

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



JANUARY, 1945

# FIELD ARTILLERY GUIDE

*Second* ( THOROUGHLY  
REVISED ) *Edition*

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# The Field Artillery Journal

JANUARY, 1945—Vol. 35, No. 1

THE MANY friends of Major General William J. Snow, founder of the U. S. Field Artillery Association and first Chief of Field Artillery, will be grieved to learn of his recent loss. Mrs. Isabel L. Snow, his wife for more than fifty years, died at Walter Reed General Hospital on November 18, 1944. Services were held at St. John's Episcopal Church in Washington, followed by interment in Arlington National Cemetery.

FROM OUR COVER PICTURE it appears that German's dairy herds are still sizable and sleek. These Holsteins are due for a rude shock shortly, however, when the 8" howitzer yeclpt "G. I. Hell" speaks its piece.

WE ARE FORTUNATE this month to be able to present so many accounts of amphibious invasions. Tarawa was the first against a coral atoll. Bloody though it was, its lessons were taken to heart to save many, many lives in later operations. Peleliu was also invaded by Marines; matters went quite differently there.

European operations were thoroughly and carefully rehearsed. Even so, not all went "according to plan." The 111th FA Bn had perhaps as rough a time of it as did any artillery unit.

Special attention is due Capt. Knowles's description of Burmese fighting. We hope to have more material from that area before long.

NEXT MONTH will bring accounts of air OPs in the South Pacific; a magnificent account of operations of a group at Cassino; a description of short range firing against the Siegfried Line; a number of Russian articles; and one by Maj. Raymond, who has compiled so many authentic accounts for these pages.

IN THE COMING YEAR we anticipate a continued flow of your splendid combat accounts, written on the spot by you who know the details so well. These not only help those who will follow you, but are of great interest and value to artillerymen in other and quite different theaters. Your cooperation and efforts are deeply appreciated by all.

WE WOULD REMIND overseas members that for only \$1 per year extra, their "pony" JOURNALS will go to them by first class mail, at a much greater speed.

To all members we say, "Be sure to keep us posted concerning your full and correct address!"

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	PAGE
MARINES ON GUAM.....	2
ARTILLERY AT TARAWA By Lt. Col. P. M. Rixey, USMC, and Maj. Wendell H. Best, USMC	3
ARTILLERY ON "NOTHING ATOLL".....By Lt. Col. R. A. Evans, USMC	6
TRENDS IN FIELD ARTILLERY ORGANIZATION AND EQUIPMENT By Maj. Shirley B. Metzger, FA	10
HOW WE TRAINED FOR D-DAY.....By Lt. Bruce Bliven, Jr., FA	11
111TH FA BN ON D-DAY.....By Lt. Col. S. L. A. Marshall, GSC	13
THE VISAYAS.....By Col. Conrad H. Lanza	16
ANGLE OF SITE COMPUTER.....By Lt. Lewis R. Soffer, FA	20
MEDIUM ARTILLERY IN BURMA.....By Capt. J. B. Knowles, FA	21
BURMESE VIGNETTE.....By a Regimental Commander, RA	27
A NEW COMMANDANT, F.A.S.....	28
AN M12 BATTALION IN COMBAT.....By Lt. Lewis R. Soffer, FA	29
PERIMETERS IN PARAGRAPHS.....By Col. Conrad H. Lanza	32
MEDIUMS AT MANTES.....By Lt. John J. Osborne, FA	44
INCIDENTS OF THE 173D.....By the Group Commander	48
GERMAN 17-CM GUN.....By Lt. Col. G. B. Jarrett, Ord.	49
BATTLE NOTES.....By Maj. Harold S. Davis, FA By Lt. George J. Cantrell, FA	53
NOT IN THE BOOK.....	54
DIARY OF WAR EVENTS.....	55
FOR HEROISM AND SERVICE.....	56
BOOK REVIEWS.....	58

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**Authors alone are responsible for statements made. No articles are official unless specifically so described.**

# MARINES ON GUAM



*Jap air strength was so overwhelmed that 75 pack howitzers could occupy positions in the open. DUKWs not only brought them and their supplies directly to the positions, but also brought 105s ashore and unloaded them with their own cranes.*



*So much ammunition was fired that the stacks of even small 75 rounds bulked large at each piece. During lulls in firing the cannoneers worked hard, ripping crates open and then emptying the fiber containers, in order to keep a supply ready for use.*



*One 75 section was lucky—it built a lean-to from scrap material, to keep off the worst of the tropical rain.*

*Between showers the hot sun made these 155-how cannoneers peel down for action. Notice the great quantities of supplies stacked just ahead of this position. →*



# ARTILLERY AT TARAWA

By Lt. Col. P. M. Rixey, USMC and Maj. Wendell H. Best, USMC

REPUBLICATED BY COURTESY OF THE "MARINE CORPS GAZETTE"

The First Battalion, Tenth Marines, equipped with 75-mm pack howitzers and attached to the Second Marines, Second Marine Division, as direct support artillery for that combat team, landed on Betio beach close behind their brothers-in-arm on that memorable morning, November 20, 1943. Under extremely adverse conditions they effectively accomplished the mission assigned.

Though landed on call under battalion control, firing batteries were embarked on separate transports with normal infantry landing teams of the Second Marines. Headquarters and Service Battery was divided between two ships with one complete Fire Direction Center team on each. The Battalion Commander, Bn-3, Communication Officer, and Bn-2 embarked on the Combat Team command ship.

## THE PLAN

The artillery annex to the Combat Team operation order contemplated landing the entire battalion on Red One, the westernmost beach, when a sufficient beachhead had been seized by assault infantry elements. Although this area was the most heavily wooded, we were prepared to cut lanes of fire with demolitions and axes in case air and naval bombardment failed to level this space. This plan was advisable in order to occupy the only likely and feasible position area from which we would render the maximum support for an advance toward the eastern third of Betio.

The infantry scheme of maneuver called for a sweep across the island from north to south with the object of seizing the airfield, and then a turning movement to overcome resistance on the eastern portion of the island.

The observation plan called for two forward observer parties to land, one with 2-8 and the other with 1-2. On the eastern flank was 2-8, while 1-2 was the unit which was to make the final attack down the eastern tip. Inasmuch as 2-2 and 3-2 were operating in an area where they could under no circumstances place fire, no forward observers were assigned to them. The "B" battery forward observer was under orders to report to the battalion FDC on landing. It was planned to use him either as replacement or, should the opportunity arise, as an observer in a boat off the eastern tip of the island.

Of the six forward observers in the battalion, only three were available for artillery spotting as three had been assigned to the assault landing teams to handle naval gunfire spotting. As a result, all but one of our forward observers were committed in the assault waves. Lts. N. E. Milner, T. N. Greene, and L. K. Wilson performed valiant duty as NGF spotters. Lts. H. E. Dickinson and M. A. Traylor were the artillery forward observers.

Due to the very small area (one square mile) in which the operation was going to take place, the action was unique from our standpoint. We decided after long deliberation that no liaison with assault landing teams would be needed, but liaison with the Combat Team Headquarters was, as normal, "a must."

One of our primary worries had always been a communication setup that would function during the landing and the subsequent action without breaking down. Our main thought was to have at our disposal alternate methods of communication

in case our primaries broke down. Also it may be of value to point out that we planned to use TBX to FO crews in order to insure contact with them.

## BEGINNINGS

In the early morning hours of D-day most of us watched assault units load into landing craft, remaining on "top-side" to witness the naval bombardment phase and air strike. The bombardment by our Fire Support Group was a beautiful sight. We wondered how any troops could survive such pounding. On landing, we were clarified on this score after observing the numerous, strongly constructed shelters, which would withstand all but a direct hit, that had been erected by our engineer-minded enemy.

Our Combat Team command group, including artillery battalion commander and battalion forward reconnaissance group with radio operator, embarked in small landing craft at about the same time that assault elements had left the line of departure. No reports of the nature of the resistance had reached us, although H-hour had been delayed 45 minutes. Two firing batteries, "B" and "C," had embarked in landing craft and were proceeding to their assigned rendezvous area. "A" battery and the remainder of H&S battery would load as soon as boats become available.

Our command boat group began the long run to our assigned landing beach, but on reaching the fringing reef it was forced to separate and transfer to smaller landing craft. Col. Shoup (CT commander), Lt. Col. Carlson (observer), Maj. Culhane, Commander Nelson (MC), Capt. Bradshaw, and Artillery Battalion Commander, with necessary minimum enlisted communication personnel, attempted to land on left half, Beach Red Two. Upon arriving opposite the end of the pier, about 300 yards from shore, we came under heavy enemy machine gun crossfire and intermittent antiboat gun fire, which forced us to withdraw temporarily. Rounding the long pier, we attempted to join up with a wave of five larger craft containing medium tanks proceeding toward Beach Red Three. When our craft was about 50 yards in rear of this wave and about 100 yards from shore the Jap defenders opened up with two 77-mm field guns, scoring two direct hits on boats of the tank wave. One sank immediately and the other was forced to withdraw in such bad condition that it later sank.

We decided that here again was too hot a spot to attempt a landing of our CP group. Our boat then proceeded a second time to Beach Red Two, where we could at least land under partial cover of the coral rock pier and, to a degree, avoid this accurate heavy shell fire. Keeping close to the pier, we managed to get about one-third of the way into the beach when our engine went dead, cause unknown. All personnel slid over the side and waded in waist-deep water to the shelter of the pier. No casualties were suffered en route, though sniper and machine gun fire was directed at our group and mortar shells were striking above us on the pier.

When radio silence had been lifted previously, our artillery command net was set up and control with all units of our battalion was established. By H + 2 all elements were at the line



*From hasty positions a Marine battery goes into action against an airfield. Notice the wide variety of uniforms. Telephone operator in left foreground is wearing a navy communicator's wide helmet.*

of departure awaiting further orders. Each battery was able to maintain control of all its boats. But even with radio it was practically impossible to designate our positions within the lagoon with regard to each other, because of the large number of boats which were forced to lie off due to heavy fire being received from the beach.

While the CT command group was seeking shelter alongside and under the pier, all elements were informed via TBY that we were meeting heavy resistance—information that was totally unnecessary as it was obvious even to those on the line of departure—and to proceed to the vicinity of the control boat and await further orders.

#### PIECES ASHORE

During the afternoon of D-day it became apparent that we would not be able to land the battalion, as planned, on Beach Red One due to heavy beach losses sustained there by the Third Battalion, Second Marines, and the unknown situation existing there. The battalion was finally ordered to land on Beach Red Two at about 1700 though approaches were still being swept by intermittent machine gun and mortar fire. A tentative limited position area close to the combat team CP had previously been selected from prone visual reconnaissance. A few frame buildings would have to be leveled and our battalion would be under small-arms fire (as was the whole island). Still, the infantry would need our help on the eastern end of the island and we wanted to be in position ready to render that help when most needed. Anyway, our cannoners were growing impatient out there on the water, many suffering the discomfort of sea-sickness.

At this time the tide was such that the Landing Craft Vehicle Personnel (LCVPs) could go only as far as the end of the pier. It was necessary to transfer to Landing Vehicle Tank (LVTs). These LVTs had been operating for twelve hours and were needed by everyone in order to land.

Two gun sections (one from "A" and one from "B" battery) were completely transferred and were ordered in just as darkness fell. Through a misunderstanding that three sections of "C" battery were in LVTs, they also were ordered to land. Although they were in LCVPs when the order was issued, they lined up on the pier and came in. All other units of 1-10 were subsequently ordered to lay off in the rendezvous area during the night. Thus, on the evening of D-day, we had five pack howitzer sections on the beach. The three sections which had managed to reach the end of the pier had

hailed their pieces along the pier under fire or carried them broken down through waist-deep water. Two members of the battalion were wounded while this was being accomplished.

An interesting sidelight on the day's landing was a story of a boat containing the Battalion Surgeon, Lt. Krauel, and the Bn-4, Capt. Kafka. The last order they received prior to leaving the ship was to land on Beach Red One. They became detached from the control boat and were faced with a decision as to what to do, since they had no idea as to the whereabouts of the battalion. Quite naturally they decided to follow orders and started in for the designated beach. Actually, Red One had one of the largest pickets of Japanese on Betio and practically none of our troops; in plain speaking, there was no beachhead there!

All in all, this boat made four attempts to land and was driven off by intense fire each time. After suffering a few casualties, Capt. Kafka and Lt. Krauel decided that the presence of friendly troops on that beach was quite doubtful and proceeded back to the boat rendezvous and found one of our artillery control boats.

On D-day one of our battery commanders, Capt. Kenneth L. Brown, who had arrived on the beach ahead of his battery, heroically led a group of infantrymen in an attempt to knock out a particularly troublesome machine gun emplacement which had killed many Marines in the support waves wading into the beach. While directing this group from an exposed position, Capt. Brown was mortally wounded by a supporting enemy rifleman's bullet. He was buried at sea.

A word on direct fire. At about 0700 on D + 1, two howitzers were used for direct fire missions at two blockhouses extending out into the lagoon at the junction of beaches Red One and Two. These blockhouses contained Jap light machine guns which were delivering devastating fire into support waves of the Eighth Marines, who were forced to wade to the beach in water chest deep. These guns were silenced by well directed fire using fuze delay in order to penetrate the coral and log structures.

Packs proved themselves to be very valuable for this mission. It is a decidedly unhealthy one, however, and unless the situation is forced on one they should never be used in this fashion. A tank or half-track is much more efficient. When the fire was delivered from 50 yards or less the shells passed right through the blockhouses as AP would, because the rotors in the fuzes had not had time to rotate far enough to expose the flash opening. One of our section chiefs thought that he must be missing the target when this happened.

The composite battery of five howitzers which had arrived during the night was placed in position facing east at 0800 on D+1, hurriedly laid by Lt. Kelleher and registered by forward observer methods. Lt. Kelleher, Lt. Brister ("A" battery executive), and crews were under constant sniper fire while this was being done. The laying of this composite battery was accomplished by simply pointing the guns toward the eastern end of the island and laying them parallel. Total frontage of this battery was about 50 yards. Even so the right guns extended out into enemy territory and the entire battery was on level ground beyond the protective sea-wall.

At the time this battery was emplaced the situation ashore was still quite vague. Groups of Marines, ranging from less than squads to companies, had penetrated inland. Several small groups had gone all the way across the airstrip and were

on the south coast. Because of the mask to our left front we could not render close-in support to the unit holding Red Three at this time; the closest we could get to this unit was about 500 yards. Of our five observers ashore, two (Lts. Traylor and Wilson) had been wounded, leaving Lt. Dickinson for artillery and Lts. Milner and Greene for naval gunfire. Contact with Dickinson was through intermittent wire and radio. The exact positions of Greene and Milner were unknown.

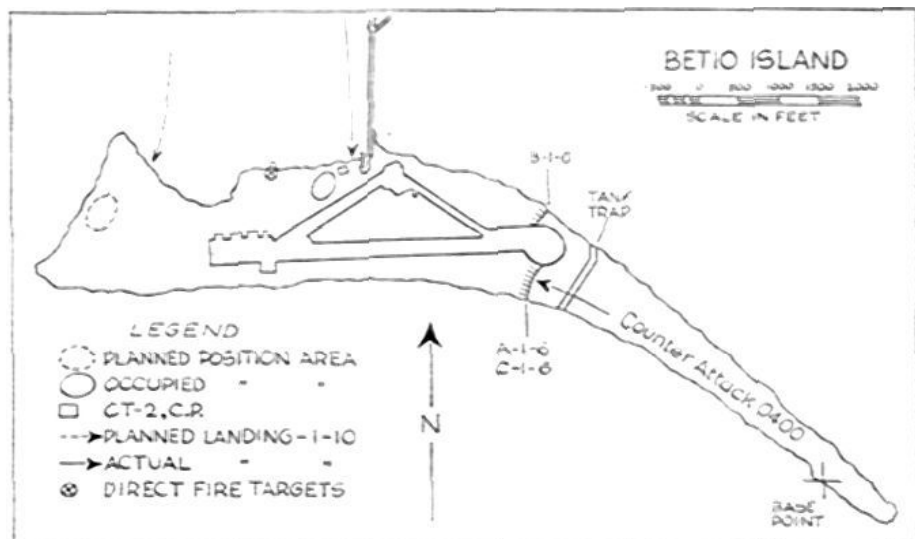
By 1600 on D+1 the entire battalion had been landed in various and sundry craft, including rubber boats and life rafts, many sections being man-handled along the pier, which was still receiving intermittent fire. One howitzer section under Lt. O. B. Wells was sent to the beach junction of Red Two—Red One to handle any direct fire targets which might present themselves. Two were emplaced on the beach to handle direct fire on the grounded Jap vessel off Red Two and any of the disabled American landing craft, should Jap snipers occupy them during the night to fire at our troops in the morning as had been done the night before. All others were set in the firing position, facing inland, with ammo on hand to handle any situation which might arise. The unused personnel were distributed to provide the perimeter defense of three-fourths of Red Two, including the combat team CP. Fire discipline was excellent: not a single small arms shot was fired from the sector during the entire night. The composite battery fired only intermittent missions on the eastern end of the island due to the vague situation.

A bombing raid early on D + 2 morning produced material casualties of only one flat tire and a damaged tear trail, both caused by bomb fragments. The tire was quickly replaced by one from a Japanese light truck in the area.

It was imperative from our standpoint that our guns be emplaced so as to be ready to render effective support to the infantry if they needed it. The area directly SSW from our position offered the only possible position area for the other two batteries. By 1000 on D+2 the area we decided to occupy had not been thoroughly mopped-up and we decided to do it ourselves. Two large patrols were formed, one headed by Lt. Kelleher and the other by Capt. Bo, the Bn-2, who was instructed to reconnoiter the area for battery positions and mark these positions on the map by inspection. Lt. Kelleher was to destroy any enemy resistance found in the area we planned to occupy.

The reconnaissance group returned with information of two good battery position areas and word that they had cleaned out a Jap bombproof shelter which could be used as an FDC. The communication section started to run all the necessary wires so that a transfer of activities could be made without loss of communication and in the least possible time. A bulldozer was secured to knock down a series of sheds which were masking the right of "C" battery; these sheds were thus leveled with the added gain of crushing a persistent sniper hidden under the flooring. At 1100 "A" and "B" batteries were moved into position facing east and echeloned to the west, "A" battery further inland and alongside the airstrip.

Lt. Milner, recently returned from his NGF work, was ordered to join 1-6, who were working up the south shore of the island. Lt. Dickinson's view was so limited he could not register us on the tip of the island. It was known that Lt. Milner would have a good



view from the south coast, so he was given instructions to register the battalion. Prior to his crossing the island in an amphib, TBX communication was established and was not broken until 24 hours later when the island had been secured and our job done.

The Second Battalion of our regiment had sent us a liaison officer who notified us that his battalion had landed on the next island east and was in position ready to support any of our fires. Communication between our battalions was by TBX. During the remainder of the operation 2-10 fired harassing missions on the eastern end of Betio and on-call missions through our FDC.

By 1400, although he had been forced to stop at intervals by virtue of ships' shellfire's obscuring his view of the base point, Lt. Milner had registered the three batteries of this battalion and one battery of 2-10.

At this point a brief discussion as to exactly how our communication was set up would be of value, if only to prove that a battalion can operate on equipment that would seem absurdly inadequate under normal circumstances. At 1400 of D+2 in the battle of Tarawa, this battalion was operating with three TBYS, one TBX, 14 telephones, and one switchboard.

It may be interesting to note that practically every piece of equipment in the battalion had been completely submerged and soaked during the landing. This applied to everything from radios to thumbtacks. With all of our planning, not a thing we had was completely waterproof. It was a hard lesson. Every piece of equipment with rubber gaskets and clamp screws must have the screws turned as tight as possible with pliers, telephones placed in rubber bags and sealed, aiming circle cases sealed with rubber tape, and all radios kept in waterproof bags.

Telephone lines to all elements of the battalion were particularly hard to keep in. The heavy amount of traffic by track-laying vehicles plus shell fire kept the lines continually cut up. You may wonder why the lines were not raised to the trees. In some instances they were but anything that stood up six feet or higher was fair game, so the wire crews were satisfied to splice wires on the ground continually. One wire crew made eight trips between FDC and the forward observer, Lt. Dickinson, on the night of D+2. Cpl. Downing was in charge, and only one man was wounded although they were under constant fire during the entire trip.

About 2300 on D+2 the First Battalion, Sixth Marines, held a line across the island as indicated on the sketch, with

three rifle companies committed abreast. At this time our forward observer, Lt. Milner, reported that approximately 50 Japs had infiltrated into infantry lines between the center and right companies and were causing considerable casualties. This was probably a group of the enemy feeling out our front lines preparatory to a general counterattack. A large force of the enemy, estimated at 250, could be heard assembling under cover about 200 yards in front of this breakthrough, preparing to follow the advantage gained by the "feeler" group. Our battalion promptly laid down a heavy concentration on this area and the threatened attack was broken up amid shrieks and yells from the Japs. This assembly area had been in an open tank trap of their own construction. Time fire was very effective against these troops with no overhead protection.

After the "feeler" group had been eliminated by prompt mopping-up by Weapons Company of this infantry battalion, later that night (at about 0400) the enemy commenced shooting and yelling on the infantry left flank. Subsequently, they initiated a counterattack against the right flank anchored on the south shore. We again fired heavy concentrations at this point, stopping the attack before it could penetrate our front lines and bringing our fires as close as 75 yards to friendly troops. By judicious use of ammunition and repeated concentrations, we kept the enemy survivors below ground the remainder of the

night. Lt. Milner, who conducted the fires of our battalion that night from a position with advanced elements of the infantry, received a much-deserved Silver Star Medal.

Approximately 1,200 rounds were fired by our battalion during the night in repulsing these counterattacks. Enemy dead credited to our fires is estimated at 125, counted the following morning. The pattern of our concentrations on the ground was easily discerned by observers, and within the pattern limits were bodies battered and broken by HE shell fragments, the majority on the south beach. This news brought great joy to our unit as this was our largest "bag" since our days on Guadalcanal.

Our final blasts in anger were delivered as a preparation for the continuation of the attack in the mopping up of remaining resistance on the eastern end of Betio by the Sixth Marines (Col. Holmes) at 0800 on D+3.

Our casualties for the entire four days of one of the fiercest fights in Marine Corps history are considered exceedingly light in view of our early time of landing and exposed position area. Totals amounted to: killed, 1 officer, 4 enlisted; died of wounds, 2 enlisted; wounded, 2 officers, 16 enlisted.

A final summation of the fires furnished during Tarawa's 76 hectic hours may be of interest: total rounds fired, 2,366; fired on counterattacks, 1,200; total other missions, 30 FO problems and K-transfers; average range fired, 1,500 yards.

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## *Artillery On "Nothing Atoll"*

By Lt. Col. R. A. Evans, USMC

### AUTHOR'S NOTE

A Marine aviation unit stationed on the island dubbed Peleliu in the Palau group, "Nothing Atoll." The term stuck, hence this title.

Another word was coined on Peleliu—"infantry." Its background was the dual nature of our employment there. For more details, see below.

Acknowledgment and thanks are hereby given to Capt. James A. Pounds, III, USMCR, for his help in preparing and editing this article.

This operation gives an example of probably the most unorthodox employment of a 155-mm howitzer battalion in this war to date. Combining the Civil War tactics of front line artillery and World War I method of massing artillery with guns hub to hub, the Third 155-mm Howitzer Battalion went headlong into an operation which will go down in Marine Corps annals as one of the most difficult in its history.

Contrary to popular opinion and the usually accepted principles of employment, the battalion was landed and firing on D+1 when the beachhead was not completely established and only three to four hundred yards deep. To the south the front lines were only 100 yards away when the guns rolled into position. Two batteries were in position trail to trail, firing in opposite directions, and the third battery was in march order close by. The entire battalion was in an area approximately 200 yards square. Compare this with an Army 155-mm howitzer battalion in Italy whose battery fronts were as much as 800 yards. These examples of medium artillery employment in two widely separated theaters of war show that sometimes the "established" rules must be thrown overboard to meet existing tactical situations.

Accepted methods of camouflage did not apply as the bombing and shelling had destroyed practically all of the natural cover. The howitzers were emplaced on top of solid coral rock, using shell holes as trail pits, because the fire of 155s was vitally needed to support the hard-pressed infantry.

Later in the campaign the battalion was ordered to act as infantry, another example of artillery personnel employment rarely acceptable or even thought of.

### AFLOAT AND BEFORE

Preparation for the operation began two months prior to D-day. Previously this battalion had converted from a 75-mm Pack Howitzer Battalion. Over a period of two months the process of procuring equipment had been completed and training begun. All hands had taken to the new weapon like ducks to water, and by the time the campaign began this battalion was as good as any the Marine Corps had.

During this period some old-timers had gone home and inexperienced men replaced them. Just prior to the final rehearsal phase 105 recruits joined the battalion, creating a small problem because the active training phase was over. Succeeding events proved, however, that the last minute additions did not impair the efficiency of the unit.

The battalion was not required to participate in landing rehearsals as it was not scheduled to land until a large beachhead was established. That pleased all hands because rehearsals are a lot of work and mainly for the command echelon anyway.

For the trip to the combat area the battalion was distributed on five ships so all the eggs would not be in one basket, and to fit the cargo and troop spaces. Most of the ammunition was boated on still another ship, each battery carrying a unit



of fire with its guns. Organic transportation was reduced to a bare minimum that would get the equipment ashore. One prime mover (TD-18 tractor) and one bulldozer (TD-18 with blade) and one 6-ton Athey trailer were allowed per battery, including Headquarters and Service Battery. Additional transportation for the battalion was three 2½-ton trucks, two radio jeeps, three wire-laying jeeps, three 1-ton cargo trailers, and four 300-gallon water trailers.

Each firing battery lashed gun boxes, tarps, camouflage nets, filled water cans, oil cans and gasoline cans, spare parts boxes, machine guns and ammunition, communication equipment, and battery sick bay boxes to the gun trails, covering the gear with a securely lashed tarp. In this way all vital equipment needed to go into position and fire was carried with the guns. Likewise the tractors were loaded with water, oil, and diesel fuel so they would be self-sufficient for several days. The tractors were waterproofed for a depth of six feet. Trucks were not waterproofed except for spray. One tractor was equipped with an A-frame to carry the jeeps ashore and to lift the motors of the trucks above the water when they were brought ashore. This A-frame proved of inestimable value in unloading ammunition. It served its purpose until most of the ammunition was ashore when an overload buckled it in the middle, rendering it unserviceable.

Athey trailers were loaded first with a layer of lumber, a large tarpaulin, 100 projectiles, powder and fuzes for the shells, and several hundred sandbags. They were loaded to the top of the stake body and over the whole load was a securely lashed tarp to keep out rain and hold the load.

The trucks were loaded with communication equipment and the galley equipment for all batteries, covered by a tarp. Six pyramidal tents were among the gear, one for each battery CP,

battalion CP, fire direction center, and battalion sick bay. Motor transport spare parts and battalion dental and sick bay equipment were on the cargo trailers, and the water trailers were filled.

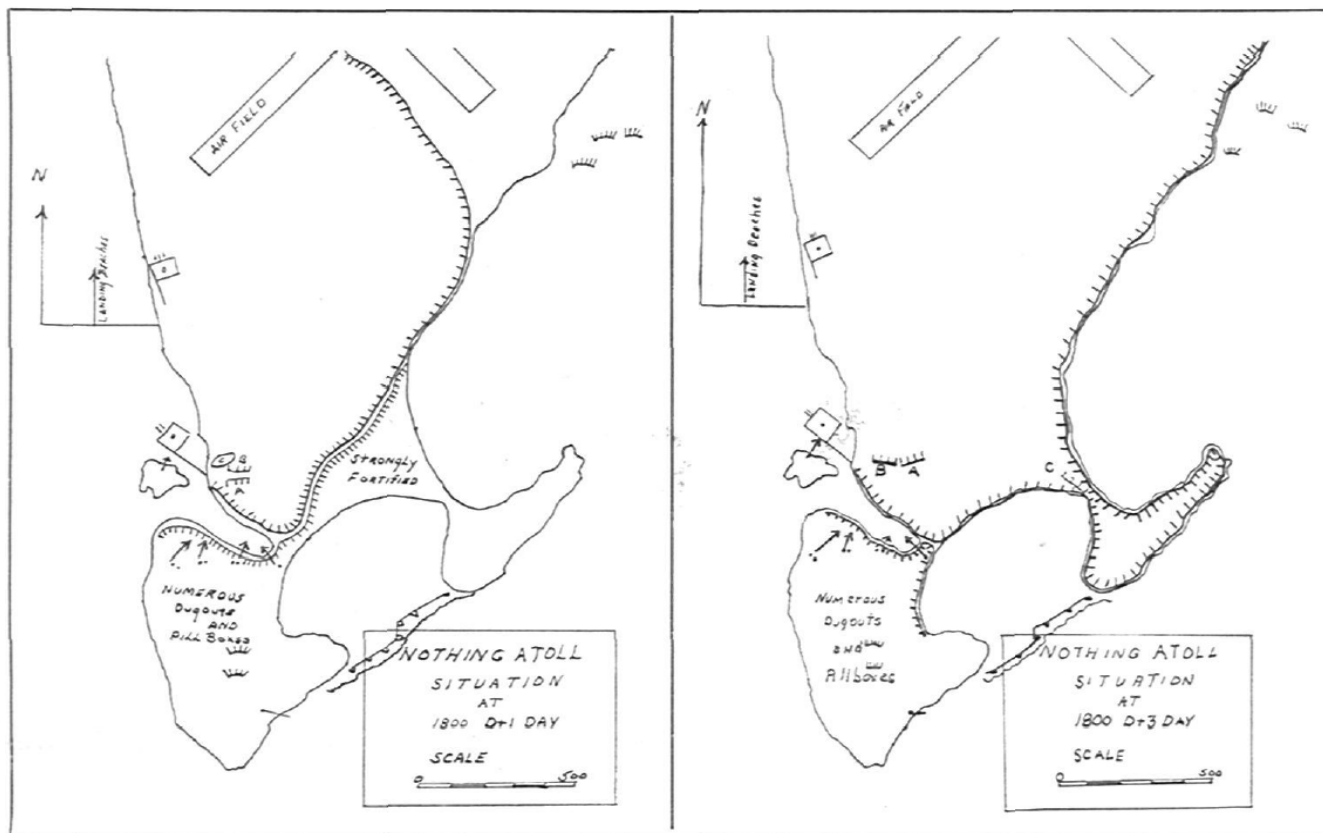
Bulk cargo consisted of 1,400 complete rounds, water cans, fuel drums, rations, and the remaining organizational equipment. We attempted to load each firing battery completely on its ship, but this proved impossible and the overflow went aboard with the Headquarters and Service Battery. LCTs were assigned to each of the three firing battery ships as they were the smallest craft that could carry the heavy equipment.

Loading was completed one week before getting underway for the combat zone. The convoy shoved off eight days prior to D-day. The trip was uneventful, broken only by the evolutions of the ships on special maneuvers.

Early on D-day morning the vague shapes of several islands were barely discernible, but at dawn guns of the bombardment fleet marked "Nothing Atoll." At this time the battle fleet and carrier planes began the final awe-inspiring preparation before the landing, giving this island of ten square miles the heaviest bombardment per yard of any island in this war. In an hour the entire island seemed afire. It appeared impossible that any human could remain alive through such terrific destruction. Much to the dismay of the entire command, there were plenty of the enemy very much alive and waiting for the assault waves. The Japs could really take it.

During the preparation ships were unloading and the assault waves were forming for the run to the beach. At 0830 the bombardment lifted inland to the high ground and the landing began. Chaos and destruction among the leading waves were fearful, but that is another story.

The battalion reconnaissance party was boated at 1000 hrs.



and on the line of departure awaiting the call to land. From the boat it could be seen that the advance was not progressing as fast as planned and the reconnaissance party probably would not land on schedule. The party remained in the broiling sun watching shells land on the beaches for seven and a half hours, only to return to the ship for the night.

During the day two LCTs were loaded with guns and equipment of B and C Batteries, ready to land. These two batteries spent the night floating around just off the beach.

The transports and cargo ships got under way and stood out to sea for the night, returning at dawn to continue unloading and sending troops ashore. Again the reconnaissance party boated and received instructions to land at 0900, which feat was accomplished after much dickering with LVTs at the line of departure. During the first two days the beach was covered with continuous enemy artillery and mortar fire so we started in with no little trepidation.

#### ARTILLERY ASHORE

Upon reaching the beach without mishap a search was begun for the regimental CP of the Eleventh Marines (to which this battalion was attached) for information and instructions. A 30-minute search found the CP in a small Jap dugout just off the beach. Lt. Col. Lyman (executive officer) and Lt. Col. Chapman (the R-3) informed us we had received erroneous instructions to land and should not be ashore until afternoon. It was too late for a change so we studied the Eleventh Marines' situation map and learned with dismay that the 155-mm howitzer area had not yet been captured. Another position area was the only solution. It was close quarters, but an area was found where at least one battery could be placed in firing position and the other two in concealed bivouac. At 1200 the reef was almost dry so permission to bring the battalion ashore was requested and granted after some discussion. The LCTs were ordered in to the reef. The third battery had been boated early in the morning so all three firing batteries were ready to come ashore. At this time mortar shells were still landing on the beach, causing some concern because one shell could easily knock out a gun. (Due to this shelling and the resulting confusion it was D+4 before all service and supply elements of the battalion were ashore.)



*Marines cautiously examine the ruined emplacement of a Jap 105-mm howitzer, Mod. 91, which had been harassing their landing troops until Marine artillery silenced it.*

C Battery got off to a bad start by getting an ammunition trailer struck on the reef but by ingenuity and hard work it was free in about thirty minutes and the battery continued to unload. By 1800 the firing batteries and enough FDC personnel to operate were ashore. B Battery was in position and registered before dark. A Battery was put in position about 50 yards in rear of B Battery with line of fire in the opposite direction (see sketch). C Battery was in concealed bivouac nearby. The position was about 200 yards square and on solid coral, pockmarked with shell and bomb craters. These craters served as trail pits and foxholes for the troops. Without them the position would have had no cover and would have been untenable. Throughout the occupation small arms fire crackled ominously overhead.

B Battery opened fire to the north and west in general support and continued firing from this position day and night for 14 days. A Battery fired in the opposite direction in direct support of the Seventh Marines, using direct fire at ranges from two to six hundred yards. For three days forward observers and observers at the guns placed several hundred rounds from A Battery guns on pillboxes, machine gun positions, and troop concentrations.

The guns were in a precarious position as the enemy could see all the pieces from close range and had commanding ground on which they had machine guns firing at our infantry. Why the Japs never concentrated fire on our position will always be an unexplained mystery.

Immediately upon coming ashore the battalion FDC was set up and ready for missions as soon as B Battery was in position. Originally the FDC was in a very small Jap shelter, where it remained for two days and nights. On the third day the FDC tent was erected, prepared for blackout, and used during the remainder of the operation. Flashlights and battery lamps were used.

HCO and VCO charts were established on two plane tables. Bn-3 and the computers with charts and records used a 3' x 6' table. Telephones marked each post. After the third day the HCO and VCO charts were combined and one man did both jobs, alternating with the other. Regularly accepted procedure was followed in the FDC. Recently developed technique proved sound. Two computer teams alternated, as did Bn-3 and his assistant. By the end of the operation four complete FDC teams were trained. A chronological record of targets and firing data was kept in journal form, no concentrations being plotted on the firing chart.

With registration the maps provided were accurate enough for horizontal control but inaccurate in vertical control. These maps were used as the battalion firing chart, nevertheless. As there was only regimental control of fire, battery fire charts were dispensed with except for situation maps. The metro section took messages every four hours; they were accurate and were used to correct firing data. No survey was attempted as location by inspection was within the error of the map and considered accurate enough.

Bn-2 kept an accurate enemy situation map, getting reports from aerial

observers and forward observers as well as from men assigned to contact adjacent units for information.

Both wire and radio communication was quickly and efficiently installed. The SCR-300 radio was used by forward observers and for alternate communication channels between batteries and battalion. This radio proved to be a good, reliable set. TCS radio jeeps were used for communication with air observers, with a telephone from jeep to FDC. Direct lines were laid from the FDC to regimental and adjacent battalion FDCs in addition to normal trunk lines between switchboards.

Ammunition came ashore in special landing craft. It had to be husbanded carefully the first few days. The supply soon became stabilized and thereafter no missions were refused. Most of the 155-mm ammunition was palletized, 18 projectiles to a pallet and approximately 36 charges to a pallet. This system proved very useful in handling ammunition and storing it above the ground.

On D+2 enough ground was secured to enable C Battery to go into position. Reconnaissance was made about noon, and the battery moved into position, registered, and was firing missions by nightfall. It fired continually for 13 days and nights. C Battery was about 500 yards from the other batteries.

Next day A Battery was able to move to a new position where it too could support the main effort to the north. Reconnaissance closely followed the infantry, but the party was pretty badly shot up by Jap machine gun fire so this position was discarded. A Battery was placed on the right flank of B Battery, making in effect one battery of eight howitzers with a front of about 200 yards. The battalion remained in this position throughout the attack phase of the operation.

Each day thereafter the battalion fired a 30-minute morning preparation, then on targets of opportunity throughout the day. Daily air spot assignments were given the battalion's observers, who remained aloft during daylight hours. The air spot was exceptionally successful. Little anti-aircraft fire was encountered, allowing the planes to go low and find otherwise invisible targets. Observers gave a blow-by-blow description of the action which greatly added to the interest and increased the morale of the troops. Throughout each night harassing fires were delivered as per schedule.

Favorable reports came from all sides on the effectiveness of the 155-mm howitzer fire. Destruction of many pillboxes, dugouts, caves, storage dumps, buildings, machine gun nests, ammunition dumps, artillery pieces, naval guns, mortars, bridges, trucks, and personnel were credited to the battalion. Time fire was used very effectively against personnel both on land and in barges. Adjustment was made with point detonating fuze, and air bursts were obtained by using the PD range and setting time fuzes for this range.

A total of 8,173 rounds were fired by the battalion—some 380 tons of high explosives and steel thrown at the enemy. Only one round fell short, and that was a smoke shell which injured no personnel and did no damage. All the ammunition fired was point detonating high explosive except for 172 smoke shells and 53 air bursts. A Battery fired 2,693 rounds, B Battery 3,135 rounds, and C Battery 2,346 rounds. B Battery was the normal adjusting battery.

#### INFANTILLERY

Then on the seventeenth day came the bombshell. The message said, "Take off your artillery dungarees and don the infantry uniform. You are to go to the front lines acting as

infantry to hold a defensive sector." Thus was born the term "Infantillery." The battalion furnished one company for the western sector and four for the northern sector. It was purely a holding mission, but a dangerous sector. The artillery was not to be used as attack infantry. The message came at 0900 and the lines were to be occupied at 1300. The relief was accomplished on time although there was quite a scamper to get required infantry weapons. In all, the battalion had 485 men on the line at one time.

Only a few machine guns could be advantageously emplaced on the rocky ridge so grenades, carbines, and Tommy guns formed the defensive backbone. On the first night as "Infantillery" the battalion CP was attacked three times by small groups of infiltrating Japs. In the resulting melee we lost one killed, two seriously wounded, and 12 others wounded. The Nips came off second best in the scrap, however. The following seven days and nights were almost repetitious, causing a total casualty list of 7 men killed and 7 wounded. Most of the wounded required evacuation. During the day the Japs had well concealed snipers whose fire was deadly accurate and at night lobbed grenades into our positions. This episode made quite an impression on all members of the battalion and convinced them that such employment was uneconomical for artillery personnel.

At the end of eight days the battalion was relieved but was required to maintain two companies of 100 men each on the line indefinitely. Fortunately this period only lasted seven more days. Everyone was relieved when this tour of duty ended.

During the "Infantillery" stage two howitzers were emplaced where they could bear with direct fire on caves and commanding ground that was causing a stalemate in the operation. These pieces fired at numerous caves in sheer coral cliffs, breaking down the hillsides and closing the caves with rubble. Direct hits were scored on the mouths of caves, causing great consternation to the hidden Japs. Artillery at this time was being used much like demolitions. Pure destruction was the mission with no methods but visual to check results. These two pieces fired in this manner for 12 days, and one was used for effective night harassing fires which pleased the infantry. This was, to the author's knowledge, the first time 155-mm howitzers had been used in such a manner.

Several high ranking artillery officers conducted fire of the advance position guns, and one claimed to have sniped a lone Jap, getting direct hits. This fire was at times landing within 100 yards of our own lines.

For this direct fire it was found that with charge one at ranges of 1,000 to 1,200 yards the projectile did not follow the trajectory but went through the air with the long axis of the shell horizontal. Ricochets were the result, and the fuze apparently did not arm—many were duds. Several theories to explain the phenomenon were advanced but none proved. The charge was changed to six and then gradually reduced to charge two, which was used thereafter for such firing.

During the whole operation there were few materiel casualties, all of a minor nature easily repaired in the field. Broken firing pins and broken obturator spindles made up the majority. One piece returned to battery jerkily after several hundred rounds but was repaired by the battalion ordnance section in a few hours.

Camouflage and camouflage discipline were forgotten except

for C Battery, which had good position with some natural cover, but no difficulties were experienced. The terrific pounding by naval gunfire and bombing made camouflage almost impossible as it practically denuded the island.

Except for several 77-mm rounds that went overhead, no counterbattery was experienced by this battalion. Some mines and a few booby traps were encountered, and one artillery shell killed two and wounded two early one morning. This shell was

from another Marine battalion firing from the other end of the island toward our area.

