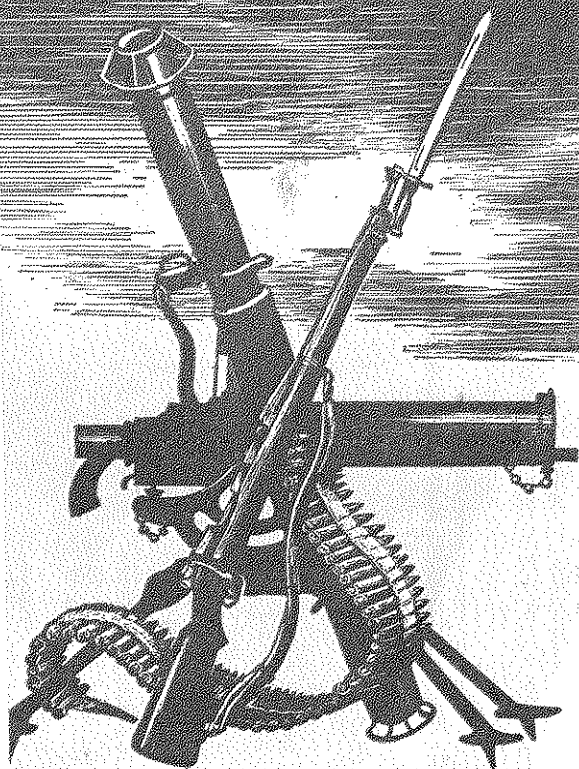


# Combat Lessons



ER 5

UNCLASSIFIED RESTRICTED

**UNCLASSIFIED**

**REGRADED \_\_\_\_\_ BY AUTHORITY**

**OF E.O. 10501**

**BY RAKEIS ON 5 Aug 86**

UNCLASSIFIED

U. S. Army Military History Institute

# Combat Lessons



NUMBER 5

*Rank and file in combat:*

*What they're doing    How they do it*

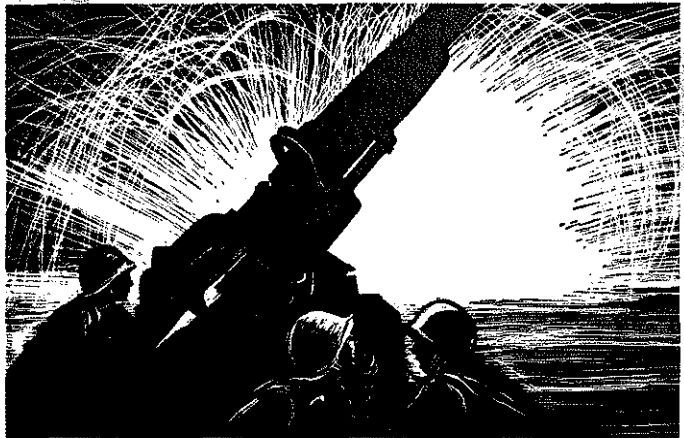


**DISSEMINATION OF RESTRICTED MATTER**

No person is entitled solely by virtue of his grade or position to knowledge or possession of classified matter. Such matter is entrusted only to those individuals whose official duties require such knowledge or possession.

(See also paragraph 23b, AR 380-5, 15 March 1944.)

**PROPERTY OF US ARMY**  
**UNCLASSIFIED**



## INTRODUCTION

The purpose of "Combat Lessons" is to give to our officers and enlisted men the benefit of the battle experiences of others. To be of maximum benefit these lessons must be disseminated *without delay*. They do not necessarily represent the carefully considered views of the War Department; they do, however, reflect the actual experiences of combat and, therefore, merit careful reading. For this reason, also, no single issue can cover many of the phases of combat; lessons will be drawn from the reports as they are received from the theaters of operation and quickly disseminated so that others may apply them. The suggestions which are made or implied are not intended to change the tactical doctrine by which our Army has been trained but rather to elaborate thereon. Much of the subject matter has been covered in training literature, but



the comments show that shortcomings continue to manifest themselves on the battlefield.

The paramount combat lesson learned from every operation is the vital importance of *leadership*. Our equipment, our supply, and, above all, our men, are splendid. Aggressive and determined leadership is the priceless factor which inspires a command and upon which all success in battle depends. It is responsible for success or failure.

*Chief of Staff.*



Landing on Leyte.

# CONTENTS

	Page
SECTION I—LEADERSHIP.....	1
SECTION II—NORMAL OPERATIONS.....	11
Notes on Attacking.....	11
The Tank-Infantry Team.....	20
Air Support of Armored Columns.....	27
Engineers.....	30
Reconnaissance.....	32
Notes on Patrolling.....	35
Antiaircraft Artillery.....	37
Field Artillery.....	39
Exploits of Cub Planes.....	42
Medical Matters.....	44
Communications.....	45
Infantry Weapons.....	49
Liaison Officers.....	52
Motor Movements.....	53
SECTION III—AIRBORNE OPERATIONS.....	55
SECTION IV—AMPHIBIOUS OPERATIONS.....	59
Normandy.....	59
An Amphibious Tank Battalion in Action.....	62
Amphibious Miscellany.....	67
New Methods of Reviving Drowned Personnel....	68
A Shore-to-Shore Operation.....	70
SECTION V—JUNGLE OPERATIONS.....	73
Perimeter Defense.....	73
Scouting and Patrolling.....	77
Jungle Pointers.....	83
Burma Notes.....	84

*Prepared from combat reports and published by direction of the Chief of Staff by Operations Division in collaboration with other Divisions of the War Department General Staff, Army Ground Forces, Army Air Forces, and Army Service Forces. Illustrated with the assistance of the Presentation Division, Office of Strategic Services. Photos by U. S. Army Signal Corps furnished by Army Pictorial Service.*

*Contributions from readers are invited either in the form of suitable material or suggestions for future issues. Correspondence should be addressed to the Combat Analysis Section, Operations Division, War Department General Staff, Washington 25, D. C. Requests for extra copies should be made through regular distribution channels.*

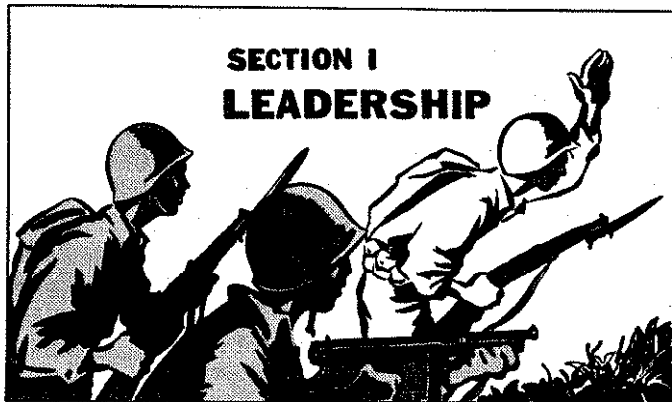
#### DISTRIBUTION

AAF (10); AGF (10); ASF (10); T of Opns (10);  
AAF Comds (2); Arm & Sv Bd (2); Def Comd (2);  
Tech Sv (2); SvC (10); Area A SvC (2); PC&S  
(1); Gen & Sp Sv Sch (10); USMA (20); ROTC  
(1); A (10); CHQ (10); D (2); B (2); R (2);  
S Bn (2); Bn (2); C (2); AF (2); W (2); G (2);  
S (2); F (2).

For explanation of symbols, see FM 21-6.



## SECTION I LEADERSHIP



Leadership is, and will always be, one of the most important factors in influencing battle. Much has appeared in previous issues on this subject, but reports from the field still show that leadership is a subject on which too much cannot be said.

Leadership is not a quality that pertains to officers alone. In countless cases, the private soldier has jumped forward to take charge of a critical situation when his appointed leaders have become casualties. Take the case of *Private First Class John C. Squires*, an infantry platoon runner in ITALY, who was awarded the Medal of Honor and subsequently promoted to the grade of sergeant for the action described below.

**Aggressive Action** "On the night of his company's attack on strongly held enemy positions in and around SPACCASSI CREEK, near PADIGLIONE, ITALY, Private Squires participated in his first offensive action. As platoon runner, he braved intense artillery, mortar, and antitank gunfire in order to investigate the effects of an antitank mine explo-

sion on the leading platoon. Despite shells which burst close to him, Squires made his way 50 yards forward to the advance element, noted the situation, reconnoitered a new route of advance, and informed his platoon leader of the casualties sustained and the alternate route. Acting without orders, he rounded up stragglers, organized a group of lost men into a squad, and led them forward.

"When the platoon reached SPACCASASSI CREEK and established an outpost, Squires, knowing that almost all of the noncommissioned officers were casualties, placed eight men in position on his own volition, disregarding enemy machine-gun, machine-pistol, and grenade fire which covered the creek draw. When his platoon had been reduced to 14 men, he twice brought up reinforcements. On each trip he went through barbed wire and across an enemy minefield under intense artillery and mortar fire. Three times in the early morning the outpost was counterattacked. Each time Squires ignored withering enemy automatic fire and grenades which struck all around him and fired hundreds of rounds of rifle and BAR ammunition at the enemy, inflicting numerous casualties and materially aiding in repulsing the attacks.

"Following these fights, he moved 50 yards to the south end of the outpost and engaged 21 German soldiers in individual machine-gun duels at point-blank range, forcing all 21 enemy to surrender and capturing 13 Spandau guns. After questioning a German officer prisoner to learn how the Spandau gun functioned, he placed the captured guns in position and instructed other members of his platoon in their operation. The next night, when the Germans attacked the outpost again, he killed three Germans and wounded more with captured 'potato-masher' grenades and fire from his Spandau gun."

*Determined and rational action by any individual may be the spark necessary to kindle in others the flame of resolution which turns defeat into victory.*



**Quick Thinking** The following incident reported by *Colonel G. B. Devore* from ITALY shows how quick thinking pays dividends: "The executive officer of a tank destroyer company in position south of ROME spotted a group of enemy foot soldiers making their way under cover toward his CP, which was near the front line. He immediately organized 9 of the 11 men at the CP into a patrol to surround the enemy group, which he estimated to be about 12 men. On advancing, he soon realized that in addition to those he had detected there was a large number of Germans in a nearby gulch. Seeing that he was hopelessly outnumbered in men and fire power, he changed his plans and decided to dispose his nine men in positions around the entire group and to have them open fire simultaneously at his command. The initial volley killed two Germans, wounded several others, and created a misleading impression of strength. As a result, 138 well-armed German soldiers and three officers, confused by the flanking fire and fire on their rear, surrendered to nine men armed with only seven M1 rifles and one carbine."



**Confident Tone of Voice** *The Commanding Officer of the 1st Marine Division Hospital*, in a statement to *Lieutenant Colonel Arthur G. King, Medical Corps*, during the early days on GUADALCANAL stressed an important feature of effective leadership as follows: "Our officers are particularly

careful to give no orders, or to say anything, except in calm, measured, and quiet tones. It takes tremendous self-control, and we not only pride ourselves on it, but also require it. It helps the officer to control his own sense of excitement or panic in times of stress, and it gives the men confidence and keeps them calm." That this was put into effect in his organization and by himself under the most trying circumstances was observed repeatedly by Colonel King, who stated that the manner in which the officers and men of the hospital functioned under aerial bombardment and shelling by the Jap Navy's heaviest guns proved the value of this training. The effect was observed to be in marked contrast to the psychological effect on listeners of the hysterical "——— it, get your head down," or "Put that fool light out," heard commonly from many younger officers, whose terrific tension was at once transmitted to all listeners by their tone of voice.



**Moral Support**

"Some men become very nervous in combat; I found that if the NCO circulates around and talks to his men, it brings them out of that condition."—*Technical Sergeant Armor, 29th Infantry Division, France.*



**Gallantry** *Staff Sergeant Jessie R. Drowley*, leader of an infantry squad on BOUGAINVILLE, whose mission during an attack was to remain under cover as a reserve for assaulting echelons, saw three members of the assault company



**Infantry and Tanks Mop Up on Bougainville.**

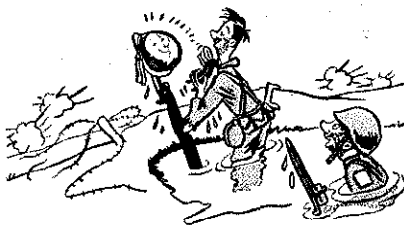
fall badly wounded. When intense hostile fire prevented aid from reaching the casualties, he fearlessly rushed forward to carry the wounded to cover. After rescuing two men, Sergeant Drowley discovered an enemy pillbox, undetected by assaulting tanks, that was inflicting heavy casualties upon the attacking force and was the chief obstacle to the success of the advance.

Delegating the rescue of the third man to an assistant, he ran across open terrain to one of the tanks. Signaling to the crew, he climbed to the turret, exchanged his weapon for a submachine gun, and voluntarily rode the deck of the tank, directing it toward the pillbox by tracer fire. The tank, constantly under heavy enemy fire, advanced to within 20 feet of the pillbox, where Sergeant Drowley received a severe bullet wound in the chest. Refusing to return for medical treatment he remained on the tank and continued to direct its progress until the enemy position was definitely located by the crew.

At this point he again was wounded by small-arms fire, losing his left eye and falling to the ground. He remained alongside the tank until the pillbox had been completely demolished and another, directly behind the first, destroyed. Sergeant Drowley, his voluntary mission successfully accomplished, returned alone for medical treatment. For this action he was awarded the Medal of Honor.



**High Standards Pay Off** The good leader strives to keep



himself presentable even under the most trying conditions and requires the same of his men. Sometimes it is hard to do, but in the long run it pays dividends in maintenance of equipment, health of the men, and esprit of the command.

Colonel L. S. Griffing, *Field Artillery*, observed of the men of the *Fifth Army* before CASSINO, ITALY: "Personal appearance of the men and officers was superior. Daily shaves, washing of the hands and face, washing of clothes, and care of weapons and equipment were emphasized. Saluting at the front was the best I've seen anywhere. I never saw a dopey-looking combat soldier. This is a lesson to us—"The alert survive'."



A tank battalion commander, *1st Armored Division*, ITALY: "My officers and men were required to shave daily and to take every opportunity to bathe and wash their

clothes. The officers set the example, and the men readily followed. This habit of personal cleanliness acted as an incentive to the men to keep their equipment clean as well. The sum total was an increased pride in their outfit and, when the chips were down, greater combat efficiency."



**Good Leadership Develops Discipline** *A Battalion Commander of the 22nd Infantry fighting in FRANCE, giving his views on the necessity for emphasis on discipline during training, stated: "Many casualties were incurred among officers and NCO's in some of my companies, because they literally had to lead the men by the hand to insure accomplishment of their mission. However, the companies whose commanders had required a high standard of discipline suffered fewer casualties and were able to move faster in the attack than those in which discipline was lax."*

While we speak of the importance of leadership in battle we must not forget that it is also important during the training periods prior to combat. It is during these periods that the discipline which must be present on the battlefield is developed. The degree of discipline attained is in direct proportion to the leadership of the commander.



**Energy and Drive** *An infantry company commander in discussing a night attack of his company in FRANCE stated: "The lieutenant who commanded my left platoon, the sergeant who commanded my right platoon, and I had to expose ourselves continuously to get the new men moving.*

We had to rush one group of six or eight men to the new location, then run back to move the next group, and so on."

