is due the courage and cooperation of the Chinese who risked their lives to help these escaped prisoners. China's story of sabotage and refusal to accept the Jap conquest is a bright story in itself.

This is a book well worth the reading.

S. L.

*WELL DONE! By Morris Markey. Appleton-Century. 223 pages. \$2.75.*

Here for a change is a war correspondent's book which does not say, "The people I worked with were the finest men in service, and they won the war single-handed." Morris Markey merely says, "I was assigned to the aircraft carrier *Essex*, and went along with it to the invasion of Saipan, the sneak raid on Iwo Jima, and the engagement with the counterattacking Jap fleet. Here's how it looked to me." This completely novel attitude makes this all the finer book and all the greater tribute to the men who sailed the *Essex* and flew its planes.

Markey has drawn here a top-notch picture of carrier life with an occasional piece of deep thinking about the purpose of the war, the make-up of our fighting men, Navy leadership, the people back home, etc. He works up to the battle action slowly, filling in background, picking up color, building suspense. The action, when it comes, is reported beautifully, conveying the complete sense of flatness and anticlimax that battle action does have, and

telling some fine combat stories with a restraint that makes them all the more memorable. Markey is one of the finest correspondent-writers in the game today, and if you're willing to forego the books that give you the whole history of the war in 330 name-crammed pages for one that covers only a very small segment of it but does it superlatively well, this is your meat. A. L. O.

*A NATION OF NATIONS.* By Louis Adamic. 350 pp.; notes and appendices; index; illustrations. Harper & Bros. \$3.50.

*A Nation of Nations* is the fourth book of a series growing out of an exhaustive "project" which the author began in 1938. The first was *From Many Lands*; the second, *Two-Way Passage*; and the third, *What's Your Name?* There is a tentative promise of another yet to come.

Mr. Adamic deplors the bias of United States history and the "we-they" manner of thinking that sets one group of people off sharply against others on the bases of race, religion, or relative lengths of native ancestral lines.

His study of our country extends into the attics of old homes for the simple revealing letters of earlier days, and includes with commoner sources the examination of old obscure records and diaries as well as a keen observation of contemporaries in all walks of life.

In *A Nation of Nations* Mr. Adamic comes to grips with the brand of Americanism that tends to promote the notion of White-Anglo-Saxon-Protestant superiority over other elements in our civilization. In his preface he states as the opposing view that "the pattern of the United States is not essentially Anglo-Saxon although her language is English. Nor is the pattern Anglo-Saxon with a motley addition of darns and patches. The pattern of America is all of a piece; it is a blend of cultures from many lands . . . Diversity itself is the pattern, is the stuff and color of the fabric."

In the pages that follow, the fabric is unfolded with a deftness that displays the richness of its "stuff and color."

First, there is a chapter on Americans from Italy. The beginning point of active Italian interest in the country is marked in history by the discovery, or rediscovery, of America by Columbus. Of the thousands that have since come from Italy many have made notable contributions to our cultural life. Philip Mazzei is credited with a share in forming the political pattern of the country by his pre-Revolution influence on his close friend, Thomas Jefferson.

From Spain and Mexico came adventuring settlers early in the 16th century, forerunners of others down through the years, and all an integral part of the "pattern of diversity" that is America.

France, Holland, Sweden, Russia, Germany, Yugoslavia, Norway, Greece, Poland, Ireland—all these, as well as England and others, have contributed their particular characteristics to the blending of an American type. All are represented by great names in the history or cultural life of the country.

Negroes, too, are a part of the great American whole. Only they, of all the sizable elements, originally came to this country involuntarily. Notwithstanding their initial disabilities and continuing barriers American Negroes have contributed a highly creditable share to the country's progress.

Mr. Adamic has presented an impressive cavalcade of various national strains marching proudly under the American banner and yet, through the disunity in its ranks, falling far short of the full measure of its splendor. His theme is a cry against the factionalism that divides a people who should stand together. He makes a sound case for justice and human understanding. His is the plea for a strong, cohesive, truly great nation of nations. F.E.J.

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Fighting with the Eighth Army through Egypt and Libya Colonel Court was injured at El Alamein, and again shortly after his battery was among the leaders in capturing Tunis. For this he was congratulated by Field Marshal Sir Bernard Montgomery, and received the Military Cross.

In 1943 he arrived in the States and served for sixteen months at Camp Hood as British liaison officer with the Tank Destroyer Center, Tank Destroyer School and Tank Destroyer Board. He became the Inspector of Training for the Tank Destroyer School, an evidence of his unique ability.

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