Needless to say the battalion was happy to be relieved by an army 155-mm howitzer battalion and go aboard ship. Remembering six weeks of toil and pure hardship, the officers and men of the battalion heaved a sigh of relief as we took our last look at "Nothing Atoll" and set course for base camp and the good food and comforts (movies and beer) that awaited us.

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## TRENDS in Field Artillery Organization & Equipment

By Maj. Shirley B. Metzger, FA

The Field Artillery Group is again being changed to include a motor officer and a radio sergeant. The assistant S-4, who was recently added to T/O & E 6-12, is also designated the group motor officer. This change gives the group the officer that has been needed to supervise motor transportation and maintenance in the assigned or attached battalions. The staff sergeant, radio, is an additional enlisted man. His function will be parallel to that of the radio sergeant in division artillery headquarters batteries.

Radio Set SCR-536 is being authorized for pack headquarters and howitzer batteries, when not part of a Mountain Division, on the basis of two (2) per battery. When the pack battalion is part of a Mountain Division the SCR-536 is authorized for the artillery forward observers in the T/O & E of each rifle company.

A revised Mountain Division Artillery, T/O & E 6-150-1 and the included pack battalion, T/O & E 6-185, Field Artillery Battalion, 75-mm Howitzer, Pack, Mountain, is being published and distributed by The Adjutant General, dated 4 November 1944.

Expendable pack items which were formerly authorized in T/O & E are being removed. The allowances for these items will be carried in SNL C-20. Units may requisition the necessary items through normal channels as they are needed. Pack T/O & E's will include a reference to the SNL where these items are to be published.

Further means of aiding TOT fires is being given higher headquarters batteries by adding the Clock, message center, M2, for time control to the headquarters batteries of Infantry and Armored Division Artillery; Field Artillery Group and Brigade. The Corps Artillery has already been given this item. In addition the armored battalion headquarters battery T/O & E is to include a Watch, stop, type B, class 15.

T/O & E 6-36, headquarters and headquarters battery, medium artillery, has been increased by twelve (12) Packboard, plywood, and allied equipment. Combat experience has indicated the need for packboards is as great in this type of unit as in the light artillery headquarters batteries.

The Rule, slide, military, w/case, 10-inch, is a newly standardized item which combines into one item the essential functions of the mathematical slide, and Slide, M1 for the 18-inch graphical firing tables, the Rule, slide, short base

triangulation, and the 10-inch polyphase slide rule. The new slide rule will be included as a component part of appropriate sets and will also be carried in T/O & E's to replace the rules indicated above.

This Military Slide Rule is a 10-inch Mannheim type, engine divided rule, which combines into a single item the functions of the Mathematical Slide and Slide M1 for the Graphical Firing Tables M4 to M22, the Short-Base Triangulation Slide Rule, and the 10-inch Polyphase Slide Rule, except for the B, K, and L scales of the latter item, which have been omitted from the subject rule since they have no application to field artillery work. This slide rule has "Apex Angle" and "Opposite Angle" Scales graduated in both mils and degrees, a "Base C" Scale, and a "Range D" Scale, which are so constructed that when used together they permit the solution of oblique triangles by the law of sines for angles reading in either mils or degrees. The graduations on the "Base C" and "Range D" Scales are also arranged so that they can be used for ordinary multiplication and division. In addition to the above scales, there are an invert or reciprocal "CI" Scale, an "A" Scale for squares of numbers, and scales of trigonometric functions of angles in mils corresponding to the somewhat similar scales on the commercial polyphase slide rule. The Military Slide Rule is especially designed for the solution of short-base triangulation problems and computation of coordinates, in addition to accomplishing the functions of the commercial 10-inch polyphase slide rule with the exception of the L, K, and B Scales. The subject slide rule has an accuracy approximately the same as that of a standard 10-inch polyphase slide rule. The slide rule occupies approximately 0.02 cu. ft., and weighs 0.5 lbs. The overall dimensions are approximately 1 × 2 × 12 inches.

Changes to divisional 105-mm howitzer batteries to provide for the addition of 2 howitzers when authorized by War Department, thus making a 6-howitzer battery, have been approved. T/O & E 6-27, Field Artillery Battery, Motorized, 105-mm Howitzer, Truck-Drawn and T/O & E 6-327, Field Artillery Battery, Motorized, 105-mm Howitzer, Tractor-Drawn, will include the augmentation qualified by the note:

"when specifically authorized by War Department for division artillery 105-mm howitzer batteries."

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Sooner or later you'll be left out in the cold if you "guess" your radiator has anti-freeze protection. Don't take a chance. Test the anti-freeze yourself—frequently.

# How We Trained for D-Day

By Lt. Bruce Bliven, Jr., FA

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We first learned that our division was to take a leading part in the invasion almost a year in advance of the event. It was in July, '43. My artillery battalion was engaged in firing when the battalion commander brought the word. He had been to an orientation meeting, had been informed that we would participate in the assault, had attended a series of lectures on amphibious techniques, and had picked up a dazzling new vocabulary of technical words and phrases. I remember one especially, "the race for the build-up," referring to the all-important period between the initial landings and the launching of the main German counterattack. "The race for the build-up," the Colonel said, "will be the crux of the matter."

He spoke familiarly about "LCVPs" and "LSTs," of "far-shore brigades" and "naval fire-control parties," of "beach masters" and "transport quartermasters." The Colonel mentioned the interesting possibility that our 105-mm outfit might be armored. We never were, but at the time that suggestion, plus a false rumor that our new guns and tracked vehicles were already waiting for us back at base camp, excited more comment than the announcement that D-day would find us on the French beaches.

Almost at once we started training for our special assault task, a curriculum of extraordinary thoroughness and—like all army schooling—endless repetition. The heavily censored news dispatches from England to our home-town papers invariably spoke of our activities as "intensive invasion preparations," an accurate but not particularly graphic description. We cursed through eleven months of that invasion drill, accusing the higher authorities of insanity or worse. But we now can see that the army's foresight, translated into our repeated "dry runs" and our forced attention to the most trivial details of the proposed operation, was the margin of success on D-day.

Our practice began with backing up. Service battery picked out a lively stretch of moors, fenced out the dimensions of a Landing Craft, Tank, and on this "mock-up" the battalion's drivers practiced loading. Each vehicle had an assigned deck space hardly greater than its own length and had to be backed on board up the simulated ramp, pushing either a trailer or a gun. It involved expert driving and patient driver-directing. On our larger vehicles the driver cannot see as far back as the end of his trailer and must be guided by a man on foot using hand signals. We practiced signaling and discovered how hard it is to let just one man at a time do all the directing, how hopelessly confused the driver gets when he has more than a single adviser. Each towed load, to add to the confusion, backs in its own whimsical fashion; our drivers learned to handle all types, from the ponderous howitzers down to the frisky jeep trailers. They backed through dust and mud, in daylight and in dark (using dimmed-out flashlights for signaling). In the process a number of tricks were improvised: welding a hook onto the truck's front bumper, for example, so the trailer could be pulled instead of pushed aboard, or picking up a jeep and bouncing it into place instead of wasting time backing and filling in cramped space.

By November, when our battalion and the infantry regiment it supports went to Assault Training Center on the windy coast, we were undoubtedly as expert at backing as any outfit in the army. And our drivers were talking about the postwar cars then intended to buy with three forward speeds and no reverse. We had meanwhile learned how to waterproof our radios and vehicles, a laborious process which consists, very roughly, of making mudpies out of a special grease and plastering up all seams, seals, vents, and electrical connections. Our drivers had been to division waterproofing school and each man had tried his knowledge by waterproofing his own truck and driving joyfully into the sea up to his fenders.

The Assault Training Center, cold, uncomfortable, and muddy, was beautifully organized. The course was designed primarily to teach the infantry the intricate individual and team techniques for storming German coastal-defense pillboxes. While the infantry learned to manipulate flamethrowers and dynamite demolition charges and how, as a team, to approach a concrete "hedgehog" bristling with automatic weapons, the artillery waterproofed its vehicles and practiced loading (this time on full-scale concrete replicas of LCTs). We experimented with firing our howitzers from ship to shore and got the feel of driving through sand of every grade and every degree of wetness. At night we attended lectures on the various aspects of amphibious operations: communications, air support, the medical problem, and so forth. The first of these lectures and a fair proportion of the subsequent talks began with the ominous remark: "The mission of this school is to prepare you for an assault on the French coast." We accepted this as a device to gain our attention; the spring and weather favorable for an attack were still too far away to worry about.

Graduation from the ATC consisted of a mock assault by our combat team, a maneuver which gave everyone a chance to employ the new skills. Our battalion loaded its equipment onto LCTs from the sandy beach at dusk, the first time the drivers had had a chance to back in earnest. Loading of personnel, both infantry and artillery, continued most of the pitch-black night, a cold and ghostly business. Finally when we were all loaded, the landing craft sorted themselves out according to assault waves and the flotilla sailed on a choppy sea a few miles up the beach to circle offshore until dawn and H-hour.

For my battalion the main problem was getting our equipment ashore, moving the trucks and guns through the narrow beach exits the engineers had swept free of dummy mines, and getting into position to fire in support of the infantry's advance inland. It sounded easy. It went, in fact, quite well. Yet even this first taste impressed us with the difficulties involved in a landing, the invitations in every phase for things to go wildly and hopelessly wrong. The maneuver lasted from dawn until dark when, wet and tired, we headed back for camp and hot food, and many of us wondered how our attack would have gone if there had been Germans waiting for us in the dunes instead of umpires with their gaily colored flags.

Other assaults on other coasts had taught the army that a

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tragically large number of soldiers could be lost by drowning in the few hundred yards from ramp to shore, in water theoretically no more than knee-deep but often, in fact, well over a man's head. So we learned to swim or at least, in the case of a few hopelessly non-buoyant, not to be terror-stricken by the surf.

The battalion swam through all but a few weeks of the cold winter, several hundred unwilling members of the Polar Bear Club. We swam in streams, rivers, pools, and static water tanks, anywhere a man could practice the difficult art of staying afloat in spite of helmet, fatigues, and GI boots. Once a man had proved his ability to negotiate roughly fifty yards he was excused from further ordeal. So after a few weeks the group of non-swimmers had been reduced to a relatively small number, some who had never before tried swimming, some who were pathologically afraid, and all of whom claimed either sinus or a "peculiar bone condition" which would prevent their ever learning.

In early spring the non-swimmers who had floundered and shivered all winter suddenly became the envy of the camp; arrangements had been made to shift the swimming classes from the frigid confines of the static water tanks to a heated indoor pool of considerable splendor, the favorite destination of men on a 48-hour pass. Immediately all battery orderly rooms were filled with applicants for instruction, as eager now to prove their entire ignorance of the water as they had been, a few months earlier, to show their ability to teach Johnny Weismuller a trick or two. The legitimate non-swimmers merely forced their blue lips into smiles and rode off happily.

With one exception every man in the battalion learned at least to float, to me as remarkable an achievement as any part of our training. The lone failure (probably due to some peculiar bone condition) persisted in sinking every time despite heroic efforts by the squad of instructors. He began the course, however, so frightened by water that the sight of the pool made him nauseated. At the end of the lessons he was willing to plunge head first down the slide at the deep end of the pool, and he did so over and over again. Each time he splashed, spluttered, sank, and was methodically fished out of the water with a long pole.

The smaller landing craft are loaded from transports close in to the enemy shore with the men transferring over the side on heavy rope "scramble" nets. To save time and minimize accident, the army has devised a systematic procedure. Naturally, we learned it. The mock-up was a platform about twenty feet in the air, with a section of railing and the net stretching to the ground below. For weeks "Cargo Net Drill" appeared on the daily training schedule, hard, dull exercise which soon outranked Close Order Drill on the list of despised classes. But shortly, and after a considerable number of sprains and bruises, every man in the outfit could manage the descent with ease, even when the net was shaken violently to represent the possibility of a rough Channel crossing. Every man knew how to wear his web equipment with the waist buckle unfastened (for quick removal, just in case), how to keep his rifle and entrenching tool from tangling in the ropes, and how to space his hands and feet for greatest security.

On the assumption, which was correct, that much of the landing would take place at night, the battalion methodically set about learning to work in the dark. For a period our time schedule was turned exactly upside down. Reveille was at six

as usual, but at 6 p.m. We took road marches from 3 to 5 a.m., ate lunch at midnight, and "evening" passes were issued from Retreat at 5:30 a.m. until noon, most confusing for a man in search of a "mild-and-bitter" who found the pubs just opening instead of just closing at the time for him to be back and in bed. The night-is-day period was a great boon to goldbricks; not even the toughest motor sergeant could deal effectively with a motor park full of drivers who made industrious scraping and polishing sounds in the dark but whose vehicles, at dawn, were just as dirty as ever.

These special subjects were all superimposed upon a regular artillery training program of more than ordinary intensity, with special attention to physical fitness. The artillery is supposed to ride to work; despite that theory we marched at least twelve miles a week during those eleven months, most of the time in 4-mile speed marches every other day over the rolling roads with full field equipment, including water in one's canteen. Every battery was required to bring all its men to the point of completing these events, taken in series, without time out to catch a breath: 25 push-ups, a 300-yard run within 45 seconds, a 50-yard crawl under barbed wire, carry a man 25 yards piggy-pack and then ride for 25 yards, and, finally, march 4 miles in not more than 45 minutes. Men who could not make the grade were transferred to other outfits.

Every man in the battalion was qualified at least as a sharpshooter with his individual weapon—a grade higher, that is, than the usual standard. And when nothing else was in progress, the battalion continued with normal exercises: practice in selecting and occupying positions, in surveying and wire-laying, practice in radio operation and the use of signal flags, in observing from our grasshopper planes, in gun drill and in conducting all types of fire; all of these overlaid with the ever-present, herculean task of keeping ourselves and our equipment shipshape—"Care and Cleaning of Materiel."

About January we began formal dress rehearsals for D-day, a series of amphibious exercises, each with an intriguing code name, and trappings of great secrecy. "Duck One" was practice in moving from base camp to a tent-city marshaling area near the coast and from there to the docks (or "hards") where our assault craft would be waiting. This in itself is a complicated operation. An artillery battalion fills a number of craft and spills over into many more, with its rear and forward echelons, liaison officers and forward observers with the infantry, reconnaissance parties in early waves and service trains in late. The battalion, both men and equipment, had to be broken down into such boat groups according to the time schedule for landing, and each group had to arrive at the right "hard" at the proper time. Duck One was at least as much an exercise for the supply troops who housed and fed us and the Transportation Corps which moved us, as it was practice for the battalion.

Each of these final rehearsals stirred up the rumor that we were actually on the way to France. On Duck One we were ordered to destroy all personal letters in our possession, turn in diaries for safekeeping and empty our wallets of anything which might furnish a clue to our military identities beyond name, rank, and serial number. That seemed going pretty far for just a dry run. Then an extra and free PX ration was issued, along with three days' K ration for the crossing, and the Cassandras looked exceedingly smug. We could not be completely sure that it was not the real thing until we marched down to the moonlit "hards" and found that no assault craft were waiting.

A considerable portion of the coast, four or five miles of the

beach, and the beautiful countryside inland to a depth of six or eight miles had been entirely evacuated for our maneuvers. The beach was almost a duplicate of the Normandy beach; the intensively cultivated farmlands with small fields marked by hedgerows was a close approximation of our present battlefield. The area was slightly tougher from a military point of view, probably on the theory that the real thing should seem easy compared to the rehearsal. We were instructed not to shoot up historic landmarks and to avoid unnecessary damage; otherwise we had a free hand. The artillery for the first time got to shoot on what had been populated ground instead of the dull wastes of our ranges. We were allowed to drive across cultivated fields, tear down fence posts and blast through hedgerows that were in the way of our guns; exciting stuff after so many months of caution and damage reports.

Our last maneuvers were full-scale landings by combat team, by division, and then by a skeletonized corps, each complete in every detail. A warning order would come to base camp, reviving the old rumor that D-day was finally at hand. We would repack our personal belongings, recheck our organizational equipment, and move out to marshaling areas completely ready to go on to France, if necessary. The battalion was broken down to craft loads, we embarked, a convoy formed and, finally, on word from higher headquarters, we sailed out into the Channel. Only at daybreak when we saw the familiar coastline ahead would we know that our landing would again be unopposed.

Each of the mock assaults was preceded by heavy naval gunfire and air bombardment on the beach and its defensive installations. The infantry, firing live ammunition and carrying real explosive charges and using the techniques learned at Assault Training Center, smashed through the line of hedgehogs. The engineers cleared out road blocks and swept clear lanes through the minefields, and the artillery came ashore, went into position, and started firing furiously at the unresisting picture-postcard landscape.

With each rehearsal the operation went a little more smoothly and we became more and more self-confident. We learned to live on K rations. Navy slang got mixed in with our GI talk, as well as extravagant words of praise for navy bread made with that good white, vitamin-deficient American flour. We learned respect for the engineers and their hazardous job and our admiration for the infantry, already great, was increased: it was obvious that it had the really tough job, the main job. All anybody else could do was to try, in our various ways, to help.

In the middle of May when the battalion was alerted for Exercise and moved to the marshaling area, we were too fed up with repetition to get excited. "This is the real thing," went the rumor. And as each man passed the word on to his neighbor he got the reply: "I hope to hell it is!"

There was almost a complete absence of tension in our camp. Not that many of us doubted that the attack would shortly take place, for we could see that too many troops were involved for a dry run. We waterproofed our vehicles, as before. We burned the few letters that had accumulated since the last burning. Extra rations were issued, lifebelts were distributed and tested, final checks were made on weapons, dogtags, and shoes; all in accord with rehearsals. There were, to be sure, a few novelties: gas-resistant clothing, water-purifying tablets, seasickness pills, and, contradictorily, vomit bags. And before D-day the entire assault force, including every private, was briefed on the plans for the operation in complete detail. All room for doubt was gone. Yet at the briefing there was no apparent excitement except a ripple of pleased astonishment when the Colonel announced the number of tons of bombs that would be dropped on our particular beach prior to the hour when we would land.

I do not mean to say that the men in the battalion were not frightened by the prospect of the job ahead. But there was certainly none of the nervous uncertainty that might have been expected. We felt confident—more confident in fact than was justified—because we had reason to believe that every possible preparation had been made.

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## 111th FA Bn ON D-DAY

By Lt. Col. S. L. A. Marshall, GSC

**June 6, 1944, was not all "beer and skittles" for the artillery, any more than it was for the infantry. From Maj. Gen. C. H. Gerhardt comes this graphic account of one battalion's difficulties, as set down shortly thereafter. Aside from being a gripping narrative, it carries many lessons for echelons both high and low.**

The battalion was supposed to land its guns at H+110, this plan assuming that a beachhead would be established by that hour. Guns and personnel were to be brought in on DUKWs, the latter having been put aboard LSTs full-loaded in Britain. The designated fire positions were to the north of Vierville.

Small group of the battalion—forward observers, recon and liaison parties, and the recon officer for HQ battery who was supposed to select the Bn CP—were scheduled to land between H+30 and H+55. They got in one hour late. The battalion commander, Lt. Col. Thornton L. Mullins, came in at 0730. These small groups landed at the same place as 116-2 HQ—on either side of Les Moulins. The beach was quite smooth when they came in. There were no shell or bomb craters. No obstacles had been blown.

To Capt. Iva L. Harper, liaison, who came in with the small groups, it seemed clear almost immediately that the guns should not be brought in. The surf was running extremely high—the officers agreed that the waves were five to six feet in height. Obstacles still barred the way to a clean landing. There was steady 88 and small arms fire on the beach. What mattered more, he saw no friendly troops ahead anywhere. The heights were still held by the enemy. In short, the beach had not been established. In those first few minutes, however, he could do nothing about it.

Such was the volume of small arms fire that the men, getting out of the boats, had to look for immediate cover. Men were dropping from bullet fire right and left—some of them as they stepped from the boats. Harper tried to take cover behind an obstacle, found it inadequate, and then made a dash for the seawall. His sergeant was killed by a shell as he reached it. Not yet being in touch with any of the other small groups, Harper sought his radio. The operator told him that it was inoperative; he had stepped from the LCVF

with it into water over his head, and for 10 minutes it had been on the bottom. Harper looked for another radio but could not find one. He then stayed on at the Inf Bn HQ for about 4 hours. It seemed to him that the situation was deteriorating during that time because of lack of information: nobody seemed to know just what steps should be taken.

The small groups had landed right in the middle of Co F, whose men the battalion commander was then trying to collect. Capt. Richard F. Brush, Arty S-2 who was aiding battery recon officers in seeking gun positions, was with this commander, whose radio was out. He tried to use Brush's but it wouldn't work, so he then started doing personal work with small groups of riflemen. Brush describes these men. "They were 'beat up' and shocked. Many of them had forgotten that they had firearms to use. Others who had lost their arms didn't seem to see that there were weapons lying all around and that it was their duty to pick them up." The battalion commander went to work on these men. He set them to cleaning their weapons, and if they were emptyhanded he showed them where they could pick up arms.

As he persevered with this work Brush became separated from him, but he saw Col. Mullins take hold in the same way. Mullins had said to Brush: "To hell with our artillery mission. We've got to be infantrymen now." Then he went to work organizing little groups of riflemen and directing them to fire points. Men were dying along the beach from close-up fire. Mullins led a tank forward against one of these fire points, and the tank destroyed it. He then prepared to lead in against another but in looking for ground over which the tank could maneuver he had to cross an open space. A sniper's bullet hit him in the stomach. He pitched forward on his face and death overtook him sometime within the next 12 hours. Artillery fire had closed

around the ground as he fell. Two enlisted men were hit by an 88 shell and killed within a few feet of him. The continuation of the fire kept Lt. Elias M. Close from getting in to his commander. His death wound was Mullins's third of the day: he had been hit at the landing, and a short time later a sniper had drilled him through the hand.

By 0330 the guns were afloat on the DUKWs and by 0400 all LSTs were unloaded. During *Exercise "Dog"* the battalion officers had felt that DUKWs were not practical for artillery, and under the rough weather conditions imposed for *Operation "Seaweed"* they believed that they would prove altogether unseaworthy. Aboard each gun-carrying craft were 14 men, 50 rds of 105 ammo, filled sandbags, and all essential equipment for set-up and maintenance. The "extras" which are so often imposed after the battalion officers had already figured out a practical DUKW load, made the craft awkward to handle from the beginning, and these mechanical difficulties were intensified by the fact that not more than three DUKW coxswains seemed to know how to handle the craft in so very high a sea; the DUKWs frequently got broadside to the wind. A strong current was streaming toward the open end of the LSTs as the DUKWs shoved out. Five of them were swung back by the current, became fouled in the ramp chains, and were nearly capsized at that point. But all the DUKWs got afloat.

The rendezvous area was 400-800 yds. from the LSTs. All DUKWs started shipping water as soon as they turned toward it. Five were swamped and lost before they had closed on the circle—including the DUKW used by the CP and fire direction. In that DUKW the motor failed, the bilge pump stopped, and the craft gradually went under. Two gun-loaded DUKWs were lost the same way. The others sank in shipping a large wave while traveling cross-wind. The Navy picked up all hands within a few minutes and the artillerymen were fitted out with Navy fatigues and helmets. They still wore these clothes when they got ashore. (The assault gas mask had helped greatly in keeping these men floating.) Four more DUKWs were swamped and foundered while circling in the rendezvous area. That left four DUKWs, and they headed for the shore, one without personnel.

A Navy LCVP, serving as guide, led this small column in at 0500. Said Capt. Jack R. Wilson, "We figured that if we got four guns in we'd have a battery, and that would help some." At least a part of the in-going journey was not too rugged. They came to the point where the APAs and LCTs were lined up in column, parallel to the beach. The 4 DUKWs went down this aisle-way and found it fairly smooth sailing. But they came to the end of the corridor and headed toward the beach—rightward. Then the waves hit them in the side again. Capt. Louis A. Shuford's second DUKW turned turtle. The guide LCVP picked up the



*Most other units had smoother landings than did the 111th.*



floating men and started back with them. That left Shuford and Wilson with only a vague idea of their direction, but they kept on going. They stopped at every naval vessel and asked for directions. For about five miles they went on this way, groping for their beach. About 1,000 yds. from the coast they came to a flock of other DUKWs, and Battery B's second DUKW got lost and strayed from the other two. This DUKW then went to within 500 yards of the beach. Its motor stopped. While the men were trying to get the motor going a burst of machine gun bullets opened up the side and the DUKW sank.

Shuford and Wilson still kept on going. There were now only two DUKWs. The two battery commanders were bent on getting one gun ashore. Shuford's DUKW had an A-frame; this meant that they had a chance to get Wilson's gun, at least, landed on the Beach. By about 0900 they were within 500 yds. of it, and at that point as they looked shoreward they saw no chance to proceed farther. They could see that the infantry hadn't moved and that they had no base.

They lashed the two DUKWs together so that they could talk things over. "If we can get one gun in we might be able to destroy one pillbox," Wilson said. At the moment a machine gun burst cut through the lashings holding the DUKWs together. Shuford said, "I think we better get the hell out of here." Shuford got his motor started and shoved off, but Wilson had gotten a bullet through his motor and couldn't follow; he figured he'd drift in. Then an artillery shell hit the breech-block of his gun, destroyed it, and killed one man. Another shell came in and the DUKW started to burn and sink. Wilson told his men to jump and start swimming for an LCT. A log floated by. They grabbed it. A machine gun burst shot it out of their hands. Three swam to the LST. Wilson and four others swam to the shore. Three others drowned.

Shuford looked back and saw that Wilson wasn't following. He turned back. A 75 shell hit the water so close to him that he "could have struck a match on it." Then a boat came between him and Wilson, and by the time it had cleared he could no longer see the DUKW. The artillery fired 10 more rounds at him but all of these shells were wide. He got to a Navy ship and wired Brush, "Where do I come in?" Brush radioed him, "Beach not clear. Go to *Fox*." From the control vessel Shuford then wired *Beach Fox*, "Where do I come in?" *Beach Fox* replied, "Don't come to *Fox*. Go to *Easy Green*" (where Brush was). Shuford got back in his DUKW and sought out another Navy ship. They told him they hadn't the slightest idea what he should do. He got back into the DUKW.

It was then 1000 hrs. and he was 1½ miles offshore. He decided to mark time until he could find a rhino ferry. He got to one within the hour and tied up alongside it. His men fell asleep on the deck at once. Shortly after, a deckhand came to Shuford and told him his DUKW was sinking. He got his driver and one other man, they climbed aboard and bailed, then started for another rhino which was equipped with a crane. He asked permission to get his gun aboard (elements of the 7th FA Bn were on this craft). Then he pushed the A-frame from his DUKW and the gun was lifted and given in charge of the 7th FA. (Note: This officer was given the Bronze Star for his courage coupled with his tenacity in saving the gun.)

At 1700 hrs. the three rhinos carrying the vehicles and other operating equipment of the battalion came in to land at the center of *Beach Dog White*, near the Vierville draw. The

rhino containing the vehicles, which were in charge of Capt. John Hodges, started to unload on the right. The water was about chest high where the rhinos stopped. Hodges waded ashore to look for an exit; the first 88, 75, and mortar fire began to hit among the rhinos as he went. An MP told him that he could get the vehicles up near Les Moulins, but on looking he found the way jammed with vehicles hub-to-hub and bumper-to-bumper. He got back to the rhino to find that the enemy shelling—much of it time fire—was near to destroying the column. All of the jeeps were drowned, having unloaded in too deep water. Eleven other vehicles—one containing a Piper Cub—had been destroyed by fire, three on the beach and the others aboard. (The few that were gotten ashore couldn't make it past the sea wall. The tide came in that evening, put them under 10 feet of water, and destroyed them.) Three of Hodges's men were dead and ten were wounded. He got the others ashore as rapidly as he could and had them dig in next to the seawall. As they were all weaponless, he organized a detail to collect arms along the beach. About that time the S-4, Capt. Frederick E. Consolvo, Jr., told him he had better get his men off the beach.

The two other rhinos had already put to sea. One of them had lingered long enough to get hung up on a drowned 6 × 6 truck. The rhino put a "cat" out to shove the rhino off the truck and the "cat" dropped out of sight in the water. The rhino floated loose. Artillery shells began falling among them and the Navy commander ordered them out. On Shuford's rhino (with 7th FA) artillery had wounded 10 men as the ferry drew in to the shore. There were seven medical majors aboard; they patched the men up. By then it was dark. The seven majors then insisted that they be given an LCVP and taken ashore. They felt that they were needed on the beach. So they put out in the darkness and were soon at work.

Three Rangers conducting prisoners came into Hodges's position on the beach. They guided him to Canham and the 116th's CP. Hodges told him that the guns were lost. Canham instructed him to bivouac near Vierville. Hodges then went back to the beach to get additional weapons for his men and to check up on his wounded. That night the artillery detachment set up its own defensive positions with arms collected on the beach. Hodges kept one man out-posted every 10 feet around a small perimeter. The position drew small arms fire throughout the night. In the morning Hodges saw an infantry column going back: it was 116-2 returning to mop up the beach. He figured he'd better fall in behind it. The artillerymen then went from Vierville down the road to the quarry where the Div CP was located. Hodges reported to Div G-1 and was told to form his men as a guard for the CP. He left his men there and went back to the beach with a detail to collect rations and more arms. Meanwhile, 1/Sgt. Melvin Morse took a party of his men out 200 yds. from the CP and returned with seven prisoners.

On D-afternoon the artillery small parties all went down to the 1st Div Sector to see if they could get contact. They did not yet know what had happened to the battalion. They spent the night on the Beach in front of Colleville—8 officers and 7 men. The next morning they walked the length of the beach back to Vierville and there met the DivArty commander.

The two rhinos came in the same morning, landing near Colleville.

# THE VISAYAS

By Col. Conrad H. Lanza

The Visayas are a group of six main islands and a large number of small ones. The six large islands contain most of the land, most of the people, and (from a military point of view) all important areas. These six, with their population, areas, and size\* are:

	Population	Area (sq. mi.)	Length (In miles)	Width
Samar	470,678	5,124	150	34
Leyte	915,853	2,799	108	26
Bohol	449,549	1,534	30	50
Cebu	947,309	4,390	156	28
Negros	1,218,710	4,903	130	39
Panay	1,291,548	4,448	triangular—about 100 miles on a side.	
Totals	5,293,647	23,198		

Counting the small islands the total area approximates 24,000 square miles, with a population of 5,509,883. For comparison note that Luzon, the main island of the Philippines, has an area of 40,814 square miles and a population of 7,374,798. Although the Visayas have only a little more than half the area of Luzon, they have nearly three quarters as many people.

The inhabitants of Visayas are a Malay group — the Visayan. It is the largest single group in the Philippines, containing about 42% of the entire population. It is more than twice as large as the Tagalogs on Luzon, who are the next largest group. There are four Visayan languages plus several dialects.

The high mountain range of Negros divides the Visayas into east and west sections, which have considerable differences in climate, crops, and local conditions. Political divisions into provinces follow the same dividing lines, Negros being divided into two provinces, one on each side of the mountains. From a military view the eastern Visayas have no pronounced dry season, while the western Visayas, with exceptions, do have one. Air observation and operation can be counted upon during the dry period where one exists, but may be interrupted at any time of the year where there is no such season.

Throughout the entire region malaria and dysentery are prevalent and must be carefully guarded against. Mosquitoes are a pest. Scarlet fever, measles, and similar diseases are non-existent unless introduced from the outside. Such cases are liable to be very severe.

## SAMAR

This is the largest island in the Visayas, and the third largest in the Philippines. With an area about twice that of Leyte it has but half as many people. It is the least settled of the six main islands.

Two factors are responsible for this condition. First, the central part of Samar is a dense and rough jungle country. This covers two thirds of the island, leaving the remainder as a band around the coasts which is flat and suitable for living on. Second, a large percentage of the typhoons which originate in the central Pacific are routed across Samar. Destructive typhoons are common. They generally destroy the flimsy shacks of the natives. During the period when barracks for

American troops were constructed of bamboo with nipa roofs, these were lost three years out of four. Solid construction is required to weather the great typhoons. Temporary covering for troops and supplies can not be counted upon to survive a typhoon season which extends from July through November.

Along the coast there is considerable low and fertile land. Here are the towns and people. The interior is uninhabited.

Capital of the island and province of the same name is Catbalogan (population 26,654). It is a small port 40 miles by air from Tacloban on Leyte. Samar is separated from Leyte by San Juanico Strait, 24 miles long and 2 to 5 miles wide. It has deep water, but the currents are strong and swift. Large ships do not use the strait; small ships can pass without danger.

From Catbalogan a hard surfaced road extends south to Basey, opposite Tacloban. Another good road extends north to Laoang at the northeast tip of the island. A third road goes across the mountains to Oras, Taft, and Borongan on the central sector of the east coast. This is the only road that crosses the mountains. The road to Laoang goes around the north end of the mountains; no road goes around the south end. The three towns mentioned on the east coast are not connected by an all-weather road with the north and south ends of the island along the east coast. There are no railroads.

The north and east coasts front on the Pacific Ocean. They are rocky and have heavy surfs. The south and west coasts are protected from surf by other islands, and are relatively easy to land on. Besides Catbalogan there are ports, suitable for small ships, at Calbayog on the west coast (35 miles northwest of Catbalogan) and at Laoang and Borongan on the east coast—all on the road net.

Samar's interior is a mass of low mountains. The highest summit is under 2,800 feet elevation. Mountains are unusually rough and jungle covered. There are numerous ravines with steep and precipitous sides, swift and deep streams, which are often unfordable. They are generally trackless.

Rain falls in Samar during every month. The annual rainfall on the east coast averages about 160 inches a year, on the west coast 120 inches. Average number of days of rain is 242 on the east coast and 216 on the west. On the east there is a maximum rainfall from November through January; on the west the maximum is from September through December, but is less than on the opposite side of the island, the rainfall being more evenly distributed throughout the year. The absence of a dry season is due to the mountains' being too low to stop the rain clouds.

Due to a plentiful rain at all seasons, Samar is peculiarly suited to the growing of the abaca, which is the hemp plant. The island is one of the principal sources of this valuable crop. Cocoanuts are produced in volume for export. For local use rice, corn, and yams are grown. There is an abundant supply of fish in the surrounding seas. The inhabitants can supply their own needed food supplies.

Campaigns in Samar are limited to the coastal zone. In places this is very narrow. There are neither roads nor resources in the wild interior for operations of bodies of troops. Experience in the early years of this century has proved that small bodies of men may subsist in the interior, and can conduct a guerrilla warfare. It is necessary to obtain food, weapons,

\*According to 1939 Philippines Census Report.

and ammunition by raiding the coast, by smuggling through numerous coves and bays, or by dropping from the air.

There are no special military objectives on Samar.

The people of Samar speak the same language as those on Leyte.

#### LEYTE

At the northeast end of the island, just below the south entrance to San Juanico Strait, is the city of Tacloban (population 31,233), capital of the island and province of Leyte. Behind it is a low range of hills parallel to the coast line.

A chain of mountains, quite rugged and with summits exceeding 4,400 feet, extends from the northwest corner to the southeast corner of the island and divides Leyte into two sectors. At the foot of the mountains on the east side, and between them and the range of low hills, is the Leyte plain, thickly inhabited and cultivated. 40 miles long, it lies between Carigara at the north end and Dulag at the south. It has a good road net.

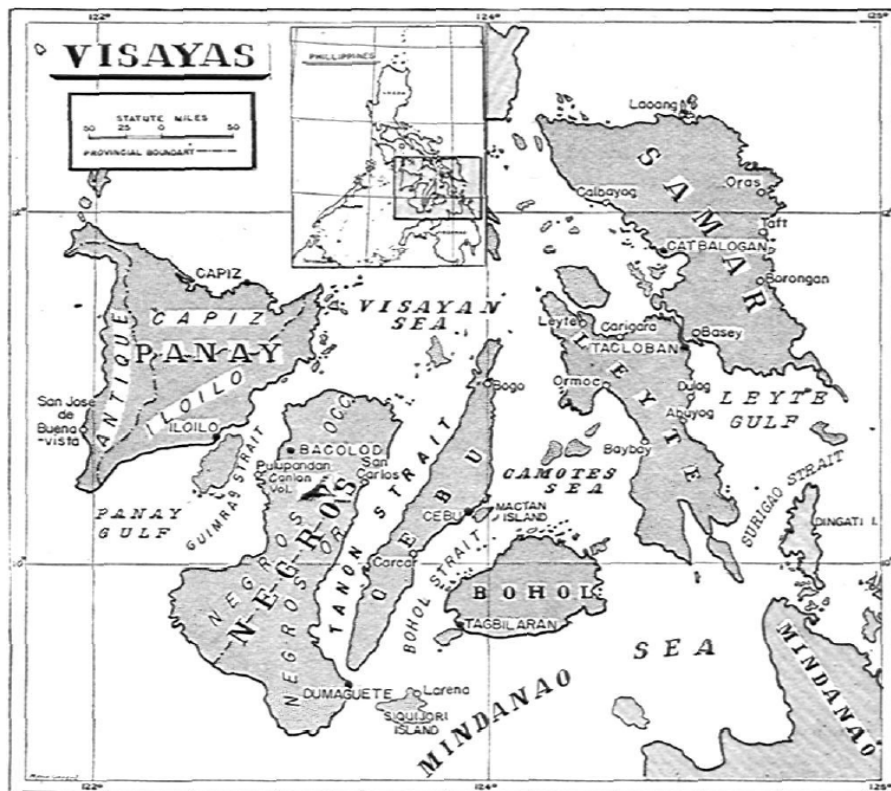
From Dulag on the east coast a coastal road goes about 30 miles north to Tacloban. The same road extends south to Abuyog, 15 miles away, where it turns west and crosses the mountains to Baybay on the west coast, a distance of 20 miles. This is the only road across the mountain range. There is no all-weather road to southeastern Leyte, nor from Tacloban around the north end of the low range of hills.

From Carigara a road extends westward along the coast to Capooan and Leyte, 10 and 22 miles. At Capooan the main road turns south, passing through a valley at the base and on the west side of the mountain range. This valley is 25 miles long and 15 miles from the sea to the west, from which it is separated by low mountains. At the south end of the valley the road reaches the coast at Ormoc, whence the road follows the west coast all the way to the south end.

Central and south Leyte are seldom visited by typhoons. The north part is occasionally struck. The centers of the destructive typhoons which frequently cross Samar are usually narrow and pass north of Leyte. In such cases Leyte receives only a heavy rainfall and high winds.

Like Samar, Leyte has rain in every month. The mountains being higher intercept some (but not all) of the monsoon rains. Consequently there is some rain during the northeast monsoon from December to June on the west coast, and some during the southwest monsoon from July to November on the east coast. The average number of days of rain on the two sides of the mountains are 216 on the east, which is the same as in opposite Samar, and 191 on the west. Average yearly rainfall varies, according to location, between 100 and 120 inches on the east side. On the west it is about 90 inches.

Due to the satisfactory quantity and distribution of rain Leyte produces considerable hemp. Cocoanuts and tobacco are other commercial crops. Some sugar is produced. Corn is



raised on the west side and rice on the east. There is not enough food for local use so rice is normally imported. There are undeveloped asphalt and sulphur deposits.

The large towns are along the coast, and mostly a few miles inland. The reason for this is a military one: it was to protect them from hostile naval forces. Until the end of the last century they were beyond the range of naval guns. In general they were at the head of navigation of a small river and at the center of a rich agricultural region. Since the American occupation enough roads have been built to avoid the necessity of using the narrow rivers; products are now shipped overland to the nearest port.

Tacloban is the principal port on the east side. It normally trades with Manila. The main port on the west is Ormoc (population 77,349), the largest town in Leyte. There is a good bay, with good sand beaches suitable for invasion landings. Trade is mostly with Cebu, as until recently there was only restricted intercourse between the two sides of the island, due to the rare passages across the main mountain chain.

Leyte plain is the main center of activity. It has fine roads and is sufficiently large to serve as an assembly area and for depots. There is ample space for constructing any desired number of airdromes.

#### BOHOL

Bohol is the smallest of the Visayan Islands. It has only 30% of the area of Samar, but almost as many people. Bohol consists of an interior plateau which is deficient in water, thinly populated, and bordered by a coastal region. The plateau used to be grazing lands, as the lack of water precludes much agricultural development. Due to cattle diseases that industry is much reduced. The coastal region produces corn and rice, but not enough for local consumption. Even with

fish, which is abundant on the north side, food must be imported and should be allowed for in military operations.

The south shore is steep and unsuitable for landings. Offshore the water is deep and without anchorage. The east coast has water of moderate depth close to shore; it is possible to land on this side of the island. On the north and west shores are numerous reefs, so navigation is dangerous. A channel has been cut through the reef to admit medium ships to Tagbilaran (population 15,617) at the southwest corner of the island, which is the capital and principal town. At this port there is deep water between the reef and shore, and a pier. This has a long approach with a head suitable for debarking passengers.

Most of the people live in the country around Tagbilaran, which is fertile and raises abaca (hemp), coconuts, tobacco, and some sugar. The rainfall in the coastal areas is fairly evenly distributed throughout the year, there being no special rainy or dry season. Average number of days of rain is 161, or roughly 2 days out of 5; average annual rainfall is about 60 inches.

On account of the reefs and steep south shore, there are no other harbors.

The interior of Bohol is suitable for airdromes, there being many flat and open spaces.

The natives of Bohol are renowned for their trading proclivities. They travel in small boats to all the other Visayan Islands and to Mindanao. This habit affords an opportunity for spies to pass back and forth among the islands. The usual commercial objectives of the voyages is to obtain food, which is essential, in return for local products, including special kinds of native mats and cloths.