Commanders of small units must keep continuously in mind that in offensive operations the advances of battalions and larger units are nothing but the sum of the coordinated advances of their squads. If the squads do not advance, the platoon, company, and battalion do not advance. Energy and drive in the leadership of small units are therefore essential to success in offensive operations. Small units must be kept moving, halting to fire only long enough to make possible a continuation of their own forward movement. Junior officers and NCO's are the ones who must start the ball and keep it rolling.



**LEADERSHIP  
IN  
SMALL UNITS**

*Intelligent leadership by men who know their jobs and have the drive and courage to carry out missions assigned to them is the key to successful small-unit operations.*

To lead his platoon in the capture of a German pillbox was the mission assigned a technical sergeant in Company E, 109th Infantry. How he brought to his job intelligence, drive, and courage is the story told here.

"Our understrength company was held up on a hill just inside the German border by German mortar and MG fire. A German machine gun on our left flank was covering the draw in front of us. There were also Germans up the road to our front in a pillbox from which they were apparently directing mortar and artillery fire. Our acting company commander ordered my platoon of about 12 men, assisted by a tank, to take and hold this pillbox.



"I looked over the map and the terrain and saw that there was a fire trench directly behind the pillbox. I got my men together after dark and withdrew to where we were to meet the tank. The tank commander and I made our plans together, and I carefully oriented my men.

"We moved out at 1030 the next morning, following the tank down the road. The tank fired at the pillbox every once in a while until we reached the area where the tank had to stop. I told the tank commander, 'Keep firing until we get so close that you have to stop.' I then started one of my squads toward the pillbox, about 350 yards away. They ran into some barbed wire, which they started to cut; but as I figured we couldn't waste time cutting wire, I found a way around it and led the squad forward. We had been receiving only mortar fire, but now we ran into MG fire, which caused some of my men to stop following me. Sergeant Moulding got the man with the BAR and three riflemen to keep moving toward the pillbox. I yelled back to them, 'Keep coming! These Heinies can't hit us.' Another sergeant and three of his men kept coming, but we were down to nine men now.

"About the time I got to the pillbox the tank cut loose again. It threw a little dirt on me, and I prayed it would be his last round. My men were still coming up, one of them carrying 10 lbs. of TNT. While I waited for them I tossed a couple of hand grenades at the back door just to keep the Germans in until I got some help. When they arrived one sergeant and two men covered the fire trench in the rear while our demolition men placed the TNT by the door of the box, but it failed to go off. The rest of our company had advanced to within 200 yards, so I got two more 10-lb. charges from them. The second one also failed to go off. We finally got the third charge

in and at last she blew. It didn't even bother the box, but I guess it jarred the Heinies. I left two men to guard the box in case they came out and with the rest of the men pushed on to the fire trench. It was empty and so was a Heinie sleeping quarters into which we threw a couple of grenades through an open door. About that time I heard a shot from the pillbox and ran back to see what was happening. Twenty-one Germans, including a captain and two lieutenants, were marching out with their hands over their heads. One had tried to make a run for it but got himself a couple of slugs from an M1 rifle. The rest figured it was time to quit.

"After searching the prisoners, I figured we had better take a look inside the pillbox. I took one of the prisoners and made him start moving stuff in case there were any booby traps, but fortunately we found none. I sent the prisoners back with three of my men and set up a defense with the rest who had come up by this time. There were only nine of us, but it was all that could be spared until morning when they sent us some help. We held the position for several days before we withdrew to reorganize."

The sergeant knew his job. He planned his attack after careful reconnaissance and consultation with his tank commander and then arranged for the demolitions he knew he would need. He set an example by leading the attack himself. His initiative in solving the problems which confronted him as the attack progressed, and in reorganizing and setting up the defense of his position, clinched the success of the operation he had so carefully planned.

## SECTION II

### NORMAL OPERATIONS



#### NOTES ON ATTACKING

**Attack Before Dawn** *Infantry Regimental Commander, FRANCE:* "The Boche does not like night fighting. We have caught him off guard several times by launching our attack 30 minutes or so before dawn. In one instance we captured by such an attack a German position which I believe we could not possibly have taken had we waited until dawn. Of course, the most careful daylight reconnaissance must be made prior to an attack in darkness."



**Attack Before Dark** *Lieutenant Colonel H. W. Sweeting, Tank Battalion Commander, ITALY:* "During the day a series of tank-infantry attacks was made against a German position in the vicinity of CASSINO. The attacks were strong and so was the resistance. By noon the troops were stopped in their tracks. An attack was then planned to take place about 1½ hours before dark. This attack was carried out as scheduled. The objective was seized promptly, with few casualties, and a number of prisoners

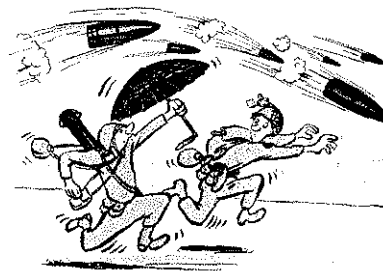
were taken. Three such successful operations at CASSINO, and one in a previous action last fall, all had identical timing and were conducted under very similar circumstances. In each case the Germans seemed to be caught by surprise even in one instance where the same plan was run off twice in a row."

The time selected for an attack is influenced to a certain extent by the direction of the attack. Particularly for an attack involving tanks the sun should be behind the attacking troops, as it blinds the enemy gunners and increases the chances for success.

When success is achieved at dusk immediate steps must be taken to defend the objective against counter-attacks and to provide protection against enemy artillery and mortars, which probably are already registered on the position.



### **Keep Close to Our Artillery**



The infantry soldier should be trained to advance as close as possible to his own artillery fire during an attack. The German will usually stick to his fox-hole during an artillery preparation, then resume his gun position when the fire has lifted. If the infantry soldier isn't near enough to close with the enemy before he can get back into position, most of the value of the preparation is lost.

*Lieutenant Jack B. Fosdick, 4th Infantry Division, FRANCE*, states: "Our troops should be able to advance closely behind our own artillery fire. During the invasion of NORMANDY my men had to follow within 50 to 75 yards of our own fires in order to attack the Germans in their prepared positions without excessive casualties."



*Lieutenant Colonel Higgins, Infantry Battalion Commander, NORMANDY*: "We must teach our soldiers to remember that when they follow the artillery barrages and air strikes closely they eventually suffer fewer casualties even though an occasional short may fall on them."



**Delay Means More Casualties** *The 88th Division Artillery* reports from ITALY: "As usual we found that if the infantry followed close under the artillery preparation the advance went well. Whenever there was any delay in their advance, however, they invariably were held up by enemy fire and suffered much heavier losses."

Experience in all theaters has shown that, where the enemy is putting up a determined defense, infantry will take fewer casualties by following closely behind our own artillery and air strikes and by moving forward promptly when the artillery lifts.



**The Bazooka Works Again** *Staff Sergeant Joe Daniels, 29th Infantry Division, FRANCE*: "Take care of your bazookas, for they do come in handy. I know from experience. On the third day of our first battle, a machine

gun was firing from a building, holding up a platoon. I called for a bazooka and fired into the building. The fire ceased and the platoon was able to advance. I know the bazooka is hard to carry with ammunition and all. But there is always a time when you will need it, and it does the work."

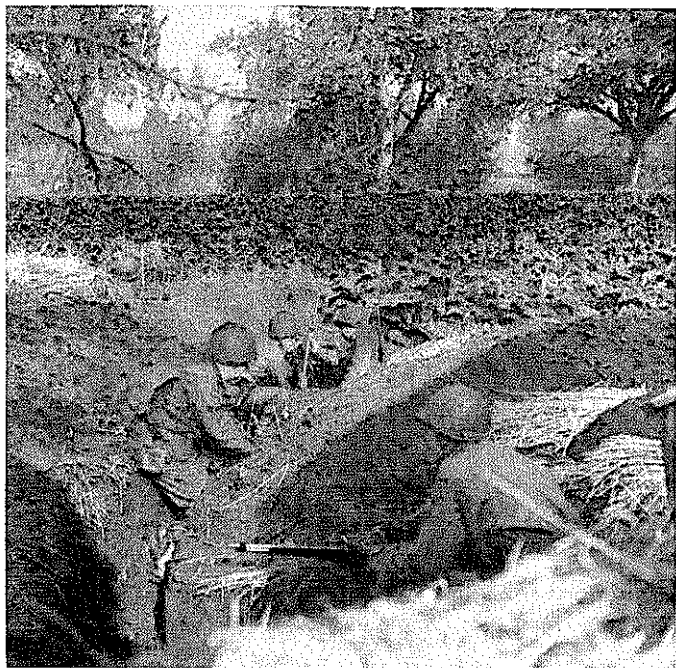


**Using Artillery the Right Way** *Infantry Company Commander, FRANCE:* "Soon after I was made company commander I got a chance to play with the Germans the way I wanted to. The mission of my company was to capture Hill 760, which was strongly held by Germans in prepared positions. We were given enough time for adequate artillery preparation.

"First I called for a concentration on Hill 760. There was quite a pause after that. Then I called for another concentration on the same area, but this time I arranged for the 81's to start firing about 2 minutes after the concentration lifted. The 81's caught the Germans just coming out of their shelters, and we could tell by the screams that we had got a lot of them.

"My object was to work on the Germans until I could count on their staying in their shelters for at least 5 minutes after a concentration. So I kept mixing up the fire. Sometimes I would throw in my 60's to hit an area where I figured they were taking cover from the heavier stuff. Several times this drove Germans out into the open where we could shoot them down with rifles or BAR's.

"Finally I had worked them over long enough to be pretty sure that they wouldn't poke their heads out of their shelters for 5 to 10 minutes after a concentration had lifted. I gave orders to my leading platoon to move for-



**Mortar Position on the Front Line in France.**

ward as far as possible under the next concentration and to charge Hill 760 as soon as the concentration stopped. Then I called for another concentration on Hill 760.

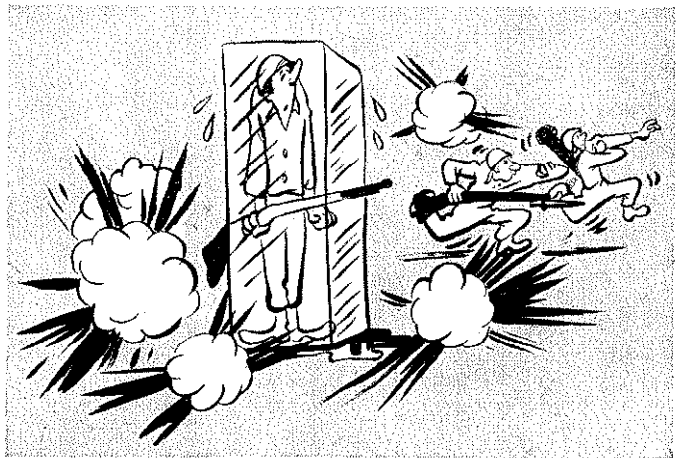
"The concentration came down and my leading platoon moved forward. When the concentration lifted they charged; they caught 14 Germans just coming out of their shelters and took them prisoners in about 30 seconds. We captured our objective with almost no casualties.

"We dug in right away and beat off several German counterattacks during the rest of the day."

The company commander was fortunate in this case in being able to control the timing of the artillery fire, probably as the result of prior planning and coordination. Such a flexible employment of artillery will not always be possible on call. For this reason plans should if possible be made well in advance to insure the proper coordination of artillery and mortar fires to achieve the desired result. A schedule of fires should be worked out with the artillery and coordinated with the mortars so that all preparatory fires will be completed in time for the attack to jump off on schedule.



**Don't Freeze Under Fire** *First Lieutenant Short, Platoon Leader, 9th Division, FRANCE:* "One of the fatal mistakes made by infantry replacements is to hit the ground and freeze when fired upon. In one instance, I had ordered





a squad to advance from one position to another. During the movement, one man was shot by a sniper who fired only one round. The entire squad hit the ground and froze. Consequently, they were picked off, one by one.

"However, to increase their chances of survival *when wounded* by sniper fire and unable to move, men should be taught to play 'dead.' If they move, the sniper is likely to fire again."

When fired on by a sniper the squad leader should detail part of a squad to dispose of him, provided that such action does not interfere with the mission of the squad. If this is the case the squad leader should report the sniper's location so the outfit following can take care of him.

#### Keep Driving

"Success in an engagement of the *2d Armored Division* in FRANCE was achieved chiefly because units were ordered not to stop but to keep driving regardless of losses or resistance encountered. When the leading tank drew the fire of any enemy weapon, the other tanks deployed and pushed on through, overrunning and knocking out enemy resistance on the move. In most cases the Germans would fire a few rounds and either move out or surrender. We are definitely convinced that by such aggressiveness we incurred fewer losses in both men and equipment than if we had stopped and attempted to maneuver, giving the Germans time to bring down fire from artillery and other weapons."—*Commanding General, 2d Armored Division.*

**The Old Story—Bunching** The principle of dispersion which is emphasized in training is not always being properly carried out in the field, according to combat reports. Here are a few typical comments selected from reports from FRANCE:



a. "In spite of all the emphasis placed on dispersion men are

still bunching. This results in needlessly heavy casualties. On one occasion one artillery shell caused seven casualties before the unit reached the line of departure. Most of these casualties were new men entering combat for the first time."

b. "There is entirely too much bunching of troops. When in danger, there is a tendency to gather together. Actually this increases the danger, so the tendency to 'bunch up' must be resisted."

c. "There is always a tendency to bunch up under fire. Jerry will fire mortar on two or more men in a group, and his mortar is very accurate. So remember your basic training and keep spread out."

d. "Avoid bunching. There is nothing Jerry likes better than to throw a mortar shell into a bunch of men."



**Consolidate Quickly** Staff Sergeant Rex W. Huggins, First Special Service Force, ITALY: "On one occasion, near MT. DEFENSIA, ITALY, while my outfit was attached to an

infantry division, I watched a group of soldiers from that division capture a hill from the Germans without much difficulty. These men sat down to rest a minute before setting up defensive positions. While they were resting, the Germans regrouped themselves, counterattacked, and retook the hill. The U. S. troops then had to attack again and secured the hill only after additional casualties. This immediate counterattack is a typical habit of the Germans and one against which all U. S. troops should be on guard."

★ **Move forward to Safety** ★

*When the enemy drops heavy mortar or artillery fire on you the safest place to go is toward the enemy. This is substantiated by many reports from the field. Here are a few:*

"When artillery falls, close with the enemy troops to get out of Jerry's barrage."—*Technical Sergeant Leonard Walker, Infantry Platoon Sergeant, 29th Division, France.*

"One good lesson which I learned as squad leader is that when you're attacking and the enemy throws mortar and artillery on you, the best thing to do is lead your men forward and get close to the enemy. That is the safest place to be. Then you can drive him out."—*Sergeant William Van Houten, Infantry Squad Leader, 29th Division, France.*

"When moving forward in the attack, we normally move farther than Jerry's old positions, because the minute he knows you're in his old foxholes he can zero in on you with his mortars and 88's."—*First Lieutenant Philip Stern, Infantry Platoon Leader, 29th Division, France.*

**Infantry Against Armor in Close Country** Report by the 29th Division, FRANCE: "Offensive armor has had little success in attacking self-propelled guns and enemy armor in position. However, in close country, aggressive infantry can knock out these weapons with bazookas and rifle grenades. Maneuver should always be employed to take the enemy vehicle in flank. It was shown in the battle of Tessy that German panzer outfits without heavy infantry support were unable to cope with aggressive infantry tactics."



### THE TANK-INFANTRY TEAM



**Control** This account from a *Tank Company Commander* in FRANCE shows the results obtained when infantry and tanks work closely together. "I was well pleased with the cooperation and coordination of our infantry-tank attack. Prior to the advance, infantry squad leaders and supporting tank commanders discussed the attack. Every detail was covered; i. e., signals, objectives, rallying points, terrain, etc. It worked as originally planned. Infantry control was good. Tanks preceded infantry in fields strongly held by small arms, thus reducing infantry losses to a

minimum. Extensive use was made of the phone on the back of the tank. Infantry would point out targets, which were quickly neutralized by the tanks. They all agree that the light casualties and success of the attack were the result of detailed plans which led to excellent cooperation."



**Visual Signals** *Colonel L. V. Hightower, 1st Armored Division, ITALY:* "We arranged for the infantry we were supporting to set off a green smoke grenade when they were held up. On this signal the nearest tank would go to the infantryman to find out what was holding up the advance. The infantry would point out or otherwise designate the enemy resistance, and the tanks would then overcome it. This system worked very well on a number of occasions."



**Coordination** *Lieutenant Colonel Glenn Rogers, Tank Battalion Commander, ITALY:* "This battalion operated with the 1st Special Service Force. There was complete coordination and a thorough understanding of what each outfit was to do. The troops kept up with the tanks and the tanks kept up with the troops. When the tanks hit some bad going that delayed them, the infantry would halt under cover and wait until the tanks could catch up again. If the tanks started to get ahead of the infantry, the tanks would halt in defilade at the first opportunity and wait for the infantry to catch up. We made much faster progress that way with much lighter losses. We progressed as a team, each taking care of the type of target for which he was trained."

**Tank Lessons from Italy**

*Colonel G. B. Devore*, in reporting on armored matters in ITALY, voiced the need for better cooperation between infantry and tank organizations. He stresses the following points as necessary for proper employment of the tank-infantry-artillery team:

*Should Not's:*

★ "Tanks should not be used for night attacks.

★ "Tanks should not be sent against antitank guns.

★ "Tanks should not be used in attacks on towns until the enemy antitank defenses have been overcome by the infantry-artillery team.

*Should's:*

★ "When it is possible to use armor in support of the infantry, the plan should be coordinated prior to the attack, and adequate time allowed for reconnaissance and planning for the best use of infantry, tanks, and artillery in support of each other.

★ "Infantry or other commanders, before deciding to use armor, should consult tank unit commanders as to the best employment.

★ "When armor is given a task, adequate assistance and time should be allowed if full benefit is to be obtained.

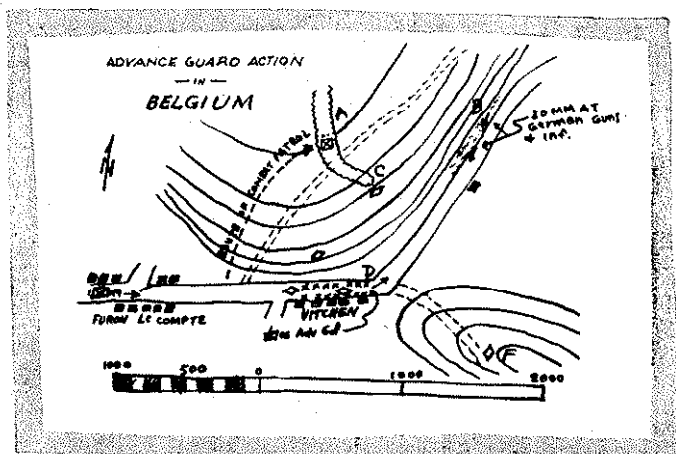
★ "Tank battalions should 'grow up' with the units which they are to support in battle.

★ "FM 17-36 (Employment of Tanks with Infantry) is a fine manual. It should be read by all infantry as well as tank unit commanders, and particularly by regimental, division, and corps staffs."

**Tanks with an Advance Guard** The following account of an advance guard action in BELGIUM illustrates effective cooperation between tanks and infantry.

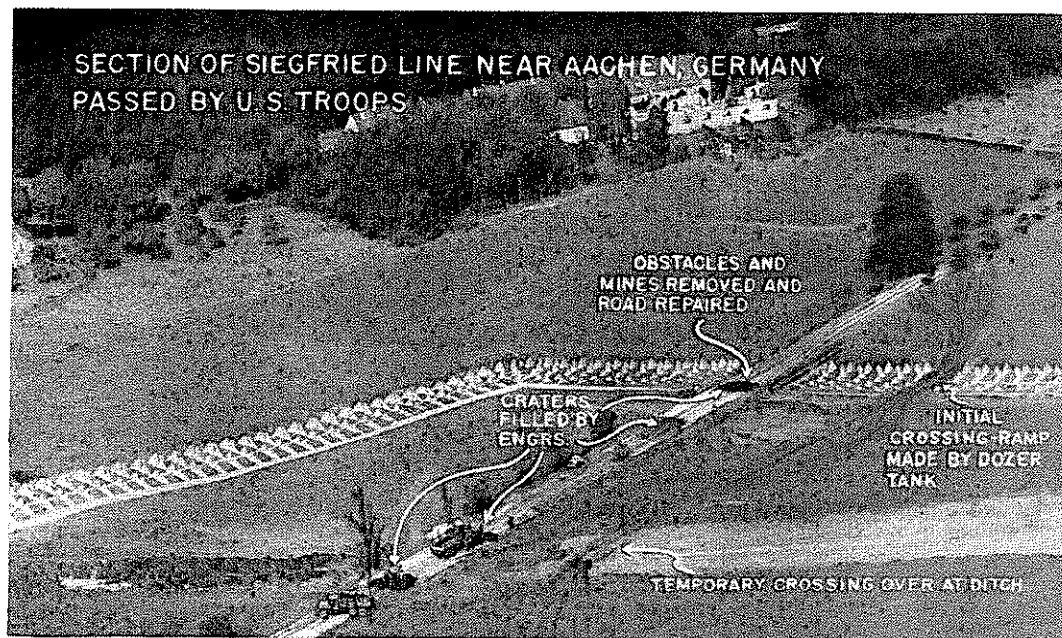
The *1st Battalion 119th Infantry*, reinforced, was advancing northeast through FURON LE COMPTE, BELGIUM, with a company, reinforced by a platoon of tanks, as an advance guard. (See sketch.)

The advance guard was held up at D by small-arms fire from the vicinity of B. Tanks immediately moved to



covering positions at C and F and a combat patrol with a section of light machine guns moved around the left flank to the vicinity of A to outflank the opposition.

The section leader of the light machine guns spotted the trail of an enemy 20-mm AT gun at B and immediately opened fire on it with tracer to point it out to his section. The tank at C observing the tracer, located the gun at B and knocked it out, whereupon the enemy abandoned the position. The advance guard reorganized and moved out.





**Attack on the Siegfried Line** *Colonel T. Seeley, Regimental Commander, 28th Division, GERMANY:* "We used the standard tank-infantry team in attacking the Siegfried Line. A platoon of tanks in support of a company was the usual ratio. We found it best to advance on a fairly wide front to avoid excessive losses from flanking fire. The tanks operated as bases of fire against bunkers, allowing the infantry to close in. The infantry protected the tanks from bazooka teams. The enemy artillery fire was intense and accurate until we captured all of their observers. We have not employed the cannon and AT companies forward because of their lack of protection and ineffectiveness against concrete bunkers. A direct attack with tanks and TD guns was the most effective. Smoke fired by artillery and mortars was used to prevent flanking fires.

"One of our principal problems was preventing the Germans from reoccupying captured pillboxes at night. It required 400 to 500 pounds of TNT to destroy a pillbox. As this was prohibitive we locked the doors of some and blew the handles off others. Our present practice is to use a tank dozer to cover the doors and embrasures with earth. The tank dozer is protected by a tank and an infantry platoon.

"We have had casualties among men who took shelter in the pillboxes at night. The Germans threw grenades into them when they found them occupied."



**Comments of G-3, 3rd Armored Division:** "All of the advances made by armored vehicles of this division through the bands of 'dragon's teeth' on the Siegfried Line were made on roads which passed through the line except in one instance. I observed this action. Combat Command 'A'

established the usual bridgehead by cleaning out the AT guns and automatic weapons that covered the dragon's teeth by fire. We found that the dragon's teeth could not be destroyed by the fire of tank guns. We next tried to destroy them with charges of TNT, but found this method too slow. We finally used tank dozers to push earth into a ramp over the dragon's teeth. This worked perfectly."



**Defiles** *Colonel W. G. Cronk, Armored Group Commander, ITALY:* "Using tanks for an armored point in a defile which has not been cleared of antitank defenses is suicide. The leading tank gets knocked out and holds back all the rest until the enemy guns have been cleared out by the infantry. The infantry must clear out the anti-tank guns and mines and must have a better understanding of what the tanks can and cannot do."



**Tanks and Flamethrowers Mopping Up.**

## AIR SUPPORT OF ARMORED COLUMNS

*Lieutenant Colonel James L. Zimmerman, Air Support Party Officer (ASPO) with a combat command of the 2d Armored Division, FRANCE, gives an excellent account of air-ground cooperation:*

**Communications** "I rode in an M-4 tank. The tank commander and driver were Armored Force, but the remainder of the crew were Air Force personnel. Our normal position in the march column was in the point, about the fourth tank. The tank commander maintained contact with the column commander over an SCR-528. I used an SCR-522 to communicate with the planes. Originally I occupied the loader's station, but had the tank seating revised so that I occupied the assistant driver's station to have outside vision and to control my own radio. This arrangement worked perfectly.

"Four fighter bombers were assigned to cover each column. As each flight approached, the leader contacted me by radio giving his call sign. He remained over us until relieved, usually about 30 minutes, whether he had expended all bombs and ammunition or not.

**A Successful Mission** "Column cover was maintained whenever we were moving in daylight. However, on one occasion, near VILLEBAUDON, we had not expected to move, and no cover had been provided. It appeared that a counterattack was developing. A group of hostile tanks was reported in some woods 3 or 4 miles away. I called direct to a plane operating in another corps area, reporting the tanks and asking him to relay a request for fighters to Fighter Control Center. Within 15 minutes, two flights totaling about 12 planes reported in to me. All our tanks

were carrying red panels. I had a yellow one placed across the rear of my tank. I called the leader over until he could locate my tank by the yellow panel, then directed him to the woods where the enemy was reported. When he appeared to be over the target, I directed him to circle and check the woods under him. He located the tanks and attacked successfully.

**Accuracy** "The Commanding General of the combat command was dubious of the accuracy of the planes in close support, as he had been bombed repeatedly by our planes in ITALY. However, the planes worked very close to us with generally excellent results. One day we were held up near LE MESNIL HERMAN by some resistance on the other side of the road and hedges from me. I directed some planes onto the resistance. They dived so close they made me nervous, but not a bullet hit our tanks, and the resistance was knocked out. Only two instances of bombs falling near our troops came to my attention. While we were passing through CANISY one lone plane from some other area dropped a bomb that hit our column. Then near TESSY, I tried to direct a flight onto a German battery, a target that is usually hard to locate, and they made a mistake and dropped bombs within 300 yards of me for no damage. Normally, however, my constant contact with the planes kept them well informed as to the location of the head of the column, and since they could locate my tank with its yellow panel crosswise, they always checked in before attacking doubtful targets.

**Tactical Reconnaissance** "We got no direct information from tactical air reconnaissance so far as I know. The best TAC/R information came from the column cover. In some instances G-2 asked me for specific information,



**Fighter Checks in With Armored Column.**

and I in turn would ask the planes to get it. In most cases the pilots would report information to me without request, especially enemy motor movements. When they were about ready to leave, the flight leader would tell me of all likely targets he could see, and I would direct the incoming flight onto them.

**Location of ASPO** "It is my opinion that the Air Support Party Officer with armored columns should be used in the way that I was, in effect the same as FO for the artillery. He should be in a tank, able to move near the head of the column. Assigning a tank for this purpose need not reduce the tank strength of the armored unit. We habitually stayed in the immediate rear of the attacking wave of tanks, and in many cases we took part in the fight. On one occasion my tank captured 31 prisoners. The crew of the tank, at least the commander, should be Armored Force personnel if the tank is to be handled in the most efficient manner. However, the Air Support Party Officer must have outside vision and control of his own radio."



## ENGINEERS

**Demolition of Pillboxes** The *Twelfth Army Group*, FRANCE, reports the following: "The amount of TNT needed to blow pillboxes can be considerably reduced if escape hatches can be found and plugged first. These hatches, found in nearly all pillboxes, are about 2 feet square and plastered over so as to be scarcely noticeable.

"Pillboxes have been blown effectively by putting charges in the ventilation pipes which run vertically through the side walls near the pillbox entrance. Thirty to 50 pounds of TNT are dropped in, primed, and tamped. In one case the firing of the charge breached the wall completely, and surviving occupants were either stunned or wounded by flying concrete."



**Sealing Captured Pillboxes** The *9th Division* in FRANCE reports: "We found it necessary to man captured pillboxes in order to prevent reoccupation by infiltrating enemy groups before our engineers could seal them up. To expedite this operation we now attach two companies of engineers to the regiment to follow assaulting troops with the mission of occupying and sealing pillboxes. Our engineers usually seal pillboxes by spot-welding the steel doors at the entrances."



**Stream Crossings** *Lieutenant Colonel George Randolph*, *Tank Battalion Commander*, FRANCE: "When the situation permits, stream crossings should be constructed at points not shown as crossings on the map and not formerly used by the enemy. Those recently encountered have been heavily



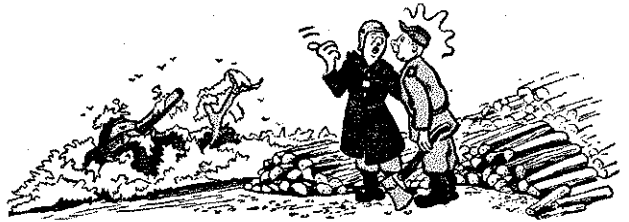
**Engineers Ferrying Tank in Belgium.**

mined or prepared for demolition so that when we attempted to use them tanks were lost and the routes were blocked. Enemy artillery will also be registered on known crossing points."



**Camouflage** *Staff Sergeant Hart, Tank Battalion, NORMANDY*, ran his camouflage-painted tank into a hedgerow and cut the engine. He was observing to the front when he heard a noise across the field behind him where he saw a German mortar crew going into position. The sergeant waited until the crew had assembled before he opened fire with his machine guns, killing all but two of the enemy. So excellent was the camouflage that the two who sur-

rendered thought the tank was a tree and would not believe otherwise until they had actually touched it."