There is a good coastal road all around the island. From the north and south sides a transverse road cuts across the island, affording access to the center of the interior plateau.

#### CEBU

Cebu is a long, thin island consisting of low hills (the lowest mountains within the Visayas) bordered all around by a coastal plain. The upper parts of the mountains are of coral formation. The soil of this island is broken down coral, which does not support a dense vegetation; the mountains are largely bare. Rice can be grown only in restricted locations but tobacco and corn are raised, together with coconuts. After rains the ground quickly dries.

Cebu is the most densely populated island in the Philippines. The principal city and capital of the province of Cebu is the city of the same name (population 146,817), which after Manila is the largest and most important port in the Philippines. Large ships can use its harbor, which is sheltered by the island of Mactan. Cebu has a large trade, much of which comes from the other Visayan Islands. This city is suitable for a base.

There is a coastal road clear around the island and two cross roads between the east and west coasts; one is just south of the city of Cebu and the other about 20 miles further south. The hills are not an important military obstacle; it would be possible for troops and motorized equipment to operate among them. There are several airfields, and sites for very large airdromes.

Along the east coast is a single track railroad extending from Cebu 20 miles to the north and 35 miles to the south.

Cebu city is the only good port. There are two small ports suitable for motor launches and similar small craft—Bogo at the north end of the island and Carcar 20 miles south of Cebu

city. Freight from the west coast usually is brought by truck over the mountains to Carcar and thence to Cebu city. At Cebu are extensive warehouses or godowns.

All arable land in Cebu island is cultivated. The only areas not cultivated or covered with buildings are bare spots in the low mountains. Rice is raised in the north end, corn in the shallow lime soil of the hills. Coconuts are grown along the coast. The copra brings the highest price in the world market, being of a superior quality due to being sundried rather than kiln-dried. Notwithstanding this condition a considerable part of the coconut trees are devoted to juice extraction. The juice, known as tuba, is highly intoxicating and much in demand. Goats, hogs, and poultry are plentiful. Provided fishing is conducted, the population of Cebu is about self supporting for food but it does not have a surplus.

On account of the lime deposits Cebu produces cement in limited quantities. It could produce more. Coal is mined in small tonnage.

Excepting Zamboanga in Mindanao, Cebu has less rainfall than any other province within the Philippines. The rains from the northeast monsoon are largely stopped by the mountains of Samar and Leyte, those of the southwest monsoon by the high mountains of Negros, while the local mountains are too low to stop rain clouds.

There is a rainy season from July to November, both months inclusive, and a dry season thereafter. Usually the wet season is not so wet nor the rainy season so dry as in other provinces. There have been years, however, when the dry season was a drought and the crops a failure. In general there is some rain every month, and it is possible to harvest three crops per annum. The average annual rainfall is 60 inches, and the average number of days of rain is 163 (or about 2 days out of 5).

Military operations can be conducted at any time of the year.

The inhabitants of Cebu speak a language differing from that in the other Visayan Islands.

#### NEGROS

Negros received its name because it was peopled by Negritos at the time of its discovery by the Spaniards. Some of them are still found in the mountains.

The mountains of Negros are the highest in the Visayas. They are in the form of a fishhook with the point at the southwest end. In the center the mountains exceed 8,000 feet, in the south at the bottom of the fishhook over 6,000 feet, at the north end 5,000 feet. There are two saddles in the range, about one third of the distance each from the north and south ends, but good roads have not been built through them. Near the center of the mountain range is Mt. Canlaon, which is an active volcano, its latest eruption having been in 1910. Mt. Balinsasayao, at the south end of the island, is supposed to be an inactive volcano. The entire island is of volcanic origin and extremely fertile. As the mountains are high, steep, and rugged, they are mostly uninhabited.

*Oriental Negros* is the province east of the divide of the Negros Mountains (less the north tip). Including some attached islets its population was 394,860. The capital is Dumaguete, at the southeast tip of the island (pop. 22,236). Its situation just opposite the entrances to

Tanaon Strait—separating Negros from Cebu,

Bohol Strait—separating Negros and Cebu from Bohol, and

Mindanao Sea—separating Negros from Mindanao,

give it a special importance. This harbor is undeveloped but is available for a limited number of small ships. It could be made into a small naval and air base.

The population is about evenly distributed all along the east coast. Kapok is raised in considerable quantities. Although this tree grows in all parts of the Philippines it is raised in commercial quantities only in Oriental Negros.

In the south central part some sugar is raised and shipped from the small port of Bais.

A good coast road extends all along the east shore.

The people raise corn. Coconuts are common, and hemp (abaca) is grown on mountain slopes. The province is about self-supporting as to food.

Off the south end and attached to Oriental Negros as a sub-province is the island of *Siquijor*, 9 miles by 6. This has a small but very safe port—Larena—at the northeast tip.

According to statements by the inhabitants, Siquijor was thrown up from the sea by volcanic action within the memory of their parents. This alleged origin seems doubtful. The island is all lime, obviously of very recent formation since sea shells are still found all over. If it rose through volcanic action, it was by the lifting upward of the sea bottom. The accounts of the old people agree that at date of birth the entire area was covered with smoke and fumes so that it was impossible to see just what did happen.

Climate and rainfall of Oriental Negros are about the same as those of Cebu.

Along considerable stretches of the east Negros coast there is no coastal plain; high ground extends to the sea. The coast road runs along the foot of slopes close to the sea. It would be practicable to land troops along this coast, and unlikely that the enemy, with land troops only, could defend any but selected places.

Dumaguete at the south end of Negros is not connected with the road net on the west side. A second small port is San Carlos, near the northeast end of the island. The coast road runs around the north end and joins the west road. It seems probable that the enemy's main defense would be in this sector.

*Occidental Negros* province occupies the western half and north end of Negros. With attached islets it has a population of 824,858, most of which is along the central and north shores. The southwest corner of Negros is lightly populated.

This province is the great sugar raising area of the Philippines. Nearly the entire west coast, less the south section, has sugar as its major industry. The sugar plantations have light steam railroads with a combined mileage exceeding that of the railroads on Luzon. There is a good road net throughout the sugar districts, but no coast road in the south and no connection with the east coast road, except around the north end of Negros where the roads are joined.

At the center of the sugar districts is Pulupandan, an artificial port recently constructed. It has an excellent pier and is available for medium ships, and could be made into a base. 16 miles to the north is Bacolod (pop. 57,474), which is the capital of the province. Except for these two ports the west coast is shallow and full of reefs. In the northern part ships can anchor in Guimaras Strait (outside the reefs) and transfer supplies and personnel to landing craft. This strait is protected against both the northeast and southwest monsoons by mountains on each side, which is not the case elsewhere.

The rainfall is heavy, varying according to location between 95 and 140 inches per annum. Average number of days of rain

is between 170 and 185. There is dry season from November to April, March and April being usually very dry. In the rainy season the maximum rainfall is in July, when it will average nearly 20 inches.

On account of the good road net troop movements are readily made. Main air fields are reported as near Bacolod. There is space for any number of airfields.

The people of this province can supply their own food. Both rice and corn are grown for local consumption.

Sugar plantations after the cane is grown may become a serious military obstacle. Tanks readily pass through them, but foot troops do so with difficulty only. Going through sugar fields on a hot day is an exhausting task, as the cane (being higher than the men) cuts off the air. After the cane has been cut the fields are passable for all troops.

Sugar fields are highly inflammable. Flames travel more rapidly in them than men on foot. Fields may be fired by incendiary bombs as well as by ordinary methods. Whereas in Hawaii fields are habitually burned before the harvest, this practice is not approved of in Negros and is not normal.

Negros sugar plantations are served by a number of sugar centrals of the latest and most efficient types. The sugar railroads belonging to the centrals are largely of standard gauge and could be used for military purposes.

#### PANAY

The west side of Panay is a narrow coastal strip between the sea and mountains which exceed 6,000 feet. It forms the province of Antique (pop. 199,414) which, including attached islands, has an area of 1,011 square miles.

East of the mountains is a plateau covering the central part and connecting with a short secondary mountain range at the northeast tip of the island. An east and west line through the center of this plateau, which at the east turns northeast along the axis of the secondary mountains, forms the boundary between Capiz province on the north and Iloilo province on the south. The former has an area of 1,710 square miles and the latter 2,040, with respective populations of 405,285 and 744,022.

The capital of Antique is San Jose de Buenavista (pop. 29,140) near the southwest corner of Panay. This is the only part of the west coast which has any considerable low ground. Here there is a 20-mile space (the Sibalom valley) toward the mountains. The remainder of the coast is generally narrow.

The narrow coast region is densely peopled. It has a rainy season from May to November, both months inclusive, and a pronounced dry season during the other months. Fish are plentiful and a main source of food, but the province needs to import food, especially rice.

There are no roads across the mountains, but a good coast road extends around the north and south ends of the mountains into the adjacent provinces of Capiz and Iloilo. As there are no good ports, trade is normally by motor transportation over the coast road. Rice, sugar, and coconuts are the main products.

An invasion of Antique by an amphibious expedition could secure the narrow coast region. It would not be a good base for operations to areas east of the main mountain range.

Capiz province consists of two fertile and cultivated valleys—the Aklan, parallel to and at the base of the main mountain chain on the west side of the island, and the Panay valley near the center of the province. The inhabitants of the two

valleys speak different languages. Each valley has a good but small port available for medium ships and which could be used for bases. These are New Washington (pop. 12,192) for Aklan valley and Capiz (29,120) for Panay valley. The latter town is also the capital of the province.

Each of the two valleys has a good road net. They are connected with each other and with Antique province by the north coast road, which continues to the northeast tip of the island and thence goes down the east shore.

From Capiz a good road and a railroad extend south across the central plateau into the province and to the city of Iloilo.

Capiz is in line with the track of the devastating typhoons which cross Samar. A reasonable number of these storms head straight for Capiz, consequently the port of that name can not be counted upon during the typhoon season. Except for this it would be entirely practicable to land troops about Capiz for an offensive against Iloilo.

Capiz has only a short dry season—March and April. Except for these two months both the northeast and the southwest monsoons bring rain, the latter much the more. The maximum rainfall is in October.

Capiz is one of the main rice growing regions of the Philippines and exports large quantities. Sugar, hemp, and coconuts are produced. Much fish is obtained.

The north coast of the province contains considerable littoral swamps covered with mangrove and nipa. The areas suitable for invasions are restricted to a few points near towns.

Iloilo province is the most important one on Panay. Its capital of the same name (pop. 90,480) is the third ranking port of the Philippines. Sheltered by the island of Guimaras on the east side, it is safe in any weather. Ships can sail either north or south around Panay or Guimaras to any destination. To blockade this port both entrances must be covered.

The plain back of Iloilo is highly fertile and raises large quantities of rice and sugar. It has a good road net with a railroad to Capiz. There are large godowns (warehouses) at Iloilo, and good piers. It is suitable for a base.

Iloilo has a pronounced dry season from January to April, both inclusive. The rainy season averages about 160 days and 86 inches of rain. Capiz with its longer rainy season averages 184 days and 100 inches of rain yearly, while Antique has about 160 days of rain but with a fall at the center of the west coast of 170 inches, the greatest in the Visayas.

Iloilo may be attacked by landings to either the east or west of the city. They would be facilitated by a prior occupation of the island of Guimaras opposite the city. This little island has high ground overlooking Iloilo harbor and is suitable for batteries. There are beaches, especially on the south side, where an amphibious expedition could land. Guimaras is the site of the former military post of Camp Jossman. An attack on Iloilo would be furthered by at least blocking Capiz, otherwise the enemy could through that port bring in replacements and supplies. It would be still better if Capiz and Iloilo were attacked at the same time.

## ANGLE OF SITE COMPUTER

By Lt. Lewis R. Soffer, FA

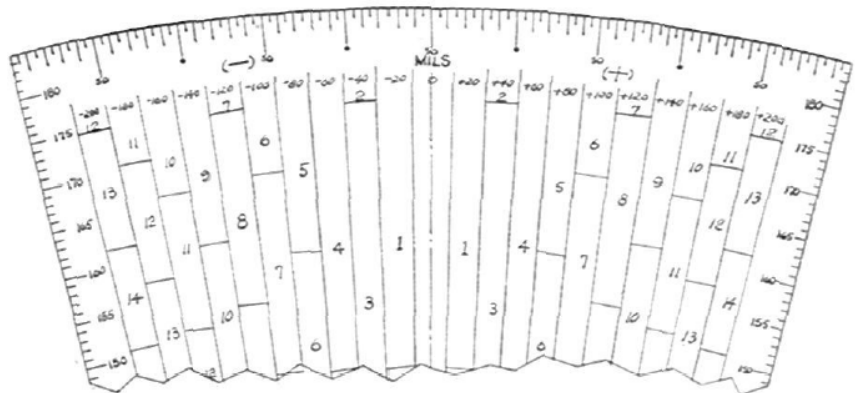
There have been many devices for the mechanical computation of the angle of site. This particular device has worked well for the FDC of our M12 battalion throughout the recent actions.

The essence of the device appears in the drawing. It will be noted that a number of rays run up and down the range deflection fan on which are written the values of the angle of site of various ranges. In our FDC these have been lettered in red on acetate, and glued face up on the underside of the fan. The numbers are there permanently; all that the VCO does in each position is to enter a few elevations on the surface of the fan.

To illustrate use of the fan, let us assume that the battalion is in position with the center battery at an elevation of 195 meters. With a china marking pencil the VCO will mark 195 meters on the face of the fan above the 0 line of the site computer. He then marks 175 above the —20 column, 155 above —40, 215 above +20, 235 above +40, etc. Now the fan is ready for all work in this position.

Let us suppose that a target appears at an elevation of 95 meters. Alongside his pin the VCO reads the range to the target as 15,500 yards. Automatically he reads the angle of site to be —7<sup>m</sup>. When a displacement occurs, the VCO erases his china markings and enters the values for the new position.

It should be noted that the columns have been set up to correspond with *metric* measurements, but that the map ranges



are in yards. This is done to conform with the present equipment in use: 1/25,000 range deflection fans in yards and 1/25,000 battle maps in meters. This does not concern the VCO, however, since all the computations are done when the original tracing is done on the acetate. Thereafter the VCO need only read the map elevation, and the device will automatically show the angle of site. Since the VCO spends very little time computing site he is quite free to check the shifts and ranges of the HCO.

Normally the flank batteries are at very nearly the same elevation as the center battery (within five meters). Where the difference is greater, the VCO carries it as a correction, as site Able +1 and site Charlie —1. No provision is made on the device for comp. site; it can be added when it is important, which it has not yet been in the flat or gently rolling French countryside.

# Medium Artillery In Burma

By Capt. J. B. Knowles, FA

Probably nowhere in jungle operations throughout the world has medium artillery played a larger part than in the British fronts of Burma. This has been especially true in recent fighting in the vicinity of Imphal on the Indo-Burmese frontier, in response to a sharp and determined effort on the part of the Japanese to invade India and cut the Allies' sole supply line to China via the Hump. Likewise, in the Arakan sector of Burma—where there has been little-publicized yet severe fighting—medium artillery has been used extensively; according to nearly all commanders it was indispensable in these operations.

On both fronts the battles that medium artillery has helped win have not been for large towns or installations. There are no such things in these sections of Burma. Objectives are usually hill features on a jungle road, or a small native village which judging from the map is a metropolis but in reality is nothing but a few native bamboo huts. For this reason, plus a strict British censorship, the full importance and severity of fighting in these areas has never been fully told. Medium artillery has in turn never been given its full credit except in official and highly classified memoranda seen by only a limited number of chosen officers.

Sometimes the remark is heard, "What are the British doing in India and Burma? They are in the same place they were a year ago after nine months of fighting in the Arakan and on the central Indo-Burmese border." It is a mistake, as this writer has verified, to be affected by such misinformed statements. The British and Indian soldiers are the same soldiers who at El Alamein started Rommel's retreat from Africa and who, assisted by Americans and French, pushed him across the Mediterranean. The problems and reasons for such limited progress of British forces in Burma are not within the scope of this article or the writer. Whatever those reasons may be, one thing is certain—that is, that the British and Indian "Gunner" has fought as hard and well as any other of his countrymen elsewhere in the world. When criticisms are made of operations in Burma, the "Gunner" will be conspicuous by his absence.

## BACKGROUND OF MEDIUM ARTILLERY IN BURMA

Although unsuccessful, the British campaign of 1942-43 in Burma demonstrated what tactics the Japanese planned to use in the type of country found in Burma. In accordance with their basic conception of fighting the Allies, the Japanese were (and probably still are) convinced that they can overcome the Allies' superiority in numbers and equipment by choosing a field of battle not suitable for our mechanized strength and relying on what they termed the "superiority of the individual soldier."

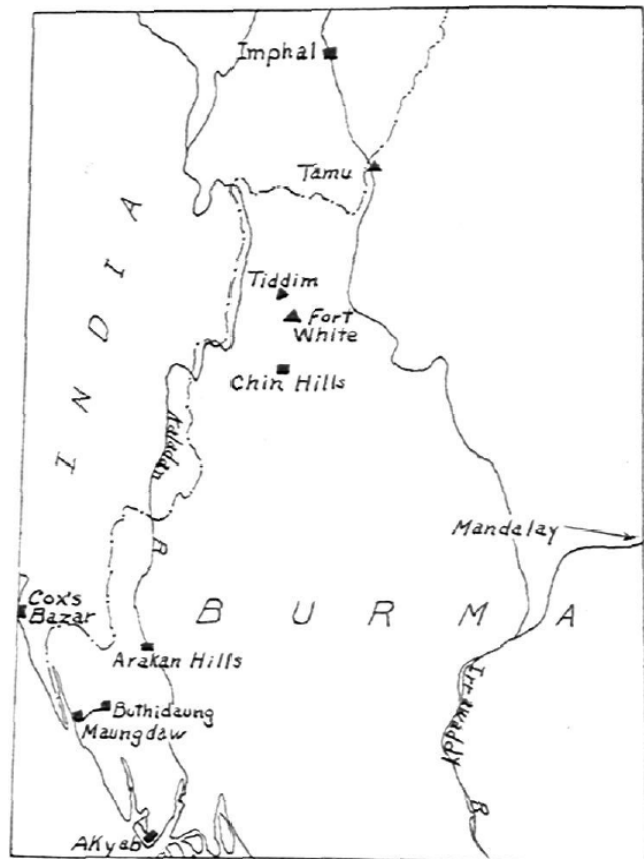
The British ran into just this type of enemy tactics. Hill features were heavily fortified in the jungle. In the flat, open ground strong and mutually supporting bunkers were found. The infantry supported by light artillery attacked these positions continuously with very discouraging results.

One bunker in the Arakan known as "Sugar 5" (named for its artillery concentration number) has become symbolic of the whole campaign. Infantrymen were on top of the feature many times, light artillery fired at these features from 200 yards, and

still the defenders could not be dislodged. It all looked so simple to take one mound of dirt, yet the brains of officers who had fought in World War I, the Near East, Africa, the Northwest Frontier of India, and a number of other places, plus the individual fighting ability of thousands of British Tommies and Indians, were defeated. The old methods of taking a position of this nature by direct assault, relying on the momentum of the attack and the individual bravery of the soldier spurred on by mustachioed old campaigners, failed miserably. What to do?

British pride and prestige were at stake. Frantic discussions of higher commanders were held to find an answer during the lull of the monsoon so that when the rains ceased in the fall of 1943 they would be ready to show the "bloody" Japanese that he can't get away with that sort of thing again. "Sacking" another general would not do as in the past. The answer was not easy to find. New weapons were not available, nor could such be made before the monsoons were over. Frantic cables to Washington to find out if the Yanks had any weapon available to defeat these Japanese tactics produced no results. The Yanks were in as much a quandary over the situation as were the British in India.

When General Wavell came to India as Commander in Chief he brought certain officers with him. One of them was a hard-hitting, bullish, determined, experienced, battle-ried, golf-playing, Scottish artilleryman, then Brigadier W. H. B. Mirrlees, D.S.O., M.C., C.R.A., of the 4th Indian Division.



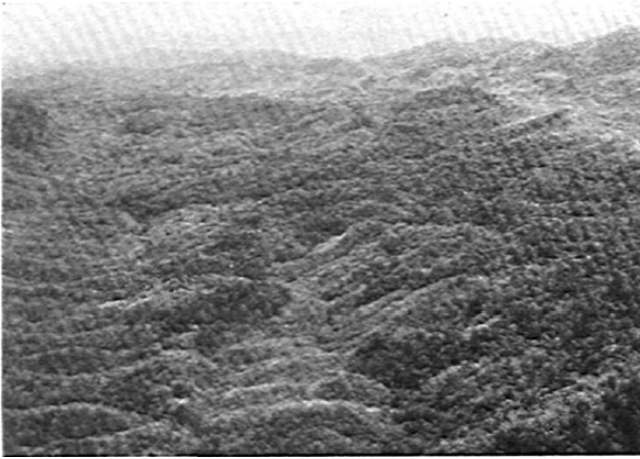


Figure 1. Looking to the south over the Mayu Range of Burma's Arakan coastal sector.



Figure 2. This bill feature in the Arakan sector was once a strongly defended Japanese position covered with jungle. Notice the effect of artillery fire.

Although he had not served in India since his days as a captain in the Royal Horse Artillery, he was remembered by many for his fighting spirit and always being able to do what he says he can do. He once stated that he could beat any golfer at a Kashmir resort using only a putter. He did. He is now a Major-General, Royal Artillery, India, and has been for the past two years.

At the various meetings of staff and field officers considering means of countering the Japanese tactics in Burma, all thoughts immediately turned to the artillery. In World War I all those present had seen artillery slowly but surely destroy German fortified positions. There appeared to be little difference between these fortifications and "Sugar 5." However, now in modern times, the aircraft was sometimes taking the place of medium and heavy artillery which had been so successful in 1914-17. The Germans had developed the *Stuka* which was a nightmare to the British in France, the Japanese had sunk the *Prince of Wales* and the *Repulse* with low level bombing, and now the Americans claim they have even a better aircraft in the *Vengeance* divebomber. Adolescent

RAF personnel were certain that equipped with the *Vengeance* divebombers they could completely destroy the type of Japanese defenses exemplified in "Sugar 5." The self-confidence of the airmen persuaded many, and *Vengeances* were ordered.

Maj.-Gen. Mirrlees, who had seen many aircraft attack his gun positions in Africa, was doubtful of the ability of aircraft to hit the small and seldom-visible targets presented to airmen in the jungle. He was convinced that only artillery properly adjusted by forward observers could hit the Japanese fortifications. Then he argued that the weapon of the artilleryman is the shell and not the gun. To destroy log defenses covered by eight feet of earth burster course, a shell bigger than the 25-pdr. or the 3.7" howitzer shell must be used. In the desert they used rabbit-eared 5.5" howitzers for destroying



Figure 3. Fames Hill 551, a strongly defended Jap position. 186 tons of shells were later used on it.

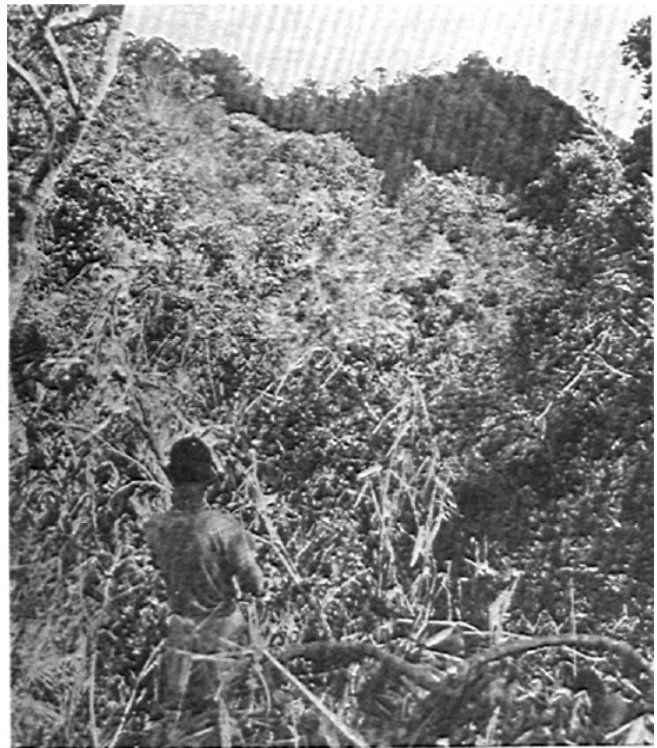


Figure 4. Amid monsoon clouds a battalion of the 2nd Gurkhas drove the Japs from two peaks in the Mayu Range in four days. Here is the second peak as seen from the first after the battle.



German gun emplacements. These did it well with their 100-pound projectile. These howitzers could be sent to India and a new delay fuze used with it for demolition.

But officers who had recently returned from the Burma front doubted the possibility of handling medium weapons in the jungle. The roads were few, rough, narrow, and steep. Then too there was the long line of communication, which was alarmingly strained for the moment; to increase its load with medium artillery shells was serious. But Gen. Mirlees said it could be done, so medium artillery units were sent for. They would be tried, at least. This was in the spring of 1943.

Several months later, just prior to the end of the monsoon period in October, the mediums had arrived and were training in India. The "Oldtimers" were shown the 5.5" howitzer. Stroking their "Poona" mustaches, they remarked that these pieces would never get over the trails and through the jungle of Burma. Others thought differently.

#### TERRAIN

To appreciate fully the doubts that were expressed over the ability to use medium weapons in Burma, one must see the terrain. In the Arakan Coastal Sector there is a sharp sloped jungle- and forest-covered mountain range, known as the Mayu Range, which extends along and is roughly parallel to the coast from three to six miles inland. The Range has a maximum height of approximately 2,000 feet, yet is made up of a succession of distinct hill features. Figs. 1, 2, 3, and 4 give a good idea of this terrain. Quite naturally the Japanese always chose to fight in the Range and contest every feature to the last man.

Further north, in the Chin and Naga Hills near Imphal, the terrain becomes even more severe and robust. There are mountains up to 9,000 feet, with long, precipitous slopes. The hills are covered with heavy forests and low bamboo. Before the war there were practically no roads, but now military roads connect the more important localities. At best, however, grades are steep and curves are sharp. Fig. 5 indicates the obstacles which must be overcome.

#### TACTICAL SITUATION AT START OF 1943 CAMPAIGN

In the Arakan the British had monsoon bases at Bawli Bazaar and were patrolling eastward to the Kalapanzin River. Any offensive would start from this position. The Japanese were dug in on the many hill features along the Mayu Range to the south. Positions between Maungdaw and Buthidaung were especially strong.

To the north the British were holding Tiddim (about 160 miles south of Imphal) and also the hills just northwest of Tamu.

#### OPERATIONS IN 1943 AND 1944

On both fronts the British attacked as soon as the monsoons were over. In the Arakan the fighting again developed into a job of reducing successive heavily-defended hill features on which the Japanese had constructed clever systems of trenches and bunkers. Each hill feature required a detailed plan of attack, which usually consisted of 25-pdr. and 3.7" howitzer preparations and divebomber strikes on the feature as a whole, or on the individual fortifications if located. The infantry then assaulted with difficulty up the steep jungle-covered slopes.



Figure 5. Typical mountainous terrain in the Chin Hills.

Invariably they were met with blistering fire from LMGs located in bunkers on the forward or reverse slopes. Casualties were heavy, progress was painfully slow.

Some idea of why the going was so slow and difficult is apparent from Figs. 7 and 8, which show to what extent the enemy had dug himself into the hill features. The last two photographs were taken after the position had been shelled and bombed for many days. Before this bombardment it was covered with thick bamboo undergrowth.

Immediately the question arises as to why the British worried about these small features. The answer lies in the scarcity of lines of communication. Unneutralized strong points presented a severe threat to the L of C. In practically all cases the L of Cs were confined to razorback ridges, single roads cut from the sides of the mountains, or routes along stream beds in the valleys.



Figure 6. Gurkhas clear up around a Jap foxhole on the summit of a captured Arakan peak. Entrance to this hole is 10 yards away.



Figure 7. Jap dugouts on the crest of a hill feature in the Arakan sector.

As stated, the going was very slow. By January, 1944, the British forces in the Arakan had advanced approximately halfway from Bawli Bazaar to the Maungdaw-Buthidaung Road. Defended Japanese positions were taken only after tremendous expenditure of men and ammunition. In the north too the going was tedious and slow. Initially the British lost Fort White (south of Tiddim) to the enemy, and in January were still assaulting bunker positions prepared by the Japanese on ridges overlooking Fort White. In the Tamu area the British columns were also stopped southeast of the town by Japanese bunker positions located on the only possible L of C.

It was then apparent that the skillful Japanese jungle defenses were again, as in 1942-43, holding back numerically superior and more fully equipped British forces. Aircraft of various sorts (including the *Vengeance*) were used to plaster the bunker positions. In one case 64 tons were used on a relatively weak position; these bombs fell in the 200-yards-square target area, yet the total damage to the defenders was one cook killed as he was trying to get water. The situation was again critical. Casualties were heavy and still no ground was gained. A weapon was urgently needed to assist in neutralizing the bunkers.

#### OPERATIONS OF MEDIUM ARTILLERY

By early 1944 the medium artillery units that Maj.-Gen Mirrlees had brought to India the year before had finished many tests on the effect of the medium shell against typical bunker positions. The results were very encouraging, although indications were that the amount of ammunition required to reduce these positions even with this

weapon was enormous. Could the L of C handle such quantities? By this time the units were fully trained and acclimatized. The situation was desperate, so they were sent to the front.

#### Arakan

The first medium units went to the Arakan front, where the fighting was divided into two separate operations. One force was on the east of the Mayu Range proceeding toward Buthidaung; the other was on the west of the range with Maungdaw as its immediate objective. The two forces each had zones of responsibilities in the Mayu Range itself. It was thus decided to place one medium artillery unit on the east of the range and the other on the west in a direct support role but still under corps control.

These units had no more than taken up positions on their respective fronts and fired a few reinforcing tasks when the Japanese started a strong offensive from the direction of the Kalapanzin River. It was this offensive which resulted in the now-famous stand by the 7th Indian Division on the Ngakyedauk Pass. A tight "box" was hastily formed in a confined flat space while the enemy swarmed over the surrounding hills not more than two to three hundred yards away. Fortunately, the medium artillery unit

committed on this side of the range was able, with the help of tank escorts, to reach the "box" without serious casualties to men or materiel. There they took up positions inside the "box" and prepared to give support to the "box" perimeter. Within accurate small arms range of the enemy the medium weapons continuously fired direct, within the limitations of their available ammunition, against enemy positions not over 300 yards



Figure 8. The Japs dig well in to the sides of hills, as in this example from Arakan.

away. They were very effective in destroying dug-in positions and also in breaking up, in no uncertain terms, enemy attacks from the hills onto the flat ground.

Fig. 9 shows a section of the "box" and the proximity of the enemy positions. At one point the enemy at night succeeded in entering the gun position but were driven out by "gunners" armed with grenades and bayonets. This situation lasted for three full weeks before the enemy ring was broken. The Corps and Division Commanders plus all those in the "box" were unanimous in their opinion that, without the help provided by the medium guns, it is very doubtful if the "box" could have held out. Thus the question of the ability to use medium weapons in jungles of Burma was settled—in the Arakan, at least.

While the siege of the 7th Indian Division "box" was going on the other medium unit (committed on the west of the Mayu Range) was anything but idle. There, efforts were concentrated on helping to break the siege of the "box." The only road across the Mayu leading to the "box" was the Ngakyedauk Pass. This was a narrow road actually cut through the forest- and jungle-covered, steep slopes of the Mayu. To reach the "box" meant driving the enemy from many heavily fortified features directly over the road. Fig. 10 shows the pass and several of the enemy positions and indicates the difficulties presented to the relieving force.

Again the old methods of frontal assault failed. The 5.5" howitzer was called upon to neutralize these features before the assault was resumed. In one case it was decided to bring a howitzer up to within 300 yards of an enemy position, clear the undergrowth systematically with impact-fuzed rounds, and then switch to delay-fuzed rounds, taking each bunker position under fire until it was completely destroyed. The engineers were called upon to build a gun pit with side and head cover enough to give protection from enemy mortar fire. At night the 5.5 was winched into this pit. Each exposed fortification was methodically taken under fire. Results were incredible. An average of three rounds per bunker for adjustment and effect not only completely destroyed the embrasure of the bunkers but killed all occupants. The position was taken by the infantry without opposition.

There are many instances of these successes. In addition, this medium unit was providing indirect fire support to the defenders of the "box" at ranges and with accuracy which had not been available to commanders before. (The 5.5" howitzer has range and accuracy comparable to our 155-mm howitzer M-1. The shell weight is almost identical.) Somehow the ammunition was getting to the front in sufficient quantities. It was concluded that medium artillery was necessary in fighting the Japanese in this area. At this time of year (the dry season) the 5.5" how, can be



Figure 9. Here is a section of the area covered by the 7th Division box. Medium guns were emplaced near where the vehicle is parked. The Japs held the hills in the foreground.



Figure 10. View of Ngakyedauk Pass and positions occupied by the Japs just above the road.

used in practically any place that a 25-pdr. can be used, and it is far more accurate and effective.

After the relief of the 7th Division "box" the push toward the Maungdaw-Buthidaung road was resumed. Again successive, heavily defended hill features had to be assaulted on both sides of and in the Mayu Range. Each feature was difficult and had to be taken individually. Again the medium artillery was used to great advantage. It was brought up close to the positions and fired directly. It was also used in an indirect fire role for harassing, neutralization in the open (this was rare because the Japanese seldom attack in the open), destruction of strongpoints, defensive fires, and last (but not least) counterbattery. The enemy had brought up their very accurate 150-mm howitzer, which could outrange any British weapon except the 5.5" piece. In all these tasks the weapon was outstanding. The infantry began to rely on its support so much that the ammunition expenditure reached previously unheard-of proportions. From the middle of January to the middle of April one unit alone fired 32,000 rounds of medium ammunition. There was no question now of the value of medium artillery in jungle fighting in Burma.

#### *Imphal*

Another unit of medium artillery had been sent into the Imphal area shortly after the units were despatched to the Arakan. Again the available medium units were split, one going to the Tiddim front and the other to the Tamu front. Like the Arakan units, they arrived just prior to a Japanese offensive—in this case stronger and more serious.

Before this offensive the medium guns at Tiddim were able to take part in a strong assault on a bunker position which had previously resisted two heavy assaults by the normal means, including heavy air support with up to 4,000-lb. bombs. They were brought into position on a 9,000-foot crest known as Kennedy Peak (see Figs. 11 and 12) and fired with indirect fire onto this same position. (Incidentally, the ballistic characteristics of a weapon at this altitude and with angles of site of as much as —500 mils is food for thought for the experts of Aberdeen and Fort Bragg.) The effect of the medium shell against enemy bunkers was again recognized as superior to any other type of support available. The bunkers on the forward slope of the hill were neutralized, allowing the infantry to proceed up it without drawing fire. However, one

bunker out of probably 20 to 25 remained active on the reverse slope. This one bunker held out under determined attacks by the infantry and resulted in their being driven off the hill. The inability of the infantry to take the position was certainly not due to any failure of the medium artillery support.

In March there were definite indications that the enemy might attack the 160-mile L of C from Imphal to Tiddim, so at the end of the battle for the position mentioned above the medium weapons were drawn back to Imphal. It was a good thing, because this is exactly what did happen and the division



Figure 12. Medium artillery fire falling on Jap position above Fort White, below Tiddim.

located at Tiddim had to fight its way back to Imphal. Medium artillery towed by bulldozers would have been very difficult to get out and very valuable to the enemy if captured. In the Tamu area the enemy attacked before the mediums there had an opportunity to get into action. They too were brought back to Imphal.

During this large-scale attack on Imphal the medium artillery played a decisive part. The country about Imphal is flat and for the most part open. Here there was nothing unusual about the employment of medium artillery. They performed all the normal tasks of corps artillery, especially counterbattery, against the Japanese 75 and 105 gun and 150 howitzer. The only regret was that there were not more of them.

The Japanese offensive was not only an attempt on their part to capture Imphal, but also a determined effort to invade India and cut the Allies' line of communication to China over the "Hump" air route. The attack was so sudden and well concealed that two divisions had to be flown from the south to Manipur to counter this Japanese blow. As soon as possible a medium artillery unit was sent to this area to support these divisions' drive down the Manipur Road through Kohima to Imphal, to relieve the besieged garrison there. This operation again developed into a continual battle for fortified hill features on and about the Manipur Road to Imphal. This road, also, contains many sharp turns and steep grades and is built largely on the crests of knife-edge ridges (see Fig. 13). Here the mobility of the medium weapons was definitely limited, but there were few cases where they could not be employed in assisting the assault of the defended localities. As in the Arakan, they were brought up as close as



Figure 11. 5.5" piece firing from Kennedy Peak (elevation: 9,000').

possible to the objective—usually within 1,000 yards—and then, with direct fire, plastered the Japanese positions with pleasing success. In one case four of them were lined up hub-to-hub across the road and proceeded to take on a direct fire target.

The question arises as to how the weapons could be employed so successfully if they were road-bound. The answer is that the zones where the enemy presented targets requiring medium artillery were all near the road. Further, the medium howitzer had sufficient range to reach any target which may have been a threat to the task of clearing the road. An excellent example of the type of jobs carried out in this operation was as follows (in the words of a unit commander): "On xxx we had three guns with us and each gun fired 300 rounds in 6 hours. The result was that every visible trench and supporting bunker was reduced to a mound. The hill will have to be resurveyed as the height is no longer 3,120 feet but probably 3,110 feet plus temporarily two feet of dead Japs."

Throughout the foregoing, for obvious reasons, there has been no mention of the number of guns employed. However, the extent to which medium artillery was used on all fronts last February, March, and April is indicated by the fact that in this period over 63,000 rounds of 5.5" ammunition were



Figure 13. A road, complete with hairpin curves, was backed through the Chin Hills from Imphal to Tiddim.

expended. This is a very impressive figure for the short period in which these pieces were employed. Much has been written about the artillery support of engagements in Italy and Normandy. Few people realize the extent to which artillery, especially medium, was used in the jungles of Burma in 1944. The expenditure of light artillery ammunition would, of course, dwarf the above figure for the medium artillery.

#### CONCLUSION

As a result of the 1944 fighting on the British fronts of Burma, the medium artillery weapon that Maj.-Gen. Mirrlees insisted could be used in the jungles has become, in the view of practically all commanders, an absolute necessity. It has been shown that the mobility of this weapon is little inferior to light artillery's and that seldom, even in the difficult jungles and mountains of Burma where roads are few, is the 5.5" gun limited in its use. The Japanese have likewise proven this by using their 150-mm howitzer and their 105-mm gun.

Then too, the medium gun has proven very successful in destroying the strong Japanese bunkers and defended localities. Heretofore there were no weapons available to the British for neutralizing these positions. Air bombing tried and failed. Properly used, the medium gun can destroy any Japanese defenses yet encountered.

The enemy having started to use medium artillery in the jungles of Burma, the Allied forces must use medium or heavy artillery for counterbattery.

Finally, there is nothing that attacking infantry surrounded by close-in jungle like to hear more than the powerful crack of a medium shell. It not only gives them more support in their very difficult tasks, but also gives them a confidence which nothing else can give. One thing is certain—in Burma the British Tommy and his partners the Indians and Gurkhas will never again be without this powerful crack leading them to an objective.

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## BURMESE VIGNETTE

By a Regimental Commander, RA

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One operation in particular in the jungle against the Japs last February was a real battle developing from a Battalion attack to a Brigade show, with the Corps Artillery tap turned right on. On 3rd February, the Jap sprang his usual counter attack. Not really a surprise because he usually employs the same tactics—an encircling move to our rear by a force he considers adequate for the job, with a similar force infiltrating through the front to join up with it.

Well, you can't ever stop encirclement or infiltration in jungle country, but you *can* do something he never thought the British would do, and that is to remain exactly where you are in strong positions and allow him to wear himself out in local attacks. So it happened. Nobody gave a yard and although he scored two initial successes (one, an attack on a Divisional H.Q. which had to move into a neighbouring box in a hurry, and two, the cutting of our main lines of communication, the Ngahaubdaub Pass) he accomplished nothing else. Strong relieving forces appeared from the North and West applying steadily increasing pressure and meanwhile the Division cleaned up its own area, bit by bit.

For three weeks of days and nights he broke himself in suicidal "1914" attacks on all our positions. All with insufficient artillery or air support and all leading to one thing—Jap bodies on the ground. Eventually the Pass was cleared and mail (and whisky!) came through again.

We counted over a thousand bodies which we buried ourselves and they are still appearing. His full casualties will never be known. They must be much higher as he normally drags away and burns his own dead after every attack.

The Artillery were constantly in action and he was strafed unmercifully in every place in which he was located. One Corps strafe produced over 300 bodies in a short five minutes' firing, and we had many similar Regimental targets. Where he established himself, which he does overnight, near to us, we blasted him out with shells, tanks, and following infantry a day or two later.

Eventually his attacks grew more and more unco-ordinated and suicidal and his hungry and battered remnants began to filter back at night. They were harried and ambushed by patrols all the way.

In such fighting a gunner's job is "ubique" and everything else at once. He can come into one's areas any time and from any direction, and more than half the gunners are mounting guard in local defence posts and shooting at close range. I had five day and night attacks on Troop positions—all seen off.

Nights at Brigade H.Q. were often hideous with the "rattle of musketry" all round!

Throughout our air was on top. First of all they appeared to have destroyed his bomber force on the ground, then our dive bombers descended on him, and finally the "Spits" put the Zero force to bed. This paved the way for a real contribution to our salvation—air supply. Day and night food and ammunition rained down like manna from Heaven, either parachuted or free dropped from heavy transports. In fact, I had two men killed by sacks of supplies falling on them in the night.

Another coincidence was more funny. One gun required new breech extractors. We wirelessed for them and they duly arrived the next day and were actually parachuted into the very gun-pit that needed them!

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#### HAVE YOU TRIED THIS?

One unit in Europe has been experimenting with high angle artillery fire on strong points in houses. The roof is more vulnerable than the stone walls. Quick fuze is used for adjustment and delay fuze for effect.



*Major General Ralph McT. Pennell*

Major General Ralph McTyeire Pennell was born in Belten, South Carolina, on August 15, 1882, and following graduation from the United States Military Academy was appointed a second lieutenant of Cavalry on June 12, 1906.

#### PROMOTIONS

Gen. Pennell was promoted to first lieutenant of Field Artillery on July 6, 1907; to captain on July 1, 1916; to major (temporary) on August 5, 1917; to lieutenant colonel (temporary) on the same date; and to colonel (temporary) on July 30, 1918. While serving as a temporary colonel he received his permanent promotion to major on February 24, 1920, to which grade he reverted on June 30, 1920. He was promoted to lieutenant colonel on January 21, 1930, to colonel on August 1, 1935, to brigadier general (temporary) on January 29, 1941, and to major general (temporary) on February 26, 1942.

#### SERVICE

Gen. Pennell first was assigned to the 13th Cavalry and served at the Mounted Service School at Fort Riley, from which he was graduated in July 1907, remaining at that post with the 6th Field Artillery. In July 1911 he was appointed Secretary of the School of Fire, Fort Sill, and served in that capacity until July 1915. His next duty was with the 2nd Field Artillery in the Philippine Islands. He returned to the United States in June 1917, and following a month's tour at El Paso, Texas, again became secretary and instructor at the School of Fire.

In April 1918 he became Assistant to the Chief of Field Artillery, Office of the Chief of Field Artillery. He then served three months (from September to December 1918) in command of the 34th Field Artillery at Camp McClellan, and in December 1918 began an inspection tour of England, France, Italy, and Germany as a member of the Armament Board, which continued until June 1919.

He spent the next five months in the office of the Chief of Field Artillery, then was assigned to Fort Sill, in command of the 1st Field Artillery, concluding this duty in September 1922.

## A NEW COMMANDANT, F.A.S.

In August 1923 Gen. Pennell completed the course at the Command and General Staff School as a Distinguished Graduate, and was assigned as Executive Officer of the 1st Field Artillery Brigade, Fort Hoyle. From February 1924 until August 1926 he served successively as liaison officer in the office of the Chief of Field Artillery, and at the Aberdeen Proving Ground, then enrolled in the Army War College. After graduating in June 1927 he entered the Naval War College, completing the course in September 1928.

Gen. Pennell was detailed to duty with the Hawaiian Division at Schofield Barracks and returned to the United States in December 1930 for assignment at the headquarters of the Eighth Corps Area, Fort Sam Houston. In September 1932 he became Battalion Commander with the 15th Field Artillery at Fort Sam Houston, and assumed the command of this regiment in February 1935. Four months later he was transferred to Fort Bragg as a member of the Field Artillery Board. He became President of the Field Artillery Board in July 1936.

He was again assigned to command the 15th Field Artillery at Fort Sam Houston in July 1939. Following a refresher course at the Field Artillery School from September to November 1939, he went on detached service at Fort Sill. He was assigned to the 27th Division at Fort McClellan in October 1940 and became Commanding General of the 27th Division with new headquarters at Fort Ord in March 1942.

Subsequently he was given an unannounced overseas assignment, then returned to the United States in October 1942 and was assigned to the War Department Dependency Board, Newark, New Jersey. In March 1943 he was named Commanding General of the Field Artillery Replacement Training Center at Fort Sill. In November 1944 he became commandant of the Field Artillery School.

#### DECORATIONS

For his services during the World War No. 1 he was awarded the Distinguished Service Medal with the following citation:

"As assistant to the Chief of Field Artillery from April 16, 1918, to September 4, 1918, he planned and executed those measures which provided a balanced production of different types of field artillery materiel and equipment and the selection of the types to be produced, and which determined the priorities of distribution of the same."

He received the Oak Leaf Cluster to the Distinguished Service Medal in 1942 with the following citation:

"For exceptionally meritorious and distinguished service in a position of great responsibility as Commanding General of an Infantry Division in the Hawaiian Department during the period March 15, 1942, to November 1, 1942. By outstanding ability, leadership, and energy he brought his Division to a high degree of training and readiness for combat conditions. He showed remarkable ability in the disposition of his troops and in the location of positions with his command. As representative of the Military Governor of the Island of Hawaii, he personally solved the problems concerned with the government of this island, which has a large alien and alien descent population. By reason of his qualities as an officer, a very difficult situation was handled in a superior manner and military civilian relationships were greatly improved."



# AN M12 BATTALION IN COMBAT

By Lt. Lewis R. Soffer, FA

Every field artillery weapon is some kind of compromise between fire power and mobility. The self-propelled gun is one solution to this problem which most nations have adopted in order to retain mobility in weapons of heavy caliber. The best known American weapon of this type is the M7, which has already proved itself in this war. Up to the landings in France the M12 had not been used in combat; now, however, enough time has elapsed to make possible a better evaluation of the weapon.

This piece is the GPF of World War I—the 155-mm Gun, M1917-1918—mounted on the M4 tank chassis stripped of armor. A spade has been added to absorb the force of recoil. On this mount the GPF is able to travel up to 35 m.p.h., but from 20 to 23 m.p.h. is considered the best operating speed. Road marches of 200 miles have been accomplished in one day; the full-track carriage has also made possible cross-country mobility.

The 991st FA Bn was among the first to be equipped with the M12. It trained with the weapon for fifteen months in Virginia, West Virginia, Tennessee, Pennsylvania, and England. At first there were the difficulties that one would expect with a new weapon. Typical of these were the troubles initially experienced with the exhaust system; this was remedied by redesigning the exhaust in accordance with suggestions of the using battalions. Other initial shortcomings were handled in a similar fashion.

During the training period stress was laid on rapid and frequent displacements and on direct fire. This training paid dividends in combat.

We are now ending our third month of action in France, Belgium, and Germany. Our experience divides itself into four phases. The first phase is the Battle of Normandy, during which the M12 was used as a normal corps artillery weapon.

The second began with the attachment of the battalion to the 3d Armd Div and continued for the period of the Battle of the Falaise-Argentan Gap. With the closing of the gap at Putanges the battalion entered the third phase when, remaining attached to the 3d Armd Div, it fought in the battle of pursuit. The fourth phase, in which it is now engaged, is the Battle of the Siegfried Line.

## BATTLE OF NORMANDY

During the battle of Normandy the battalion fought in the normal role of an army artillery separate battalion. We were attached in turn to each of the corps of the U. S. First Army; in each attachment the battalion delivered supporting fires.

This was the period when the first lessons of combat were absorbed. Like other battalions, we discovered that our basic artillery teaching was sound. We dug our first foxholes "for pay"; we occupied our first OPs under shell fire; we shot our first concentrations against a real enemy instead of a simulated one. Some new problems came up: when the great aerial preparation was made for the St. Lo breakthrough the battalion participated in effective counterflak fires to protect our bombers.

While the experiences of the first phase were extremely valuable, the battle of Normandy as a whole was one of slow movement. In this type of campaign it was impossible to utilize the exceptional mobility of the weapon.

## BATTLE OF THE FALAISE-ARGENTAN GAP

On the 12th of August we were attached to VII Corps, which in turn attached us to the 3d Armd Div. The battalion joined the latter in the vicinity of Mayenne.

From the first it became apparent that the weapon was more useful in this role than it had been in its previous one in general

support of a corps effort. The battalion was able to keep up with the armored division on all displacements and was able to register within a reasonable time after each displacement. As a result the fires of the battalion were available to the DivArty commander throughout most of the action. At various times during the action other medium and heavy battalions were attached to the division, but the self-propelled battalion found it somewhat easier to displace and keep up with the division.

Most of the fires delivered were observed fires, the bulk of which were placed on enemy flak batteries, field batteries, and on deep interdiction missions. This, of course, is in full accord with accepted field artillery doctrine for use of medium and heavy artillery.

In the early days of the action more counterflak was fired than counterbattery. This was because the flak batteries opened up even while the Air OPs were active, whereas the field batteries generally remained silent when the Air OP was up.

On one occasion the batteries delivered interdiction fires at a point 100 yards beyond the maximum range for the weapon. On the night of 14 Aug 44 the battalion had displaced to the vicinity of La Lignerès la Doucelle. In view of the existing situation at the front lines, it was not feasible to displace forward of this area. The mission of interdicting Fromental was assigned to the battalion. Fromental was on a CR astride the main German escape route in the region, and subsequently proved to be one of the two or three points in the Gap where the Germans held most stubbornly. The map range for the most advanced battery turned out to be 20,200 yards; fortunately, a favorable metro made it possible to interdict Fromental in spite of the 20,100 yards maximum shown by the firing table. At this time the M12s were the only weapons in the region which could interdict the CR. Examination of the area after Fromental was taken proved the effectiveness of this fire mission.

When the enemy began to retreat across the Orne River an effort was made to destroy several of the main bridges by precision adjustment from the air. Although direct hits were scored, it did not appear likely that any of the bridges were destroyed. The answer probably lies in the type of fuzes available at the time.

#### BATTLE OF PURSUIT

After our sector of the Falaise-Argentan Gap was closed at Putanges, VII Corps was recommitted and joined the rest of the U. S. First Army in the pursuit of the retreating Wehrmacht. The liberation of France and Belgium, accomplished during the pursuit, was undoubtedly one of the swiftest advances of military history. As is well known, the VII Corps played an active part in this pursuit. Its organization for combat placed the 3d Armd Div at the head of the Corps with the 1st and 9th Inf Divs following in the zone of advance of the armor.

Our M12 battalion was the only artillery heavier than 105-mm attached to the 3d Armd Div. Moreover, because of the rapid advance of the armor there was no medium or heavy artillery within a day's march of the division front throughout the bulk of the campaign. As a result the M12 battalion was the only artillery available for deep counterbattery, medium and long range targets of opportunity, interdiction, and covering fires during the displacements of the light battalions.

On the whole it may be said that the weapon itself had little difficulty in keeping up with the rapid advance and the frequent displacements. The tank mount proved very sturdy and the old GPF tubes again proved, as in the last war, that they could speak with authority on French soil.

As the armor pushed forward from Soissons, to Laon, to Mons, the axis of advance was almost due north. At the same time the axis of retreat for the enemy was due east. The natural outcome was that enemy groups of varying strength infiltrated between the armored spearhead of the division and the unarmored general support field artillery battalion. Several infantry actions were fought by the battalion, the sharpest on Sept. 3d, 4th, and 5th in the vicinity of Quevy-le-Grand, against remnants of the German 348th Infantry Division. On Sept. 3d the battalion took more than 500 prisoners. At various times during that day the M12 was used for the close-in defense of the battery positions, firing very effectively on tanks, half-tracks, trucks, and personnel.

Good luck and the enemy's demoralization kept our casualties very low during these actions. However, our losses would undoubtedly have been much heavier against a better armed and better organized enemy. For most of Sept. 3 this battalion, together with the headquarters troops of the 3d Armd, were fighting the bulk of the 348th Division; fortunately the enemy was never aware of how limited were our forces.

At the close of the campaign the 991st had the good luck to be first in position to fire into Germany. The first artillery shells to hit Germany from the west were fired by the battalion at 1721 on Sept. 10, 1944, at a key road crossing near Bildchen, about 19,800 yards from the battery position. Our air observer reported that the fire was effective.

#### BATTLE OF SIEGFRIED LINE

Battle of movement ended temporarily when the U. S. First Army reached the German border. The battle of the Siegfried Line began. During this battle the battalion had a dual role: as an artillery battalion delivering supporting fires, and as a siege gun reducing pillboxes and the other fixed fortifications in the area.

It is not possible at this time to give a detailed technical account of the use of the M12 as a siege gun. Most of the pillboxes destroyed or neutralized by the battalion are still on the other side of the front lines. Some general observations can be made even now, however.

When the mobile phase of the campaign ended with the investment of the Siegfried Line, "B" Btry was detached from the battalion and attached to the 9th Inf Div for the specific purpose of direct fire against pillboxes. The remainder of the battalion executed some pillbox missions in addition to its regular artillery work for the 3d Armd Div.

From 15 to 24 Sept., 35 direct fire missions were assigned to the battalion. Of these 28 were pillboxes (some of which were taken under fire 2 or 3 times) and 7 were fortified houses or OPs. 16 of the missions were completely successful. On each of these missions complete destruction of the pillbox, penetration, or direct surrender to the fire of the M12 was accomplished. On the remaining 19 missions varying degrees of neutralization were achieved. In most of these latter cases it has not been possible to occupy the pillboxes or other structures on which the fire was delivered, but from PW reports it is concluded that casualties due to concussion and chipping of concrete occurred in all cases. An average of about 10 rounds were fired on each mission.



Based on the experiences so far gained we believe that the M12, suitably employed, will destroy, penetrate, or knock out of action pillboxes of the Siegfried Line type. The projectile produces casualties and lowers the morale of the pillbox occupants. No penetrations on the heavy 14" steel cupolas which the better pillboxes have are known of. It is also difficult to penetrate the best type of concrete, but in some cases seven feet of concrete were penetrated fairly easily. Final conclusions must await further examinations.

Because of the limited experience and because many of the demolished pillboxes have not yet been examined, it is not possible at this time to say which fuze and which projectile is most suitable. One officer who has been active in this work believes that the M51 fuze set for delay is as effective as any fuze. In one case smoke shell was used with good effect. In another, smoke shell was used but had no effect because it was blocked out by a gas screen in the ventilating system.

The optimum range for pillbox work would appear to be between 1,000 and 2,000 yards. At this range there is very little loss of accuracy or muzzle velocity, and the crew are out of range of much of the enemy's small arms fire. Pillbox attacks should be closely coordinated with the supported infantry and tanks so that neutralizing fire may be delivered on the pillboxes while the M12 is shooting for destruction. Most of the missions were fired by individual pieces, but perhaps massing the simultaneous fire of several M12s would greatly increase the concussion effect as well as the shattering and penetration of the concrete, thus conserving ammunition.

#### LESSONS LEARNED

##### *Communication and Liaison*

The main factor for successful cooperation with the armored division proved to be communications. After a few initial difficulties the following communications were set up and worked satisfactorily.

Communication was primarily by SCR-608 radio from the battalion to the LnO stationed at DivArty FDC. In addition, the SCR-193 went into the Div AM net.

The liaison officer also had an SCR-509 radio, mounted with the SCR-608 in a ¾-ton weapons carrier. One of the SCR-284s was mounted in a jeep and accompanied the liaison section; it served as a relay station in the 193 net when other communication failed. One SCR-528 was obtained for use at FDC.

As soon as the situation stabilized for as much as a few hours, wire was initiated from the DivArty CP and also from the Bn CP; two lines were laid, wherever possible, by different routes. When wire was in, it was always preferable to radio.

Our T/O provides neither a liaison officer nor a liaison section for a 155-mm Gun (SP) battalion. During all the action with the armor it was necessary to maintain 24-hour liaison with the DivArty FDC as well as intermittent liaison with the combat commands. At one time the battalion had to provide four liaison officers and liaison parties simultaneously. A liaison section was improvised; this, however, deprived the battalion of the services in their regular jobs of one staff officer and a key NCO, as well as diverting a vehicle and radios from their normal jobs. Our liaison section would have had greater freedom of movement on the roads if it had had an M8 scout car or a half-track rather than a "soft" vehicle.

##### *Occupation of Position*

In the early stages of the battle for France this battalion habitually occupied positions with very wide dispersion between pieces. In this action with the armored division it proved necessary to put the guns considerably closer together for speed in the fulfillment of fire missions.

As another means of gaining time a registering gun rolled forward with the advance elements of the reconnaissance, thus making prompt registration possible.

One of the limitations of the M12 is its limited traverse, since from any given position only a 500° sector can be covered without moving the carriage (700° if the traverse stops are removed). The fluid front made rapid shifts necessary, and it was also necessary to fire at great ranges. Wooden chocks were improvised onto which the front end of the guns could be rolled. This expedient, which proved fairly successful, enabled the gun crews to make rapid shifts and still maintain range coverage. Without some such expedient the M12 can not shoot at maximum range.

##### *Local Security*

All the batteries put greater stress than normal on local security. Casualties were very light, but additional machine gun firepower would improve the local security measures. Reconnaissance vehicles would have greater freedom of reconnaissance if scout cars were available to the battalion. Submachine guns and M1 rifles might replace some of the carbines with which we are now equipped. Minor infantry tactics might well have a bigger part in the training of artillerymen.\*

##### *Gunnery and FDC*

Throughout the action the orthodox methods taught by the Field Artillery School were used and proved their combat utility. Observed fires were controlled by the invaluable liaison planes.

Because of the frequent and rapid displacements, metro service was limited.

Throughout the battles the firing chart was either the 1/25,000 battle map or the 1/50,000 map when the former was not available. On one occasion effective fire was delivered from a 1/100,000 map. The VCO used the map directly; the HCO used a grid sheet on which all critical points were entered. Rapid position area survey was performed. Registration was by liaison plane. Arty/R registration was attempted, using the VHF set attached to the division, but this failed because of communication difficulties. Unobserved fires were delivered with some success, a limiting factor being the absence of current metro data during the mobile phase of the action.

##### *Supply*

Procurement of Class III and V supplies proved to be one of the most difficult problems facing the battalion. While the absence of an ammunition train was no great handicap in the battle of Normandy, it proved to be a great obstacle to full utilization of the battalion with the armor. On a number of occasions it was necessary to make ammunition hauls from dumps 200 miles and more from the battalion positions. Moreover, it was impossible for the armored division to divert transportation to the battalion, as the division was finding it difficult to haul ammunition for the organic battalions. The gasoline problem was similar.

\*See Maj. E. A. Raymond's *As Skirmishers*, p. 507 of this JOURNAL for August, 1944.—Ed.



# 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

## THE WEST GERMAN FRONT (19 Oct to 18 Nov 44)

On 19 Oct the Allied force held a line from the North Sea to Switzerland, approximately as follows:

**21st Army Group (Field Marshal Bernard L. Montgomery):**

**Canadian First Army (Lt.-Gen. H. D. G. Crerar):** West Schelde River (with German beachhead on south bank around Breskens)—Woensdrecht (Allies)—Esschen (German)—Meerle (A)—3 miles south of Tilburg.

**British Second Army (Lt.-Gen. J. T. Crocker):** 's Hertogenbosch (G)—Ravenstein (?)—Druten (G)—Neder Rijn (Lek) River from opposite Wagenheim to Arnhem (inc)—Mook (G)—Maas (Meuse) River to Vierlingsbeek—Helenaveen (G)—Weert (G)—Maeseyck (A)—Sittard (?).

**12th Army Group (Lt. Gen. Omar N. Bradley):**

**U. S. First Army (Lt. Gen. Courtney H. Hodges):** Geilenkirchen (G)—Stolberg (with German strongpoint in Aachen)—Huertgen (G)—Monschau (A)—Our River.

**U. S. Third Army (Lt. Gen. George S. Patton):** Mosel (Moselle) River (German bridgeheads at Thionville, Maizieres-les-Metz, and Metz)—Dieulouard (A)—Serrieres (A)—Chenicourt (A)—Jallaucourt (A)—Gremecey Forest (A)—Burchecourt (?)—Arracourt (A).

**6th Army Group (Lt. Gen. Jacob L. Devers):**

**U. S. Seventh Army (Lt. Gen. Alexander M. Patch):** Parroy (A)—Benamenil (G)—Glonville (A)—Fontenoy-la-Joute (A)—Rambervillers (A)—Bruyeres (G)—Lavaline (A)—Granges (G).

**French First Army (Maj. Gen. Jean de Lattre de Tassigny):** La Bresse (G)—Le Thillot (G)—Ronchamp (?)—Belverne (G)—Montbard (G)—Pont de Roide (A)—Blamont (?).

In GHQ Reserve were:

**Allied First Airborne Army (Lt. Gen. Lewis H. Brereton)**

**U. S. Ninth Army (Lt. Gen. William H. Simpson)**

The entire front was active.

### BATTLE OF THE SCHELDE

On the extreme left of the line the enemy held the north bank and part of the south bank of the Schelde River, thereby blocking the entrance to Antwerp. This, one of the greatest ports of Europe, was much desired by the Allies as its possession would facilitate the supply of troops who have had to depend upon the distant port of Cherbourg and what can be landed over beaches. The port of Antwerp had not been destroyed.

Operations to drive the enemy out of his bridgehead south of the Schelde had commenced in the first week of September. Ever since they had been progressing at a slow rate.

On 19 Oct two operations were in progress to free the Schelde River. A direct attack being made against the Breskens bridgehead on this day reached the line: 2 miles from Schoondijke (G)—Oostburg (G). A second attack from the area north of Antwerp was directed against the causeway leading from the mainland to South Beveland Island. To protect this latter attack an additional attack was in progress as far eastward as Meerle. All attacks were strongly supported by artillery fire and the air force. Rocket-firing planes were used in numbers. The attack on the mainland employed tanks.

On the 22nd the attack south of the Schelde reached and entered Fort Frederick Hendrick, whose batteries closed the Schelde River. It was

impracticable to hold this gain at the time, and the fort was lost to a counterattack. Substantial progress was made elsewhere: Breskens was taken, and the enemy bridgehead reduced to a small area. The attack on the mainland was extended eastward to beyond's Hertogenbosch. This met very strong resistance, but advanced slowly.

Allied tanks broke through the German line near 's Hertogenbosch but were unable to maintain themselves; some were lost. That town gave considerable trouble. An attack from the south met so much resistance that the main effort was shifted to the east and later to the northeast. On the night 23/24 Oct the artillery fired a very heavy preparation, which enabled British troops to break into and occupy about half of the town on the following morning.

By the 26th the Breskens bridgehead had been almost eliminated; the attack across the causeway into South Beveland had gained an allied bridgehead; while the attack to the north had reached the line Roosendall (G)—Tilburg (G)—'s Hertogenbosch (A). Next day the Allies captured against only moderate resistance Bergen op Zoom and Tilburg, and advanced the South Beveland bridgehead to the vicinity of Kruiningen. Breda fell on the 29th.

South Beveland was completely occupied by 30 Oct. The enemy bridgehead south of the Schelde, although reduced in size, continued to resist. The advance on the mainland was pushed with the object of eliminating all enemy south of the Maas River. It was determined to make a major effort to reduce Walcheren Island, whose batteries alone were sufficient to close the Schelde River.

On 1 Nov British Commandos landed on the west side of Walcheren near Westkapelle. They got on shore but with very serious losses, numerous landing craft being lost from enemy artillery fire. The supporting naval squadron also suffered severely. A second Commando landing made later the same day on the south side of Walcheren was supported by Allied artillery on the south side of the Schelde. An attack was launched across the causeway from South Beveland. All three attacks established beachheads but not connected with one another.

The attacks on Walcheren labored under considerable difficulties. A large part of the island was under water: the Allies had previously breached the sea dikes with 6-ton bombs, letting in the sea. It had been hoped that this would flood out the enemy's batteries and eliminate the necessity of costly attacks. This hadn't succeeded. The enemy managed to find sites for batteries which were not under water.

By hard fighting the two Commando landings joined together on 3 Nov. the enemy retiring to the interior of the island around Middleburg. On the 4th another amphibious attack was made by landing troops at the southeast end of Walcheren. This enabled the forces seeking to cross the causeway to do so. On this date the last resistance on the south side of the Schelde was overcome. Progress was now rapid on Walcheren, which was completely occupied by 9 Nov.

The enemy's sea block to the entrance of the port of Antwerp had been removed. It had taken slightly over two months of continuous fighting. The enemy now announced that his sea entrance block had accomplished its mission of delaying the Allies. Time had thereby been acquired during which batteries for firing flying-bombs had been established for starting destructive firing against Antwerp. The Allies have acknowledged that this fire is falling. Information as to results has not been released.

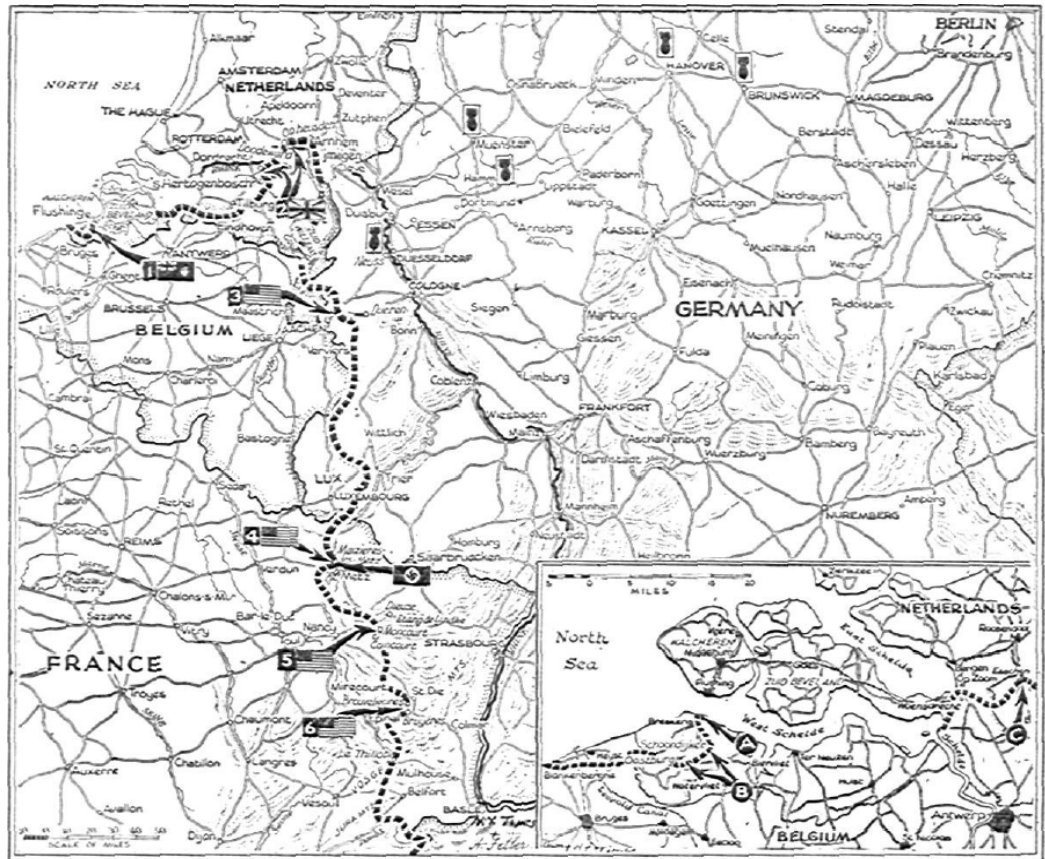
In the meantime the Allied attack to reach the south side of the

Maas had gone forward slowly. After the Battle for the Dutch Salient in September it had been hoped that one of the results of that offensive would be to cut off large numbers of enemy troops, estimated as at least 100,000 in west Germany. Nothing like this happened. The enemy fought hard. The Allies advanced, but daily gains were limited to not over a few miles at the most. The enemy had ample time to withdraw and appears to have succeeded in removing most of his equipment. The south side of the Maas west of the salient to Nijmegen was cleared of the enemy by 10 Nov. The enemy destroyed all bridges, including the great Moerdijk bridge.

#### OPERATIONS AROUND AACHEN

At the beginning of the period operations were centered about reducing enemy forces in Aachen, which was completely surrounded and about half of which had been occupied by American troops.

The enemy within the city held certain strong points. The German commander was Col. Gerhard Wilch. He had had 2,500 men to start with but had already lost many. The attack against him had started on 8 Oct. The German strong points were systematically attacked. 155-mm SP guns were found to be a most



Early in the period the lines looked like this. Striking to clean up the knot of resistance at the mouth of the Schelde (1) the Canadians captured Breskens (A on inset), advanced toward Schoondijke and Oostburg (B), and smashed into Esschen (C). To second these efforts the British began closing in on 's Hertogenbosch from two directions (2). They also gained control of Doodeward and Opeusden at the tip of the Netherland salient. Beyond Aachen (3) the Americans advanced a mile in the direction of Dueren. To the south the Americans battled inside Maizieres les Metz (4). Below the area flooded by Allied fliers' breaching of the dam at Etange de Lindre American troops reached Coincourt and Moncourt (5). East of Epinal there was fighting at Brouvelieures (6). Allied bombers smashed at Neuss, Hamm, Muenster, Hanover, and Brunswick (bomb devices) in their efforts to disrupt German behind-the-lines communications.



On 28 Oct the Germans captured Meijel (1), but it was their only success. British columns, heading for the foe's Meuse crossing at Geertruidenberg, pushed five miles west of 's Hertogenbosch and three beyond Loon op Zand (2). They were 2 miles northwest of Tilburg (3). Breda (4) was being enclosed, with the British 2 miles away to the east and the Poles pushing up from the south. The Canadians were a mile from Roosendaal and captured Bergen op Zoom (5). They also plunged forward on Zuid Beveland within 3 miles of the expanded British beachhead (6). On the south shore of Schelde estuary the Canadians reached the coast northwest of Groede (7).

effective weapon, aided by tanks.

The end came on the 21st, when the German commander surrendered at noon. 1,600 prisoners were taken.

Upon completion of the Battle of the Schelde a new operation (at first on a relatively small scale) was commenced in the Aachen area. On 2 Nov the British Second Army attacked in the vicinity of Meijel (45 miles north of Aachen) while the U. S. First Army attacked in the vicinity of Huertgen (12 southeast of Aachen). Heavy artillery preparations were first fired. The American attack on a 5-mile front captured Vossenack (1½ miles south of Huertgen). These two towns are just east of Huertgen Forest. The advance gained 2,500 yards. In their attack on a 6-mile front the British gained 2,000 yards. The Americans pushed beyond Schmidt next day, but lost this place to an enemy counterattack the day following. On the 6th it was necessary to withdraw from Vossenack. Some American troops were cut off. Operations were hampered by cold rains, mud which at places was knee deep, and nearly constant thick clouds which prevented good air support. This battle fluctuated and died down by the 12th, with a slight net American gain.

The Third Battle of Aachen started on 16 November. The U. S. Ninth Army was inserted in line just north of Aachen with the U. S. First Army on its right and the British Second Army on its left. All three armies participated in the attack, the mission of which was to smash an opening through the enemy's lines toward Cologne. The enemy had noted the preparations for this battle, including the forward



November 7th German troops battled their way into the eastern half of Vossenack (1), but were driven back to the edge of the town after close-in fighting. American forces struck in the direction of Huertgen (2) and Schmidt (3). At the latter place three Nazi counterattacks were repelled.

displacement of additional batteries and the assembling of new troops. For three days he had, as a counteroffensive measure, employed his artillery in nearly continuous fire against the new targets. Results of this artillery activity are not yet known.

The Allied attack started at 1115 hours in rain, snow, and mist, with a 1½-hour joint artillery and air preparation. Batteries fired at maximum rate of fire. The air attack was in two parts. At first 1,200 heavy bombers (U. S. 8th Air Force) with 480 fighters attacked towns, batteries, and presumed sensitive points on a wide arc from before Meijel through Dueren and Eschweiler. The second attack was by 1,150 R.A.F. heavy bombers covered by 250 fighters. The air forces lost only 8 planes. From the O.P.s it looked as if the joint preparation had been terrifyingly destructive. The weather was so bad, however, that it seems doubtful whether the observation available could determine the accuracy of the shelling and bombing. During the preparation there was little enemy artillery reaction.

At 1245 hours the ground troops jumped off with tanks leading. They were immediately received by a very hot fire. Everywhere was mire and mud, with a misty cold rain. Some gains were made, the most important being the capture of Immensdorf (2½ miles southeast of Geilenkirchen), which was not taken but was by-passed.

The battle was renewed in great intensity on the 17th. Least opposition seemed to be on the left, where the British arrived within 5 miles of Roermond. In this sector the terrain has numerous canals and irrigation ditches, which were found to be but lightly held. They nevertheless caused considerable delay. Enemy mine fields also retarded the advance.

The U. S. Ninth Army met very strong resistance and its advance was limited. Our First Army had only slightly better success. The weather continued to be a misty rain, interfering with air and ground observation and limiting air support. According to German reports the two American armies together lost in the first two days of this battle 122 tanks. Up to this time the German resistance had been strong but passive.

On 18 Nov the battle became extremely tough and dour. It was necessary to fight for every wood, field, and village. Panzer divisions commenced to launch limited counterattacks. The Ninth Army's attacks on Geilenkirchen failed again, but the advance was continued beyond that town on both sides for a mile to a mile and a half beyond. Elsewhere the progress made was described as slight to moderate.

As this account closes the battle continues, with the Allies committed to a major offensive against strong German lines of resistance.

#### THE BATTLE OF LORRAINE

The U. S. Third Army had previously attempted to capture Metz by a direct attack (see page 829 of this JOURNAL for December, 1944). This had failed. It was decided to reduce this fortress by envelopment from both sides, to be made outside of the circle of forts which surrounded Metz. Through that city ran all the multilane highways and principal

railroads of the area. Possession by the enemy constituted an effective road-block.

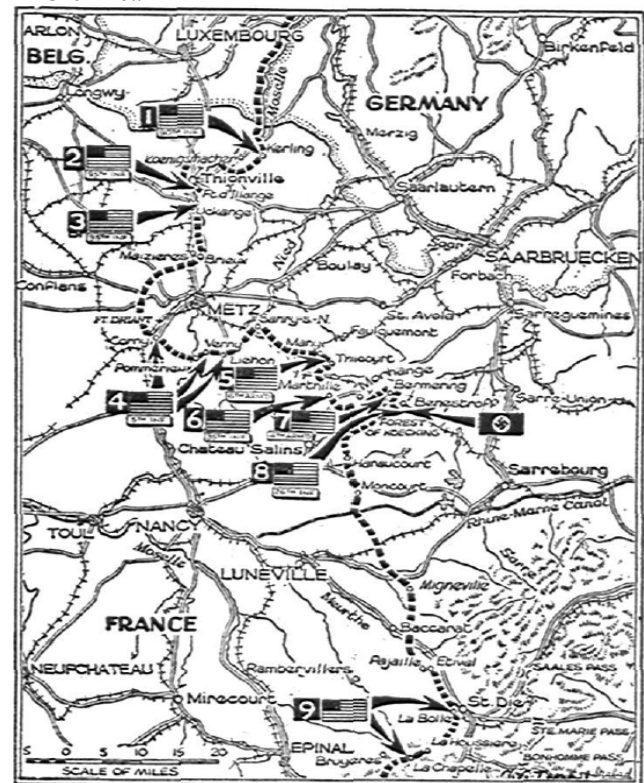
Early fighting was confined to the vicinity of Maizieres-les-Metz (6 miles north of Metz and on the west side of the Moselle River). A long house and street battle of nearly two weeks ended on 30 Oct with American troops in possession.

On 1 Nov an offensive was started north of Nancy and south of Nomeny. This reached the line Abaucourt (1½ miles northeast of Nomeny) to Letricourt. This was a 2½-mile front. As far as is known this did not unduly attract the enemy's attention to this area. Next day the Air Force commenced a systematic attack of enemy lines of communication in Lorraine.

Nov 7th the U. S. Third Army launched a major operation directed northeastwardly from the area northeast of Nancy. It was preceded by a strong artillery preparation. The enemy had observed the preparations made for this offensive, and had made counter-preparations. The first day's attack on a 30-mile front met strong German counterattacks. No great gains were made. But by evening of the 8th, in very hard fighting, the line Aulnois-sur-Seille—Malaucourt—Jallaucourt — Gremecey Forest — Buchecourt — Bezeange-la Petite—Moncourt had been reached.

On 9 Nov a new operation was commenced northeast of Thionville. It succeeded in forcing a crossing of the Moselle River, but some early gains were lost. The main operation was enlarged to around Pont-a-Mousson. The order of battle now was such that

**5th Div from vicinity of Pont-a-Mousson attacked northeast to Cheminot.**



Around Koenigsmacher (1) our forces, attacking on a 5-mile front on 13 Nov, regained ground lost the previous day. Two more bridgeheads were flung across the Moselle: one at Thionville (2), where a fort on the east bank was captured, and the other across from Uckange (3). South of Metz (4) the Americans took Corny, on the Moselle, Pommerieux, a group of forts at Verny, and Liehon. In the direction of Faulquemont armored units advanced to Many and Thicourt (5). Infantry mopped up Marthille (6). The junction of Benestroff was threatened on the north by armored forces that drove to the vicinity of Bermering (7) and on the south by infantry that broke out of the Forest of Koecking but then was driven back a mile by a counterattack (8). West of St. Die the Seventh Army seized La Bolle and La Chapelle (9).

**4th and 6th Armd Divs attacked northeast in the vicinity of Delme to just outside Viviers. Delme was not captured.**

**26th Div passed Chateau Salins on both flanks, but failed to capture that place.**

**35th Div arrived in vicinity of Moyenvic.**

**80th Div arrived in vicinity of Moncourt.**

The attacks between Delme and Chateau Salins had very strong tank support. The entire front was aided by large artillery and air forces.

On the 10th the 26th Div captured Chateau Salins and advanced up the Seille valley about 3 miles to the line Amelecourt—Hampont. The 5th Div made good progress and reached the line Vigny—Secourt—Delme Ridge (exc). In the meantime the attack northeast of Thionville had had difficulty. The enemy was counterattacking vigorously, and the line fluctuated. At the end of the day the Americans held a small bridgehead near Koenigsmacher.

Next day the main gain was within the Seille valley, the Americans advancing over 4 miles to Haboudange (Habudingén). The enemy continued to hold the high ground on both sides of the valley. On the north side the 26th Div reached Gerbecourt. North of Metz the 90th and 95th Divs were engaged, without much change in the line. On the 12th the advance up the Seille valley reached Conthil (2½ miles south of Morhange). The armored divisions made a considerable advance, crossing the Nied River near Ham-sur-Nied and reaching Hery (Herlingen), where they encountered strong enemy armor. North of Metz the bridgehead near Koenigsmacher was strengthened and enlarged.

On 13 Nov the enemy near the Moselle withdrew to within the line of forts encircling Metz, and the 5th Div advanced to the forts on a line through Corny — Pommerieux — Verny — Liehon. The armored divisions advanced about a mile, an infantry division coming to their aid in the area about Hery. In the north a detached fort was taken on the west side of the Moselle just north of Thionville. This gain enabled the bridgehead near Koenigsmacher to be extended during the following day to opposite Thionville.

The 5th Div attacked north toward Metz on the 14th, while at the same time the 95th Div attacked the west side of that city. Some of the forts south of Metz on the east side of the Moselle were found to be without garrisons or not prepared for defense. It was possible to advance as far as Orny without great loss.

Thionville was all but surrounded on the 15th. Fort Illange on the east bank was captured by the 90th Div, which also enlarged its own

bridgehead. The 95th Div attacked around the northwest side of Metz from Maizieres-les-Metz and captured several forts in this sector. On the south side the 5th Div advanced from Orny to Peltre, only 2 miles from Metz. The 80th Div advanced to beyond Arriance. A heavy Panzer attack at Landroff was met by the 6th Armd Div and stopped. The 35th Div in rear of the armored troops slipped to the right and occupied Baronville and Morhange. The 4th Armd Div seized Guebling, then turning north reached the vicinity of Bendsdorf. The 26th Div advanced toward Dieuze from the north.

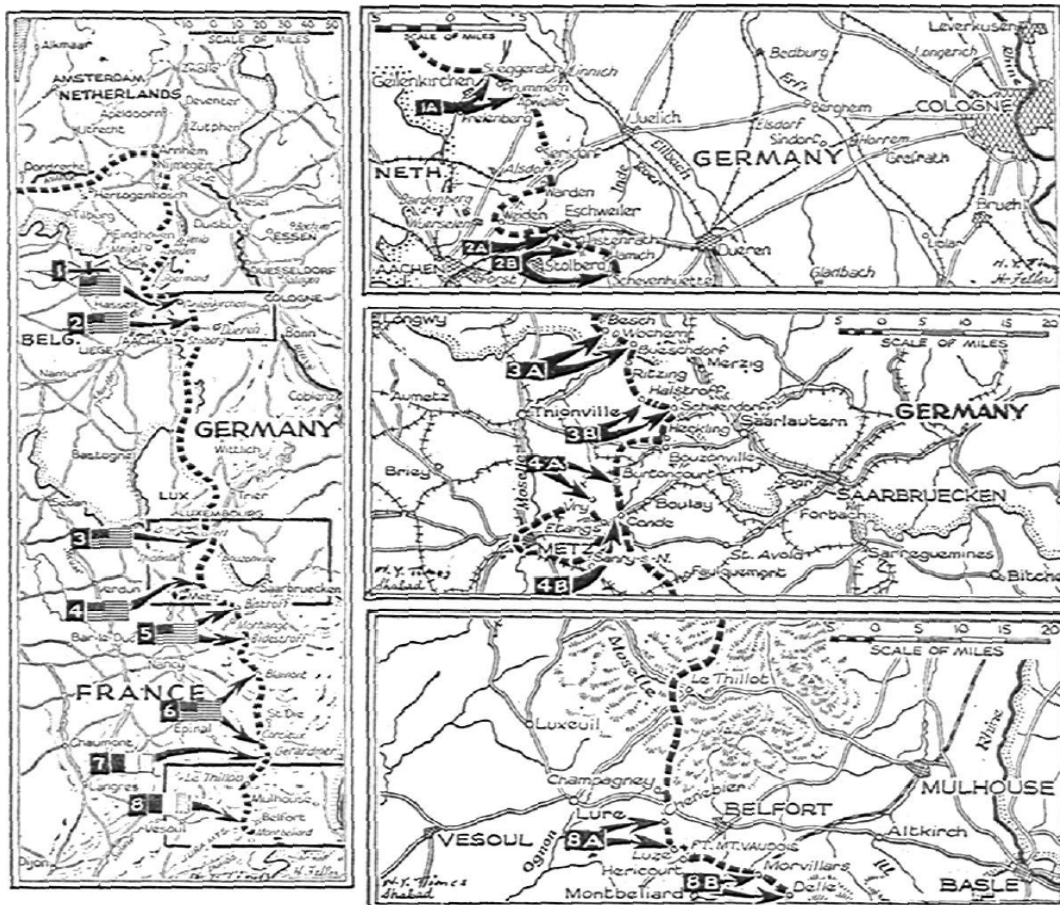
On the 16th the 95th Div captured Woippy (just north of Metz) but lost Fort St. Hubert, which had been taken the day before. South of Metz the 5th Div captured Augny and lost Peltre. Elsewhere there was heavy fighting with only slight changes in the line.