**The Enemy Thought the Tank a Tree.**



## RECONNAISSANCE

**Reconnaissance on Pursuit** *Lieutenant Colonel John F. Homfield, Commanding Officer of a Cavalry Reconnaissance Squadron, writes concerning his operations in FRANCE: "We have had a continuous run of this combat business—since 1 July with no breaks. Quite a bit different from maneuvers, when we looked forward to administrative breaks which are nonexistent here.*

*"We were fortunate in leading the pack in the big chase, and I know how it feels to be cut off with the Jerries all around. It's an all-gone feeling, but we got out by always going forward. We have by-passed plenty of them, and it's also a queer feeling to know they are behind you. However, reconnaissance requires this so we have to take it.*

*"Each sector we have been in has presented a different problem—hedgerow and close fighting in NORMANDY and BRITTANY, open country in the sector where we are now. Tactics are modified to conform to the terrain. We have even held the flank of the line alongside the infantry.*

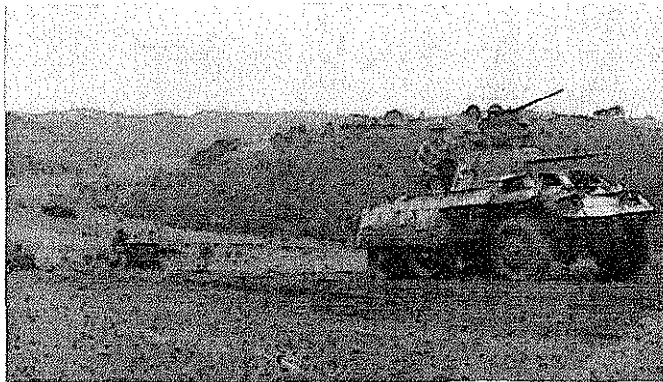


Defiles were common in NORMANDY; our method often had to be to push the throttle down, pray, and go through with the machine guns spraying lead.

"I can tell you this: stress field firing at unknown ranges—not at known distance. Stress mine training, tank-infantry teamwork for hedgerow work, reconnaissance by fire, and a respect, but not a fear, of the 88. It's a mean gun, but it can be knocked out. Above all, platoon leaders must—and I repeat 'must'—remember the weapons they have available, particularly the mortar. We often wished it were an 81, but we have had good results with the 60. Basic loads should include more smoke.

"For mopping up a town there is nothing equal to a white phosphorus grenade either thrown or fired from carbine or rifle.

"Each platoon must have an SOP formation so that when it runs into trouble each vehicle does something. It may not be the best thing at the time, but it prevents inertia and saves lives.



**Cavalry Reconnaissance Section in Germany.**

"I keep my CP about 1 to 2 miles behind the platoons for better control, and work my radios direct from platoon to squadron. It works, too, and with a good communications officer any unit can, with present channels, contact any other unit. We use voice transmission normally, with slidex\* the only code. Clear text and code may be mixed in that.

"I know that I sound like a school teacher but, as I say, I have been in front in this push and believe I know whereof I speak."



**Why Ask for it?** The following incident was related recently by an observer attached to an infantry division in FRANCE: "On 25 August, near BREST, the leader of the regimental intelligence and reconnaissance platoon set up an OP for the regimental commander in the control tower of a captured airfield. Soon the Germans opened fire, demolishing the tower and killing both officer and observer.

"Among the prisoners of war captured subsequently there was a soldier who said he had been a member of the gun crew that fired on the tower. He said the members of his gun crew had seen everything that happened in the tower; they had watched it for more than an hour and were amazed at the carelessness of the Americans. The German said he saw two men standing in the tower, smoking cigarettes and looking through a telescope which reflected the rays of the sun. The Americans, according to the German, made no attempt to conceal themselves."

---

\*Slidex is a British device for encoding and decoding quickly the words and expressions of military significance most commonly used in field messages.

## NOTES ON PATROLLING

**Field Jacket Reflects Light** *Staff Sergeant Lester B. Lease, 29th Infantry Division, FRANCE:*

"Two mistakes made by night reconnaissance patrols are the wearing of the field jacket and canvas leggings. The field jacket reflects a bright glow as do the leggings; besides the leggings make a scraping noise on the underbrush."



*Captain Chandler, Company Commander, 1st Infantry Division, FRANCE:* "Field jackets, especially at night, reflect light. We have smeared ours with green dye to offset this."



**Reconnaissance Patrols** *Staff Sergeant Fred Eilenfeld, Company L, 115th Infantry, FRANCE:* "Strength of reconnaissance patrols should be not over five men. They should travel light, taking only necessary equipment. It is very important that the patrol be briefed at least several hours ahead. Make sure the men have a map and compass. Have them study terrain features so they know where they are going and the way back."



**Patrol Communications** *An S-2 in the 26th Infantry, NORMANDY:* "A patrol of squad size should be equipped

with a radio if possible. The following instance is cited to illustrate the advantage of furnishing such communication facilities: A combat patrol was furnished with an SCR-300 radio, and the patrol leader was briefed concerning several reference points along his route. These reference points were given also to the artillery liaison officer with the battalion. As a result, the patrol leader was able to call for and get accurate fire on enemy positions which he discovered."



**Patrol Checking Side Street in German Village.**

**Consider Enemy Capabilities** *Captain Robert A. Guenther, 45th Division, ITALY:* "In SAN PIETRO, ITALY, where the fighting was bitter, the Germans worked a clever trick on the 180th Infantry. The American troops advancing to capture SAN PIETRO sent a reconnaissance detail to determine whether the Germans had evacuated. The Germans had left the town itself, but remained in its outskirts. They then waited for the American scouts to return to their unit after which they reoccupied the town, placing their

men in strategic spots to wait the incoming and unsuspecting Americans.

"Our troops suffered numerous casualties because of this ruse."

Several other reports similar to this have been received. The lesson to be learned is not the cleverness of the Germans but the basic principles violated by our own troops:

1. A patrol preceding advancing troops should not relinquish ground once gained. The patrol in this case should have sent a message back as to the status of the town and remained in observation, rather than have the whole patrol return.

2. Troops advancing in the combat zone when contact with the enemy has been lost must maintain proper security detachments to the front and flanks.



## ANTIAIRCRAFT ARTILLERY

**AA Troops in Close Combat** A portion of an AA Automatic Weapons Battery proved itself capable of ground combat one night in FRANCE:

"About 0100 an M2 half-track and two M16's\* of B Battery moved into a bivouac area south of VILLEDIEU-LES-POELES. During his reconnaissance for machine-gun positions, Captain Shaw, the Battery Commander, discovered a German Mark IV tank parked on the other side of a hedgerow. Captain Shaw withdrew hastily to enlist aid in destroying the tank. He returned with three men and some TNT with which to blow the tracks on the tank.

---

\*An M16 is a half-track mounting four .50-cal. antiaircraft machine guns.

Just as he was about to ignite the fuze, the tank commander, armed with a machine pistol, stood up to take a look around. One of the men struck the German on the head with a hand axe and grappled with him. The German, in the ensuing struggle, was shot by his own weapon.

"During the melee with the remainder of the crew, Captain Shaw managed to drop an incendiary grenade into the tank. The Americans jumped from the tank and the gunner scrambled back inside. When Captain Shaw's incendiary grenade exploded, the crew immediately abandoned the tank. The Americans shot the gunner but the others escaped.

**M16 vs. Ground Targets** "The light from the grenade illuminated several other enemy vehicles in an adjacent orchard. By this time one of the M16's had moved up to where it could fire into the orchard and immediately went into action, firing 800 rounds of .50-caliber ammunition at anything and everything that moved. Tremendous fires were started by the incendiary bullets. A count the next morning showed that there had been destroyed, in addition to the Mark IV tank, one armored half-track, three trucks loaded with gasoline and ammunition, two motorcycles, two personnel carriers, and one building containing an enemy headquarters. Abandoned were five trucks, two motorcycles, two radio and reconnaissance cars, one sedan, and a field kitchen complete with flour and meat. Five Germans were killed, seven wounded, and nine captured, and an unknown number had fled."

The initiative, resourcefulness, and aggressiveness of Captain Shaw and his men in attacking the enemy tank and personnel with the weapons they had available rather than withdrawing and waiting for troops

more appropriately armed are commendable. The tremendous effect of the M16 with incendiary ammunition against ground targets is clearly demonstrated.



### FIELD ARTILLERY

**Infantrymen as Artillery Observers** *Major H. N. Wicks, Battalion Executive, Parachute Field Artillery, ITALY:* "It is my opinion that every intelligent infantryman and artilleryman should be trained in the methods of forward observation. This could be done in a very short time and would result in increased efficiency of artillery fire. I have heard numerous infantry officers lament their lack of knowledge in directing artillery fire.

"At Anzio, it was the practice of my battalion to send out artillery observers with raiding parties and patrols so that immediate information on enemy movements could be communicated to the battery in the rear and fire placed without delay."



**Team Play by Observers** *A Field Artillery Battalion reports after operations in FRANCE:* "Observation from two OP's permits accurate fire to be placed on a target in a minimum of time, with surprise effect and with maximum economy of ammunition. On one occasion, a target was located by one observer who could not get a good adjustment of fire because the target was in such poor terrain that many rounds were lost. When another observer picked up the target, registration was speedily completed and effective fire placed on the target."

Observation by two observers will often permit accurate adjustment of artillery fire on obscure targets

provided that both observers are properly oriented with respect to the correct target and that uninterrupted communications can be maintained.



**8-inch Guns Attack St. Malo Citadel** *Colonel A. E. Billings, Commanding Officer, Field Artillery Group, FRANCE:*

"This presented an unusual situation. We were allowed to emplace 8-inch guns within 1,300 yards of the Fortress and within 9,000 yards of naval guns on the ISLE OF CEZEMBRE without receiving counterbattery fire. If we had received counterbattery fire we would probably have lost both guns and crews. We fired three missions at the Fort, expending 185 rounds with the following results: -

"a. Blew a hole 10 feet by 20 feet in a turret built of 26-inch concrete backed with steel sheeting.

"b. Blew a 20-foot hole in a concrete tower.

"c. Destroyed two 88-mm guns emplaced in concrete turrets.

"Our conclusions from this attack were:

"a. The 8-inch gun is very accurate. In one case we blew out a machine gun through a small aperture.

"b. Precision adjustment by one piece is the most effective method of attacking a concrete gun emplacement.

"c. Heavy artillery can be used to crack concrete fortresses so as to make subsequent attacks by fighter-bombers with flame bombs more effective."



**240-mm Howitzer** *Colonel W. A. Metz, Commanding a Field Artillery Group (Four Battalions of 240-mm*





**A 240-mm Howitzer in Action on the Italian Front.**

*Howitzers*): "We have been in action since 4 July 1944. The 240-mm is a fine weapon, and the observed results of our fire have been extremely good. It takes us approximately 2 hours to dig pits, emplace the weapons, and get ready to open fire. Sometimes it can be done in 1½ hours if the position is on soil that works easily. Time for complete emplacement for protection of personnel and ammunition is indefinite. In fact we never stop work on a gun position from the time we enter it until we leave. For long-range fire, cubs can't get up close enough to see bursts for either adjustment or effect. We must have high-performance aircraft with a capable observer for such fire. Of course most targets attacked with this weapon require a precision adjustment."

**Sniping with an Assault Gun**

An unusual instance of the successful use of the 105-mm assault gun has been reported from FRANCE: An infantry company commander requested assistance in neutralizing a camouflaged position from which his unit was receiving fire. The leader of an assault-gun platoon maneuvered one of his guns into position behind a house. The gun was placed so that it could fire through the rear and front doors of the house directly upon the position. Later, infantry patrols went to the position and found a Mark III assault gun and an antitank gun both completely demolished.

**EXPLOITS OF CUB PLANES**

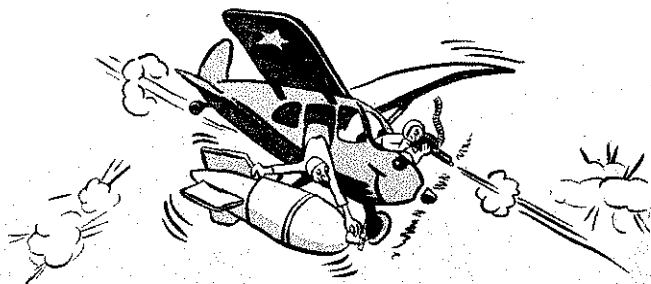
**Cub Plane vs. Mark VI Tank** From a *Field Artillery Battalion* in FRANCE comes this interesting account of a battle between a cub plane and a Mark VI Tiger tank: "With the tank firing its antiaircraft weapons and the cub adjusting artillery fire, the battle lasted 2½ hours. The tank, being a mobile target, kept changing position, making an adjustment very difficult. Finally, with the aid of another cub, the fight came to an end. One cub placed a battery volley of artillery fire behind the tank while the other cub adjusted a battery just in front. The tank was on a road and could move neither to its right nor to its left because of very high hedgerows. Then the two cubs shifted their battery fires as though closing a telescope and knocked out the tank."



**Cub Contact** *Colonel H. E. Maguire, Chief of Staff, XIX Corps*, reports from FRANCE on the value of light planes for liaison in a rapidly moving situation: "Communication is a problem on moves such as this corps has been making. Yesterday the distance from our front to our headquarters became so great that wire was impracticable and even radio out of range; so the artillery cub planes were sent on schedules from corps headquarters to make visual observation of our columns and return with oral reports as to their location, activities, route, whether or not in contact with the enemy, and also to warn the columns of any enemy which the planes could observe."



**Cubs "Bomb" and Strafe** *A Field Artillery Battalion* which participated in the capture of NOEMFOOR ISLAND reports this new role for cub planes: "During the attack on



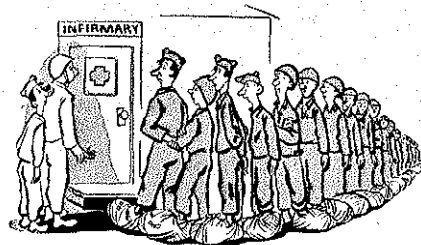
NOEMFOOR, an artillery cub plane sighted 12 Japanese attempting to escape from the island in two native canoes. The pilot and observer returned to base camp, secured Thompson machine guns and hand grenades, and returned to strafe and 'bomb' the fleeting members of the Jap force. Three Japs were killed and the remaining nine captured later by PC boats which were guided to the area."

## MEDICAL MATTERS

**Medics on the Job** *Lieutenant John D. McMaster* reports the following incident as a typical example of the efficiency and courage of Medical Corps men in combat zones: "An American tank was hit by a German 88-mm shell on 20 July 1944 about 6 miles north of PERIERS, FRANCE. All of the crew left the tank immediately, except one badly wounded man who could not help himself. While the tank was still under fire, members of the 8th Infantry Regiment Medical Detachment went into the vehicle and in 10 minutes had removed the wounded man, who had lost both legs. Emergency treatment was given on the spot and 30 minutes later the casualty was received at a field hospital in the rear. There appropriate dressings were applied and the patient sent to a Base Hospital about 8 miles farther back, where he arrived with wounds treated and dressed, a little more than 2 hours after being wounded."