Next day the 90th Div made gains to the east, but the Germans in Thionville held out. Elsewhere the attack was temporarily suspended.

On the 18th the 95th Div was attacking Metz from the north and west and the 5th from the southeast. Both divisions arrived at the edge of the city, respectively at the north and southeast edges. On the north side a house and street battle started. At this time the Germans were still holding the high ground west of Metz, and were everywhere defending fiercely.

#### THE BATTLE OF BACCARAT—ST. DIE

At the beginning of the period the Seventh Army was attacking in the vicinity of Bruyeres. The country is heavily wooded and so



At the end of this account, in sectors around Aachen British and American units joined to capture Geilenkirchen (1). In this area they also took Frelenberg, Prummern, Apweiler, and Suedgerath (1A). In a 4-mile advance the American First Army reached the outskirts of Eschweiler (2 and 2A) and to the southeast took Hastenrath and Schevenhuette (2B). Northeast of Thionville (3) the Third Army crossed into Germany to seize Besch, Wochern, and Bueschdorf (3A). East of Thionville the Hastroff area was reached and Schwerdorff was entered (3B). Metz was encircled, and beyond the city General Patton's men took Burtoncourt and Vry (4A) and Etangs and Conde (4B). To the southeast our forces occupied Bistroff and Bidesstroff (5). The American Seventh Army won Blamont and Corcieux (6). Farther south the French took the Gerardmer junction (7) and around Belfort (8) they seized Chenebier, Luze (8A), Morvillars, and Delle (8B).

very favorable for defense. Bruyeres was taken on the 20th. On the left, small attacks were in progress at the east end of the Foret de Parroy.

An attack on St. Die was started astride the high road from Bruyeres. This forced a crossing of the Morhange River on the 23d, and advanced by next day about 4 miles to Mortagne. A direct attack on Baccarat from the west arrived the same day at Menarmont. Troops from Rambervillers arrived at Houserras headed for St. Die, and at Fraipertuis, on the 28th and 29th respectively. Resistance was strong everywhere, but apparently by inferior numbers of troops. This last attack was extended to the north to include Jeanmenil and Bru, which were taken on the 30th. The latter town was on the high road to Raon l'Etape. Pushing forward astride this, the troops reached St. Benoit on the last day of October.

Starting from the base previously secured east of Luneville, an attack launched against Baccarat from the north arrived on 1 Nov on the line Azerailles (in the Meurthe valley)—Hablainville. The attacks from Rambervillers and from Bruyeres were advancing steadily but slowly through dense forests.

Baccarat was taken next day by a combined attack from the north and west. The main effort was now concentrated to clearing the enemy out of the Meurthe valley. The Allies had a line astride the valley through Baccarat, which pushed southward. Other troops attacked from the west. Raon l'Etape was the first objective. Ste. Barbe was taken on the 5th, and next day the Allied advance reached the line Vacqueville—Betrichamps—la Chapelle — Nompelize. Further south the line was approaching Geradmer, a famous French summer and winter resort, where French troops had started an offensive on the 3d.

By 11 Nov Allied troops held the west bank of the Meurthe from Raon l'Etape to St. Die, less an enemy bridgehead at the latter place. The Allied attack was now extended east from Luneville toward Blamont. Attacks in this area were not supported by the masses of artillery and air forces employed around Aachen and Metz, but were of a limited nature involving daily advances proportionate to the terrain difficulties and seldom exceeding a couple of miles. On 18 Nov Raon l'Etape was occupied.

#### THE BATTLE OF BELFORT

Belfort is a fortress consisting of an inner and an outer circle of forts defending the roads and railroads through that town. An excellent road extends south of Belfort through Montbeliard to the Rhine, but it is covered by the outer circle of forts. Belfort with its forts is intended to close the gap of about 17 miles between the south end of the Vosges Mountains and the Swiss frontier.

The French First Army launched a major offensive on 14 Nov astride the Doubs River west of Montbeliard. As the river was in flood, the first day's battle brought only limited gains. The front of the attack was about 18 miles. Continuing on the following day, the enemy's first positions were reached along the line Marvelise—Montenois—Lougres—Ecot—Ecurcey, all outside the outer belt of forts. Next day armor pierced through the line of forts and some troops reached Montbeliard. The French made their main effort on their right. Attacking without pause, by the evening of the 18th although German-

held forts were holding they had been by-passed and the right advanced to Delle on the Swiss border. Directly west of Belfort the left of the attack reached the line Chenebier—Chagey—Luze (all inc), just outside the outer belt of forts.

As this account closes the French Army was pushing its attack directly against Belfort, while at the same time slipping along the Swiss border toward the Rhine River.

\* \* \*

On the evening of 18 Nov the line was approximately:

**Canadian First Army: Hollandische Diep—Maas River.**

**British Second Army: Neder Rijn (Lek) River from opposite Wagenheim to Arnhem (inc)—Mook (G)—Maas River to Vierlingsbeek—Venray (A)—Amerika (G)—Venlo (German with bridgehead on west side of river)—Maas River (both banks German to Maeseyck)—Sitard (A)—Geilenkirchen (A).**

**U. S. Ninth Army: Immensdorf (A)—Euchen (?)—Stolberg (A).**

**U. S. First Army: Huertgen (?)—Monschau (A)—Our River.**

**U. S. Third Army: Mosel River (U. S. bridgehead around Koenigsmacher, German bridgeheads at Thionville and Metz)—Augny (A)—Peltre (G)—Sanry-sur-Meuse (A)—Remilly (A)—Arriance (A)—Morhange (A)—Conthil (A)—Marsal (?)—Juvelise (?).**

**U. S. Seventh Army: Foret de Parroy (A)—Veho (?)—Migneville (A)—Ste. Pole—Raon l'Etape (A)—Meurthe River—St. Die (G)—Taintrux (G)—la Houssiere (G)—Geradmer (G).**

**French First Army: La Bresse (?)—Cornimont (?)—Le Thillot (?)—Champagny (?)—Chenebier (A)—Chazey (A)—Luze (A)—Hericourt (G)—Ste. Marie (?)—Dampierre-sur-les-Doubs (A)—Audincourt (Allies, with some troops in Montbeliard)—Dampierre-les-Bois (A)—Delle (A).**

#### GERMAN-HELD PORTS IN FRANCE

In mid-November the Germans were evacuating their posts on the south side of the Gironde River to the north side, near Royan. In all the Germans have there a garrison of 21,000 men. The modern port of Le Verdon is being demolished by the Germans.

At St. Nazaire the German garrison is estimated as 20,000 men. They hold both banks of the Loire. Both at St. Nazaire and at Royan the Germans have air fields, and are in communication with Germany.

At La Rochelle the enemy's garrison is also 20,000 men, including 1,000 Italians. There is no air field but there is a submarine port. It is known that during the past month the enemy here received considerable quantities of commissary supplies.

At Lorient the enemy has the XXV Corps and 25,000 men; at Dunkerque, about 20,000 men. Roughly two-thirds of the enemy's forces are combat troops, including sailors, marines, MPs, etc., and one-third belong to the services. All enemy posts are encircled by a line of forts of reinforced concrete, covered by antitank ditches, wire, mine fields, and other obstacles. The radius of the circle of forts is about 10 miles.

The investing forces at all posts are French Forces of the Interior. They are poorly equipped and have no heavy artillery or appropriate siege materiel. Their commander is Gen. Edouard R. M. de Larminat.

## THE WAR IN ITALY (19 Oct to 18 Nov 44)

The Allied Central Mediterranean Force (Gen. Sir Harold R. L. G. Alexander) with the U. S. Fifth Army (Lt. Gen. Mark W. Clark) on the left and British Eighth Army (Lt. Gen. Sir Oliver W. H. Leese) on the right, held the line

**Viareggio (Allies)—Galliciano (A)—Barga (A)—Fanano (German)—Montese (G)—Vergato (G)—point 2 miles north of Loiano—Marradi (?)—Galeata (G)—Cesena (G)—Cesenatico (G)** against a German Army Group (Field Marshal Albert von Kesselring) estimated at about 23 divisions. The mission of the Allies was to drive the Germans out of Italy. That of the Germans was to hold on to north Italy as long as possible, in view of its economic importance from its industrial and agricultural resources.

Some Allied units were withdrawn and a Brazilian division entered line on the left of the U. S. Fifth Army. The enemy held a very strong mountain position, and was unusually aggressive in counterattacking.

At this season of the year rains were frequent, with snows in the mountains. Although roads were hard surfaced they had not been designed for the heavy traffic incident to operations of large modern armies. They deteriorated rapidly. The rains swelled the streams, washed out bridges, and reduced the possibilities of rapidly crossing streams which during the summer were not important obstacles. Under the circumstances the previous rather rapid rate of advance of the Allies was reduced.

On 19 Oct the Fifth Army was engaged in a major offensive along the line Vergato—Loiano with Bologna as the objective. The Eighth Army was making its main effort near the Adriatic coast, with a view of turning the enemy's left by an advance toward Ferrara. On the 20th, Canadian troops in heavy fighting entered Cesena and occupied Cesenatico. The Germans mostly withdrew to across the Savio River and adjusted their line to the west. This enabled a Polish Corps to capture Galeata. The Eighth kept right on with its offensive which extended from the Adriatic 30 miles inland into the mountains.

The Fifth Army advanced slowly in difficult mountain fighting. A South African division attacked near Vergato between the Setta and Reno Rivers. American divisions extended the line to the right to include the Savena valley. British and Indian Divisions extended it still further east. The advance was steady, but very slow.

On 25 Oct the Eighth Army discovered that the enemy had withdrawn across the Ronco River and thereupon closed up to that line. The Fifth Army was almost immobilized by rain, sleet, and mud. Motor vehicles sank up to the truck beds. Camps were quagmires. Large forces of men were working on roads. It was barely possible to keep a few cars moving. All streams were formidable obstacles on account of the speed and volume of their currents. These conditions led to a temporary halt in the Allied offensive.

On 30 Oct the Eighth Army renewed its offensive on the left of the active sector. An Indian Division forced a crossing of the Ronco River near Meldola, which was taken next day. An offensive by the Brazilian Division north from Galliciano against Castelnuovo di Garfagnana failed.

There was more delay on account of weather and roads. On 6 Nov Polish troops of the Eighth Army attacked north of Galeata toward Modigliana and reached a line north of Rocca San Casciano. As this attack seemed promising it was continued on the following day, and on the 8th was renewed together with a major effort against the Ronco River line. The battle commenced with an extensive artillery preparation. The principal gain was by the Poles, but this was balanced on the 9th by the advance across the Ronco breaking through and entering Forli.

Fighting continued in and around Forli for several days. Not until 13 Nov was this town finally cleared of the enemy. The Allied advance was then renewed to the north on the axis Forli—Lugo—Ferrara. The loss of Forli did not cause the enemy to abandon his general line. He continued to defend the line Modigliana—Montone River—Ravenna, treating Forli as a hostile bridgehead encircled on three sides by German troops. Meanwhile the Fifth Army continued on



Around 10 Nov the British had patrols operating 5 miles from Ravenna (1). They captured Forli and Sadurano (2), the foe digging in on the west bank of the Montone River. Polish troops seized Mount Bora (3). The American Fifth Army was checked near Vedriano and south of Bologna (4), but near the west coast Levigliani, Terrinca, and Azzano (5) were taken.

with a succession of attacks with limited objectives in the mountains south of Bologna.

On 16 Nov the right of the U. S. Fifth Army, having been extended eastward, attacked jointly with the left of the British Eighth Army and captured Modigliana. An attack on the left of the line, near the west coast near Galliciano, gained about a mile. This was partly lost to an enemy counterattack on the 18th. At that date the line was

**Viareggio (A)—Galliciano (A)—Barga (A)—Fanano (A)—Montese (G)—Vergato (G)—line 3 miles north of Loiano—Valsenio (?)—Modigliana (A)—Forli (A)—Ravenna (G).**

The Germans had flooded the terrain south of Ravenna by destroying dikes of adjacent streams. The Allied line in this sector was south of the Ronco River. For the period the Allied gain was on the right, for a maximum of 16 miles along the coast.

## THE WAR ON THE RUSSIAN FRONT (19 Oct to 18 Nov 44)

### FINLAND

On 19 Oct the Germans were retreating from north Finland on two fronts:

**North: a north—south line just east of Kirkenes;**  
**South: almost along the Arctic Circle.**

In the north sector a Russian force estimated at 12 divisions plus attached tank brigades, on 23 Oct attacked toward Kirkenes. The Germans seem to have previously decided to withdraw to the vicinity of Tromsø and they did not make a serious resistance. Kirkenes fell on the 25th, the Germans retiring via the Arctic Road—which was an all-weather one which they had constructed from Narvik.

Kirkenes was a town of only 6,000 people. It had been a base for German attacks against convoys to and from Murmansk. The iron mines in the vicinity produced also two million tons of ore per annum. There was a large airdrome. The next German airdrome (excluding emergency landing fields) is at Banak near Porsanger Fjord, 115 miles west. The intervening country is a flat and rocky tundra not much above sea level. There are numerous streams and lakes, and no roads except the one mentioned above.

The south German force retired at an average rate of about 9 miles per day. With very little fighting, on 6 Nov it had reached the line Palojoensuu—Ivalo, covering the two roads leading around the north end of Sweden into Norway.

By 18 Nov the Germans were still holding Palojoensuu. They had fallen back in the center to the vicinity of Kaamanen. On the north their line was near the west end of Varanger Fjord.

### THE BALTIC STATES

The Germans held a large beachhead in Latvia from the Lielupe River southeast to a point 12 miles south of Liepaja. This enclosed the ports of Ventspils (Windau) and Liepaja (Libau), denying use of them to

the Russians. The Russians held Riga, but use of this port was denied by the beachhead on the south side of the Gulf of Riga and by a detached post which held Sworbe peninsula at the south end of Oesel Island. About 30 German divisions were in the beachhead, covering a front of nearly 150 miles. The strategical idea for holding this territory seems to have been that if the Russians had the use of the Baltic ports they would be able to launch amphibious expeditions against the coast of north Prussia as far west as Denmark. Denied the use of the ports, amphibious expeditions would have to start from the Gulf of Finland. These ports are so far away that an expedition from that area would be liable to attack from the air, and by considerable German naval forces, before they could reach their destination. It also would have required more than 30 divisions to effectively guard the 400 miles of north German coast.

At the beginning of the period the Russians were engaged in two operations to secure use of ports—one against the Sworbe peninsula, the other against Liepaja. The German navy dominated the Baltic Sea and there was no Russian naval activity. The attack by land against the Sworbe peninsula was subject to enfilade fire by German light naval forces.

On 27 Oct the Russians launched twin attacks. One from the vicinity of Auce was directed against Ventspils, while the other from south of Liepaja was directed against that port. At the same time the attack against Sworbe peninsula was intensified. The twin attacks were preceded by a terrific air and artillery preparation.

Very little information is available concerning these attacks. That against Liepaja continued until 2 Nov, inclusive, when it was discontinued without having had any substantial success. The Auce attack was suspended on 7 Nov, also without having obtained other than local gains. New attacks on the 11th and 12th in great strength



While the siege of Memel (1) continued in late October, the Red Army advanced its northeastern wing to Jogschen (2) and also took Werskepchen, only 2 miles from Schlossberg. At Schurgupchen (3) Soviet forces were 6 miles southeast of Gumbinnen. Capture of Regellen (4) marked the fighting southeast of Goldap, where the Germans claimed they had pushed the Russians back. The thrust westward from Suwalki was carried to Sidory (5), approaching Treuberg. Augustow (6), the German bastion in northern Poland, also toppled.

failed to penetrate the German lines.

This left the situation (and the line) at the close of the period substantially unchanged.

#### THE POLAND FRONTIER

The line on 19 Oct was **border between Lithuania and Prussia—Suwalki (G)—Augustow (G)—Osovets (R)—Narew River to vicinity of Warsaw, with small Russian and German bridgeheads at intervals—Praga (R)—Vistula (Wista) River (with Russian bridgeheads south of the Pilica River and near Sandomierz)—Mielec (R)—Rzeszow (R)—Jaslo (G).**

The Russian 1st Baltic and 3d White Russian Army Groups (latter on the south) had started on 16 Oct a major offensive north of Suwalki with the mission of advancing to Koenigsberg. The main effort was astride the railroad through Gumbinnen. It was a powerful attack by 35 infantry divisions, and on 19 Oct it reached the line Schirwindt—Virbalis—Suwalki (all exc). It did not gain much next day, but on the 21st Russian tanks penetrated the German lines and some of them reached the area south of Gumbinnen, while others entered Goldap before they were intercepted. The main attack astride the railroad failed to advance. The local German commander was Gen. Hossback.

The Russians were able to follow up after the tanks which had pierced the hostile front, and they seized and held Goldap on the 23d. They did not succeed in taking Gumbinnen but reached the vicinity of Stallupoenen (Ebenrode on some maps). The front of the offensive was extended southward to opposite Augustow, making the entire battle front about 90 miles. On the north the Germans shortened their line by withdrawing across the Niemen River, less a beachhead around Memel which was left garrisoned. On the south Suwalki fell.

On the 24th the German left advanced near Gumbinnen, recovering some lost ground. At the same time the Russian left took Augustow. The Germans introduced into line their recently organized Volksturm battalions as reinforcing units to divisions. These new troops were hastily organized units, mostly of over-age men. A part of the NCOs and officers were experienced veterans drafted from old organizations. With the help of these troops the Germans came close to stopping the

Russian advance by the following day. By the end of the month the Russian offensive had been halted.

The Russians had a bridgehead across the Narew near Pultusk. Commencing on 24 Oct they endeavored to break out. Six divisions were used. This attempt, which may have been intended solely as a diversion, did not succeed.

These Russian attacks depended largely upon tank action. Tank losses appear to have been high in East Prussia they are reported as averaging over 100 a day. The same figure applied to the minor offensive near Pultusk, which, being in a confined space, was more dangerous to tank action.

On 3 Nov the Germans, finding the great battle in East Prussia over, commenced a series of limited attacks with a view of recovering ground and securing a better line. First efforts were toward Goldap, which was recovered on the 5th. The Germans were able in the next few days to advance to the head of Lake Goldap. The line then stabilized:

**German beachhead at Memel. Niemen (Nettunas or Memel) River—Schirwindt (R)—Pillkallen (G)—Ebenrode (?)—Lake Goldap—Prussian boundary—Augustow (R)—Osovets (R)—Narew River with Russian bridgehead at Pultusk—Praga (R)—Vistula River with Russian bridgeheads south of the Pilica River and south of Sandomierz—Mielec—Rzeszow (R)—Jaslotka River.**

#### HUNGARY

The line at the start of the period was **Jaslo (G)—Dukla Pass (G)—southeast along the Carpathian Mountains with all passes in Russian hands to Rahov (R)—Sighet (?)—Baia Mare (G)—Valealui-Mihai (?)—Debrecen (G)—Hajduszoboszo (R)—Abadszalok (R)—Mezoetur (R)—Kocroes River—Tisza (Theiss) River with Russian bridgeheads below Csongrad and below Szegez (latter including Subotica).**

The Russian 2nd Ukraine Army Group aided by 12 Romanian divisions was engaged in an effort to force Hungary out of its alliance with Germany and into a connection with the Allies. This was the major Russian effort on the entire front. On 19 Oct the main fighting was along the line Mezoetur—Debrecen. Both sides succeeded in advancing on their right flanks.

On the 20th the Russians extended their attacks to the Dukla and Uzok passes with a view of turning the left of the enemy's positions in the Hungarian plain around Debrecen. The latter town was entered by a frontal attack coupled with flank attacks by cavalry and tanks.

Next day a new strong Russian attack was launched on a front of 70 miles from south of Subotica to opposite Csongrad. It met little resistance, and the first day armored troops reached Baja on the Danube—a 50-mile advance from Czegléd. Csongrad fell. Advances were made north from Debrecen, and in the Carpathian passes. Only near Mezoetur were the Germans able to make gains. Here in the flat country they partially encircled the 4th Romanian Division and mauled it badly.

In two days, the Russian advance by their 37th Army from Debrecen gained 50 miles, arriving about Nyiregyhaza on the 23d. Next day the Russians were at the Tisza River. Fighting in this area was fluid. There was no continuous line. There was a maximum amount of maneuver by armored forces. The Germans did not stop the Russians, but with tanks they partly encircled a Russian cavalry division. Although the latter had a brigade of tanks (about 50 machines) attached, they were very roughly handled. In the south the Russians made no effort to cross the Danube; instead, they formed a line facing north (extending between the Danube and Tisza Rivers) which reached Kiskunhalas, 70 miles from Budapest.

The German army included many Hungarian divisions—24 in all. A mixture of troops of both nations were on this entire front. As far as can be ascertained they got along well together. North of Debrecen the Axis troops took the offensive with highly mobile troops and encircled a number of Russian units. They recaptured Nyiregyhaza, but the Russians advanced on the east from the Carpathian passes,



and on the south toward Budapest. By the 29th the Russian attack in the center had been stopped temporarily. According to German reports, in the rapid and extensive tank battles the Russians had lost within a week 6,600 prisoners together with nearly 800 tanks and 1,000 guns. The Russians made no claims as to German losses.

The Russian advance from the Carpathian passes reached Uzhorod (Ungvar) and Munkacs on the 27th, and Csap on the 30th. There was some hard fighting near the latter place. On the last day of the month the Russians attacking all along the line reached Kecskemet with their left, and reoccupied Nyiregyhaza with their center. In between Nyiregyhaza and Csap the Germans had withdrawn, in apparent good order, from the Satu Mare area. The line now nearly paralleled the Tisza River.

Now the Russians shifted their main effort to their left. New Russian troops arrived in line, while the Axis had reinforced what had previously been a covering force by transferring Panzer divisions from other fronts. The terrain being in general favorable for tank maneuvers, heavy fighting started right in. To provide troops for this sector the Germans abandoned the left bank of the Tisza River (where at the time they held only a narrow belt) and withdrew to the right bank.

Russian tanks penetrated the German front on 3 Nov and advanced over 18 miles before they were intercepted at Alsonemedi, 10 miles southeast of Budapest. Germans that were cut off were close to the Danube and able to form a bridgehead at Duna Foeldvar. The Germans did not seriously contest the area between Czegled and Szolnok and by the 4th had withdrawn to a line encircling Budapest. The reason for this withdrawal is not yet known. It was probably due to lack of troops to cover Budapest without abandoning a front distant from it. By the 6th the Axis had its new line established and was able to counterattack; some armored troops made raids deep within the Russian lines.

On 9 Nov a strong Russian attack by 10 divisions was delivered on a 35-mile front about halfway between Budapest and Miskolcz. The Tisza River was low, and fordable at places. Armored troops led the offensive and advanced 12 miles beyond the river. Strong attacks against Budapest may have been a diversion, but they failed to advance. The Russians widened their bridgehead over the Tisza on the 10th. Energetic Axis counterattacks and bad weather prevented an advance.

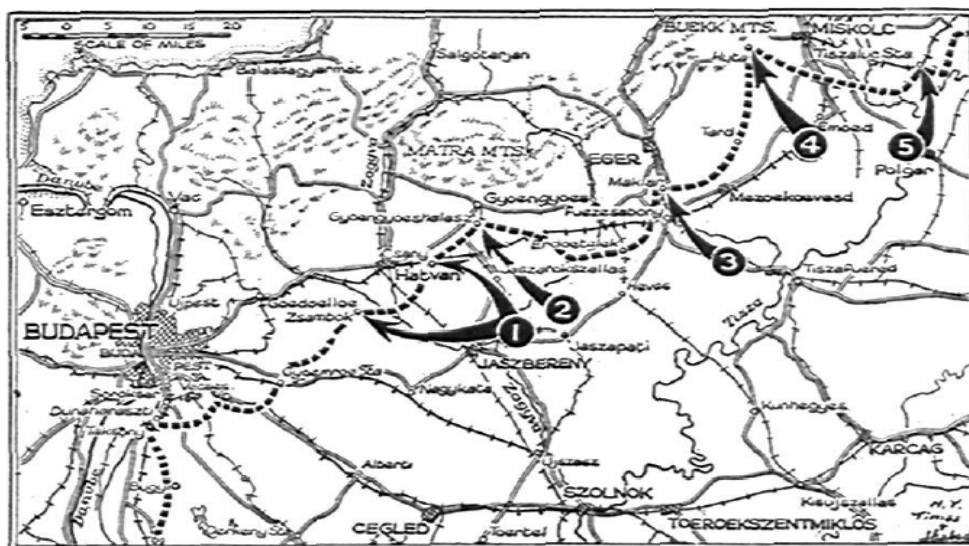
On the 12th strong Russian attacks were delivered against Budapest on the front Racskeve—Pilis—Jaszbereny. Although numerous tanks were used this attack did not gain much. The Russians gained about their bridgehead over the Tisza, which now extended from Gyoengyoes to Mezo Koevesd (both inc). Continuing next day, the Russians advanced to close to Jaszbereny but were unable to take that town. The Germans withdrew their troops from the Duna Foeldvar bridgehead, to the probable relief of the Russian command: the latter apparently had the idea that the Germans intended to debouch from this bridgehead against their left rear. As mentioned above, it now seems more probable that this bridgehead was a temporary necessity to save troops cut off by the Russian advance; as soon as arrangements could be made they were withdrawn.

On the 14th a Russian attack secured Jaszbereny. Minor advances were subsequently made until the 18th. At the end of that day the line in Hungary was approximately

**Jasiocka River—Topla River—Csap (R)—Tisza River—Miskolc (G)—Mezo Koevesd (R)—Hatvan (G)—Budapest (G)—Danube River.**

#### YUGOSLAVIA

On 19 Oct the line was  
**Subotica (R)—Senta (R)—Tisza River—Belgrade (?)—Morava valley—Nis (G)—Leskovo (G)—Kriva Palanka (?)—Stip (G)—Strumitsa (G)—Kilkis (G)—Serrai (G).**



*As the period closed no advance was reported from the frontal assault on Budapest, but in the drive toward Hatvan the Russians captured Zsambok and Csany (1). They took Gyoengyoeshalasz (2) in their drive toward Gyoengyoes. The long-besieged junction of Fuzesabony (3) also was won, while Huta (4) was seized in an outflanking push against Miskolc. The capture of Tiszaluc (3) cut a railroad running east from Miskolc.*

In the north half of this front the Russian 3d Ukraine Army Group, aided by an undetermined number of Yugoslav partisans, was engaged in an offensive directed to the west. Its object was to cut the German line of communications to Greece and thereby trap an estimated force of some 15 divisions believed to be south of Nis. Against the south half of the front a Bulgar Army (estimated as about 6 divisions) was engaged in holding attacks.

The Germans were withdrawing from the Balkans. They had made this decision about the beginning of September, and had wasted no time in carrying out their plan. They began by relieving garrisons in the Aegean Islands and followed this by withdrawals from south Greece. Athens and south thereof had already been evacuated.

This German withdrawal has on the whole been very orderly, and has brought off practically all equipment. It added to this a vast quantity of supplies gathered locally. In cases this left the population in a destitute condition. In the German rear have been numerous bands belonging to the general authority of Marshal Tito of Yugoslavia. In spite of glowing daily reports of successes obtained by this general, the best evidence seems to be that his operations have been only of a harassing nature and have not seriously interfered with the German retreat.

At first the Russians' main effort was in the north. They had already entered Belgrade where a hot house and street battle had been going on for several days. On 21 Oct the Germans quit and left the city. According to Russian reports the Germans lost over 9,000 killed, 8,000 prisoners, and over 300 guns. The Germans withdrew from the Morava valley to the Shumadia Mountains along its west edge, and there dug in.

The Morava valley had been the main line of communications to the south Balkans. West of the Shumadia Mountains (through Sarajevo and Skoplje) was an alternate line which became the main line. The Russians occupied Krusevac and Nis. A German campaign was started to clear partisans away from their rear areas.

On 31 Oct the Germans completed the evacuation of Greece. British troops which were following then occupied Salonika. By now the Germans had abandoned all of the coast of Dalmatia, withdrawing to the mountains just back of the Adriatic. British troops (together with Yugoslav partisans) occupied the abandoned places.

Continuing with their retreat, the Germans evacuated Kumanovo and territory south thereof on 13 Nov. South Albania was also abandoned. By 18 Nov the Germans were north of the line Elbasani—Skoplje. Maximum German withdrawal had been 200 miles. The line was  
**Danube River—Sabac (?)—Valjevo (G)—Cacak (G)—mountains east of the Ibar River—Pristina (G)—Tetovo (G)—Debar (G)—Tirana (G)—Adriatic coast—Dubrovnik (A)—Dinaric Alps to head of the Adriatic.**

## COMMENTS

According to Russian reports, as of 1 Nov the enemy's forces on the Russian front, as compared with a year previously, were:

1943	207	German divisions	77	Axis divisions	284	divisions total
1944	180		24		204	
decrease			27	53		80

A year ago the Russian front was in round numbers 1,000 miles long, whereas it is now about 1,400 miles. This increase is due to the desertion of Romania and Bulgaria, which extended the front from the north side of the Black Sea through the Balkans to the Adriatic. Each Axis division now has to cover an average front of about 7 miles instead of half of this. This does not include the Dinaric Alps front.

If the German retreat continues to the head of the Adriatic the New line would be about 1,100 miles in all. It is estimated that the Germans

had 15 divisions in the Balkans guarding rear areas and in Greece, and not on the Russian front. Assuming these divisions will join the 204 opposed to the Russians, it will give a total of 219 divisions or 1 division to 5 miles of front.

Due to territories abandoned, a large number of German service and MP troops are no longer needed. There has also been a noticeable decrease in AA artillery, there being fewer places to defend. There has been a decrease in the German Air Force.

The latest available reports of German service strengths in rear areas is as of 1 Jan 44. This shows for territories then occupied on the eastern front

Russia	775,000	Germans	195,000	others
Balkans	90,000	"		

Release of these troops has enabled Germany to make up much of the heavy losses she has sustained.

## THE WAR IN THE PHILIPPINES (19 Oct to 18 Nov 44)

### PRELIMINARY OPERATIONS

In the November number of this JOURNAL (pp. 763 and 764), report was made of the operations of an American Naval Task Force east of the Philippines between 9 and 14 Sep. Planes from this TF had attacked ships and airfields on Mindanao and in the Visayas. They reported having sunk 32 small ships (exclusive of sampans) and as having downed or destroyed on the ground 501 enemy planes. At this time the Pacific Fleet Command under Admiral Nimitz had just initiated an attack on the Palau Islands. It was contemplating an attack on Yap.

To accomplish that mission the XXIV Army Corps (Maj. Gen. John R. Hodge) with the 7th and 96th Inf Divs was en route from Hawaii for Yap, having sailed on 15 Sep. On that day a communication was received from Admiral William F. Halsey (commanding the Fleet operating against the Philippines) stating that in view of the great success obtained by the TF in the days just preceding he recommended that no attack be made against Yap, but that the forces intended for that purpose be utilized instead for an attack against the Philippines. This was approved on 16 Sep and the XXIV Corps was diverted to a position in readiness.

The Philippines lie within the territorial limits of the Southwest Pacific Command of Gen. MacArthur. It was necessary to arrange with him for the proposed attack. MacArthur approved of the idea; an expedition was prepared by him to which the XXIV Corps would be added, as on loan from the Pacific Fleet. The latter also assigned the 7th Fleet (Vice Admiral Kincaid) to cover the movement. Preparations and movement of troops took one month.

The Pacific Fleet detailed the 3d Fleet (Vice Admiral Marc A. Mitscher) to cover the movement of the expeditionary force to be sent to the Philippines against hostile sea and air forces coming from the north. As described in the December number of this JOURNAL, the 3d Fleet took station east and north of Luzon. Its planes raided Luzon on 21 Sep. The enemy was reported to have lost 51 ships sunk and 58 damaged, and 357 planes. When the expeditionary force was ready to start new air raids were made between 10 and 19 Oct against the Ryukyu Islands, Formosa, Luzon, and the Visayas. This resulted in an enemy loss claimed of 83 ships sunk and 90 damaged and 1,353 planes destroyed or downed. In view of these successes the expeditionary force met no opposition. It arrived off Leyte early on 20 Oct.

### EARLY OPERATIONS

After a devastating artillery preparation fired by the navy, the X Corps (Maj. Gen. Franklin C. Sibert) with the 24th Inf and 1st Cav (dismounted) Divs landed south of Tacloban. The XXIV Corps with its two divisions, less one combat team, landed in the vicinity of Dulag. One combat team landed on Panaon Island (just south of Leyte). Sixth Army Headquarters (Lt. Gen. Walter Krueger) was in command. Gen. MacArthur as C-in-C was also present.

It was officially announced that the following additional troops were present:

**3d Engineer Brigade (amphibious);**  
**Detachment Australian Royal Air Corps;**  
**An Australian Naval Squadron.**

The enemy was found to be the 16th Japanese Division. As it was scattered all over Leyte, there was no effective opposition to the

landings. All got ashore and established beachheads.

On 21 Oct enemy planes attacked the convoy of ships discharging off shore. This was continued daily. The navy furnished air cover for the expeditionary force pending operation of airfields on Leyte. The X Corps captured Tacloban and the adjacent airfield. The XXIV Corps met some opposition, but occupied the Dulag airfield. Work was immediately started to recondition the captured fields.

Troops pushed out from the beachheads and by 25 Oct, against only light and scattered opposition, the two were united. A detachment from the 1st Cav Div was sent across San Juanico Strait, while the X Corps occupied the west side of the strait. The XXIV Corps had advanced from Dulag to Burauen (12 miles inland), and was facing north across Leyte plain (which lies east of the main mountain range) in a northwest—southeast axis. This plain is heavily cultivated and populated.

### THE LEYTE NAVAL CAMPAIGN

On 20 Oct it was believed that the enemy had been surprised by the invasion of Leyte. It now seems that the enemy may not have foreseen an attack on Leyte, but he was definitely expecting an attack somewhere in the Philippines. He had a plan ready for the occasion. Movements made indicate that the Japanese C-in-C (Field Marshal Count Juichi Terauchi) issued orders on 20 Oct, within a few hours after the invasion landed, to start the plan going.

In compliance with orders issued, three Japanese naval forces started on the same day on courses and speeds which would bring them opposite the east shore of Leyte on 25 Oct. These will be designated as the north, center, and south Jap Naval Forces. The south force was discovered by American naval scouts (submarines and planes) on 22 Oct, en route from Singapore toward north Mindanao. This was confirmed by an additional observation on the 23d. The central and north forces were not discovered until the 24th, when the center one was already in the Sibuyan Sea, and the north force was 200 miles northeast of Luzon coming south. The south force was again observed, found heading for Surigao Strait. If not intercepted, all three groups would be able to join east of Leyte next day.

The strengths of the three forces as observed at the time were

	<i>South</i>	<i>Center</i>	<i>North</i>
<b>Battleships</b>	2	5	2
<b>Cruisers</b>	4	8	5
<b>Destroyers</b>	7 or 8	13	6
<b>Aircraft Carriers</b>			4

In view of this situation the 3d Fleet (operating under the Pacific Fleet) headed from its covering position east of the Philippines at a high rate of speed on a course to intercept the enemy's north force at daylight on 25 Oct.

The 7th Fleet (operating under orders of the Southwest Pacific Command) launched its planes to attack immediately the enemy's center force. This was delivered during the afternoon of the 24th, and the reported result was that the enemy had had

- 1 light cruiser torpedoed, capsized and sunk;**
- 3 heavy cruisers both bombed and torpedoed;**
- 3 battleships both bombed and torpedoed;**
- 1 battleship severely damaged, set on fire by bombs, and possibly sunk;**
- 1 cruiser severely damaged, set on fire, and possibly sunk.**

This accounted for 4 out of 5 battleships and 5 out of 8 cruisers. In

view of this reported success the 3d Fleet left its aircraft carriers east of Samar as an air base and detached its combat ships to the south to intercept the enemy's south force as it passed through narrow Surigao Strait. Planes preceded the ships, attacked the enemy, and claimed to have damaged both enemy battleships.

Enemy land-based planes aided their ships. Some attacked the 3d Fleet's aircraft carriers. This fight resulted in 150 Jap planes' being downed, while the United States lost the carrier *Princeton*.

At about 0130 hours on 25 Oct a naval action started in Surigao Strait, when American motor torpedo boats attacked the Jap south force (now reported as 2 battleships, 3 cruisers, and 6 destroyers) coming eastward. This attack did not succeed. Shortly afterward 5 American battleships and several cruisers, including Australian ships, arrived and engaged the enemy. After a 40-minute engagement American destroyers dashed forward, while Navy torpedo planes attacked. At this stage, which was at about 0400 hours, the enemy turned and commenced to withdraw. The American fleet with the Australian cruisers followed.

According to our accounts 3 enemy cruisers with 2 destroyers had been sunk, while one of the two enemy battleships was torpedoed and was also hit by 3 500-lb. bombs and 500 (*sic*) 100-lb. bombs. The Allied ships did not follow the retreating enemy far. They also turned and retraced their route, for an SOS message had been received just after daylight from the aircraft carriers east of Samar that a hostile naval force of greatly superior strength was attacking them.

What had happened was that the enemy's center force, supposed to have been nearly destroyed, was not as much destroyed as believed. Thinking that nothing much had been left of this force, we had no containing forces to hold it, and nothing seems to have been done to even watch San Bernardino Strait. This strait is not easy to navigate at night but the Japs came through, and at 0730 hours on 25 Oct came in sight of the aircraft carriers. According to American communiques the enemy had 4 battleships, 9 cruisers, and 12 destroyers. This is one battleship less, one cruiser more, and one destroyer less than the report of 24 Oct, preceding the engagement of that day.

The Japanese fleet was aided by land-based planes. Together they attacked six U. S. aircraft carriers and 7 destroyers who were hopelessly outclassed by the enemy's greater gun power. The aircraft carriers thereupon for five hours followed evasive tactics, aided by destroyers who laid smoke screens and made torpedo attacks. An SOS had been broadcast, and the 7th Fleet was en route from Surigao Strait. It did not arrive until afternoon. Presumably the enemy's planes discovered the approach of this American force. Pending the arrival of the 7th Fleet the

enemy's ships were attacked by American planes. The ships fought back at intervals with their batteries. As the aircraft carriers were unarmored, while the enemy's ships had armor, the Americans sought to keep out of gun range by retiring to the east.

About 0920 hours the Japanese center force broke off action and retired by the route it had come. The reason for this action is not yet known. At this time our reports indicate that the enemy had lost two cruisers and one destroyer, and that most of his remaining ships had been damaged. Our losses had been one aircraft carrier and 2 destroyers lost; 1 other aircraft carrier was damaged.

During the afternoon air attacks (which were continued during the night) were made against both the south and center Jap forces, and against the center force during the following morning. The results were stated to be that the enemy lost, including previous losses during the 25th:

**from the south force all ships—stated to be 2 battleships, 4 cruisers, 10 destroyers; from the center force all ships damaged, and 4 cruisers and 1 destroyer sunk.**

While these battles were in progress, near the north end of Luzon the 3d Fleet intercepted the north Jap force at daylight on the 25th. The composition of this force is not exactly known, but included at least 2 battleships, 5 cruisers, 6 destroyers, and 4 aircraft carriers. The enemy's planes were absent on shore, and when the American attack by both planes and gunfire came there was no Japanese air opposition. The American planes seemed to have had a field day. The battle was very one-sided and was about over at 1000 hours. By this time the enemy had lost (sunk) 2 cruisers, 1 destroyer, and 4 aircraft carriers, while all other ships were heavily damaged. The Japanese planes now returned but were too late.

Due to the SOS from the American aircraft carriers off Samar, the 3d Fleet broke off the engagement and withdrew at high speed to the south. The enemy withdrew to the north. Planes of the 3d Fleet arrived off Samar during the afternoon in time to take part in the air pursuit during the night and following morning against the enemy's center force. In the battle off north Luzon no American ships had been damaged. 10 planes had been lost with 18 men, while 21 enemy planes were downed in the final stage of this battle.