**Trench Foot** *Lieutenant Colonel Roy E. Moore, Commanding Officer of an Infantry Regiment, 3d Division,*



ITALY. "For long periods at ANZIO our troops could not get their feet dry, with the result that during February, trench foot disabled more men than German shells."

If your men are required to remain in a situation where they cannot dry their shoes and socks, require them to massage and exercise their feet as often as possible. Stimulating the circulation will reduce the chances of developing trench foot. Be sure their shoes and leggings fit loosely. See to it that they wear heavy wool socks and change them daily. Lanolin or vaseline rubbed lightly on the skin before putting on clean socks will help.



**First Aid** *Colonel Charles H. Coates*, an observer with the *Twelfth Army Group*, FRANCE: "Too few wounded men apply their own aid dressings; too many simply wait until the aid men arrive. The individual line soldier's responsibilities for his own first aid must be stressed continually.

**Cutting Clothing from Wounded** "Clothing is unnecessarily destroyed in clearing stations by routine cutting where it could, in many cases, be rolled just as easily."

There have been many reports of unnecessary cutting of clothing by medical and other personnel. Remember that each item cut must be replaced. Multiply by the number of casualties and you have some idea of the resulting supply problem. Don't cut that clothing unless you have to.



## COMMUNICATIONS

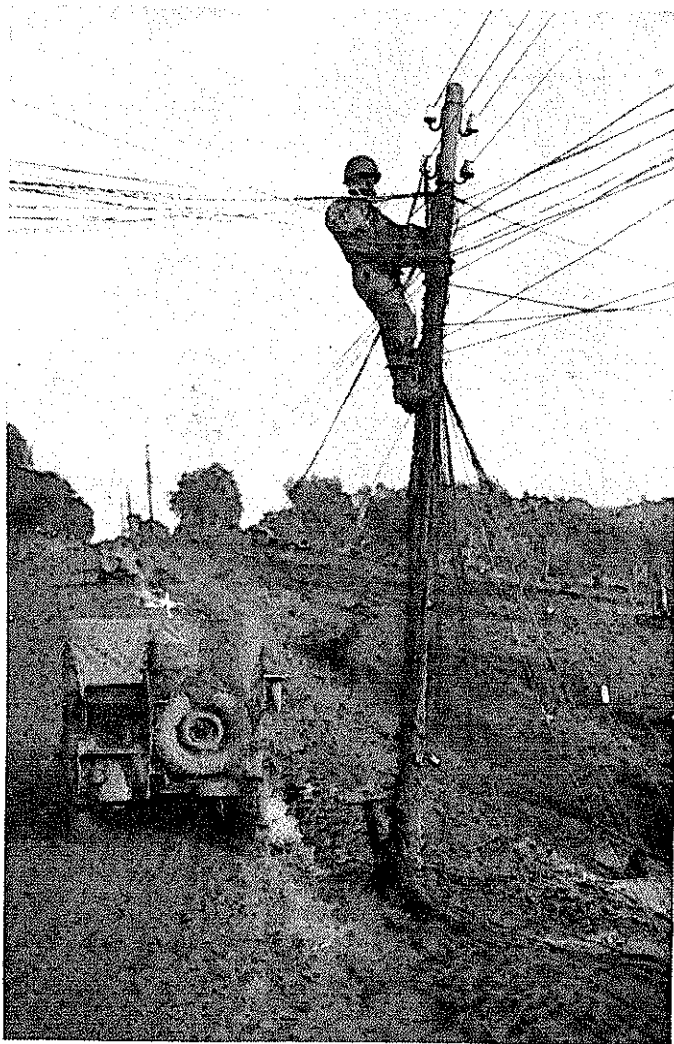
**Trouble Shooting in Italy** Most units found that maintaining communication was a headache for about the first

30 days of combat. By that time, however, the wire crews had learned the little tricks that simplified the whole problem. They learned to service a line properly and carefully during installation so that breaks would be decreased. When wire did go out, repair crewmen, instead of running up and down a line with test clips, checked the location of enemy shelling with MP's and others who heard the concentrations fall, and proceeded directly to the shelled areas, usually finding their trouble right there.

**More Grief for the Lineman** The *Amphibious Force* participating in the GILBERT ISLANDS operations reports: "During the first 2 or 3 days, wire was frequently laid across or along the coastal track. Tanks, tractors, and wheeled vehicles tore the wire up, and communications were often interrupted. Vehicle drivers generally made no effort to keep from breaking wire."

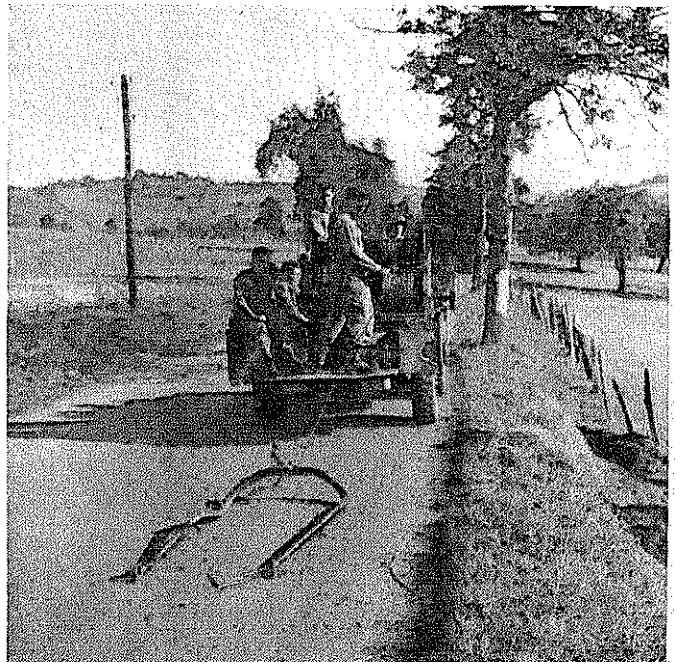
Since communications directly affect the battle efficiency of a unit, every soldier must understand that it is to his own interest to protect wires from damage. There have been many instances where fallen lines have been destroyed by passing vehicles in the presence of other soldiers who failed to take even the simplest steps to correct the situation. All wire personnel should be instructed not to leave loose wires on roads or trails even though this wire is of no further value, since the sight of wire being run over and further destroyed cannot help but create the impression that wire is not important. If wire cannot be salvaged at the time, it should be cleared from avenues of traffic until it can be recovered by a salvage crew.





Trouble Shooting in Italy.

**Sound-Power Phone** *Second Lieutenant J. G. McCoy, Cavalry, ADMIRALTY ISLANDS:* "The sound-power phone was effectively used in the field for distances up to 2 miles and was probably the best form of communication for short distances. The enemy on various occasions attempted to tap the wires, but alert operators could often tell when the enemy had cut in by the disturbance it caused in the headset."



**Ingenious Wire Crew Eliminates Running With Wire.**



**Watch that Antenna** *Staff Sergeant George J. Bromwell, 29th Infantry Division, FRANCE:* "I was carrying our SCR-300 during one attack, and had put it on the ground behind a hedgerow. While waiting for the attack to jump off I had to change from short to long antenna. Inside of 2 minutes Jerry started dropping mortars down my neck. It was called to my attention that the top of the antenna showed above the top of the hedgerow. That's a point to remember when you're working close to the enemy."

Communication personnel should always make sure that antennas are concealed or camouflaged. Many radio vehicles, OP's and CP's have been spotted by the enemy through carelessness on this point.



**Authentication** *Lieutenant Colonel Robert L. Cox, Signal Corps,* offers the following comment based on his experience and observation in NORTH AFRICA and ITALY: "Enemy stations sometimes made attempts to enter various radio nets. This was prevented in all known cases by the use of a station identification code."



## INFANTRY WEAPONS

**Beware of the "Blow Back"** *Headquarters, Army Ground Forces,* cautions all personnel using ground signals M17A1 through M22A1, M51A1, and M52A1 to keep their heads down when launching the signals and not watch them in flight, as a slight "blow back" from the propelling charge may be expected.

**M1 Grenade Launcher** *Private First Class Paul Hogan, 30th Infantry Division, NORMANDY:* "The M1 grenade launcher is really a perfect weapon. We wiped out two armored cars at about 175 yards with one round apiece from four M1's. The hits tore holes 6 to 8 inches in diameter in the sides, killing the men inside. One shell hit a gas tank and the car blew up.

**Browning Automatic Rifle** "For a while the Germans thought our BAR was a machine gun, but by the time they brought fire on the BAR position the gunner had moved and was firing on them from another direction.

**'03 Rifle with Scope** "We had one Springfield '03 Sniper's rifle with scope with each squad. It is absolutely accurate. All the fellows want one. It is not too bulky and can be carried just as easily with as without the scope.

**Bazooka vs. Machine Gun** "My squad took care of two out of five machine-gun emplacements at which we were shooting. The machine-gun squads were 175 yards away. It took two bazooka shells on each nest. The bazooka worked perfectly."



**Carbine** Great stress was laid on the proper use of the carbine by *Lieutenant Colonel F. O. Hortell* of the *45th Infantry Division* as a result of operations at Anzio in March. "When the carbine is used properly in lieu of the pistol it becomes a dangerous and accurate weapon, but when it is used in place of the M1 rifle, a grave mistake has been made. Always remember that any target that can be hit by a carbine can also be hit by an M1 rifle, but the reverse is not true."

**Hand Grenade** *Staff Sergeant Joe Daniels, 29th Infantry Division, FRANCE:* "In the fighting we have done up to now, the hand grenade has proved better for night fighting than the rifle, principally because it does not give your position away."



**Mortar Cleaning Kit** The importance of keeping the mortar cleaning kit with the mortar was emphasized by *Corporal Gennarino Cataldo, 45th Infantry Division, ITALY:* "At VENAFRO, my section was ordered to replace the men who had been operating three mortars on a hilltop for 7 days. Because of intense opposition, the guns could not be moved to a new position. We found no cleaning kit with the mortars. Two of them misfired and went out of action on the first shot. The remaining mortar bore the brunt of the work, and the crew fired 136 rounds in about an hour, the barrel becoming red-hot. The enemy then spotted the rapid fire from one source and knocked out the gun with artillery fire. If the cleaning kits had been available, all three mortars could have been maintained in operation and the crew would not have been spotted and knocked out so easily."



**Using Enemy Weapons** *Lieutenant Fosdick, a platoon leader of the 4th Infantry Division, FRANCE, reports:* "When captured enemy weapons are to be used by any member of a unit, all members of the unit must be so informed. On one occasion a sergeant was killed when he began to fire with a captured German machine pistol. This weapon has a characteristic sound when fired. Other

troops of the sergeant's own unit thought a German sniper was in their midst and fired on the sergeant, killing him."



**Jap Mortar Ammunition** *Colonel H. D. Harris, U. S. Marine Corps:* "Jap 81-mm mortar ammunition was used extensively by the 3d Marine Division. It proved very effective but seemed to hit about 50 yards short of our 81-mm mortar shells."



**German Mortar Ordnance Officer, 90th Division, FRANCE:** "Captured German 81-mm mortars are being used extensively by the heavy weapons companies of this Division. We usually use our ammunition with this mortar, as we have experienced prematures with the German 81-mm."



## LIAISON OFFICERS

**Selection of Liaison Officers** The need for good liaison officers is recognized by all commanders with combat experience, as shown by the following comments selected at random from various combat reports:

"Select your best officers for liaison officers."

"All units recognized the necessity for assigning competent officers to liaison duties."

"We put our best people on the job as liaison officers."

"Liaison officers must be good officers and must receive special training prior to the time they are detailed if they are going to be of any use in battle."

**Personality** An officer with 10 months experience in and out of combat as a Corps liaison officer states:



"... Practice or training in liaison has been neglected in too many cases.

"Of prime importance is the personality of the officer. He must be of a nature to encourage friendliness, confidence, and comradeship

with all personnel from whom he seeks his information. He must establish himself as an integral working part of the headquarters to which he is attached; he must be willing to take hold and to volunteer bits of information from his own headquarters where he sees the occasion. He must have initiative and resourcefulness as well as tactical knowledge."

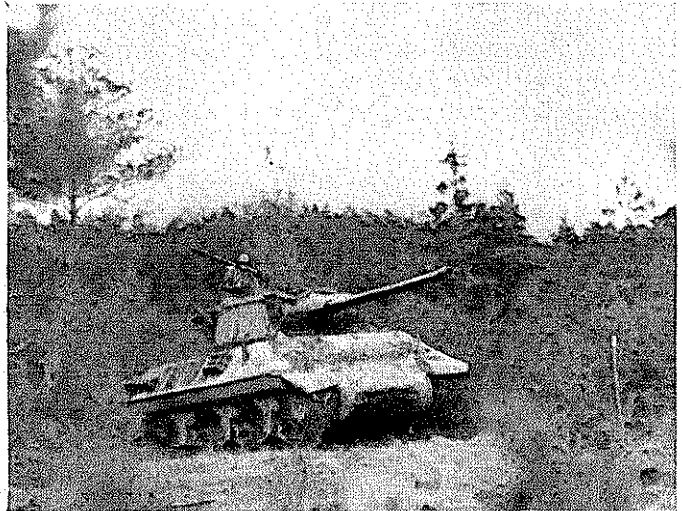


## MOTOR MOVEMENTS

**Route Marking** *Armored Field Artillery Battalion Commander, 1st Armored Division:* "We have a route-marking procedure which is standard in this battalion and which has proved very successful in the African and Italian campaigns, particularly in fast-moving situations such as the ROME offensive. The method is as follows: The unit will follow the road unless directed by a guide to do otherwise. Road conditions being equal at a Y junction, the unit will normally take the right fork. If the unit must take the left fork, it will be so marked. Upon arrival at a four-cornered cross road, they will continue straight ahead unless a turn

is indicated by a marker. In the event of any unusual intersection, such as a main traffic cross roads, or any place where doubt may arise in the mind of a car commander or driver, a guide is dropped.

"The advantages of this method are that it is in accord with a man's natural tendencies; it is easily understood; and it prevents much indecision."