For the entire series of engagements of 25 Oct the Japanese claim that

a. **Only about 3 American divisions had landed by this date on Leyte (not 6½ as claimed in U. S. communiques).**

a. **Only about 3 American divisions had landed by this date on Leyte (not 6½ as claimed in U. S. communiques).**

b. **The Jap naval forces, with attached land-based planes, succeeded in reaching the transport area off Leyte.**

c. **Alleged American warships sunk: 8 aircraft carriers, 3 cruisers, and 2 destroyers, as against 2 aircraft carriers and 3 destroyers admitted lost by U. S. Alleged American warships damaged: 1 battleship, 2 cruisers, 7 aircraft carriers. Alleged American ships sunk: 5 transports and 17 landing craft. Alleged American ships damaged: 17 transports and 2 landing craft.**

d. **Japanese admitted loss of 1 battleship sunk and one substantially damaged. An unstated number of planes were lost.**

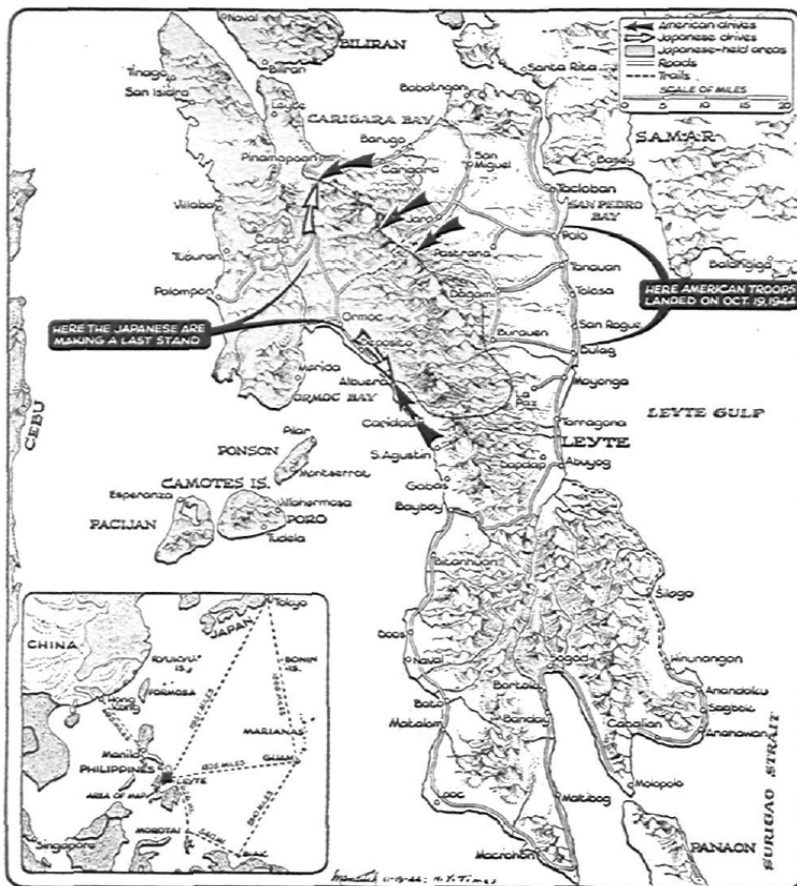
#### OCCUPATION OF LEYTE

Against moderate resistance and in heavy rains and deep mud the American occupation continued. It was announced that to include 27 Oct the invasion forces had lost 518 killed, 1,503 wounded, and 139 missing, for a total of 2,160, while the enemy 16th Div had lost 14,045 men. According to Japanese Tables of Organization this would represent about a complete division, including services. The local airfield had been sufficiently repaired to enable some planes to be based thereon. Japanese continued to make daily day and night attacks, mainly directed against the shipping. For this mission the Japanese organized a Special Air Attack Unit of volunteer fanatics, designated as the "sure hit and sure death" detachment.

On 29 Oct it was officially announced that all organized resistance had ceased. By 30 Oct the occupation of Leyte plain, which extends from Carigara on the north to Dulag on the south, was nearly completed. The occupation of Samar by units of the 1st Cav Div had been extended to include Catbalogan, thereby effecting a solid holding of both sides of San Juanico Straits. The enemy's losses were



*Piecing together the statements of Admiral Nimitz and Gen. MacArthur gives this picture of the battle around the Philippines: One Japanese force, including 4 battleships, 10 cruisers and 13 destroyers, first sighted south of Mindoro (1), steamed east, across the Sibuyan Sea, through San Bernardino Strait, and down the east coast of Samar, where Admiral Kinkaid's combined force attacked it (2) and forced it to retire northward with perhaps 10 ships damaged. It was apparently in this action that the American light carrier *Princeton* was sunk. A second enemy force, first sighted southwest of Negros (3), included 2 battleships, 1 or 2 cruisers, and 4 destroyers. It moved east across the Sulu Sea and through Surigao Strait (4). Admiral Kinkair attacked this group and it lost 1 battleship and several cruisers and destroyers; the rest of the force retreated west through the strait. This whole battle scene is at (A) on the inset. A third enemy force was engaged southeast of Formosa (B).*



now estimated as 24,000, being an increase of 10,000 in three days. American casualties had increased in the same period by 961 to 3,221. It was now discovered that the enemy had organized a base at Ormoc and was receiving replacements and supplies by night from Cebu, about 90 sea miles away.

On 2 Nov it was officially announced that the end of the Leyte-Samar campaign was in sight. The enemy had by now lost 30,000 men while the Leyte plain east of the main mountain range was practically clear of the enemy. The XXIV Corps on the south had reached Baybay on the west coast and was preparing to move north on Ormoc, while the X Corps was coming around the north end of the mountains to attack Ormoc from the north. The air force was daily bombing enemy airfields in the other Visayan Islands. No further material resistance was expected.

Next day the arrival of Japanese mechanized troops was noted. Japanese air attacks against shipping were numerous. On 7 Nov it was estimated that all organized Japanese resistance would be

quelled within two weeks, regardless of reinforcements known to have been received. Next day it was discovered that the enemy was defending the west side of Leyte with at least 4 divisions, identified as the 1st, 16th, 30th, and 102nd. On 9 Nov it was estimated that the enemy had by now lost 35,000 men, but that he was constantly receiving reinforcements from Mindanao, Cebu, and other places. His Thirty-fifth Army had arrived and taken over, under Gen. Tomoguki Yamashita. This is the same general who conquered Malaya and afterward Bataan. This change in Japanese command appears to have become known from Japanese radio intercepts of 8 Nov; it is not yet known whether Gen. Yamashita had by that date actually arrived on Leyte.

On 12 Nov the 3d Fleet's planes attacked an enemy convoy outside Ormoc Bay and report sinking 4 transports and 4 destroyers and downing 15 Jap planes. Next day another convoy of 4 transports and 6 destroyers were reported sunk. The American estimate of the situation at this date was that Gen. Yamashita was endeavoring to assemble sufficient forces to break out from the vicinity of Ormoc and crush the Americans.

The X Corps on the north was meeting strong resistance against its attempts to advance south from Carigara Bay toward Ormoc. The XXIV Corps had similar opposition in its effort to advance north from Baybay. On 14 Nov the X Corps commenced a double envelopment of the enemy's position near Limon, with the 24th Div on the right and the 1st Cav Div on the left. The XXIV Corps was using the 7th Div for a frontal attack along the west coast, while its 96th Div was seeking to advance straight across the mountains just east of Ormoc.

Next day the 24th Div closed in and by the 17th established a strong road block across the Ormoc Road south of Limon, thereby cutting off a detachment of the 1st Jap Div near Limon. Our 32nd Inf Div, newly arrived, entered line on the left of the 24th, and the two divisions attacked jointly down the Ormoc Road. The 1st Cav Div, attacking from Jaro, reached in part the crest line of the mountains separating the Ormoc Road on the west from the Leyte plain on the east.

As this account closes on 18 Nov the situation of the X Corps on the north had not changed. The XXIV Corps on the south had its 7th Inf Div in the vicinity of Albuera (7 miles south of Ormoc) and its 96th Div on the left of the 1st Cav Div west of Dagami, operating against enemy in the mountain range.

It was officially announced that to date American losses had been 1,133 killed, 4,432 wounded, and 146 missing, for a total of 5,711. Enemy losses were estimated at 45,000.

## THE WAR AGAINST JAPAN (less the Philippines) (19 Oct to 18 Nov 44)

### SOUTHEAST ASIA

In *Arakan* the 25th India Division has been holding the line between Maungdaw (Br) and Buthedaung (Jap). There has been no material change in this sector. The 81st West Africa Division has advanced southward in the Kaladan valley meeting only enemy patrols and entered Paletwa, which was found deserted on 18 Nov.

The *West Sector* is the old Manipur area. At the beginning of the period the 5th India Division was 10 miles south of Tiddim, advancing along a narrow valley between high mountains. On 23 Oct it engaged the enemy's rear guard about 11 miles from Tiddim. Some heavy fighting developed, in which the air corps was repeatedly called upon

to attack. On 3 Nov the Indians occupied the enemy's positions. It is not yet known whether the enemy retired voluntarily having accomplished a delaying mission or whether he was forced back. The British have made no claims as to capture of prisoners or materiel. Without meeting further resistance the Indians arrived at Fort White on 8 Nov.

In the meantime the 11th East African Division had advanced south down the Kabaw valley. Its movements were adjusted to those of the 5th India Division so that both arrived respectively north and west of Kalemyo on 14 Nov. A joint attack captured that place next day. As this account closes the 11th East Africans were on the way eastward to the Chindwin valley, meeting no particular opposition.

In the *North Sector* the 36th British Division had on 15 Oct commenced an offensive from the area southwest from Mogaung, advancing southward astride the railroad to Indaw. At the same time two Chinese columns started from the vicinity of Myitkyina. The east column followed a trail east of the Irrawaddy River toward Bhamo; the other column was directed toward Shwegu (on the Irrawaddy, and just halfway between Indaw and Bhamo). The latter column met no great resistance; it arrived at its objective on 8 Nov. The east Chinese column met resistance only after it arrived in the vicinity of Bhamo on 12 Nov. Bhamo was found defended by the enemy, who held an area about 3 miles by 2. By 17 Nov the Chinese had closed in and were attacking from the north, east, and south. Next day one block in Bhamo had been captured. The British column has been stopped just north of Pinwe.

The commander in North Burma is a Chinese general. Besides the 36th British Division there are five China divisions—the 14th, 22nd, 30th, 38th, and 50th. The mission of this command is to cover the completion of the Ledo Road to a connection with the Burma Road, in process of construction from Myitkyina to Tengyueh—about 70 miles of road building over very difficult country. The dry season starts about 1 Dec. Assuming no interruptions, it appears doubtful whether the Burma Road can be opened during 1945, before the next rainy season.

The *Salween Sector* is a Chinese command. Its mission is to push along the Burma Road toward a connection with the Ledo Road. Operations have centered around Lungling, where a branch road, now unimproved, extends across country to Tengyueh, 40 miles away. Lungling was attacked on 1 Nov and occupied on the 3d. The enemy withdrew about 9 miles toward Manshih.

*Burma* is ruled by Premier Ba Maw as directed by Japanese "advice." As Allied troops push into Burma the inhabitants show a pronounced preference toward them and antipathy to the Japanese.

*Thailand* is a kingdom whose king resides in Switzerland. The pro-Japanese Prince-Regent has been replaced by French-educated Luang Pradist. He has been Foreign Minister, and is reputed as highly intelligent. He had been suspected of being a Communist but a Board of Officers found this not proven. He is not pro-Japanese, but has not yet changed the Thailand collaboration policy. He may change over to the Allies, provided a suitable opportunity to do so presents itself.

#### SOUTHWEST PACIFIC COMMAND

The major Allied activity has been air raids on enemy bases in the Netherland Indies to include Halmahera, Ceram, Timor, and islands east thereof. For the first time a number of air attacks have been made against Borneo, including oil plants on the east coast and the naval bases at Brunei and Sandakan.

On 15 Nov troops occupied the Asia Islands. There was only a small enemy detachment at that place.

There is some evidence that the enemy has resupplied and possibly strengthened his forces near Wewak and Sarmi, on the north New Guinea coast. According to Australian reports the enemy has reoccupied Salamaua and Lae.

There has been no change in the situation in New Britain, New Ireland, and Bougainville.

In all of these places substantial enemy forces were by-passed in earlier campaigns. The plan was that the enemy's supplies would thereby be cut off and that he would have the option of surrendering or dying of starvation. It now appears that the enemy can supply these troops, using submarine barges for more distant places and surface barges where craft can conceal themselves by day along the shore. Whether barges withdraw troops as they return or whether they have brought in reinforcements is unknown.

#### PACIFIC FLEET COMMAND

Active air raids and a few raids by surface vessels have been made in the **Kurile Islands: against Paramushiro, Onnekotan, Tori, Suribachi.**

**North Pacific: against Marcus and Wake Islands.**

**Bonin Islands: against Chichi, Haha, Kita Iwo, Iwo Islands.**

**Marianas: against Pagan and Rota Islands.**

**Marshall Islands: against Jaluit, Mili.**

**Carolines: against Ponape, Yap, and Woleai.**

**South: against Nauru.**

Most of these raids were in connection with reconnaissance activities. Ground activities on a small scale have continued on the occupied islands of Angaur and Peleliu of the Palau group, and on Saipan and

Tinian. On each of these small enemy forces had remained. Total enemy losses to include 17 Nov are reported as

	<i>Killed</i>	<i>Prisoners</i>
<b>Angaur and Peleliu</b>	<b>12,980</b>	<b>420</b>
<b>Saipan</b>	<b>26,525</b>	<b>2,115</b>
<b>Tinian</b>	<b>6,893</b>	<b>316</b>
<b>Guam</b>	<b>17,238</b>	<b>463</b>
<b>Total</b>	<b>63,636</b>	<b>3,314</b>

The only American casualties reported were on Saipan, and amounted to 9 killed and 40 wounded.

#### CHINA

Military operations have been limited to Kwangsi. A strong Japanese force, reported by China as 250,000 men, has been advancing westward on an irregular front of some 200 miles. Main columns followed the Kwei valley and the valley of the Pak and Si Rivers. At the beginning of the period the line was approximately from Hingan to Kweiping.

The enemy moved steadily forward. He met no resistance that he was unable to overcome within a few days at the most excepting at Kweilin, which was reached on 31 Oct but was not taken until 10 Nov. On the same day Liuchow was taken. These two cities were the sites of important American air bases. On 14 Nov the enemy arrived at Ishan, where there was another American airbase.

These Japanese successes are the only ones in this World War won by the enemy during the period covered by this article. The loss of the airfields is annoying, but is not serious. The loss of Chinese economic resources due to Japanese occupation of Kwangsi is of material importance.

The situation at China GHQ is reported as none too good. On 19 Oct the United States at the request of China relieved its representative, Gen. J. W. Stilwell, who in addition to other duties was China's chief of staff. He has been replaced by Maj. Gen. A. C. Wedemeyer, who has joined and reported for duty.

China in over 7 years of war against Japan, and with unparalleled resources and enormous manpower, has been unable to defeat Japan. According to Chinese reports the Japanese force in China is only about 25% of the alleged strength of the Chinese armies. In large parts of China there is no military activity, the war being nominal only. Japan controls the key points through which most main lines of communications pass to the non-military areas. China receives such supplies as the Japanese permit. It is strictly limited as to quality and quantity. No military supplies go through. Enough food is allowed to maintain the population in a state of chronic semi-starvation. The idea has been that such a state of physical condition will prevent the Chinese from starting anything. The idea seems to have worked.

China GHQ does not control all of China. A substantial part is under Communist rule. The Communists have armies claimed to number nearly 500,000 men. They are not fighting the Japs, the excuse being that Chinese GHQ represents the Kuomintang Party and receives all Lease-Lend supplies, but will not issue any of it outside of their own party. Another part of China is pro-Japan and under control of their Nanking Government.

The explanation of Chinese differences is that (especially between the Communists and the Kuomintang) each side suspects the other of attempting a double-cross. Unfortunately there is a previous history to lend support to this condition. Since no party has any confidence in any other, no agreement has been reached.

#### JAPAN

There has been one air raid on Japan. It occurred by day on 11 Nov, against air plants near Omura on Kyushu. It is reported that bombing was through heavy clouds and the results were uncertain.

#### INDOCHINA

Contrary to the general opinion, the Japanese have not occupied this country: they control through the French officials, who have been collaborating with Japan.

Since the fall of the Vichy Government in France the Indochina commander (Admiral Decoux) has assumed dictatorial powers. There was a French law providing for such action in an emergency. Like Thailand, it is quite possible that Indochina will be ready to join the Allies as soon as a favorable opportunity presents itself.

# MEDIUMS AT MANTES

By Lt. John J. Osborne, FA

## AUTHOR'S NOTE

This is the story of the establishment of the bridgehead across the Seine at Mantes-Gassicourt as seen through the eyes of a forward observer from a medium battalion of corps artillery. Too seldom does corps artillery personnel get to see a show like this, at close range; I hope the account proves interesting and perhaps to some a little instructive.

The XV Corps Artillery began to assemble for business purposes in an area generally west of the city of Mantes under cover of darkness on the 18th of August. The 79th Infantry Division pulled in just west the city on the same night and bedded down. Nobody knew what was across the river but everyone was fairly sure that Mantes had been cleared. The doughboys settled themselves down for a good night's sleep. The artillery, however, started to work as soon as they had the trails spread. It was decided that the enemy should be impressed by our strength (which in reality didn't exist at the moment), so several hundred rounds were allotted for interdiction and harassing fires from map data uncorrected. I should judge that roughly 100% of the S-3s (and I suspect even the division and corps commanders) figured that the fire, if it had any results at all, would be purely psychological. But we learned later that the results were slightly better than that.\*

Evidently the "powers" decided to spend the next day girding their loins and incidentally looking to see what they could see, rather than plunging headlong across the river and perhaps into a hornet's net. This they did with the aid of Piper Cubs and various observation posts on the high ground just outside (southwest) of Mantes. One of these OPs was manned by my battalion, the 182nd, before sun-up. We had an excellent view of the high bluff across the river but could see very little detail until almost noon because of the rising sun in our eyes and the persistent haze rising from the river valley. Our battalion commander, Lt. Col. R. H. Moore, was behind our skimpy little hedge with us and remained there the greater part of the day. His patience was rewarded along in the afternoon by the appearance of a few darkly clad individuals moving stealthily, if a little unwisely, in the trees on the bluff directly opposite the city. It could only be one of two possible classes of society: either Frenchmen or "Boche." The 20-power 'scope proved that at last we had an observed fire mission on our hands. The colonel himself cut loose, and his first few rounds evidently removed some camouflage from an installation which showed the long barrel of a gun very plainly. What it was we weren't exactly sure but that tube was quite enough to invite a few battalion concentrations on the installation itself and the surrounding woods. The results were to be learned later. That day provided no further targets, so we retired to the sack, slightly bewildered as to why Jerry hadn't bothered to fire at least one counter-punch.

That same night the 79th began working their way across the Seine in assault boats and early the next morning I was told to go across myself and find a certain Capt. Riester of another FA battalion, who was liaison officer to the 3d Bn of one of the regiments. For the first time in France the organic divisional

\*It has been stated authoritatively that at least 4,000 Germans were killed by our artillery in this operation.



artillery had called for a forward observer from their supporting Corps unit; a short time later our party set out for what was to be our first real taste of battle. Cpl. Erwin Jacobi, Cpl. Sammy Monsoor, and I climbed into little "Doty," the jeep, which was loaded with the standard apparatus including a few days' supply of "Ks." At the river bank we ran into the ever-present traffic congestion and were told politely that no vehicles were allowed as yet. After some explaining and with the aid of Capt. Riester, who was himself still on this side of the river, we managed enough priority to load Doty aboard a raft and get her across.

Our first job of finding the CO of the 3d Bn didn't appear so easy at first because nobody seemed to know where he was, but after climbing to the high bluff we ran into him by sheer luck. At the time he had his boys out looking for a site for his command post. These parties were actually breaking ground, not knowing what was ahead of them. The area, definitely commanding the Seine and the city of Mantes, was generally wooded. We didn't have to go far in our reconnaissance before we met with an amazing sight. Overlooking the river, on the forward slope stood a battery of four German 88s, emplaced for direct fire. The guns had been deserted almost intact, with an adequate supply of ammunition stacked near each piece. We could hardly believe our eyes. There they were, eager, ready, and formidable, but not one shot had thundered from their deep throats. Just below them, less than 1,000 yards away, our doughboys were calmly crossing the River Seine, perfect targets for direct fire. Further study of the hill uncovered more 88s, along with at least a dozen 20-mm AA guns with plenty of ammunition and some heavier guns which we thought to be 105s. Some of the AAs had been dismantled to a fair degree and some of the breech blocks had been removed from the 88s and laid gently on the ground beside them. That was all. Even in broad daylight the pieces had a ghostly appearance about them, caused probably by the second-guessing going on in our heads as to what the things could have done with a few live cannoners present.

This made a satisfactory beginning, for here we saw the result of Col. Moore's concentrations on the hilltop of the preceding afternoon. The area near the German battery and two to three hundred yards deep behind it was well populated with

good dead Germans whom their comrades, usually so meticulous about taking care of their dead, had left for the ravens. I have no official figures for any part of this story, they probably may be found elsewhere, but my guess would be about 50 slain. The amateur G-2s went to work like little beavers and decided that when the German officer was killed the remainder of the unit just naturally took off. We could picture the 155-mm shell bursting not five yards in front of him. It doesn't take much imagination to guess what happened then, but we could definitely make out that he was an officer and the only one we found in the vicinity.

Our supported infantry selected a site for the CP in an old chateau which also overlooked the river and the town of Limay on the same side. We didn't see much of it until about midnight because Maj. Cook, the 3d Bn commander, was busy establishing his front line along the paved road which goes generally north from Limay. A gap of at least 1,000 yards between our right flank company and the river at Limay was to be covered by machine gun fire. This gap Maj. Cook decided to leave open because of favorable terrain; he slowly started to work his boys toward the road. There were several wooded areas to be flushed, and the approach was generally cautious on rising ground. Only the right flank company had a view of the road, and then only in their own sector and on into the town. Soon we heard rifle fire from this sector; it turned out to be M1s firing at Krauts boldly going up and down the road on bicycles. The boys were quite excited because this was their first crack at "gallery shooting." Make no mistake—this gang had fought their way into Cherbourg and had broken through at Lessay, but in the hedgerows they couldn't see the enemy. Here was "fun," and they picked off several before Jerry got wise.

L Co on the left was coming close to the road now, and it happened that a platoon of Germans were on the road in their sector. A few shots rang out. The platoon scattered to both sides of the road, not knowing whence these shots came. They were quite well prepared, however, because a hot fire fight ensued which lasted the better part of an hour. About dark the woods had been flushed and our line established. We felt our way back to the CP through a very black night and crawled into our bedrolls, puzzling not so much about what the enemy would do in the morning but why? why? why? hadn't he blasted with those guns? I think it was our artillery which helped him make up his mind.

Next morning I was still at the CP. The observer of the 105-mm battalion was up along the chateau wall looking over Limay and the low flat ground to the east along the river. Several reports of scattered German movements between Limay and the little town of Issou were reported to the CP, but nothing worth shooting at seemed to present itself until about 9 o'clock when the observer called a frantic fire mission over his 511 radio; he wondered if he could get mediums on it. In a few moments we had the 182nd S-3 on the phone. The "3" willingly started the adjustment but was also very frantic in his efforts to find out the nature of the target which had fleetingly been described as an enemy column coming into Limay. The resulting confusion slowed the fire considerably. This is an excellent object lesson, especially for mediums and heavies. They must know at what they are shooting because they must account for nearly each round. It's difficult to bring up that heavy ammunition. Then too, every little delay that creeps into the mission is multiplied tenfold by relays in communication. An observer is battling his communications as well as his enemy. In addition to all this, the

observer had company at his OP who outranked him by about 5 grades and the free advice was profuse, but the gist of the whole thing was "Git that ——— fire out there."

Eventually he called for "Fire for effect" and lo! over the radio came a "Cease firing." I heard it, the radio operator heard it and reported it clearly, I relayed it to the S-3. The radio operator with the observer heard it too but neither the observer nor his advisers heard it and you can imagine the general result when they waited in vain for the effect to come while the enemy infantry column marched slowly out from under our fire. Yes, it came eventually after the delay was questioned, and the effect was beautiful except that no target was there. But apparently it was enough to discourage the enemy because he scattered and worked his way back eastward. Nevertheless we had a very angry infantry colonel on our hands, which in many ways is worse than an angry flock of Boche.

Other things may also go haywire in like circumstances. No matter whether we are shooting our first mission or our hundredth, we will always be more or less excited. Hence we must remember to *be specific* if we want cooperation from an S-3—specific as to nature of target, numbers, location, how much fire for effect we want, and so on.

At 1630 the same day it was decided to move the line northeastward about 1,500 yards to occupy some high ground. We moved across the road and over some open fields, in one of which was a well-marked mine field which Jerry had planted some time before. I Co was placed in a rectangular patch of woods overlooking the town of Guitrancourt, which lies at the right extremity of a high bowl some two or three thousand yards in diameter. The northeast edge of the woods was the front line in our sector; here was our OP. Another infantry regiment had moved in on the right of the one we were supporting and took over the sector next to the Seine. The regiment we supported extended from their left a few hundred yards north of the village of Les Rues, and the third regiment of the division extended to the north of that.

It was I Co of our forward regiment in the rectangular patch of woods, however, which drew the prize. A Fort Sill dream was this OP. An infantry captain explained it simply: "All you hafta do is cross your legs and shoot." To add to the beauty of the situation we had just been issued our first 1/25,000 maps, and our bowl was all on one sheet. If you're interested and can find one, it is the Limay sheet (GS GS-4041). Incidentally, it made a more than satisfactory panoramic sketch. We gained the OP with no opposition but later to our sorrow found we must earn the right to such a select spot—Jerry had been weakened but he still had a sting.

Another black night soon overtook us. This time we walked rather briskly back to the CP and slept in a nice bed, which gives some idea of the way the doughboys treat artillery observers. They really love us and depend on us and there are many times when we take sober stock of ourselves and pray that we may never let them down. Capt. Riester, who was with them all through the campaign, is for my money the ideal liaison officer. He is a very important character indeed in the 3d Bn. Each night he and the infantry CO go into a huddle on all phases of the next attack (or, as in this case, the defense of their sector of the bridgehead). His word carries extreme weight in all plans for defensive fires at night and I am quite sure that the division artillery shoots all that he recommends,

even to the amount. Many defensive fires were laid down by the artillery massed at the bridgehead and they did damage to the enemy beyond the fondest hopes of everyone, as those who afterward saw the battlefield can testify.

An example of Capt. Riester's prowess presented itself that very night. The enemy decided to come at our line after dark, possibly to try to scare us back off the hill. He sallied forth to within a hundred yards or so at some points, shooting flares, rockets, even searchlights, and lots of small arms and machine guns. Jerry hates the dark and will do everything in his power to light the place up like a Christmas tree. After the firing had ceased and we found that everything was intact and no one was hurt, we began to receive reports from the posts all along the line telling of hearing the Germans talking and "carrying on" very close to our front. Capt. Riester had a party line to every company. A sergeant (in K Co, I believe) was telling him about one of these Kaffee Klatch's going on right under his nose. The sergeant asked the captain to fire on it. In two minutes a battery volley came down near the given coordinates. The captain of course knew the sergeant's location and from the map knew just the little woods the sergeant referred to in his very "doughboy-like" designation. The sergeant then told how far to the left he thought the rounds landed and the captain sent the correct nomenclature of the sensing back to his battalion. After a couple of volleys everybody in the room could hear a sensing come over the phone which sounded something like this: "Oh boy, captain, you got 'em that time, you shut their water off!" And the captain was gentleman enough to inform the sergeant that he was the one who had done the adjusting, and complimented him on his work.

The specific mission of the 182nd FA Bn was to reinforce the fires of an artillery battalion of the 79th Div. Our liaison officer, Capt. G. L. Sherman, was sent to their FDC, where he or his representative remained throughout the mission. All our fire was controlled by the organic battalion and fire missions had to be cleared through our liaison. This situation was not clearly understood at first and some bugs came up when we attempted to send a fire mission straight back to our own S-3. It was also disconcerting to observers, looking at a clearly defined target, to be refused permission (from the organic battalion) to fire. But all in all it paid dividends. Their S-2 is much better informed as to locations of infantry than is the supporting-unit's S-2, and if the target happens to be outside the immediate sector of the observer (and a lot of them are) the observer may fire on his own troops. The observer must become accustomed, when firing by radio direct to his FDC, to remember to get clearance from his relay station at the FDC of the supported unit on the same channel.

For the next couple of days we observed without incident from our "box seat." We saw many of the enemy in the bowl but they were mostly in ones and twos. The light battalions did quite a bit of shooting at clumps of 8 and 10, enjoying the sport of chasing them across the open fields. They were difficult targets but excellent practice in quick shifting. The Germans, very gregarious, will remain close together even under artillery fire. This may not make sense but it is true in almost 99% of the cases that we witnessed. One salvo burst accidentally quite close to a straw stack. Seven or eight Krauts filed out of the straw stack and ran into the woods. We were so surprised that our subsequent fire commands were 'way behind them. They never did disperse.

I don't believe we missed a single German movement in our bowl during those two days. Of course, the observers themselves couldn't see everything simultaneously, but we were constantly besieged by the whole infantry company with requests for fire which we gave when we could. You don't have to ask the doughboy to help you observe—he'll do it without coaxing.

At 0800 next morning the company was being served, in shifts, a hot breakfast of 10-in-1s, the first of this type they had received in weeks. I had just finished my "K" and was looking over the bowl to see what presented itself for the morning's service practice. Almost immediately around the dense finger of woods behind Guitrancourt appeared the familiar figures of 3 PzKw-Vs. We had seen lots of them knocked out in our trip across France but these were live and kicking and were accompanied by droves of infantry who all appeared to be at least 8 feet tall. By the time those of us who noticed them had regained enough composure to shout the alarm they were on their way toward us. Our hides curled in anticipation of—what? Our artillery fire began coming almost immediately, but it required fast adjusting and the Germans were moving in rapidly. A natural draw running 500 yards to our left was covered by beautiful cross-fire from machine guns. We had an antitank platoon covering the draw and in a few moments everyone was set. We tried hard with the artillery and the effect was fair, but we couldn't seem to mass enough fire to stop them. The Germans, moving at a trot, were fast approaching the mask under the nose of our hill. We shot until we couldn't see them, then began pelting the road leading into the draw.

But the next thing we knew we were gazing straight down the muzzle of an 88 mounted atop a Mk-V, which from a distance of 20 yards assumed enormous proportions.

Our infantry company was operating with a lot of new replacements received since the Cherbourg campaign; for them it was slightly different from watching the artillery bursting in the bowl. There were no antitank guns and no tank destroyers in the vicinity. The one bazooka present had a bead on the tank. When the trigger was pulled, however, it was discovered there was no juice in the battery. (Before you finish this, go replace the batteries in all your bazookas.) With only M1 rifles for physical support and no moral support at all at the moment, it was decided, but quickly, to leave the hill and see if we could find a "better 'ole" behind it.

Dotty was parked about 200 yards on the other side of the woods; the three of us artillerymen hopped aboard and started toward the CP. Machine gun bullets from the Mk-V were whistling around our pants. Time was precious. As we were approaching the main road someone warned us off the track—and there, coming back toward the hill, was an M10 tank destroyer which appeared as if from heaven. He was edging his way in the vicinity of the *Panther*, and our doughboys were beginning to gather behind him. It seemed like a hundred men were pointing a hundred different directions trying to show the M10 where the *Panther* was, so he was confused and the *Panther* came around a clump of bushes to fire the first round. It set the M10 afire. Our men's confidence was lost again in the pyre.

At the CP Maj. Cook was hurriedly trying to rearrange his line along the main road which runs from Limay to Guitrancourt. He seemed wonderfully calm and sure of himself. I looked around and decided that the best vantage point for me was at the chateau we had formerly used for a CP; with the major's permission I went there. The first thing I saw was



the Jerries digging in on our hill facing in our direction and burping their machine pistols down on some AA guns in the flat sector which we once held. A converged battery concentration on them with our mediums seemed to shut off the machine gun fire; the Germans withdrew under cover of the trees.

One reassuring sight met our eyes at this point. I Co had gathered along the road which was in a five-foot cut and K Co, who had broken with them, were filling in fast. Regiment had sent 6 Sherman tanks to the scene. We could hear them approaching now.

Talk about your psychological warfare! The sound of those tanks was like a shot in the arm to the doughboys. As soon as the tank commander had gotten the story he began working his column up the road preparing to flush the woods. The infantrymen flocked behind him. Thirty minutes after we left the hill we were on our way back, resolved to get it and never let it go. Two hours later we were on our OP again. And the ground was littered with German dead and wounded. The score was roughly two dead and eight wounded for our side; the Germans suffered 50 dead, 30 wounded, and 50 prisoners taken, out of about 200 which had made the attack. Our tanks had accounted for the majority of these. The enemy were more surprised by our swift counter-punch than we had been at their counterattack.

As it turned out, leaving the hill was the best thing to do. But each of us felt at the time that we shouldn't have given ground. Having the courage of one's convictions, however, is not an easy matter in one's first real brush, and especially so when a *Panther* tank is approaching.

The Germans had made a beautiful haul of "K" rations, 10-in-1s, and cigarettes when they came into the woods. But the doughboys regained most of it when they came back, minus what Jerry had smoked and eaten meanwhile. In the thickest of the confusion I overheard one sage remark which stuck with me. "Dammit," someone said, "every time we have 10-in-1s we get into trouble," which proves that an army really does move on its stomach or something.

About the first thing done after the fight was to emplace some tank-killing guns around the vicinity, check bazookas, and dig a little deeper. This was begun very quickly, since from the stories told by the more loquacious prisoners we could expect Jerry back again. Three M10s were put on the hill for direct fire; soon everyone was breathing much easier and confidence was restored all along the line. All the observers paid a little more attention to concentration numbers and check points so that the fire could be brought anywhere quickly. We didn't take our dream OP for granted any longer. Neither did we plan on losing it again. Late that evening we picked up the three enemy tanks disappearing into the heavy woods which cover Hill 188 across the bowl; we shot at them, but the observation was poor—and a direct hit is generally necessary to stop a tank, especially the big ones.

The next two or three days (I lost all track of time) were spent in more "service practice" with the Boche appearing less and less. A great many scheduled fires were laid down during the whole period by all the massed artillery at Mantes. Several organic battalions had come across the river and were doing likewise. Every nook and cranny was being covered. The result of this fire was later found to be very gratifying indeed. Cannoneers worked night and day without complaint, supply trains were buzzing constantly. ASPs were being sucked dry one after the other, but the refills kept coming. It was an all-out artillery show to screen the one division of infantry against

reported superior German strength girding themselves behind the hill-mass and heavy woods near the towns of Drocourt and Brueil en Vexin. Within both organic and corps artillery there were surprisingly few errors and everyone was justly proud of our cannoneers. One night alone the combined artillery fired over 4,000 rounds in harassing, interdicting, and "road-running" fires. Several TOTs were fired also—which made sleeping pretty fitful, but it sounded like a symphony to the doughboys.

At about 1530 one day Jerry came at us again. This time he had six big tanks and it looked to me like a couple of regiments, or remnants thereof, of foot soldiers. His tanks this time appeared in the vicinity of a water tower which is close to the village of Les Rues. A wave of infantry again followed the tanks in the general direction of our OP. It was an old story now: they came in droves, tight together, refusing to disperse in the face of terrific fire. One of the tanks received a hit which immobilized him almost immediately. The others decided to stay near him and never came any closer. After running through a terrific amount of adjusted fire, the foot soldiers came to within about 200 yards of our lines in most sectors. It was at this point that the artillery really began to tell. A tremendous curtain of roaring hell came down all along our line. The people in Paris 40 miles away must have heard it. Time seemed to stand still. For at least 30 minutes there was one huge, continuous bedlam. When it let up a little it was very evident that the Germans had been stopped cold by artillery alone. They were literally beaten to a pulp and none except the scattered dead were to be seen. One couldn't see with the eyes but knew for certain that Jerry was crawling back through the bowl on his belly, along hedges and under trees, to get out of that red hot no-man's land.

All the tanks had at last gone except the one which was crippled; there he remained like a headstone. We tried for an hour to get a hit with the mediums but it is only a lucky shot which gets them. We tried battalion concentrations converged, we tried precision adjustments with one gun, firing 6 rounds for effect over and over again—but no hits. Our tank destroyers were out of piercing range for this business although they did get a few glancing blows. The only way that we found to stop the tanks with artillery was to stop the infantry which accompanied them. The Germans refuse to come at you unescorted, and their infantry can be discouraged by massed fires.

By nightfall all enemy fire had ceased. The only sound was our corps artillery delivering sporadic harassing fire on the woods across the bowl. We remained at the OP all night, taking turns staying awake. The clouds were very heavy and a slight patter of rain began to fall. It was as black a night as I have ever seen; any sound carried long distances. All night long we could hear moaning and groaning and wailing of wounded men in the bowl below us. It wasn't too pleasant a sound. Jerry again shot flares throughout the night but he saw nothing except a scene of carnage in his own front yard which must have been very discouraging indeed.

At about 0800 the following morning an incident occurred which showed us the reduced morale of at least part of the German troops. We were scouring the bowl with our field glasses when suddenly we noticed someone run quickly from behind a bush and plant a white flag in the ground over a dark object lying there. He ran back quickly and in about two minutes another fellow ran out and planted a white flag

in the ground close to the first one, and also disappeared. Five minutes later both of them came out again and stood under the flags. They were nearly 1,000 yards away and seemed to be working over the dark object, which proved to be a wounded comrade. Soon they had improvised a litter and a couple more came out to help carry him away. No one fired at the group. They began working their way toward us. We couldn't see them too well because of the distance but we could follow the general path of those white flags. In a few minutes they had reached the road which ran from Guitrancourt back toward Limay and wound around in front of our hill. When they arrived on the road we were nearly bowled over. There were thirty of them, all very healthy except the one in the litter, and they marched in column with their hands high in the air all the way back to our command post. Reports later reached us from the CP verifying the fact that they were very much shaken by the artillery fire, both mentally and physically, and were very happy indeed to be out of the war at last.

The same morning some good news started to filter along the lines: the 30th Inf Div had crossed during the night and plenty of armor was reported just across the river. The sound of armor is magic as a morale builder to infantry, and the other division didn't do badly toward elevating the spirits of the 79th, either, because we still didn't know what was on the far side of that big woods. The 30th Div replaced the infantry regiment on the right flank next to the river and covered about half of another regimental sector also. The 79th Div crowded together toward the left and everybody's lines were strengthened.

It had been decided to extend the bridgehead. The attack was set for 1600 that same day, with the first objective the mysterious big woods on the other side of our bowl. The 3d Bn moved far to the left to attack the woods near Hill 192. I was told to stay on the OP and shoot at any flanking punch that might come out of the woods. At H—15 the preparation began; 99% of the fires were concentrated on the big woods. At H-hour our doughboys moved out across the bowl. Each sector had a few tanks with the men, about 20 in all. The show looked for all the world like one of Maj. Clark's Ft. Sill demonstrations of the "Infantry in Attack." Mt. Hinds never afforded a better view than the one we had. Our men were well dispersed and

presented a much more sensible picture than the enemy had done in coming our way. A few rounds of enemy artillery began to burst near us at intervals but most of them were wild, and I saw none in our sector which burst among the infantrymen. The bowl was completely populated by American troops in less than an hour after the attack began. Our OP now being useless, we came back across the river to the 182nd's CP for a little rest.

When the statistics are made available, I wonder if the AA will be forgotten. There were hundreds of ack-ack at the bridgehead, and a complete variety of the same. Almost every day at least 10 or 20 German fighters zoomed near the river but they did practically no damage at all and certainly none to the bridge. The AA boys had a field day. It seemed that most of the planes brought down were cut to pieces by multiple .50-calibers mounted on half-tracks. The large AA guns fired a lot, but the planes were usually very low and AA shells explode at a given distance which was usually right over the front lines. The doughboys always crawled into their holes when our flak started after the MEs and FWs. One of the infantry officers told me that every day for over a week at least one man in the battalion had been injured by the flak. No one suggested doing away with it, however, because it does the Luftwaffe many times more harm than it does our infantry.

The mission of the 182nd FA Bn was now changed. They were to stay where they were until the attack forced the enemy out of range, and then displace elsewhere. About noon the following day we left the bridgehead at Mantes. The last word from the 3d Bn which we had supported was that they were the first to gain their initial objective and were going smoothly from there on out. Cpl. Jacobi, Cpl. Monsoor, and I were now supposed to be seasoned soldiers, but as the column moved away from the 3d Bn we each confessed a lump in our throats. Lifelong friends are made quickly among the doughboys, and although we may never see them again they will never be forgotten. A forward observer appreciates, more than anyone else in his battalion, the justification for the existence of Field Artillery, and we hope one day to be able to lay down such effective fire for the doughboy that it won't be necessary for him to fight at all—just occupy the ground.

## INCIDENTS OF THE 173d By the Group Commander

France, 17 Oct 44

While we were still "enjoying" early warfare our group received a new battalion that had marched clear across France from the beach to join me, and had not yet been in battle. Their first experience at this place was to deliver some night harassing fires, which are merely a few volleys fired "blind" at night at some road or other place which the Germans *might* be using. The next day our infantry captured this locality, and we found that our battalion had totally destroyed a German battery of horse-drawn field artillery on the road. The shells had burst in the poplars lining the highway, and the place was a litter of dead horses, men, and ruined guns and vehicles which had been cut to pieces by the shell fragments.