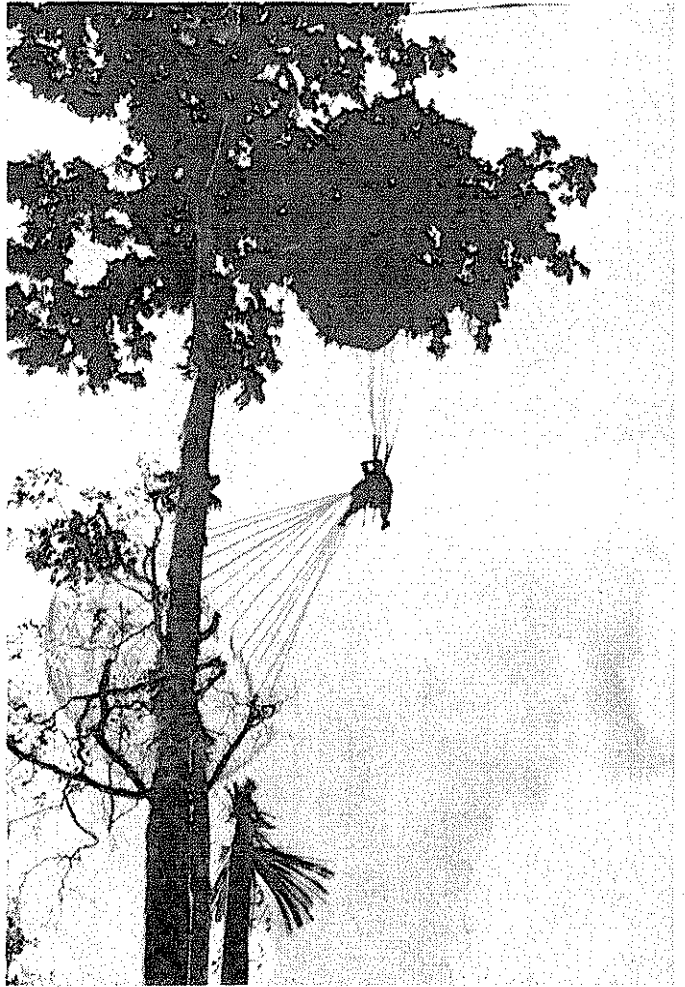


**M36 Tank Destroyer Mounting a 90-mm Gun.**



**Disrupting the Enemy Rear** Officers of the *101st Airborne Division* made the following observations after their early operations in FRANCE: "An airborne landing at night in the presence of the enemy is not as hazardous as first thought. While it results in sharp fighting and the loss of some men before they can use their weapons, it has a devastating effect on the enemy. It upsets his command organization and prevents the movement of his reserves and artillery. Although airborne troops may not carry out their tactical plans as scheduled, the disruptive effect of the attack on the enemy compensates for the disorder in their own plans. Furthermore, in this hand-to-hand type of fighting, the airborne troops do not feel the absence of heavy weapons as much as in a formal meeting engagement. In some cases, therefore, it may be more economical of lives to land directly on the enemy than to come down at a distance and close with him in a deliberate approach march and development.

"The initial effect of airborne troops will result largely



**"When a Feller Needs a Friend."**



from the aggressive action of small groups thoroughly briefed upon the missions which it is desired to accomplish."



**Parachute Lessons from SWPA** *Colonel George M. Jones, Commanding a Parachute Infantry Regiment, reports the following lessons learned during the NOEMFOOR ISLAND operation:*

**Pilot Training** "Prior to D-day every pilot participating should have training in dropping parachutists. A number of pilots dropping parachutists on this mission had not flown for a jump for a period of 12 months. Many had never dropped parachute troops. Lack of practice caused a feeling of uneasiness on the part of the pilots.

**Jump Practice** "Shortly prior to the mission, parachutists should be given refresher training by participation in a tactical jump of at least company size. The majority of jumpers on the NOEMFOOR mission had made only one jump within the 6 months prior to the mission. None of these jumps was in connection with a tactical problem, since a sufficient number of planes had never been available at one time.

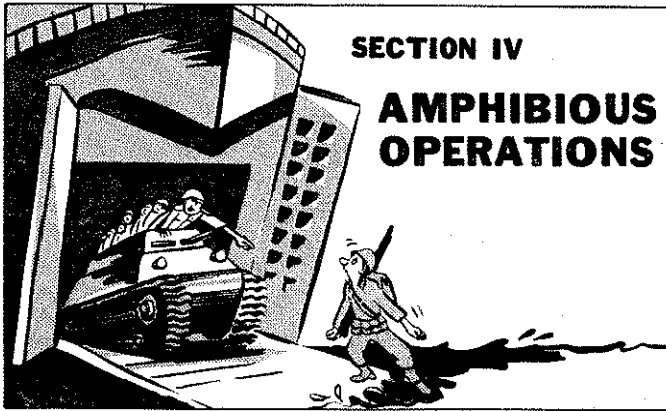
**Air Reconnaissance of Jump Areas** "It is most important that air reconnaissance of the jump area be made at altitudes that allow study of the topography. A study of aerial photographs does not give satisfactory information as to the character of the terrain or the obstacles which will be encountered on the ground. Prior ground reconnaissance would be invaluable in selection of suitable jump areas.

**Air Strips** "Landing strips are unsatisfactory as jump areas for parachute troops. The hardness of the ground results in excessive casualties due to the shock of impact of a parachutist under the normal combat load. Native gardens, kunai grass, or scrub timber are satisfactory.

**Transportation** "As paratroopers are primarily shock troops and are lightly equipped, arrangements should be made for a limited supply of transportation (jeeps and trailers) to be brought in as soon as water transportation or air transportation is practicable.

**Location of Troops in Jungle** "The coordinated use of a FA liaison plane and colored smoke released at specified hours proved valuable in pin-pointing the location of our parachute troops operating in the jungle."

☆ ☆ ☆



## **NORMANDY**

**Amphibious Assault** Officers of the *1st Infantry Division*, who made the assault landing in NORMANDY against stiff opposition, point out as a result of their experiences: "Leading assault waves should pass through the beach defenses as quickly as possible in order to get inland in depth. The mission of mopping-up beach defenses should be assigned to support waves.

"The first objective of the assault, after the beach is crossed, must be seizure of the terrain from which enemy can observe the beach. After this has been accomplished the destruction of the enemy rather than the capture of territory is the prime consideration.

**Control by Commanders** "Battalion and regimental commanders should land early so as to be able to exert their influence upon the action to the maximum. Reorganization of the assault elements must start as soon as troops land and must be continuous. Troops inexperienced in

assault landing tend to bog down; leaders therefore must be very active and aggressive. The commander must be ahead of the job and not behind the job."



**Tanks in the Normandy Landing** An officer of an *Armored Group* gives this account of tank problems and actions in securing the initial beachhead in NORMANDY:

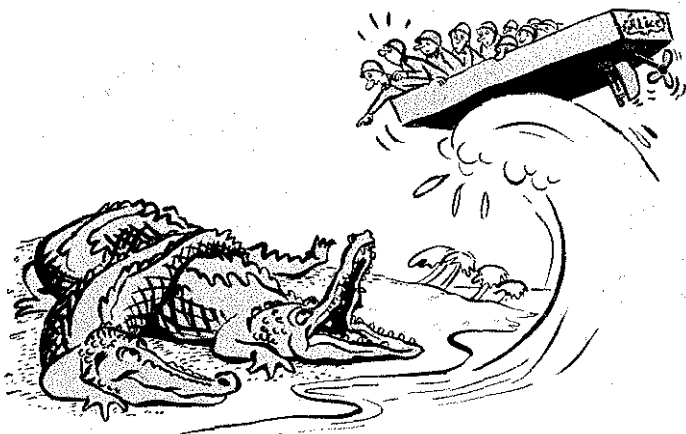
"In many cases there was a scant 30 to 50 yards between the water's edge and the sea wall or hill in front of the tanks, giving them little room in which to maneuver. As one tank commander put it, 'We could go straight ahead 30 yards or straight back 20 yards—that's all, Brother!' Maneuver was further restricted by mines, other vehicles, and foot troops. The tanks, making as much use of cover as possible but still in most cases fully exposed, therefore 'slugged it out' with the enemy, firing at pillboxes, machine-gun nests, sniper positions, and any other targets of opportunity that presented themselves, while taking equal punishment in return.

**Coordination with Infantry** "Tank fire was coordinated with the infantry attack by verbal and visual instructions of infantry officers. Platoon leaders and company commanders of infantry units pinned down by enemy fire pointed out the sources of this fire to the tanks, which silenced the enemy guns with 75-mm HE and machine-gun fire. Searching tank machine-gun fire in the weeds and trees in the paths ahead of the foot troops helped greatly in clearing out snipers.

**Flexible Employment** "The action, both on the beach and in the expansion of the beachhead, was extremely

fluid. Tank platoons and companies were attached to infantry units as warranted by circumstances. Temporary emergency attachments and reliefs from attachment to elements of the 1st, 2d, and 29th Infantry Divisions were frequent. For instance, on the morning of 7 June an improvised tank platoon consisting of two tanks from Headquarters Company and one tank from each of the medium tank companies of the 741st Tank Battalion went forward to support the 2d Battalion, 16th Combat Team, but was stopped en route by the Commanding Officer of the 18th Combat Team, who urgently needed tank support. This makeshift platoon was relieved from attachment to 16th Combat Team on the spot by radio and was attached to the 18th Combat Team, which it supported effectively in the vicinity of ENGRANVILLE."

In amphibious operations the first tanks ashore can expect to operate in very restricted areas until beach



"Anything Can Happen in an Amphibious Landing."

exits can be secured. Their primary job upon landing is to slug it out with the beach defenses and assist the infantry in securing the beach exits. In Normandy the operations of the tanks that got ashore and their coordination with the infantry were excellent in spite of the restricted maneuver space.

As shown in this action anything can happen in an amphibious landing. Therefore, plans must be flexible; tank crews must be well briefed on the operation and must expect and react promptly to the unexpected. Junior leaders must be quick to size up changing situations and take the necessary action. Only by aggressive, intelligent action on the part of all leaders can order come out of the confusion that will always exist during the early stages of a heavily opposed landing.



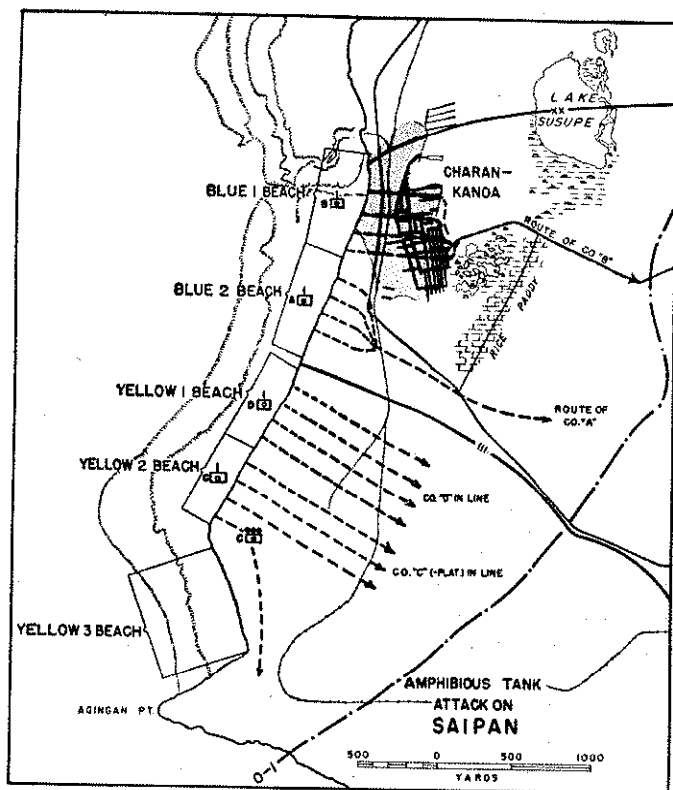
#### AN AMPHIBIOUS TANK BATTALION IN ACTION

The following account is by the *Battalion Commander* of the *Amphibious Tank Battalion* which supported the attack on SAIPAN. It illustrates the variety of missions assigned to the amphibious tanks and their terrain limitations.

**Terrain Difficulties** "Company B, in support of the first battalion of one Marine regiment to get ashore, was to pass through the town of CHARAN KANOA and move to the 0-1 line about 2,000 yards inland (see sketch). It approached the beach under small-arms and artillery fire and mounted the reef about 800 yards from shore. While crossing the reef, the company lost two vehicles, one being swamped, the other failing mechanically. While moving

inland, Company B temporarily lost two other vehicles which were hung on stumps or bogged in shell holes.

**"The Best-Laid Plans——"** "The plan was to pass through the town in line of platoon columns, resuming the company line formation and continuing to the O-1 line over the open ground just outside of the town. However, most of the ground beyond the town consisted of rice paddies. We found it impossible to cross these fields of soft mud



with our amphibious tanks, which promptly 'bellied down' and lost traction. The company therefore proceeded to the 0-1 line in column along the one road leading from the town. No enemy fire was encountered at all while passing through CHARAN KANO, and, fortunately, only small-caliber fire was encountered while crossing the open ground beyond the town.

"By about 1000, 13 tanks had arrived on the 0-1 line, and the company commander was told by the assault battalion commander to remain there till infantry arrived to support him.

**Paddies Impassable** "Company A, which supported the first battalion of another Marine regiment, approached the beach under heavy small-arms and mortar fire, mounting the reef about 800 yards from shore. While crossing the reef this company had three vehicles mechanically disabled and while moving inland from the beach had four others hung on stumps of trees. About 800 yards inland from the beach this company was stopped by the rice paddies to the front. Being unable to find a way around, it tried to infiltrate through; but after having three or four vehicles bogged down, the tanks circled the right flank of this swamp. Only eight tanks reached the 0-1 line on D-day. The others were on the reef, hung on stumps or in ditches, or had been destroyed by fire.

**Artillery Fire** "Company D, which was supporting the first battalion of another Marine regiment, approached the beach under heavy small-arms and mortar fire. It mounted the offshore reef, hit the beach, and went inland, losing three vehicles on the way. While crossing the open ground, this company came under heavy artillery fire from enemy positions near the 0-1 line and lost two tanks before



these enemy guns were knocked out. By about 1000, 12 tanks had arrived at the 0-1 line.

**Right Flank Operations** "Company C was in support of the second battalion of the same regiment. The right platoon, with the aid of an infantry company, was to move to the right flank and clean out enemy installations on AGINGAN POINT. This platoon partially accomplished its mission but was ordered to withdraw since that ground was to be covered by our own air and naval gunfire in suppression of an enemy counterattack. That platoon remained near the beach and spent the day in helping the infantry clean out enemy pillboxes. Seven of the other tanks of Company C had arrived at the 0-1 line by 1000.



**Amphibious Tank Pushes Inland in South Pacific.**

**Operations on the O-1 Line** "By 1000 on D-day the battalion had 40 tanks in defiladed positions on the initial beachhead line. They remained here supporting the infantry throughout the day. By 1800 the battalion had had about 100 casualties and had 28 operating tanks left. Leaving about 12 of these tanks on the O-1 line to support the infantry during the night the remainder withdrew to the beach for refueling and resupply.

**D Plus Operations** "On D + 1 the companies, with what tanks they had operating, returned to the front lines and supported the infantry attacks. Until D + 11 the amphibious tanks continued to support the attacks of the infantry, leading the attacks when land tanks were not available, operating with the land tanks, or supporting the land tanks by fire and following them at about 1,500 yards. During this time, it was necessary to reorganize the battalion into three provisional companies, keeping two on the line constantly and one in the battalion bivouac to rest the men and rehabilitate the vehicles.

**Maintenance** "On D + 2 the battalion rear echelon came ashore and a bivouac area was established. All disabled vehicles were gathered and taken to the bivouac area for repair or for salvage of usable parts. On D + 3 the companies were placed under battalion control and daily two of them were attached to the two assault regiments.

**Cleaning Out Caves** "During the final phase, amphibious tanks were used from the water to help the infantry clean out caves along the shore line and as an encouragement for the civilians to surrender. The battalion was released from combat on D + 12."