More recently (maybe it was today) from an OP we saw in the distance a crossroads where about every 30 minutes a German vehicle—car or motorcycle—passed. One of our

forward observers, Osborne, adjusted one gun on this point, then figured that if he had the cannoneer pull the lanyard when the car passed a certain tree the German and the shell would arrive at the crossroad simultaneously. Of course, it was all estimation. But he had a piece loaded and waiting. When the next German sedan came along the road he gave the command "Fire" over the 'phone. About 30 seconds later we heard him yell with delight. He blew the German car sky high.

I was up at this OP (a very safe place, by the way) all day yesterday and didn't see a thing of interest. Nothing ever happens when I'm there. Today the observer saw 20 Germans suddenly rise out of the bushes and walk into our lines with their hands in the air. I have about stared my eyes out and have yet to see a live German (except prisoners). Yesterday Bozie and I were sure we picked up a German tank in a hull-down position, but Capt. Sherman, who had a more powerful instrument, said it was a horse. We still maintain that it was a tank, although Sherman said the tank was eating grass.



17-cm of 1916

## Know Your Enemies' Weapons

### GERMAN 17-cm GUN

By Lt. Col. G. B. Jarrett, Ord.

Many prominent newsmen have written of the German 17-cm (6.7") gun which has appeared in this present war. They proclaim it as a new weapon. Undoubtedly it is a fine piece, and capable of devastating punishment at annoying ranges. These writers call it a "Super Gun," but actually it is merely a 17-cm gun and most beautifully outperformed by a U. S. 20.0-cm gun (8").

The original German nomenclature in W. W. I was 17-cm SK L/40 Cannon on Carriage 40 (Schwere Kanone Lafette 40, heavy carriage). This caliber is not a new diameter for the German designer. It dates back many years to the German navy, as a secondary battery weapon on the larger battleships. From the start it was a long tubed gun with a large chamber giving it the high velocity and flat trajectory so desirable in naval guns. It was with this gun during the preparatory time of World War I that the Germans first pioneered the streamlined shell, giving to the gun an improved velocity over original design.

By the winter of 1915-16 the German Army High Command, driven to the trenches of Flanders and France, were in need of long range, flat trajectory weapons. The High Command appealed to the navy, which—with its ships holed up and rotting at anchor—was in a favorable position to furnish guns either by removal from ships or from spares. The 17-cm gun was among the many calibers furnished. These 17-cm naval guns were eventually mounted in three ways:

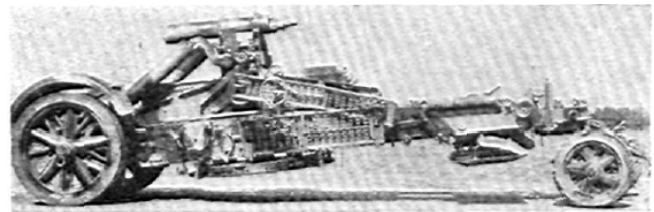
- |                 |   |  |
|-----------------|---|--|
| 17-cm S.K. L/40 | } | 17-cm K. Bett Geschutz, Kanon in Bett. Geschutz (Platform mounted) |
|                 |   | 17-cm K.I. RL, Kanone in Rad Lafette (Wheeled)                     |
|                 |   | 17-cm K. Eis., Kanone in Eisenbahn (Rwy. Gun)                      |

The fortification mount was the original naval pedestal platform mount set in a concrete base and surrounded by a parapet. Such units were set up in the sand dunes for Belgian coastal defense during 1917-18. The outstanding use of this 17-cm fortification gun was at Zeebrugge in Belgium, at that time a big German submarine base. One of these guns was still in place at the edge of the mole in 1931 as a souvenir of the German defenses of 1918.

Next type was the gun and cradle seen as a mobile field piece. Here the mounting was rather crude and on an outrageously heavy carriage, though it did support the weapon and permit extensive corps artillery use. The carriage was a huge box girder permitting 3° traverse right and left and at least 30° elevation. Platforms to aid the crew in loading were attachable to the box trail. For transport the tube was dismantled and placed on a wagon. Both carriage and transport wagon had large wheels with wide treads and spokes, all of steel. Treads were about 12" wide. Heavy wicker mats were provided for moving the carriage into position over bad ground and to give the piece good support in action. These wicker mats were 4" thick and 20" × 48" in size.

The third type of 17-cm gun was the naval pedestal mount attached to a railway carriage. Only two or three such mounts were identified before the Armistice of 1918. It would appear that the railway version was unnecessary since the wheeled carriage design was relatively successful for World War I requirements.

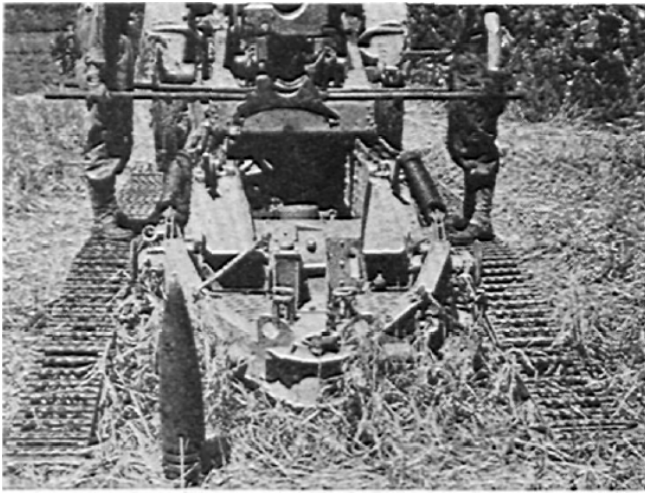
Returning to the wheeled carriage, a few comments are of interest. The tube was 40 cal. (25½ feet) in length with 52 grooves. Weight of this weapon in action was approximately 25 tons. In transport, the tube on its separate carriage weighed



Above: 21-cm carriage, common to both tubes

Left, top: 21-cm tube on transport wagon

Left, bottom: 17-cm tube on transport wagon



*Carriage at spade, with platforms erected for loading*

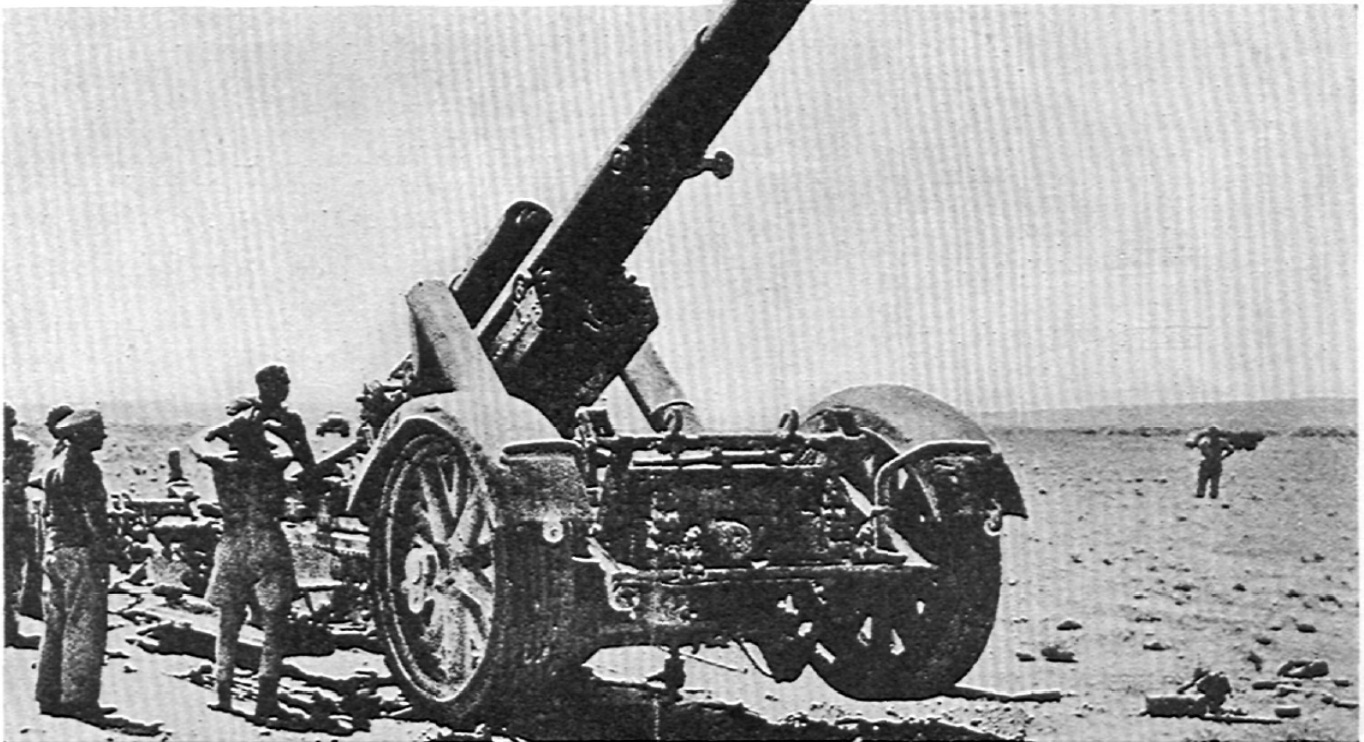


*German crew loading*



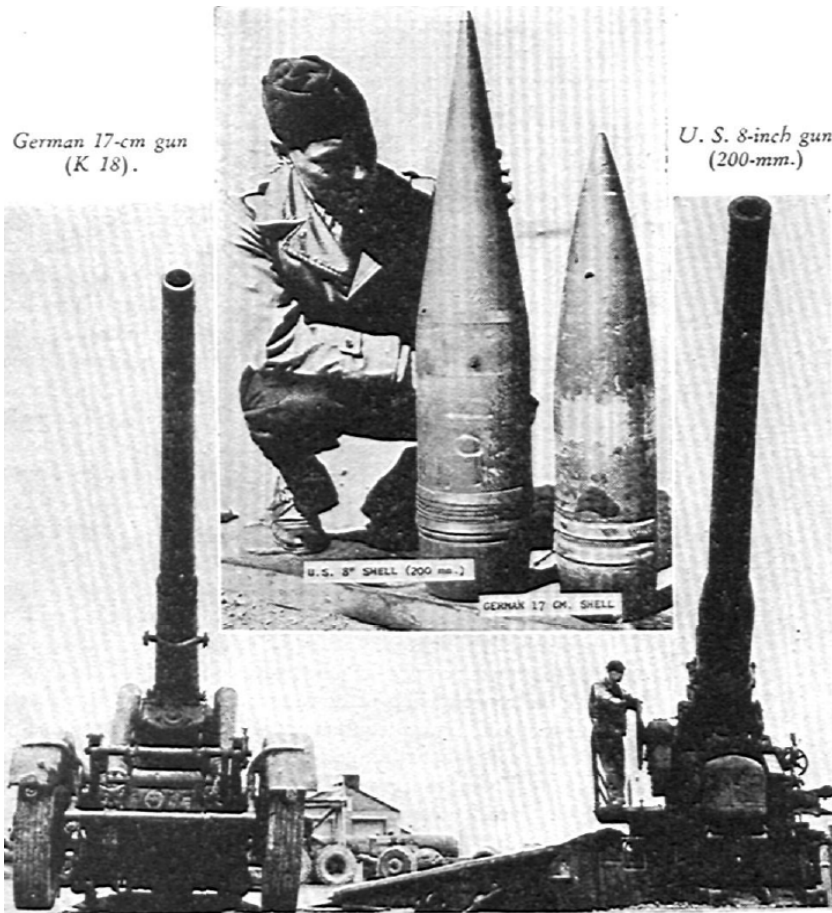
*17-cm gun in France, 1918*

*170-mm gun (actually 172.5-mm 17-cm K mounted on 21-cm Mörser Lafette 18) near Mareth, Tunisia. Note that wheels are clear of the ground, with carriage supported on pintle base for ready 360° traverse.*



German 17-cm gun  
(K 18).

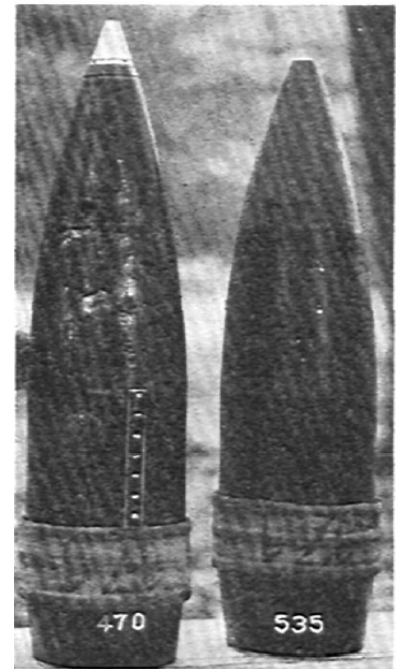
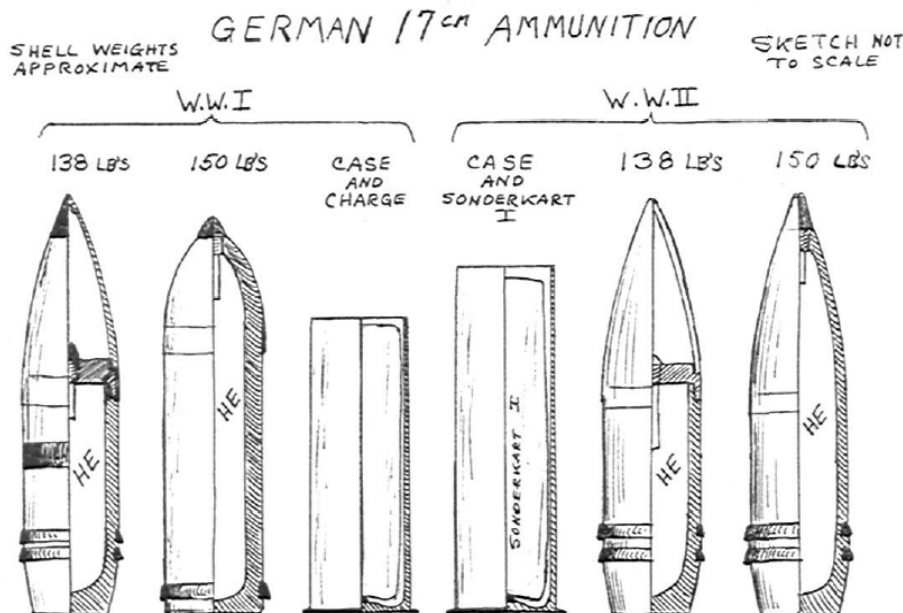
U. S. 8-inch gun  
(200-mm.)



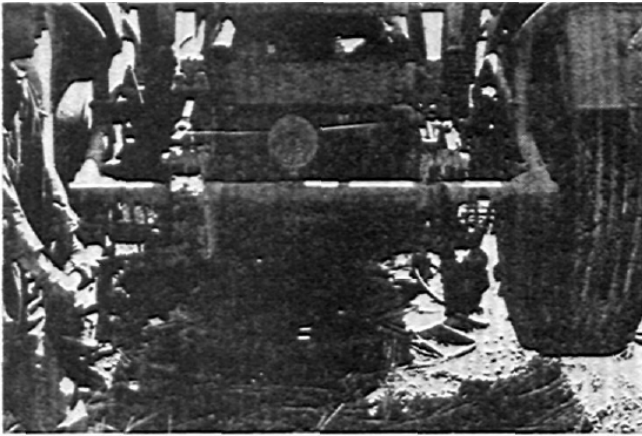
18 tons. The gun carriage was towed by a limber. An additional vehicle per unit was provided to haul remaining equipment—the mats, loading platforms, hand winches, etc. The entire equipment of one 17-cm wheeled gun is believed to have weighed about 60 tons, but none of the three parts of the unit exceeded 25 tons for transport. It is of further interest that all this material was mainly horse-drawn. Teams of 20 animals per unit were provided. At one time the Aberdeen Proving Ground

shell. The 141-lb. shell carried 14.17 lbs. of TNT.

Fillers for the two projectiles were mainly pressed TNT in waxed cardboard containers, but undoubtedly some shells may have been filled with cast TNT. Carton loading has been a favored method of loading by the Germans.



Left, 150-pound shell; right, 138-pound shell. Note canvas and leather rotating band protectors in place.



The pintle firing base with wheels jacked up

The advantage of this method has always been open to argument, but the Germans have used it since about 1900. It is possible that their industrial setup for war has made carton loading seem advantageous. The streamlined shell was also issued with a chemical filling, for long range gas shelling. All shells were painted a brownish yellow with a wide black stripe below the bourrelet, and a black-tipped nose.

Fuzes used in these shells were conventional patterns of the period and represent nothing unusual except the lack of reliable safety devices. This is a situation quite different from our own.

The general design of this 17-cm gun was characteristically Krupp. This necessitated a regular drawn cartridge case, despite the size. This primed cartridge case contained the charge of double base powder. The charge was in a silk wrapped bundle of long, single, tubular sticks. Two types of charges were provided, one each for the two shell patterns mentioned above. A charge of  $K_2SO_4$  was also provided to use as a smoke producer to reduce flash at night.

Conventional indirect sighting for field guns was adapted to these weapons. The 17-cm wheeled version appears to have had the widest use mainly on the Western Front just prior to the Armistice.

Before discussing the modern 17-cm weapon, let me repeat that the 17-cm German weapon of World War I was a naval gun adapted to field use to get the long range so vitally needed. The German 17-cm of the present day is essentially the same, but embodies certain desirable features adapted from other German cannon. For instance, advantage was taken of experience with certain railway carriages, including the famous Paris guns of 1918, which utilized a firing platform base with a pintle ball and socket arrangement upon which the gun carriage was balanced, thus permitting a 360° turning if desired.

Now we come to the modern version, known as 17-cm K on 21-cm Mrs. Lafette 18. The carriage is convertible for either the 21-cm mortar or the 17-cm gun tubes by adjustment of the recoil system.

Present overall length of the 17-cm gun tube is 28 feet. This tube has a conventional Krupp type of breech, requiring use of a cartridge case. The chamber is 5¼ feet long, permitting use of a relatively heavy charge.

Two novel features exist in the carriage: the firing platform and the double recoil system. The former is the pintle base idea of Paris gun fame modified for this heavy mobile 21-cm Mrs.

Carriage, permitting 360° traverse if desired, while the latter consists of a recoiling top carriage in addition to the conventional recoil system of the gun. Both recoil systems have a graduated gauge on the side to check the amount of recoil when firing. Thus it is possible for the crew to know at once if the buffer pressure is too low, allowing excessive recoil.

The general construction of the carriage suggests a huge box girder, upon which is mounted a saddle-like top carriage which in turn carries the trunnions of the cradle. When in firing position this carriage is supported by the pintle connection of this firing platform and the spade assembly. When placed, the spade permits 16° deflection (8 left or right). If the spade is lifted, which can easily be done by balancing the entire piece on the pintle of the firing platform, the entire carriage can be swung through 360°. The firing platform is attached to the under side of the carriage. As the sighting is conventional for field artillery weapons, it is not necessary to describe it here.

Ammunition for this 17-cm gun is somewhat complicated, and without question more so than would be tolerated in American design. As mentioned before, two shells are intended for this weapon, both streamlined. When used with a super charge the lighter shell is the subtle means resorted to by the Germans to gain an unusually long range. It is well to note the complication of data and range tables, plus divers ammunition and special equipment, which must be provided to accomplish the unusual range of the 17-cm gun.

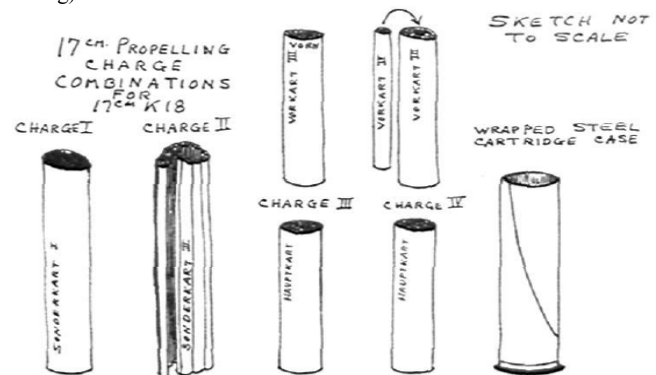
German 17-cm charges are provided in five units, usable with one cartridge case. The following names appear on the cartridge bags:

- Vorkart*—Front Section of a charge
- Hauptkart*—Main Section of a charge
- Sonderkart*—Special Section of a charge

These five sections can be made into four charges. The *Hauptkart*—the so-called base increment—comes in a cartridge case. *Vorkart 3* is usually packed with this cartridge case and its charge (*Hauptkart*). The remaining charges come in similar metal containers. When firing the super charges the extra bags are placed in the chamber separately, followed by the *Hauptkart* in the cartridge case. The sketches illustrate the charges and shells.

These are the charge arrangements used in the primed cases for the two shell patterns:

	<i>150-lb. shell</i>	<i>138-lb. shell</i>
Charge I—use <i>Sonderkart I</i>		(Not used)
Charge II— <i>Sonderkart I</i> plus II (approx. 19.85 Kg)		(Not used)
Charge III— <i>Hauptkart</i> plus <i>Vorkart</i> (approx. 28.45 Kg)		(Not used)



Charge IV—(Not used)

*Hauptkart plus Vorkart III & IV* (approx. 29.8 Kg)

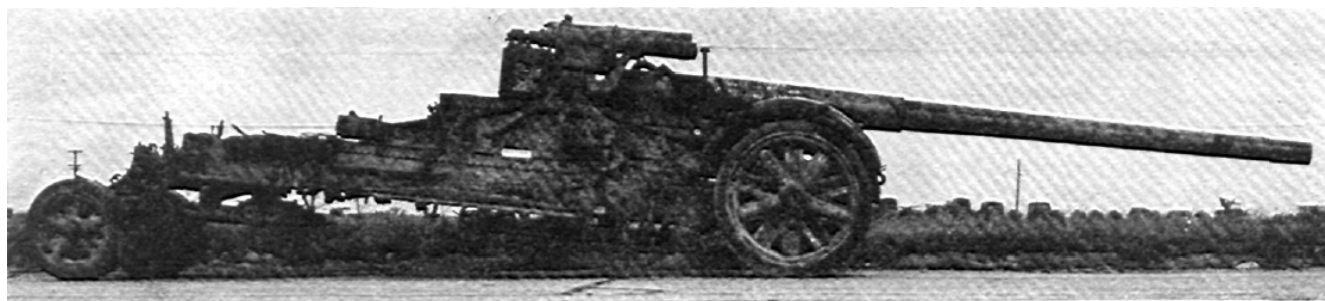
Fuzes: Standard percussion for nose (AZ 35K) or time (Dopp.Z.s./90K) Special percussion at adaptor for false ogive (Hbgr.Z.35K) or time (Dopp.Z.s./90K)

Cartridge cases themselves are of four types: an original type made of brass, a steel case brass plated, the same with no plating nor rust preventative, and finally a wrapped steel case (blued) which appears to be a recent attempt to provide a case quickly and cheaply. All cartridge cases come in a ribbed metal container. Supplementary charges come in a similar but extra

metal container. All cases use a small, flat type primer. The base charge has a special igniter powder in fine grain form.

Both shells have double rotating bi-metal bands (originally all copper). These bands are always covered by a reinforced canvas grommet, laced in place. For shipment the shell is often placed in a wicker basket. Both shells are adapted for tracer elements which may or may not be used.

An anti-concrete shell has been reported in existence. Even if this be fact and not mere rumor, the destructive possibilities of the German 17-cm gun are not yet on a par with our own 8" gun.



*17-cm K 18 carriage and tube can be moved this way on good roads.*

## BATTLE NOTES

By Maj. Harold S. Davis, FA

Now and then we encounter something not in any book. For example—Having just finished a registration on a check point (range 10,300) we received "Fire mission, coord . . . , enemy command car next to house." On our 1/100,000 map (the only map we had) we found the house, plotted where the car was, used our transfer corrections from the check point, and fired center right to begin our adjustment on the car (range 2,500)—a 7,800-yard change in range (slightly out of transfer limits)! The first salvo landed and we received, "Mission accomplished, target hit, one enemy vehicle demolished!"

Here's another one for the book. We were moving to new positions, survey had started only a few minutes before our arrival, we had only radio communication, no maps but the 1/100,000 we had used as a road map on the way to the position. Our trails had hardly hit the ground when we received from our LnO, "Fire mission, coord . . . , enemy vehicles and troops, request all possible fire." We immediately estimated a compass for the center battery, estimated angle Ts for the other two batteries, sent each of them a compass, estimated a range, and began to adjust. I carried the firing chart in my head (used by the guess-and-by-golly method) and wielded the battalion much in the manner of a 12-gun battery. Our battalion fired for effect and received excellent effect, massing perfectly. One mission followed another. Finally, after there were many less Germans out to our front, things died down and when wire came in we were asked for adjusted coordinates on all of our concentrations by the LnO and the unit he was with. Fire was so accurate on the areas covered that they wanted to pass the coordinates on to the other battalions to be fired on call later if needed. I certainly hated to reveal how it had all been done—but—it worked! And that's what counts.

Regardless of what any of them say, and I have argued the point over the phone with many S-3s, I still believe fire is most effective when adjusted, unless you have map data corrected.

By Lt. George J. Cantrell, FA

A few comments on the articles contained in the July 1944 issue: The "Letter to Observers" by Capt. Brewer contains in my opinion the kind of statements that would come only from an old hand at being an observer. I quite agree with him in everything he says—as does our battery exec. We have had a little experience as FOs. I worked at it from Mignano to Cassino and again here in France.

I find that in the attack the FO should stay near the infantry company headquarters group while moving but he should be able to give fire support at any time. Our infantry treat us as one of themselves. They include us in the issue of dry socks, underwear, rations, and anything that might make life more comfortable for us.

It has been possible to have my radio within voice range at all times except for a while on Mt. Lungo. We carry our 610s on pack boards arranged so that we can transmit and receive while climbing that next hill. I don't know who first thought of the idea, but it works well.

We usually get W-130 wire from the infantry whenever it is necessary, and always carry two sound-power phones with us, though I've only used them once.

Junior officers should be given the opportunity to work with small scale maps. 1/100,000 are all that we have had here in France. They work out well enough, but it is necessary to make a very careful reading of coordinates.

Air OPs are great; they aid the FO a great deal by giving us a more complete picture of what's out there—and we have had them fire on targets which were not too clearly observed from the ground.

I've had my say so I'll crawl back into my hole and wait for the next call of the forward OP where the only fun in war can be had—the shooting of live targets.

Your magazine is swell—nuff said.

# Not in the BOOK

## NEED A SHOWER?

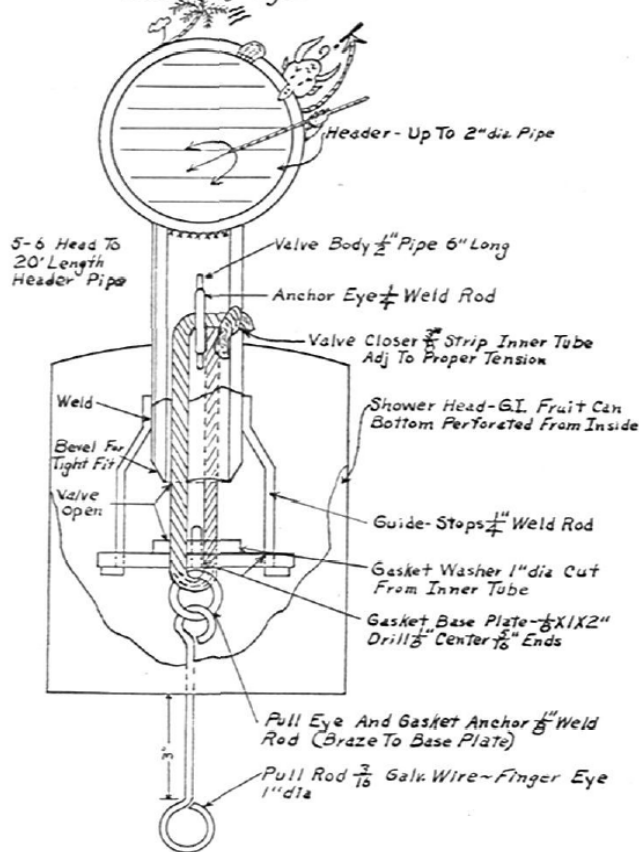
Our special shower-head proved to be entirely practical here on this bug-infested blot of coral. With ten such heads coupled to two 500-gal. tanks (procured on midnight requisition and hurriedly painted) this installation furnished a daily shower for the entire battalion.

A generous Tojo after being nudged a bit by a few 105 shells donated the works (less the tanks), including a tank truck. As the truck was up to usual Nip manufacturing standards it soon gave up the ghost. The tank proper with power pump hose and attendant jewelry were then mounted on skids and slipped into a 6x6 GMC.

### GREEN HELL BATHQUART SHOWER VALVE

MAIN PLANT-- GREEN HELL, NEW GUINEA

Materials By Tojo



Having no pipe threading tools we joined the pipe by using radiator hose and clamps from shot-up Nip prime movers. Gasket base plates were cut from battery cradles from the same source. Rubber for gaskets and valve closers was also of Nip origin, and proved to be the real McCoy. Gaskets were easily cut with a 1" pipe nipple beveled on one end to a sharp cutting edge. A puncture in the gasket center allows it to be stretched over the gasket anchor and also facilitates replacement. The showerhead was made from a powdered turkey container, and secured to anchor eyes by hay wire. The lower eye in the valve pull rod had to be reduced to one-finger size to prevent G. I. Joe from chinning himself while he washed both feet simultaneously.

Welding torch we had, but oxygen had to be procured from a nearby Air Force shop. Made our own acetylene with a Nip generator. On the final weld this blew up and the operator has been A.W.O.L.

EDITOR'S NOTE: This feature is devoted to ideas sent in by our readers describing methods or devices which, though not specified by official literature, have proved useful in service.

since. We had three of these; later we traded one to an outfit we didn't care for and set the third one out as a booby trap. This netted us one (1) ridge-running Malay hog which, due to the carbide flavor, proved to be unpalatable—so we traded it as fresh meat to another outfit that had eaten dehydrated elephant meat for so long they were using pictures of steaks for (or in lieu of) pinup girls.

The drawing, patterned after the Rube Goldberg school of art, is strictly my own. Any resemblance to mechanical detail is purely coincidental. The point is, though, it works.

MAJ. R. G. MCMAHON, FA

## RADIO TUBE TESTER

Radio tubes in vehicular FM sets are forever burning out. Without testing equipment the operator must change all the tubes (or at least most of them) in order to locate and eliminate the bad tube. As it is nearly always the tube filament that burns out (caused by voltage surges and faulty connections), any simple device capable of testing filament continuity will be a big help.

We have devised a gadget which occupies no additional space and is always available to the operator in the form of his flashlight, TL-122-B. Merely bore holes in the plastic base cap to resemble a tube socket. Improvise a couple of contacts for the appropriate prongs and install a sliding contact to ride on the copper lining of the battery compartment. Everything is contained in the cap alone. It may also be constructed to accommodate 4-prong, 5-prong, octal, loktal, and many others.

For practical use it remains an ordinary flashlight. To test tubes you merely turn on the switch and unscrew the base slightly until the light goes out. This places the improvised prong contacts in series with the light circuit. If a good tube is inserted in the socket the light will burn. If a burnt-out tube is inserted, the light will not burn. *The fact that the light burns is not 100% proof that the tube is good, but if the light fails to burn the tube is definitely bad.*

This device has been in use for over six months and has more than proved its value.

MAJ. HAYDEN B. WHITEHOUSE, FA

## GAS CHECK PAD REPAIR

*A Field Expedient*

During one of the recent operations in New Guinea my battery, which was doing a considerable amount of firing, was running short of gas check pads. Our old ones were becoming unserviceable. My artillery mechanic, T/4 Lloyd E. "Skip" Willis, thought of a brilliant but simple plan of repairing these gas check pads, making them in every way as satisfactory as new pads. Here is his method:

a. First, take plain medical adhesive tape (friction tape or rubberized insulating tape are *not* satisfactory) and wrap the outer circumference of the pad. Second, wrap the entire surface of the pad radially, working from the center.

b. Wrap the pad as tightly as possible to keep it free from irregularities in size or shape.

c. Occasionally small chunks, about the size of a pea, will come out of the pad. Fill in small holes in pad with pieces of adhesive tape until level with surface of pad. This is done prior to wrapping the pad with tape.

Use of this tape has not resulted in deterioration of the breech block assembly. Old pads have thus been made serviceable and have remained so until they became soft or broken. Our experience has indicated that pads become unserviceable after some two hundred rounds. Pads wrapped with tape have stood up a like amount. In fact, one has been wrapped a second time and is still going strong.

CAPT. G. T. PORTER, JR., FA



# Diary of War Events

(As taken from the American Press—Edited by B. H. W.)

## NOVEMBER, 1944

- 1st Allied air might pounds Gelsenkirchen, Hamm, Coblenz, Oberhausen, Cologne and Berlin.  
U.S. 1st Cavalry on Leyte fights bitter struggle with the Japs for Carigara.
- 2nd 2,400 U.S. 8th Air Force planes battle Germans over Merseburg, southeast of Berlin. Shoot down 208 planes and lose 41 bombers and 28 fighters.  
U.S. 1st Army captures Vossenack and Germeter.
- 3rd Red Army advances to within 7 miles of Budapest.  
U.S. Superfortresses bomb railroad yards at Rangoon, Japs' supply system base.
- 4th German counterattacks push U.S. troops out of Schmidt, southeast of Aachen.  
5,000 Allied planes bomb German industrial cities.
- 5th U.S. superfortresses raid Singapore.  
U.S. forces on Leyte close a pincers on the Japs in the Ormoc.  
Allied heavy bombers raid German military targets.  
Carrier planes of U.S. 3rd Fleet raid Japs' air power in the Manila and southern Luzon areas. Destroy 440 planes and destroy or damage 30 ships.
- 6th Losses for the Germans since D-day total 1,150,000 men.
- 7th U.S. 1st Army fights its way back into streets of Vossenack.
- 8th U.S. 3rd Army opens sudden attack between Metz and Nancy, advances 3 miles on a 25-mile front.
- 9th U.S. 3rd Army crosses the Moselle River and advances 5 miles on Metz.
- 10th U.S. fliers and naval units sink 4 Jap transports and 6 destroyers in Ormoc Bay in the Philippines.  
750 U.S. bombers pound military targets behind the German lines. Allied troops in Italy capture Forli, 39 miles from Bologna.
- 11th U.S. superfortresses bomb Jap targets in China and Japan.  
U.S. 3rd Army advances to within 5 miles of Metz.  
Germany releases her V-2 rockets on Britain, France, and Belgium.
- 12th U.S. troops in the Philippines advance 3 miles toward the port of Ormoc on the western end of Leyte.
- 13th U.S. 3rd Army captures Fort Verny and 2 strongholds south of Metz and Fort Thionville on the north.  
RAF bombers sink the German battleship *Tirpitz*.  
Jap offensive in China forces U.S. 14th Air Force to destroy its air base at Liuchow.
- 14th British Navy sinks 9 out of 11 ships caught in a German convoy off the southwest coast of Norway.
- 15th U.S. troops on Leyte push to rear of Jap positions and cut off enemy units near Limon, American-held village south of Carigara Bay.
- 16th Six Allied Armies form the western front extending from the Netherlands to the Alps.  
More than 3,000 Allied planes bomb targets behind the German lines.
- 17th Allied Armies in France make slight advances.  
MacArthur's troops trap 3,000 Japs on Leyte.  
Jap forces continue their advances in China.
- 18th U.S. 3rd Army pushes across the German border into the Saar Basin and into the streets of Metz.  
U.S. planes raid the Munich area and destroy 86 planes.
- 19th 1,500 planes of the 9th Air Force bomb German troops and transport facilities from Aachen to Saarbrucken. 1,200 U.S. planes from Italy raid Germany's southern supply bases.  
British troops join Marshal Tito's partisans and Albanian patriots to drive the Germans from Yugoslavia and Albania.
- 20th U.S. 3rd Army captures Metz and pushes 7 miles beyond.  
Two fleets of U. S. heavy bombers again hit German supply and oil centers.  
Chinese troops recapture the Burma Road center of Mangshih.  
Japs continue advances west of Liuchow. Generalissimo Chiang reorganizes his cabinet and names Gen. Chen Cheng as new Minister of War.
- 21st 3,000 Allied planes bomb Germany's oil resources, at Merseburg, Hamburg and Harburg.  
U.S. Superfortresses hit the Japs' homeland island of Kyushu, bomb aircraft plants at Omura and other facilities at Nanking and Shanghai.
- 22nd U.S. 1st Army captures Eschweiler and other Allied troops advance toward Strasbourg.  
U.S. heavy bombers destroy a Jap light cruiser and damage a warship at Brunei Bay in northwest Borneo.
- 23rd U.S. troops in the Philippines crush the Japs at Limon and advance to the Leyte River.
- 24th 100 B-29s bomb Tokyo. Lose 2.  
U.S. 9th Army destroys 118 German tanks on Cologne Plain.
- 25th Gen. Hodges's 1st Army crashes out of the Huertgen Forest.  
1,000 U. S. heavy bombers pound oil supplies at Merseburg and Bingen in Germany.  
U.S. fliers in the Pacific smash Leyte. Pound Jap convoy of 4 transports; sink 3 and damage the other.
- 26th U.S. 3rd Army breaks the Maginot and advances 5 miles.  
U.S. bombers and fighters destroy 122 German planes in the air and 7 on the ground in a raid over Misburg near Hanover.  
War Department announces Lt. Gen. Clark promoted to commander of the 15th Army Group in Italy; General Alexander, raised to a Field Marshal, becomes Supreme Commander in the Mediterranean.  
Carrier planes from the U.S. 3rd Fleet raid the Luzon area. Sink 18 Jap vessels, including a destroyer and a heavy cruiser. Destroy 72 planes.
- 27th U.S. 3rd Army captures St. Avold and advances to Merten.  
7th Army paratroopers land behind the German lines near the Swiss border.  
500 8th Air Force fighters shoot down 98 German planes in a bombing raid over Bingen and Offenburg. We lose 1 bomber and 15 fighters.  
U.S. superfortresses again bomb Tokyo and Bangkok.  
Secretary of State Hull resigns. Under-Secretary Edward R. Stettinius succeeds him.
- 28th U.S. 3rd Army crosses the German frontier along a 26-mile front from Berus to Besch and advances toward Saarbruecken.  
U.S. 9th Army captures Barmen and Altdorf.  
Strong force of RAF Mosquitoes bombs Nuremberg.  
Japs raid our B-29 base at Saipan and attack other units in the Leyte Gulf. Our damage unannounced. Japs lose 26 planes.
- 29th U.S. bombers raid oil refinery at Misburg, Germany.  
RAF Mosquitoes bomb Duisburg, in the Ruhr.  
B-29s bomb Tokyo for 3rd time in 6 days.  
Gen. MacArthur's fliers smash the 6th Jap convoy trying to get reinforcements to Ormoc on Leyte. Sink 10 transports and 3 destroyers.
- 30th 3,000 U.S. and British planes bomb oil plants in the Leipzig area and the Ruhr. Lose 56 bombers and 30 fighters.  
German counterattacks in Italy force U.S. 5th Army to give up Mount Belvedere.  
U.S. Thunderbolts "skip-bomb" to destruction the 7th Jap convoy of 6 ships on its way to Ormoc in the Philippines with 5,000 men.  
All Allied Armies on the Western Front advance in the face of strong counterattacks.



## For Heroism and Service



### DISTINGUISHED SERVICE CROSS

Capt. RICHARD B. HAWK, for making his way through heavy shelling to gun positions which had been hit during enemy counterbattery barrages directed at his battery positions on 18 Mar 44 in Italy and for administering first aid to the seriously wounded. Address: 3833 McFalin St., Dallas, Tex.

T/5 MARVIN B. LINDLEY, for aiding in the evacuation of several wounded through an area under severe artillery shelling while proceeding forward to an OP near Campo di Carne, Italy on 21 Feb 44. Address: Orleans, Ind.

### LEGION OF MERIT

Col. VERNON T. ANDERSON, N. Africa, 24 Feb 44. 34 Upland Rd., Lyman, S. C.

1st Lt. JOHN R. BANISTER, III, N. Africa, 25 Mar to 5 Apr 43. 1804½ W. 6th St., Austin, Tex.

Capt. JAMES M. DECARMO, Italy, 13 Dec 43 to 15 Feb 44. 315 N. Caddo St., Cleburne, Tex.

Col. NORMAN J. ECKERT, SWP, 6 Dec 42 to 2 Aug 43. 220 Whittier St., NW, Washington, D. C.

Lt. Col. JOHNSON HAGOOD, JR., Italy, 14 Jun 43 to 31 Jan 44. 2 Greenhill St., Charlotte, S. C.

Capt. MERRILL G. HATCH, Vella Lavella, 12 to 15 Aug 43. 524 S. Second East St., Bountiful, Utah.

Col. DOUGLAS V. JOHNSON, African-Middle East Theater, 10 Mar 42 to 10 Aug 44. 3409 15th St. N., Arlington, Va.

Lt. Col. HARRISON KING, N. Africa, 10 Aug to 20 Oct 43. 3719 Reservoir Rd., NW, Washington, D. C.

Capt. STANLEY J. KREDELER, N. Africa, 15 Feb 43 to 21 Mar 44. 3563 Vine St., Cincinnati, Ohio.

S/Sgt. EARL LITTLE, Italy, 8 Sep to 13 Oct 43. 200 E. Collins St., Corsicana, Tex.

1st Sgt. WINSTON C. LOCKABEY, 6 Jan 42 to 24 Feb 44. RFD 3, Belton, Tex.

S/Sgt. WILLIAM H. McCOLLUM, N. Africa, Nov 42 to Dec 43. RFD 1, Leeds, S. C.

Capt. CLAUDE H. MATCHETTE, N. Africa, 4 Mar 43 to 5 Jan 44. 426 N. Wallace St., Indianapolis, Ind.

Col. LEMUEL MATHEWSON, W. William St., Bath, N. Y.

Sgt. CURTIS C. ROGERS, Italy, 17 Nov 43 to 12 Mar 44. RFD 2, Henderson, Tex.

2d Lt. FRANK H. SEIFFERT, N. Africa, 15 Nov 42 to 18 Nov 43. 125 W. Union St., Medina, Ohio.

T/Sgt. FREDERICK A. STOLZ, N. Africa, 12 Oct 43. 1212 Capuchini Ave., Burlingame, Calif.

1st Lt. VICTOR J. TOFANY, 18 Dec 42 to 16 Mar 44. 2923 Ridgeway Ave., Rochester, N. Y.

Lt. Col. JOSEPH E. WESTBURY, 27 Jan 41 to 23 Feb 44. 114 Hazard St., Georgetown, S. C.

### SILVER STAR (Posthumously)

Sgt. ARTHUR A. YOUNG, Italy, 7 Jan 44.

### SILVER STAR

T/5 RODNEY R. ADAMS, Normandy, France, 6 Jun 44. 171 Manet Ave., Quincy, Ill.

Pfc. RICHARD W. BELL, New Guinea, 22 Jun 44. 1645 E. Prairie St., Decatur, Ill.

2d Lt. ROBERT L. BRATCHER, Biak Island, 2 Jun 44. 1515 W. Billon St., St. Louis, Mo.

Capt. PAUL J. BURKE, New Guinea, 22 Jun 44. 607 W. Church St., Elmira, N. Y.

Maj. RAYMOND W. CARRAHER, New Guinea, 22 Jun 44. 3915 Madison Ave., Sioux City, Ia.

Pfc. FRANK J. DESUTTER, New Guinea, 22 Jun 44. RFD 1, Manito, Ill.

Sgt. ROY C. GIEDRYS, New Guinea, 23 Jun 44. Anson, Tex.

T/4 JOHN C. GIEDRYS, New Guinea, 22 Jun 44. 8123 Bellevue Ave., Cleveland, Ohio.

2d Lt. CHARLES N. HERGENRATHER, Italy, 24 Jan. 44. 223 Register Ave., Baltimore, Md.

Cpl EARL E. HIGHT, New Guinea, 23 Jun 44. 2004 Newton, Springfield, Mo.

Pvt. BENJAMIN F. HORN, New Guinea, 24 Jun 44. RFD 2, Box 113, Concord, Calif.

1st Lt. CHARLES A. JAMIESON, New Guinea, 22 Jun 44. 671 Suffern Rd., Teaneck, N. J.

2d Lt. STEVEN A. KING, Biak Island, 21 and 22 Jun 44. Kingfisher, Okla.

1st Lt. JOE B. KOPYCINSKY, RFD 1, Chapel Hill, Tex.

T/5 MELVIN D. KRUSE, New Guinea, 24 Jun 44. 205 W. 22nd St., Cedar Falls, Ia.

T/5 CLELL E. LANDERS, New Guinea, 24 Jun 44. RFD 2, Willard, Mo.

T/5 LEE ROY H. LUCHTERHANDT, New Guinea, 22 Jun 4. Marcus, Ia.

T/4 SIEBERT A. McDANIEL, New Guinea, 22 Jun 44. RFD 1, Amesville, Ohio.

Pfc. NUGGETT F. MAYES, New Guinea, 22 Jun 44. 215 W. Galena St., Webb City, Mo.

1st Lt. ROBERT C. MOLONEY, Italy, 29 Jan 44. 602 Wallace Ave., Covington, Ky.

Capt. WILLIAM S. MORRIS, New Guinea, 22 Jun 44. 409 Shelby, Higginsville, Mo.

2d Lt. CHARLES H. PARKS, Biak Island, 21 Jun 44. Box 246, Wynona, Okla.

Pvt. NELSON STROUPE, New Guinea, 24 Jun 44. 431 N. Main St., Bolivar, Tenn.

Capt. HERBERT E. SUNDSTROM, N. Africa, 23 Mar 43. 6810 Thomas Blvd., Pittsburgh, Pa.

### SOLDIER'S MEDAL

Pvt. STYMAN CLAYTON, Bougainville, 9 Apr 44. RFD 5. Thomasville, Ga.

Pfc. FERNANDO B. GARCIA, Cisterna di Littoria, Italy, 10 Mar 44. Box 364, Florence, Ariz.

Sgt. CHARLES R. HENLEY, N. Africa, 5 Jun 43. 904 Broadway, Cape Girardeau, Mo.

Maj. DANIEL S. T. HINMAN, Italy, 21 Sep 43. Brookside, Wakefield, R. I.

Capt. ROBERT J. KING, Italy, 18 Nov 43. 2037 E. 115th St., Cleveland, Ohio.

Pfc. CHARLES B. OWEN, Italy, 18 Jan 44. 812 W. Poplar St., Harrisburg, Ill.

Pfc. F. D. ROBINSON, Italy, 6 Nov 43. RFD 2, Lawrenceburg, Ky.

Sgt. ROBERT L. WAKEFIELD, Sicily, 6 Aug 43. 690 Fidalgo St., Seattle, Wash.

### AIR MEDAL (Posthumously)

1st Lt. ELLIOTT H. BEALE, Normandy, France, 11 Jun 44.

1st Lt. FRANK M. MARSON.

### AIR MEDAL

2d Lt. KEITH J. BAUER, Italy, 8 Jan 44. RFD 1, Arkansaw, Wis.  
1st Lt. WILBUR S. BERRY, Normandy, 7 Jul 44. N. Main St.,  
Darlington, S. C.  
1st Lt. WILLIAM C. BROWN, JR., Sicily, Jul and Aug 43. Avondale  
Farms, Birdsboro, Pa.  
2d Lt. ROBERT B. CAROW, Solomon Islands, 20 Jan to 15 Feb 44.  
Michigan St., Michigan City, Ind.  
1st Lt. JOHN W. CASE, Normandy, 4 Jul 44. Saunderstown, R. I.  
2d Lt. WILLIAM S. CLEMENT, Normandy, 4 Jul 44. Rose Valley  
Rd., Rose Valley, Pa.  
2d Lt. HOWARD C. COFER, Italy, 8 Jan 44. 4534 N.E. 32d Pl.,  
Portland, Ore.  
1st Lt. DAVID E. CONDON, Normandy, 7 to 28 Jun 44. Goshen, Va.  
1st Lt. GEORGE L. CRALLE, Bougainville, 2 May 44. 1756 N. 40th  
St., East St. Louis, Ill.  
2d Lt. CHARLES W. CROSS, Bougainville, 15 to 26 Jan 44. 761 N.  
Horsman St., Rockford, Ill.  
1st Lt. JOHN GALL, Italy, 21 Nov 43. 840 Bow St., Wheeling, W. Va.  
1st Lt. FRANK W. GRUNEWALD, Normandy, 3 Jul 44. 1727  
Stephen St., Brooklyn, N. Y.  
2d Lt. FRED HADDEN, Normandy, 24 Jun 44. Hazard, Ky.  
1st Lt. THOMAS J. HALL, JR., Sicily, Jul and Aug 43. 204 S. Pa.  
Ave., Roswell, N. Mex.  
1st Lt. GEORGE R. HILDRETH, Normandy, 4 Jul 44. 7649 Eastlake  
Terr., Chicago, Ill.  
1st Lt. JOHN S. HOLLEMAN, Normandy, 4 Jul 44. Box 484,  
Livingston, Tex.  
1st Lt. ROBERT W. JONES, Bougainville, 7 Apr 44. 5915 W.  
Superior St., Chicago, Ill.  
1st Lt. CLARENCE F. LANGE, Normandy, 8 Jun to 3 Jul 44. 4661 N.  
38th St., Milwaukee, Wis.  
1st Lt. DAVID P. McNAMARA, Normandy, 5 Jul 44. 112 Huntington  
Rd., Garden City, N. Y.  
2d Lt. RUSSELL REYKJALIN, Sicily, Mar to Aug 43. Leal, N. D.  
1st Lt. ROBERT A. SEVERSON, Sicily, Jul and Aug 43. 905 Fifth  
St., Brookings, S. D.  
2d Lt. HERBERT W. SHEIDY, Sicily, Jul and Aug 43. Sinking Springs, Pa.  
1st Lt. GEORGE L. STEWART, Normandy, 3 Jul 44. 168 Hot Springs  
Rd., Santa Barbara, Calif.  
Maj. J. ELMORE SWENSON, Normandy, 8 Jul 44. 247 Kelsey Ave.,  
Salt Lake City, Utah.  
1st Lt. ALLEN WALKER, Normandy, 15 Jun 44. 1925 50th Ave.,  
Oakland, Calif.

S/Sgt. DEANEL B. WILSON, Sicily, Jul and Aug 43. RFD 1, Joaquin,  
Tex.

### BRONZE STAR (Posthumously)

Sgt. HAROLD B. JARRETT.

### OAK LEAF CLUSTER TO BRONZE STAR

Lt. Col. WILLIAM H. ALLEN, JR., Guadalcanal, 10 to 31 Jan 43.  
2014 State St., Santa Barbara, Calif.  
S/Sgt. ANTHONY LO PRESTO, Bougainville, 8 to 24 Mar 44. 50-39  
42d St., Long Island City, N. Y.  
T/5 WILBUR W. WOLFORD, Italy, 30 May 44. 1546 E. Main St.,  
Stockton, Calif.


### BRONZE STAR

Cpl. WILLIAM E. ALEXANDER, Italy, 29 Feb 44. 2304 S. 15th Rd.,  
Phoenix, Ariz.  
T/5 THOMAS A. ALLEN, Sicily, 3 to 5 Aug 43. RFD 2, Reed, Okla.  
Cpl. MICHAEL J. ALONGE, Italy, 30 May 44. Lattintown Rd.,  
Marlboro, N. Y.  
S/Sgt. ELMER C. ARMSTRONG, Solomon Islands, 3 Dec 43 to 22  
Feb 44. RFD 3, Ariton, Ala.  
T/4 LOVELL D. AUSTIN, Sicily, 3 Aug 43. 3643 Folsom St., San  
Francisco, Calif.  
Pfc. LEWIS T. BAILEY, Italy, 31 Jan 44. 517 N. Evans St., Pottsville,  
Pa.  
Pvt. STACY T. BARRICK, Italy, 31 Jan 44. 765 Simmons St., Huron,  
S. D.  
T/5 IVAN W. BEAL, Italy, 30 May 44. Pratt, Minn.  
T/Sgt. JOHN C. BENEFIELD, Italy, 14 May 44. RFD 3, Roanoke,  
Ala.  
Pfc. MORRIS BERK, Italy, 25 Feb 44. 2743 Glenview Ave., Los  
Angeles, Calif.  
T/5 ALFRED BLISS, Italy, 11 Jul 43. RFD 2, Camden, N. J.  
Cpl. JOSEPH W. BOWLER, Bougainville, 16 Feb 44. 1450 N. Lawler  
St., Chicago, Ill.  
S/Sgt. CLYDE E. BURTON, Italy, 9 Sep 43 to 28 Mar 44. 601 Pierce  
St., Amarillo, Tex.  
T/4 ELMO F. BYRD, Italy, 22 Jan to 23 Mar 44. Clarksville, Ark.  
Lt. Col. JOHN D. BYRNE, N. Africa and Italy, 2 Nov 42 to 5 Jun 44.  
411 Phoenix Ave., Elmira, N. Y.  
Pfc. FREDERICK D. CAREY, Italy, 23 Oct 43. 416 S. Metcalf St.,  
Lima, Ohio.

### ROLL OF HONOR

LT. RUDOLPH A. ARDELEAN, O-1171873, killed in action in France, 10 Aug 44.	LT. GEORGE B. POWELL, O-1181734, battle casualty in France, 18 Jul 44.
CAPT. H. W. BYERS, JR., O-406652, killed in action in France, 7 Aug 44.	LT. NICHOLAS B. RAHAL, O-1169696, killed in action in Italy, 13 Feb 44.
LT. COL. JOHN B. DALY, O-17194, died in action in France, 18 Aug 44.	COL. THOMAS A. ROBERTS, JR., O-02678, killed in action in France, 4 Aug 44.
LT. EDWARD J. GOALS, O-1176639, killed in action in France, 29 Aug 44.	CAPT. JEREMIAH A. SHEEHAN, O-422897, killed in action 7 Aug 44 in France.
CAPT. HENRY T. HARPER, O-365182, killed in action in France, 2 Aug 44.	LT. HARRY J. SIMON, O-1173779, killed in action in France, 15 Jun 44.
LT. A. R. HOWARD, O-452457, died in combat in France, 4 Jul 44.	CAPT. DONALD R. SKELTON, O-32425, killed in action in France, 8 Jun 44.
AC KARL WERNER KASSOWITZ, JR., 16118073, died 26 Jul 44, at Gardner Field, Taft, Calif.	CAPT. EDWARD STEWART, O-346784, killed in action in Italy, 29 Nov 43.
LT. GEORGE T. LAND, O-1174038, died at Fort Bragg, N. C.	LT. GERALD R. TABER, O-1165051, killed in action in Italy, 15 May 44.
LT. FREDERICK J. OWENS, O-1298117, killed in action in France, 3 Jul 44.	CAPT. GEORGE W. TYSON, killed in action in Southwest Pacific, 1 Feb 44.
CAPT. MAURICE M. PARKER, O-445365, killed in action in France, 4 Jul 44.	LT. JOHN L. WISSING, JR., O-1283180, killed in action in France, 15 Aug 44.
LT. WALTER L. PIPER, O-1172227, died in action in France, 5 Aug 44.	CAPT. J. C. WORKIZER, died in France, 6 Jul 44.

# BOOK REVIEWS



*CHINA TAKES HER PLACE.* By Carl Crow. 276 pp.; index. Harper & Bros. \$2.75.

Carl Crow's faithful followers, who have been a bit worried by his not always happy excursions into the minds of the Japanese, the South Americans, and the great American customer, will be delighted at his return to things Chinese. If any of you don't know Carl Crow's Chinese books, and want to know something about China, let me recommend this as an excellent beginning.

With a deep appreciation of China's forty centuries of history, Carl Crow starts his absorbing narrative of modern China with the Revolution of 1911, which led to the overthrow of the Manchus. He covers the era of the War Lords, the Sun Yat-sen revolution, the industrialization of China, and the war with Japan. He looks into the future and analyzes the Kuomintang-Communist controversy, recently highlighted by the transfer of Gen. Stilwell.

Carl Crow can't go wrong when he writes about China, and this book is one of the best he's written. R. G. M.

*MacARTHUR AND THE WAR AGAINST JAPAN.* By Frazier Hunt. 176 pp.; index; maps. Charles Scribner's Sons. \$2.50.

Frazier Hunt, a skilled and experienced correspondent, spent three months in Australia last spring with Gen. MacArthur, his staff, and the records of his headquarters. From those contacts comes this account of the slugging land war of the Pacific, that grubbing war that has had so relatively little publicity since the fall of Corregidor. It is timely, in view of the ever accelerating pace of the war against Japan.

The author's hero worship tends to make him put events in terms of black and white, rather than the compromising grays that incomplete knowledge suggests. And there are many points on which the record is not yet completely revealed, as well as others the author knew only by hearsay. An example of the first is the reason half the "Flying Forts" remained at Clark Field after being thrice ordered south to Mindanao. One of the second is the author's lack of battle experience or observation.

This latter detachment is perhaps a virtue, however, in a survey of this kind. John Hersey and others have written graphically the details of jungle fighting; not all campaigns have been detailed, but the pattern of jungle and atoll is pretty well known. Until this book was published, though, there was no evaluation of MacArthur's efforts available.

The second half is the best part of Mr. Hunt's new book. It deals with the New Guinea campaign, that all-important one that stopped the Nips' march to the south and started the slow push up toward Japan. A daring campaign, this, opening with one of the war's greatest air-borne operations. Its pace varied from slow and muddy going to great amphibious leaps. It has gone forward steadily—and will unquestionably long be regarded as a classic. Through Hollandia it is well told here, in good perspective.

*THE FORGOTTEN BATTLEFIELD.* By Kazimierz Wierzynski, 179 pp.; illustrated. Roy Publishers. \$2.50.

Poland's black days of 1939 are revived with unbelievably reality in *The Forgotten Battlefield*, a collection of personal accounts, as told to a noted Polish author by eye-witnesses and participants—Polish soldiers, driven from their homeland to carry on their fight with the United Nations.

The outside world knows relatively little of Poland's brave stand against the German forces in the days of September, 1939. Overwhelmed by quantities of German men, airplanes, and mechanical equipment, the Poles fought to the last man. Notable was their stand in the Janow forest, where the 11th Polish Division marched by day among their protective trees, attacked at night, and vanquished five German divisions. Later, members of this Polish division escaped to France to continue their fight. Other colorful epics are those of the small Polish air force, its few fighter pilots and planes attacking and re-attacking until both were worn out; the Poles' fleet of small ships holding the Hul Peninsula for numerous days; and lastly the brave peasants whose valiant deeds will never fully be told.

In *The Forgotten Battlefield* the author has succeeded in drawing from bloody hearts such stories of individual heroism and mass devotion as only could have happened to men whose country has been invaded time and again. C. P.

*I WENT TO THE SOVIET ARCTIC.* By Ruth Gruber; preface by Vilhjalmur Stefansson. 276 pp.; glossary; index; illustrated; endpaper map. The Viking Press. \$3.50.

Thanks largely to the development of airlines, the Arctic is coming into its own. In this country we are increasingly aware of Alaska's economic and strategic importance.

It is the Soviet Russian counterpart of Alaska that Dr. Ruth Gruber describes in her book. The author wanted to see for herself what was being done in the Soviet Arctic. She especially wanted to see if women were taking any part in claiming the great sprawling hinterland for agriculture and industry.

The woman angle of the subject seems to have been wide open to exploitation, or Dr. Gruber's letters of introduction must have had a certain magic. Perhaps it was a combination of both, for the enthusiastic young author gained hospitable admittance not always extended to "capitalist" correspondents.

Soviet willingness to open for public view the record of women in Arctic pioneering is not surprising: it is a record of which the country may well be proud. Women along with men have worked eagerly, accepting hardships with sturdy pioneer courage. Theirs is the job of opening a new country to habitation, and they have caught its inspiration and sensed its dignity.

Dr. Gruber entered whole-heartedly into the interests of the country and refused to be embarrassed by its peculiarities. She is a keen observer and, with generous Soviet cooperation, she has gathered a

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Nothing can be sent C.O.D. anywhere, or by insured or air mail to A.P.O.s overseas. Such items as globes are too bulky for shipment to individuals overseas, as we are of course subject to Post Office Department Order No. 19687; for its detailed provisions, consult your local postmaster.

wealth of information about a little known part of the world. Interwoven with descriptive passages that give the land physical reality, it all sums up to a large slice of first-hand observation very agreeably presented. F. E. J.

*OUR JUNGLE DIPLOMACY.* By William Franklin Sands, in collaboration with Joseph M. Lalley. 240 pp.; index. University of North Carolina Press. \$2.50.

Writing after a long career in diplomatic and international affairs, William Franklin Sands, constructive in his criticism, has produced a valuable and interesting book in *Our Jungle Diplomacy*. "Our course in foreign affairs has been capricious and unpredictable. Our diplomacy has been lost in a jungle of its own creation."

Thus agreeing with Walter Lippman that for decades the United States has had no consistent foreign policy, Mr. Sands draws from his own experiences in the Orient, Russia, and Latin America to show the tragic cost. For instance, the American seizure of Hawaii and Theodore Roosevelt's absorption of the Panama Canal Zone "offered a ready-made politico-diplomatic pattern for Japanese expansion."

Mr. Sands recommends a program of thorough and systematic training for all State Department personnel, a reorganization to produce administrative coherence, and a recognition that the vital posts in American diplomacy are not in Europe but in the Far East and in South America. F. B.

*VIA DIPLOMATIC POUCH.* By Douglas Miller. 248 pp. Didier Publishing Co. \$3.00.

This book contains some of the confidential reports Mr. Miller sent to the Government in his capacity as American Commercial Attache in Berlin. They were written from 1933 to 1937, and give a candid idea of one man's view of Germany. To a student of European affairs they have a certain value in showing what our Government learned from its representatives abroad during the rise of the Nazis. The general reader, however, accustomed to keeping up with the headlines, won't find the book very interesting because he knows too well by now what manner of beasts the Nazis are and what their plans for world conquest were. R. G. M.

*THE SECOND CHANCE: America and the Peace.* Edited by John B. Whitton. 228 pp.; index. Princeton University Press. \$2.50.

Most of us have a conception, more or less definite by now, of "what we are fighting for." But do we know how to go about securing our goals after the actual fighting has finished? We knew what we wanted during the first world war, but the peace was not successful. Presently, we will have a "second chance." This book is an attempt to educate the American public so that they will not miss this second chance.

The authors are members of the Princeton Group for the Study of Post-War International Problems. They have written in the hope and the belief that a group of American scholars such as they might, in some measure, help to clarify the basic issues of the post-war settlement.

Upon the background of the Versailles Conference and the League of Nations they examine the alternatives open to us today in the way of world peace and organization. They examine the political and economic conditions which would be necessary at home and abroad to make an international world organization feasible. The authors do not always agree as to the details of such an organization, but they are convinced that the United States should "participate whole-heartedly in a world-wide effort to secure an enduring peace." At times their discussion may seem overly scholarly, but it is convincing and worthy of much intelligent thought and discussion. R. N. G.

*THE ROAD TO SERFDOM.* By Friedrich A. Hayek. 244 pp.; index. University of Chicago Press. \$2.75.

This book dealing with the possible result of certain governmental policies of the democracies deserves recognition as one of the outstanding political essays of our times. In a well-written and cogent argument which defies abridgment for a brief review, the author develops a thesis that the rise of the totalitarian states was not a reaction against the socialistic trends of the preceding period but the necessary result of those trends which were evidenced by "national

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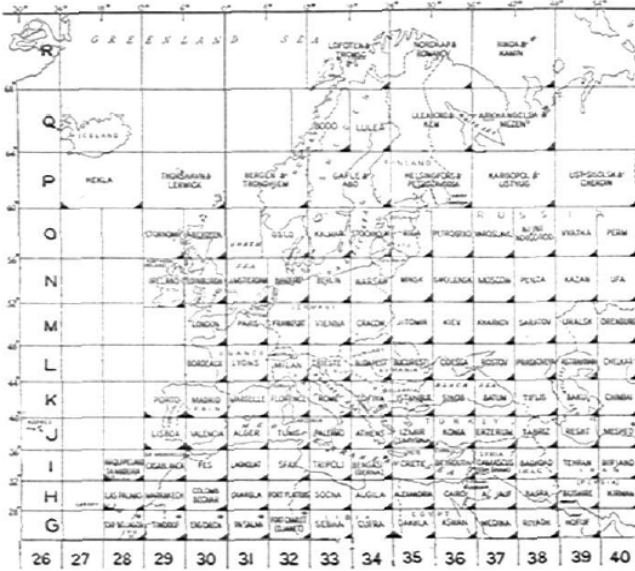
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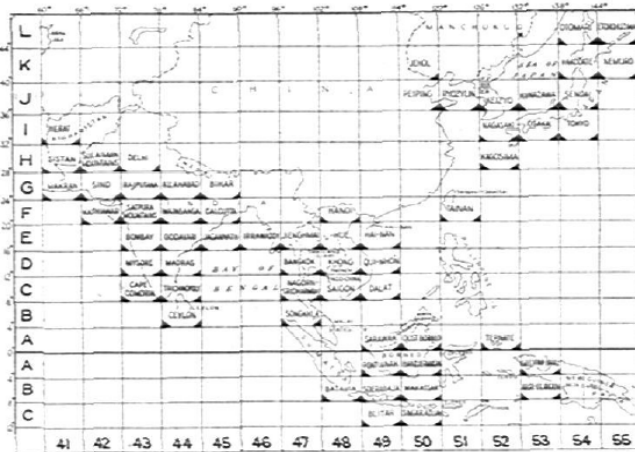
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planning," the growth of State control, and the disappearance of the Rule of Law. His warning is that these same trends are present in the governmental policies of the democracies and are taking us along the same path that Germany once trod.

The author had an unusual opportunity of observing these trends both in Central Europe and in the democracies, particularly Great Britain. A native Austrian, he was Director of the Austrian Institute for Economic Research and Lecturer on Economics at the University of Vienna during the years in which Hitler was gaining strength. In 1931 he came to England, where he has become a citizen and is now a Professor of Economic Science at the University of London.

Mr. Hayek's book is not simply an argument: it is a magnificent defense of the nineteenth century concept of liberty—the individual's freedom from government coercion. The struggle for wealth (we soften this term by calling it "economic freedom") in our individual lives and the great changes wrought by technology in our modern age have caused most of us to grow cynical about the ideals presented, for example, in John Stuart Mill's essay *On Liberty*. Here is a writer who challenges that cynicism and who restates those ideals and warnings against contrary policies as the cornerstones of the democracies of today and tomorrow.

As the author points out in an introduction to his bibliography, he is not alone in his belief. This should be remembered by those who will seek to disregard his conclusions as simply those of an isolated individual. Mr. Hayek's essay should serve as the instrument to call attention to a growing opinion among economists and political thinkers.

The value of the book does not depend on whether or not the democracies actually become totalitarian powers. There can be no doubt that the steady centralization of power in the State *may* lead to such a result. This book is a call for all of us who have a voice in the government to reconsider our steps and to double our precautions that no regimentation on a Fascist model happens here. Nobody can afford to neglect a warning of a potential disaster. It will be a tragedy in more ways than one if the flood of books on the modern market keeps the volume under review from receiving the recognition which it deserves.

J. R. C.

*THE TECHNIQUE OF THE TERRAIN.* By H. A. Musham. 202 pp.; appendixes; index: illustrated. Reinhold Publishing Corp. \$3.85.

Subtitled *Maps and Their Use in the Field in Peace and War*, this new book approaches its field a bit differently than most of the recent books on the subject. Its author states "it is not concerned with the making and production of maps nor is it planned to cover the whole subject of topography." He found it pretty hard to stick closely to this aim, however. This of course was not wholly his fault, as the subject's ramifications are so inter-linked, but he consciously departed from his announced aims.

For instance, the entire chapter on drafting is pointed at the making of maps (even to types of pencil points), and specifically includes a section on copying, reproduction, enlargement, and reduction of maps. Construction and use of stride and pace scales have perhaps a hybrid character. The whole subject of topography is at least approached when triangulation and aerial photography are included in the book, to some extent.

This is not to belittle the book, though. A conscientious job has been done, and it is based on sound, official publications of our own and the British government departments. Inclusion of numerous problems is a distinct aid to the novice—who, by the way, will find this a very useful text. Appendixes contain tables of linear and square measurement, and of natural functions; those dealing with Chinese, Russian, and Japanese units are of unusual interest and value.

Besides presenting details well, Mr. Musham includes a wealth of useful background and explanatory material that is usually missing from the more common or popular mapping texts.

*MILITARY OCCUPATION AND THE RULE OF LAW.* By Ernst Fraenkel. 248 pp.; bibliography; table of cases; index. Oxford University Press. \$3.50.

A detailed study was made in 1942-44 of the Rhineland occupation after the last war. It was under the aegis of the Carnegie Endowment for International Peace and of the Institute of World Affairs.

This book contains the results of the investigation in final form.

Dr. Fraenkel examines in great detail the problems and work of the occupying forces. These of course covered all aspects of a complex society. Just how directly applicable the lessons from that earlier armistice may be in these days of fanatic nationalism is perhaps moot. As a general thing, however, a study of the past helps smooth the path of the future. Certainly there has been no more careful, honest, and scholarly examination of this question in the period 1918-23.

**WAR THROUGH THE AGES.** By Lynn Montross. 904 pp.; reading list; index; illustrated. Harper & Bros. \$5.00.

From Alexander to Eisenhower, from the Greek phalanx to our amphibious forces, Mr. Montross traces the development of weapons, tactics, and strategy. His book is really an outline of world history with emphasis on its military aspects. He relates military operations to the social and economic fabric of society, shows the influence of personalities and new inventions on the course and method of war. Great movements, dynastic wars, revolutions—all have played a part in the development of warfare and all are treated here. As a result this is an amazingly useful reference volume, as well as a thoroughly interesting one to read.

Mr. Montross has taken great pains to ensure accuracy. Although his prime aim is not "debunking," he is careful to straighten the record, set straight several popular misconceptions.

Since he wrote primarily for the layman, he has turned out a fine popular history, one from which anyone would benefit. Over a hundred plans, maps, and line drawings add greatly to the clarity of the text. A chronological table is a useful feature, and a lengthy suggested reading list will open wide fields to those who may be inclined to delve in greater detail. *War Through the Ages* has a place in anyone's military or historical library.

**WESTWARD THE WOMEN.** By Nancy Wilson Ross. 195 pp.; reading list. Alfred A. Knopf. \$2.75.

The Pioneer Woman, as a generic term, has become a sort of national symbol marking the sharp contrast between the ruggedness of pioneer days and the material growth that has since been attained. Measured by such a contrast we have come a long way in the last hundred years. Viewed from the angle of such non-material qualities as courage, resourcefulness, and high purpose, the distance seems to shrink. Indeed, this view brings the whole point of woman's progress into question.

In writing *Westward the Women* Mrs. Ross has raised the pioneer woman out of her anonymity and endowed her with warm, vibrant, human qualities. She has made a searching study of some of those first hardy-spirited women who crossed the continent to help claim Washington and Oregon from the wilderness. Through their revealing diaries and other historical records she has caught intimate glimpses of them which she has conveyed in full life-and-color reality to her readers.

Faithful Sacajawea, the Shoshone Indian squaw on the Lewis and Clark Expedition, gentle Narcissa Whitman, patient Eliza Spalding, Mary Richardson Walker, Dr. Bethenia Owens-Adair, the Belgian nuns, and others stand out as examples of almost incredible courage. Even by standards of today some were social as well as material pioneers.

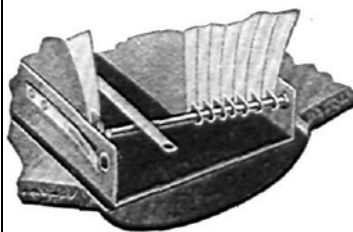
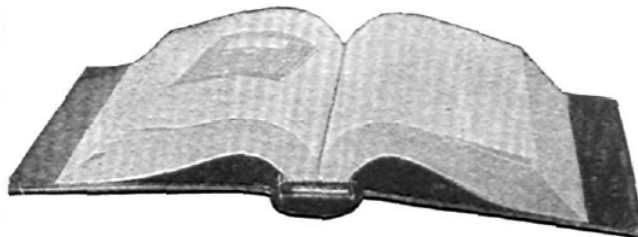
There were other women too, adventuresses who went along "for the ride" and, inevitably, some who were too frail in body and character for the stern demands of the frontier. But after a century in which the wilderness has been tamed it is the heroism of the Pioneer Woman brought to life by Mrs. Ross that stands out in sharp relief and, in an oddly disquieting way, takes oblique issue with the comfort-and-luxury-loving women of our "more advanced" time. F. E. J.

**BRAVE MEN.** By Ernie Pyle. 466 pp.; index of persons and places. Henry Holt & Co. \$3.00.

As the world knows, Ernie Pyle is unique. He lives with the GIs, and in the same way. He is definitely unhappy and uncomfortable when back in headquarters towns. Identified so closely with the life of the soldier, he writes with understanding and sympathy of the little daily events that form so large a part of their lives. Some people call this the "human" side of the war; most realize that it is just as important a part as the so-called "big picture."

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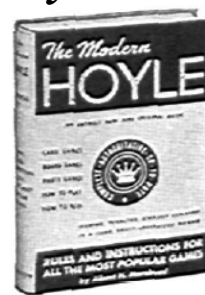
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the war, what they think as well as how they act. His daily columns reflect his sincerity. So does this latest book, which in four sections covers Sicily from June to September, 1943, Italy from that December to last April, England in April and May, and France from the invasion to September. The picture is graphic. The writing is a fine antidote to some of the breathless accounts that have been ground out.

*TRAINS, TRACKS AND TRAVEL. By T. W. Van Metre. 414 pp.; index; illustrated. Simmons-Boardman Publishing Corp. \$3.50.*

Dr. Van Metre is Columbia University's Professor of Transportation, but he is also a small boy at heart. He's never recovered from his boyhood love of steel rails, their trains, depots and freight houses, and all that is related to them. As his own son was growing up the author compiled a scrapbook of trains and railroad lore that finally resulted in this book. First published in 1926, it is now in its sixth edition.

Directly, clearly, and in interesting fashion it develops the epic story of the growth of our transcontinental network of rails. It takes the reader behind the scenes to show how a railroad is built, how it is run, details of its freight, passenger, and operating equipment.

A wealth of pictures illustrate all phases of this story. Many are rare, authentic views of the pioneer era, others are splendid photos of ultra-modern railroading. All catch the spirit of the humming rails.

Any youngster, regardless of his age, will revel in this version of a modern saga, the story of our railroads.

*LENINGRAD. By Alexander Werth. 189 pp. Alfred A. Knopf. \$2.50.*

For 29 months Leningrad created one of this war's greatest sagas. For that period it was blockaded from the mainland in whole or in part. This city in effect waged its own complete war, with many problems utterly unlike those of other besieged cities. It continued civilian life as best as possible, to maintain the manufacture of supplies and munitions to support its own army.

To Mr. Werth the epic of Leningrad held special interest: he was born there, son of a Russian engineer and an English mother, when the city was known as St. Petersburg. Reared bi-lingually in Russia, after completing his education in Scotland he went into newspaper work. From 1929 to 1940 he was a correspondent in Paris. A later and lengthy assignment returned him to his homeland.

There he was the only British correspondent to visit Leningrad during the blockade. To this unique opportunity for first-hand observation he added another visit last February. On both of them he was in a peculiarly favorable position to get the facts: he was back in his home town, which of course he knew well, and more important than that he spoke the language like the native he was. All this adds up to a thorough—and thoroughly interesting—record of what he saw and heard, without too much pointing of morals or drawing of conclusions. Leningrad's inhabitants' heroism is thus well served.

*LORD HALIFAX'S GHOST BOOK. Foreword by Viscount Halifax. 298 pp. Didier. \$2.75.*

In these days of united nations, lend-lease (both direct and in reverse), etc., one of our better "quids pro quo" is this extraordinary collection of stories of haunted houses, apparitions, and supernatural occurrences. It was brought together by Charles Lindley, Viscount Halifax, father of the present British ambassador to this country. His first requirement of a tale was that it should carry some assurance of authenticity.

These stories were picked up all over the world. Most, of course, are of British ghosts. The rest of the world is well represented in tales from this country, Canada, and Europe. Some will curdle your blood—but all of them will make you ponder on the question of supernatural forces, those things which persist and pervade every country, every race, every age.

*REVERIES ON THE ART OF WAR. By Marshal Maurice de Saxe; translated and edited by Brig. Gen. Thomas R. Phillips. 122 pp. Military Service Publishing Co. \$1.00.*

With this volume the splendid "Military Classics" series is about completed. These small volumes offer a distillate of what is generally



conceded to be the best military thought of the ages. They are made even more valuable by their introductions, which outline the authors' lives, summarize their achievements, and place them properly in time and in perspective.

This volume is no exception. It shows Saxe (1696-1750) as an earthy man but a great soldier. Rediscoverer of cadenced marching and objector to volley fire with the rifle, his broad interests included reorganization of the entire army. His greatest glory came as Marshal of France during the last five years of his life, during which time his successes in the field amply justified his theories. The *Reveries* themselves are a notable milestone along the road of military growth and progress.

*TAKE THEM UP TENDERLY: A Collection of Profiles.* By Margaret Case Harriman. 266 pp. Alfred A. Knopf. \$2.75.

*The New Yorker* has developed a razor-edged type of biographical sketch called "profiles." Not an interviewer's report nor a full-blown biography, a profile thoroughly dissects its subject, shows its innards and its workings, and sometimes even puts some of the pieces together again.

Daughter of the famed host of the Algonquin, Margaret Case Harriman is one of the most skilled and quotable of the profile-writers. Her withering wit is master of a technique that deftly characterizes her target of the moment. At the same time she gives a rounded account of the man's (or woman's) life, achievements, and foibles.

For this book she has brought down to date fifteen of these little masterpieces. All of them are concerned with theatrical folk, and all but one have appeared, in earlier versions, in *The New Yorker*. The whole field is covered, and well: playwrights, producers, songwriters, librettists, actresses, an agent, etc., are represented by such individuals as Lillian Hellman, Gilbert Miller, Clare Boothe, Cole Porter, Rodgers and Hart, and others of like stature in their fields.

Although, as the title suggests, Mrs. Harriman may *Take Them Up Tenderly*, she sometimes lets them drop with quite a thud. In fact, it has been suggested that she might have called this collection *Wry and Soda*.

*ARGENTINE RIDDLE.* By Felix J. Weil. 297 pp. The John Day Co. \$3.50.

It certainly is a relief to get an authoritative book about the Argentine. Mr. Weil writes from the inside—he is an Argentine with an illustrious career in that country—and not after a three-week tour by plane. His book is packed with solid meat, and he has done research that will save future writers many hours of musty library work.

Argentina, says Mr. Weil, is "now at the crossroads, with a battle royal raging between the new industrialization and the old vested interests." With this as his thesis, Mr. Weil amplifies and clarifies the whole riddle of the Argentine. He holds no brief for the dictators and the cattle barons, but explains at some length how they came to power and how the present war has made them fight harder than ever to hold power. He proves by verse and chapter how misleading the popular reports about the Argentine are, and he presents a case, which convinces me anyway, showing how ineptly we are handling the present Argentine crisis.

His last chapter, "The Big Chance for the United States," is too good to spoil by summarizing. Extremely valuable tables on foreign investments, landholding, and farm and industrial statistics wind up a book that is excellent in all respects save one: there is no index. The publishers should be ashamed of themselves for this omission.

R. G. M.

*GREAT SOLDIERS OF WORLD WAR II.* By Maj. H. A. DeWeerd. 298 pp.; bibliography; index; illustrated. W. W. Norton & Co. \$3.75.

As an interim report or summary up to last winter or early spring, this is a good account. Maj. DeWeerd takes a look at Gamelin, DeGaulle, Wavell, Rommel, Montgomery, Hitler, Churchill, Timoshenko, MacArthur, Chiang Kai-Shek, and Eisenhower. He thus considers only a limited field, as well as a restricted period of time. This he explains by the fact that these men have accomplished their major purposes, or that their careers were so well advanced that the pattern was clear; other men—such as Marshall, Stalin, and Tedder—will not emerge in their true perspective until the war's background and scope are better known.

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In some cases, then, the author's work seems quite incomplete, particularly when viewed against the events of the summer and fall. That is simply one of the risks of any author when he attempts a work on the basis of current news and information rather than the complete record—there must be some (often arbitrary) stopping place, for if there weren't the job would never get done. It is a good technique, however, with which to give a bird's-eye view of certain commanders and a quick review of the campaigns in which they participated.

*SNOWSHOE COUNTRY.* By Florence Page Jacques; illustrated by Francis Lee Jacques. 110 pp. University of Minnesota Press. \$3.00.

Too many sectional books tell only of early history. They are fine in their way, but merely recall a nostalgic past without having any particular relation to the present.

Not so *Snowshoe Country*. Its authors spent last winter in the arctic country on the border between Minnesota and Canada. In essence, this is their illustrated diary—illustrated with Mr. Jacques's magnificent black-and-white drawings. It is an intimate, easy, day-to-day account of the changes of the seasons, the local life and customs, the way these outlanders fitted into the pattern of the few year-round residents of this summer vacation land. It has a real charm. Also, it puts ideas into my head as to what to do that first winter after the war!

*INSTRUCTIONS FOR HIS GENERALS.* By Frederick the Great; translated by Brig. Gen. Thomas R. Phillips. 104 pp.; illustrated. Military Service Publishing Co. \$1.00.

Gradually completing its splendid "dollar" series of Military Classics, this publisher has just completed work on the considered thoughts of one of the first "modern" generals. Frederick is generally credited with introducing the first permanent staff organization. Aside from this, however, his other military achievements warrant his high place in history, and lend great weight to his words.

An excellent introduction outlines Frederick's life, the tactics and weapons of his period (1712-86), his campaigns, and his achievements. The net result is a fit companion to the earlier volumes of this series.

*PADDLE WHEEL DAYS IN CALIFORNIA.* By Jerry MacMullen. 134 pp.; appendices; index; illustrated. Stanford University Press. \$3.00.

*BONANZA RAILROADS.* By Gilbert H. Kneiss. 132 pp.; appendix; references; index; illustrated. Stanford University Press. \$3.00.

*CABLE CAR DAYS IN SAN FRANCISCO.* By Edgar M. Kahn. 116 pp.; appendix; references; illustrated. Stanford University Press. \$3.00.

California, a fabulous state, had a fabulous early history. Boomtime rushes combined with unusual geography to develop a transportation network far superior to most of its eastern contemporaries. Life was rough and rugged, but the inland waterways' side-wheelers survived storm and fire, trickery and thievery, and a competition about as damaging as the river bars.

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San Francisco's peaks were too steep for horse cars. The cable cars are about gone now, but they gave the city a distinctive flavor.

Although, of course, of special interest to Californians, these are splendid books for anyone interested in Americana.

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