**AMPHIBIOUS MISCELLANY**

**Learn to Swim** "The soldier must learn to swim to enable him to cross rivers at night. It is likely that many river crossings in face of resistance will be made under cover of darkness. The terror of water in the dark to a non-swimmer is defeating."



Many of our future operations will be amphibious. The advantage a good swimmer has in this type operation is obvious.



**Pointers on Unloading** Navy reports on actions in the MARSHALLS state: "If jeeps and other small gasoline-driven trucks are loaded backwards on the boats so that they must be backed out onto the beach, there will be fewer cases of 'drowning out.' The drivers have to back out slowly and cannot gun the engines as they invariably do when headed out.

"A double drum winch taken to the beach was found to be very useful in unloading boats, especially those containing palletized cargo."



**Inter-Com System on Amphibious Tractor** *Second Lieutenant Albert Spindel, Amphibious Tractor Battalion, SAI-PAN,* reported the following method of tractor inter-com-

munication: "When our earphones became defective because of contact with salt-water spray, many of the tractor crews constructed two lights on the dashboards of their tractors and installed a switch which could be operated by the crew commander in the rear. To signal the driver to steer to the right, the crew commander would switch on the light on the right of the dashboard; to steer to the left, the left light was turned on; to go ahead, both lights were blinked; to stop the tractor, both lights were switched on simultaneously."



#### NEW METHOD OF REVIVING DROWNED PERSONNEL

**Eve's Method** A drowned man who has been unconscious for as many as 8 hours may be revived by a treatment known as "Eve's" method. The treatment, which is described in "Air-Sea Rescue Bulletin," July 1944, has been tested by British Naval Authorities.

**Basic Principle** "If a man's body is tilted with his head downwards, the contents of his abdomen slide down towards his head and press on his diaphragm, forcing air out of his lungs. If he is then tilted feet down, the contents of the belly slide down towards the feet, pulling the diaphragm down and sucking air into the lungs. So if he is tilted to and fro, his breathing will be automatically done for him.

**Assistants Necessary** "The help of one or two other men is required, and if they do not know what to do, you must be prepared to tell them.

**The System** "When a man requires artificial respiration:

"1. Begin Schafer's method (normal method of resuscitation) at once.

"2. Send someone to fetch a litter with a blanket on it.

"3. Place patient face down on the litter and continue Schafer's method while the man is fixed to prevent his slipping during rocking. This is best done by bandaging his wrists and ankles to the handles of the stretcher over plenty of padding. An alternate method is to place ropes around his body and the litter just above and below his buttocks.

"4. Meanwhile a light rope is secured to a hammock hook. Deck space is cleared all around.

"5. The litter is lifted to waist height and the rope is passed below and then made fast to the next hammock hook. You now have the litter resting with its middle on a loop of rope. (Note: On land two trees 4 to 6 feet apart with the rope tied between them can be used.)

"6. Begin tilting the litter to and fro.

"7. Cover the patient with warm blankets.

"8. Continue the seesaw rocking at the rate of 12 times a minute until normal breathing returns. This has been known to occur after 8 hours. The only certain sign of death that may be accepted as final by first aid personnel is rigor mortis—the stiffening of the muscles of the body that occurs after death. Rocking must therefore go on for 8 hours, until rigor mortis is present, or until a medical officer says that the man is dead. In order to prevent the litter from slipping on the rope, a pair of nails should be hammered into the underside of the litter bars on each side. This must be done before the man is placed on the litter.

**Practice** "This method is easy. But do not expect to be able to do it without practice. Just as you must practice

Schafer's method, so you must practice rigging the litter and rhythmically carrying out the seesaw movements.

"Although you must not waste time in changing over to Eve's method of artificial respiration, you must not panic about it—it is far better to spend the short, but necessary, time in getting the man to a place where you can work, and then, with the help of others, perform Eve's method there, than to carry on Schafer's method on the first flat surface you can find.

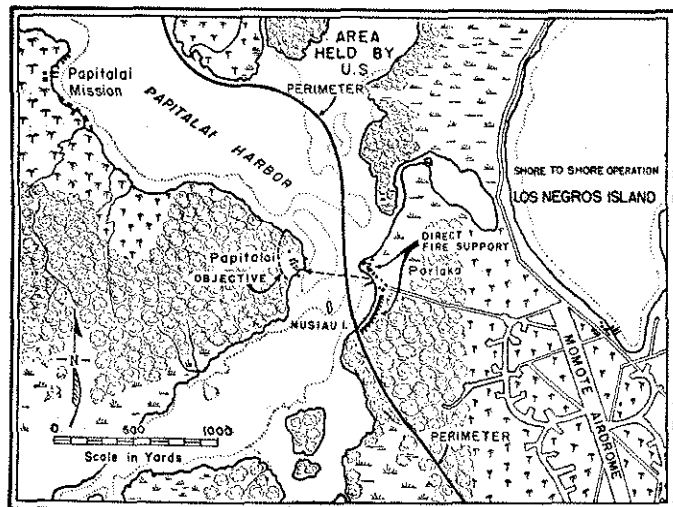
**Advantages** "There are many practical advantages of Eve's method. Any untrained man can assist after watching for only a few moments and pick up the rhythm. Thus it can be kept up for many hours with unskilled help. Since recovery has taken place after 8 hours of unconsciousness, work must be continued for that time. With several casualties and using Schafer's method, this may be impossible, for it involves the whole-time efforts of many trained men and their reliefs. In contrast any novice can rock a litter.

"The head down position allows any water in the lungs to run out; also wet clothes can be taken off and warm blankets put on (and when necessary first aid can be given to wounds and burns of the trunk) without disturbing the artificial respiration, whereas such treatment would interfere seriously with the Schafer method. Also, Eve's method cannot do any harm such as may be caused by rough use of Schafer's method; for example, bruising the contents of the abdomen, or fracturing a rib by too great pressure."



## **A SHORE-TO-SHORE OPERATION**

**Landing Mission** *Colonel Marion Carson, Cavalry, Observer, SWPA:* "During the operations of the 1st Cavalry



Division on LOS NEGROS ISLAND the plan called for a landing in the vicinity of PAPITALAI (see sketch). The mission was to be the establishment of a beachhead that could cover the crossing of a full cavalry squadron from PORLAKA to PAPITALAI. The beachhead was to be sufficiently large to permit stocking of supplies for the unit.

**Only a Few Boats Available** "Only four canvas boats (3-man) and three small rubber boats (5-man) were available. The assault was therefore limited to a cavalry rifle platoon. This was to be followed by a rifle troop. Field artillery and mortars were to furnish preparatory fires and, reinforced by 37-mm and heavy machine-gun units, were to support the crossing and the movement inland.

**Preparatory and Supporting Fires** "At 1145 a battalion of field artillery started firing a concentration on the

objective. This was lifted at 1155 and the 60-mm and 81-mm mortars fired concentrations. At 1200 the reinforced rifle platoon started the crossing. The mortars ceased firing as soon as the boats moved out. Four .50-caliber machine guns, four 37-mm guns, and eight heavy machine guns opened fire from the near shore on probable enemy positions in the objective area. Four of the machine guns fired over the crossing force, but the bulk of the machine guns and the 37-mm guns were emplaced on both flanks of the near-shore beach.

**The Crossing** "The platoon landed without casualties, but suffered some from isolated enemy snipers during the advance inland. The boats returned to the near shore immediately and started ferrying the troop. By 1400 an engineer assault boat had become available and a damaged enemy barge found on the far shore had been repaired and placed in operation. The troop, with its supplies, had crossed and reached its objective by 1620 with only two casualties, both wounded.

"Later information showed that there had been about 50 Japanese soldiers in the area seized. Practically all were killed. Our losses were one officer and one enlisted man killed, three officers and one enlisted man wounded."

A landing against opposition may produce higher casualties among the officers than in a normal attack which is preceded by proper reconnaissance. The obscurity of the situation on the beach requires that all commanders be forward and necessitates the physical leading of units by junior officers. Without physical leadership, the attainment of the objective will be delayed and casualties in all ranks will be heavy.

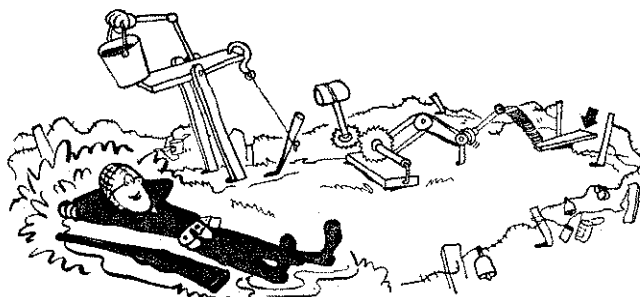




## PERIMETER DEFENSE

**Infiltration** Report from USAFFE BOARD, SWPA: "Night attacks by the Japanese are the rule rather than the exception. Invariably, they will attempt to infiltrate our lines at night to attack artillery positions and disrupt communications. On MANUS ISLAND our ammunition carriers found Japs walking beside them between the gun positions and the ammunition dump. One officer sleeping in a hammock within the defensive perimeter was hacked to death by infiltrating Japanese.

**Warning Devices** "If possible, sufficient barbed wire should be brought in on D-day to enable troops to install at least a single apron around the defense perimeter, thus greatly reducing surprise by infiltration. Tin cans hung from a string tied to the wire will give sufficient warning of approach of the enemy. Booby traps of any sort placed at least 35 yards outside of the defense perimeter are effective. It has been found that such measures reduce pro-



### Warning Devices Allow Our Troops to Get More Rest.

miscuous night firing by our troops and allow them to get more rest.

"A Field Artillery Battalion took the metallic ends of cloverleaf ammunition bundles, minus the containers, bolted them together with the long center bolt, and strewed them at random over an area about 10 yards in depth and 15 to 20 yards in front of the guns. Approaching enemy tripped over these pieces of metal, giving our troops adequate warning of their presence.

"Infiltration of enemy can be greatly reduced by careful coordination in establishing defensive perimeters. This alone will prevent many casualties."



**Use Alternate Positions** *Second Lieutenant L. M. Standridge, Platoon Leader, Infantry Weapons Company, 43rd Division, SWPA:* "The Japanese go to great trouble to single out and destroy machine guns. As a platoon moved forward, the Japanese would generally pull back, leaving observers for the purpose of determining the location of the machine guns. Because of these observers, it was im-

possible to keep the machine-gun emplacements from being located. To guard against attacks by Japanese patrols after dark, we would set up the machine gun at one place, and then immediately after dark the gun would be moved to another prepared location. When the Japanese would attack the position during the night they would encounter only riflemen and would not succeed in destroying the object of their attack."



**4.2-Inch Mortars** *Lieutenant Colonel W. H. Shimonek, 4.2-inch Chemical Mortar Battalion Commander, SOUTH PACIFIC:* "In the BOUGAINVILLE area we have selected, prepared, and ranged in for possible use 26 positions which cover the entire perimeter of the beachhead. During the recent Jap attacks we had to use 16 of them. At one time we had 154 miles of wire laid, and maintained all of it at the front in dense jungle terrain. It was a lot of work, but it surely paid dividends.

"We have had practically no ammunition functioning troubles. On one occasion, however, while we were establishing a smoke screen with WP on a hot afternoon, the shells tumbled badly even though they had been stored on end at the mortar position. Since then we keep WP under a double-decked roof when no natural shade is available.

"Damage to our mortars has been negligible, and has resulted chiefly from a failure to follow instructions. Several tie rods and hooks were broken because too many sand bags were used on the standard in an attempt to stabilize the mortars in loose ground. Some forks were bent by failing to provide good substantial footings for the base plate. When the base plate sinks from repeated firings, it is better to pry it out and refill the hole so as to take

advantage of the packing accomplished by the previous firing.

"We emplace the six mortars in the platoon to cover equal segments of a 600-mil sector, with stakes out for a similar sector on each flank. This permits the quick massing of three mortars anywhere in the sector, except on the extreme flanks. In this jungle work, it saves time to make up some tall aiming stakes."



**Artillerymen Need Infantry Training** *First Lieutenant Melvin C. Monroe, Field Artillery, SWPA:* "In each campaign we have been in, the artillery has been placed in position from  $\frac{1}{2}$  to 2 miles behind the infantry front lines. It has been entirely up to us to provide our own local security from Japanese attacks. We were off by ourselves, and our gun positions were assaulted repeatedly. We had to man our own defenses, set up our own outposts, and run our own patrols. We felt that more knowledge of applicable infantry procedure would have been a decided advantage. An artilleryman should understand scouting and patrolling, organization of offensive and defensive positions, terrain appreciation, and squad tactics. The men should be schooled particularly in the use of machine guns, mortars, grenades, and land mines. By this I do not mean an 'appreciation' course in which each member of the machine-gun section fires 10 rounds and then marches off having learned nothing else about the gun."



**Interpreter on Night Patrols** *Canadian Army Observer in POA:* "Because of our tendency to stop action, set up a perimeter defense, dig foxholes, and stop all activity before

dusk, the Japs apparently do not establish a night defense line. They continue with preparation of meals, improvement of their defenses, and movement of ammunition and supplies, all quite noisily. In view of this noisiness of the Japs, some information might be obtained if a person able to understand Japanese accompanied the patrols."



**Jap Artillery Tactics** *Colonel H. D. Harris, U. S. Marine Corps, SWPA:* "On occasion, Jap artillery would register with one or two rounds on a target just prior to darkness. About 2 hours later they would open up on this registration point with everything they had. Moral: Move CP's after darkness if the enemy has registered on them."



**QM Security in SWPA** *Captain Martin E. Griner, Quartermaster Corps,* reported upon his return from SWPA, where he had been with an infantry division QM company: "Listening Posts were used habitually in SWPA around dumps, supply points, and bivouac areas. Road blocks were seldom used, because no roads existed in the areas in which we operated. We usually placed four guards on listening posts, with one sleeping at a time. Each listening post (there were usually about 12) was connected to the QM CP by telephone. Walking sentries invite disaster in jungles."



## SCOUTING AND PATROLLING

**Ambush in the Jungle** From a *Parachute Regiment*, NOEMFOOR ISLAND, comes this account of how an alert patrol leader foiled a Jap ambush.

"Captain Smith's patrol, a reinforced platoon, had marched about 2,000 yards when they encountered three unarmed enemy who indicated a desire to surrender. When the rear scout of the patrol took cover, the Japs ran into the bush, whereupon the patrol leader immediately became suspicious. He sent a reconnaissance party about 75 yards to the front. This party ran into Nambu machine-gun and rifle fire. At the same time the rear of the column was fired on by heavy machine guns and riflemen.

"The patrol was thrown into all-around defense and ordered to dig in. The Japs kept up heavy intermittent but ineffective fire from 1700 to about 2000.

"At about 2000 they started dropping grenades and more fire into the area and kept it up until midnight. During the night they attempted to infiltrate the position without success. At daybreak they withdrew after firing several machine-gun bursts to cover their withdrawal. The patrol then returned to the CP without further incident.

"The patrol had two killed and one wounded and these in the initial phase of the action. Captain Smith estimated that he was surrounded by about 100 Japs. He also noticed that the Nip fire was on a fixed line but too high to be effective. Twenty-one Japs were killed in this action."

Immediate action by the patrol leader in this case probably saved the patrol many casualties. Jungle patrols regardless of their size must take such formation that they can protect themselves immediately from attack. Of course, the idea is always to find the enemy before he finds you, but as this is not always possible in the jungle, adopt a formation that will minimize the effect of surprise attack from any direction.



**Scout Dog Leads a Patrol Through the Jungle.**

**Jungle Patrol Hints** *Captain John G. Carter, S-2, 112th Cavalry, SWPA:* "Scouting became a fine art in my unit. Two factors contributed to our success; the first was religious observance of the rules laid down in the field manual 'Scouting and Patrolling'; and the second was a set of rules we worked out based on jungle conditions. They are as follows:

"Friendly natives are invaluable as scouts. Send one or more with the patrol when possible. School all junior

officers so that they can understand and can make themselves understood by the natives.

"When an officer goes out on patrol with enlisted men, he should be the lead man at least half the time, rotating with the enlisted men.

"Two submachine guns and two rifles or carbines provide a good distribution of arms for a four-man patrol, which is the size we prefer. A submachine gun should always lead.

"A four-man patrol returning from a mission can often facilitate its withdrawal under enemy pressure by engaging the enemy with brief, well-aimed fire. The patrol should then break contact and return.

"It must be proved by demonstration to every man who is likely to do reconnaissance patrolling that the jungle is friendly and will help him on his mission."



**He Learned the Hard Way** *An Infantry Platoon Leader of the Americal Division*, in discussing ambush tactics by patrols states: "We had an outpost of five Japs completely surrounded by our patrol of 69 men. They were armed but not aware of us. We covered them with three BAR's and three rifles, intending to shoot their legs from under them on my signal in order to take them prisoner. Meanwhile we placed four more BAR's covering the front and the right and left flanks. The TOROKINA RIVER was to our rear, which was protected by riflemen. We held three BAR's in reserve.

"This all-around defense looked good; we were sure of success. I trained my sights on the buttocks of a Jap officer who was sitting on the ground with a rifle across his lap. I whistled sharply and shot and wounded him as he



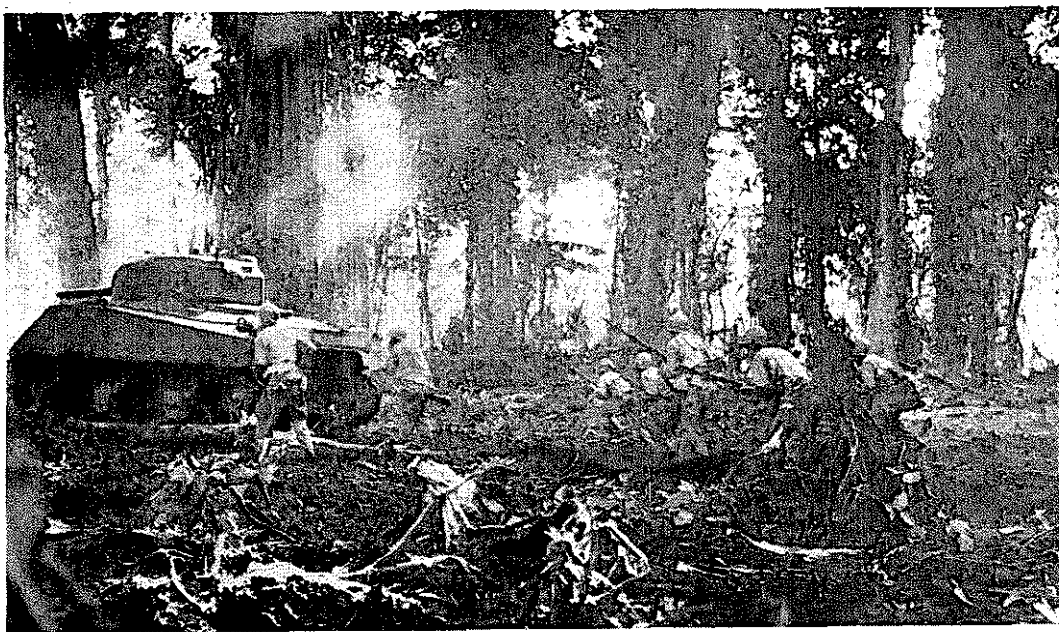
turned his head. The BAR's opened fire, killing three and wounding one, who died later on the stretcher going in. The wounded officer feigned death but charged as I approached. One squirt of a BAR ripped him open and felled him for keeps. The stretcher bearers were called up to remove the wounded Jap and I gave orders to pull out.

"Then disaster struck. Three light machine guns opened up from our direct front, wounding three men immediately. Two who were slightly wounded got out, but the other was hit in the abdomen and pinned down by grazing fire. Several new men had jumped into foxholes and were crouched so low they could not see out. Everyone made it back to safety except the one wounded man and my runner, who could not be found and did not answer our calls. There was so much confusion that checking the men was difficult.

"I used my 60-mm mortar to silence the Nip's machine guns, and then with our BAR's and rifles built up a strong fire line. Under heavy covering fire, the wounded man was rescued and placed on a stretcher. He bled profusely and died as we returned to our lines. It was then discovered that four other men were missing; however, with the exception of one they turned up the next day. From this incident I learned to push security out as far as possible before striking, even when we have the ambushed force surrounded."

This point is now covered in paragraph 145a (5), page 143, FM 21-75; this officer had to learn it the hard way.





Target Designation by Phone on Bougainville.

**JUNGLE POINTERS**

**Hot Carbine** The following information was obtained from wounded Marine officers who were evacuated from SAIPAN: "Some flamethrower operators strapped or wired the nozzle of the flamethrower on the left side of a carbine barrel. This enabled the operator to have 15 shots immediately available after the flame fuel was exhausted."



**Jungle Litter** Because of the difficulty of carrying the heavy issue litter in jungle operations, *Captain Thomas H. Stevens, Medical Corps, Regimental Surgeon of the 503d Parachute Infantry, NOEMFOOR ISLAND*, recommends: "The use of a strip of canvas, the size of an army cot, with loops along the sides through which poles can be inserted, to be used for jungle evacuation in lieu of the cumbersome and heavy issue litter."



**Tanks in the Jungle** On several occasions in the ARAWE, TOEM, and NOEMFOOR operations, tanks have been used very successfully in the reduction of machine-gun emplacements, rifle positions, and caves. In one case, a 37-mm gun which was well dug in at the base of a large tree was knocked out, along with several machine guns and some 35 Japs, at a cost to us of one officer. Tanks are kept in a protected area until strong opposition is encountered. The tank commander is brought forward to make a foot reconnaissance of the ground over which he is to move, while his tanks follow. At least one squad of riflemen is assigned to go forward with each tank. This squad must

stay up with the tank, ready to pick off enemy who may try to attack it with explosives.

"One of the problems encountered in working with tanks is the difficulty of communication between the man on the ground and the tank commander. To overcome this, very limited objectives are selected. To reduce an area containing several strong emplacements may require a number of small coordinated attacks."



### BURMA NOTES

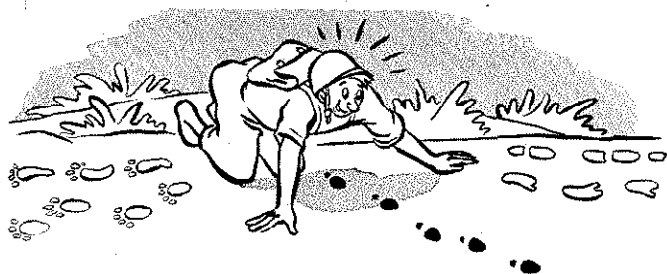
**"Merrill's Marauders"** An American force in Burma, popularly known as "Merrill's Marauders," picked up quite a bit of information on the Japs and how to work against them during their actions in NORTH BURMA. Here are some of the main points passed on.

**Animal Transport** "When ordered to get animals off a trail quickly, take them off in pairs—they go better and don't bray so much.

**Nisei for Combat Intelligence** "Some of the most valuable men in our outfit were the Nisei Japanese interpreters, not back with battalion and regimental headquarters, but up with a platoon in contact on the perimeter. The Japs talk loudly sometimes before attack. On several occasions the Japanese interpreters told us exactly what the Japs were shouting and enabled us to get set for an attack from a certain direction. Once an interpreter caused the Japs to attack into a trap by shouting orders to them.

**Recognition of Foot Prints** "It is easy to teach a man to look for different types of shoe prints on a trail. On two

occasions, a suspicious-looking shoe print caused us to surprise the Japs, whereas if we hadn't noticed it they probably would have surprised us.



**"Look for Different Types of Shoe Prints."**

**Cellophane Bags for Maps** "Flexible cellophane bags to carry your maps are invaluable. The top of your helmet is a good spot for mosquito head net and the map you are using.

**Map for Every Soldier** "Some simple map should be provided for every soldier, not only for possible use in case he becomes lost but to orient him on the situation.

**Jap Ambush** "One of our patrols took a route a previous patrol had used and was ambushed. The Japs are cagey—they will follow a patrol sometimes for long distances, then set an ambush in case it comes out again.

**Keep Your Eyes Open** "The third battalion's lead scouts were cautiously moving up the trail near WESU GA when a Jap patrol opened fire on them from the opposite side of a small open field. The lead scout fell to the ground, and the Japs, thinking he was killed, rushed forward. The

scout raised up and fired a full magazine from his tommy gun, killing two Japs and putting five others to flight, and the third battalion moved on.

**Ding How** "Japs will do anything they can think of to entice our soldiers into a trap. Frequently the Japs shout 'Ding How,' which are the words Chinese often use to identify themselves to U. S. troops. The terms is equivalent to our 'OK.'

**Dogs** "Japs often use dogs to attract fire which will reveal the positions of our automatic weapons. If possible, U. S. troops should withhold fire from dogs.

**Tree Bursts** "Japs aim their mortar and artillery shells at trees near our troops. When a shell strikes a tree, the fragments are deflected downward rather than upward and sideward, which is the fragment pattern when a shell explodes on contact with the ground. Therefore our troops should not build foxholes near or under big trees.

### **Improvising Bunks in the Jungle**

*Corporal Frank L. Morris* stated that members of his squad learned from Ghurka soldiers how to improvise dry, above-ground sleeping pallets in the jungle. The method is as follows: Bamboo poles 7 feet long are flattened out and lashed together to make a pallet 4 feet in width. Strings or fibers from the bamboo itself are used to bind the flattened strips together. Stakes 2 feet long, to which the corners of the pallet are lashed, hold it well above the jungle floor. Shelter halves and blankets are used on the pallets for warmth and protection against rain.

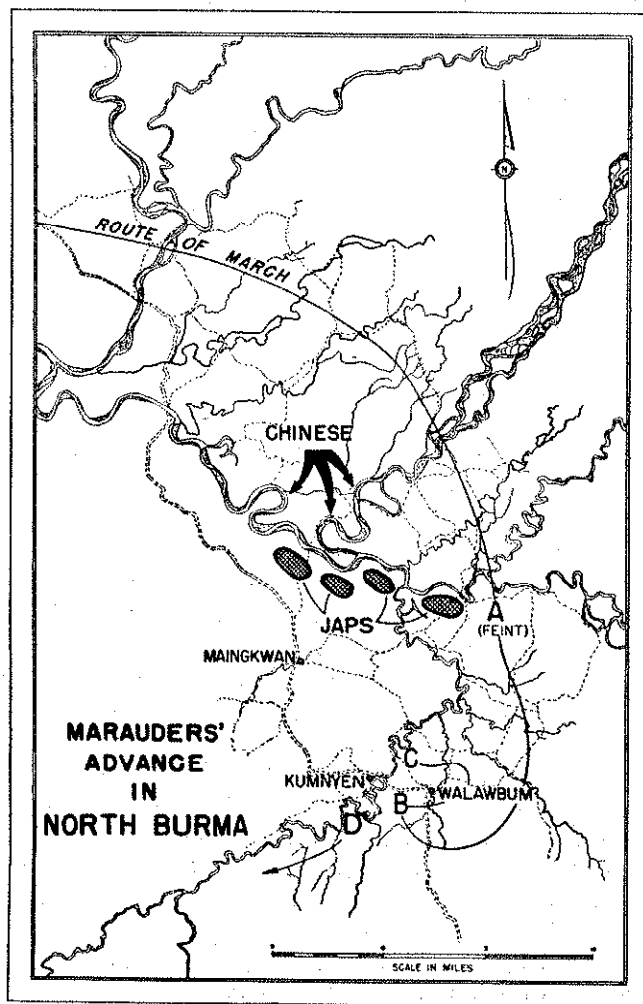
**Camouflage** "Replacements should be taught that it is not good practice to cut out a firing lane in front of their foxholes or positions, because the recent removal of even a little brush or vegetation is easily spotted by the Japs with the result that the position is discovered.



**Withdrawal Across A River Under Attack** *Major John Jones, Observer with Merrill's Marauders*, reports the following: "Six hundred yards north of WALAWBUM, Lieutenant Weston's intelligence and reconnaissance platoon began taking a heavy pounding from Jap mortars just after daylight. At 0730 he was attacked from the north; at 1030 from the northeast; a little later from the northwest. The Japanese Nisei interpreter with Lieutenant Weston heard the Jap orders for attack at different points, and his warnings enabled Lieutenant Weston to shift automatic weapons to the points of attack. By 1100 Lieutenant Weston was surrounded on three sides by superior forces of Japs and almost out of ammunition. The Jap knee-mortar fire was close and very accurate.

"The combat team commander decided to withdraw the platoon immediately. He told Lieutenant Weston by radio to withdraw under the cover of a squad on the south river bank and a smoke barrage on the Jap positions overlooking the river. Weston had his men take off their undershirts and put them on the river bank to mark the flanks of the place where they were going to cross, so the squad on the opposite bank could cover them. Then he called for smoke and started withdrawing a few of his men to the river bank, letting them infiltrate across under the protective fire of the BAR's on the opposite bank.

"The Japs had anticipated this withdrawal and had





placed two Nambus (light machine guns) near the bank. The BAR's opened on them, however, and the Nambus didn't fire more than 10 shots at the men withdrawing. One of Lieutenant Weston's snipers, Chief Janis, a full-blooded American Indian, picked off five Japs who had crept to the river bank and were firing from close range at the infiltrating members of the platoon. A few men from each side of the perimeter withdrew at a time. BAR and Tommy-gun men were last. The Japs were throwing mortar fire at the perimeter all the time.

"The first four men to cross carried litters, made of jackets stretched on bamboo poles, on which they carried two badly wounded comrades. When they reached the opposite bank, the Medics took the wounded and dressed their wounds even though bullets were flying about and mortar shells were bursting in the water 10 to 20 yards away.

"Lieutenant Weston was the last man to cross the river. The withdrawal was a success because of a perfectly coordinated plan. Communications by SCR-300 radio had been maintained all the time."



**A Marauder Operation** *Major General Frank D. Merrill* gives the following account of one of the operations of his "Marauders" in BURMA: "The Chinese had for some time been carrying out operations against the Jap fortified positions, as shown on the sketch. The Japs had been there for about 18 months and were dug in pretty strongly. As the Chinese were having difficulty with their operation, it was decided to send us in to assist them. We made a long march around the Japanese right flank to A, where we pulled a feint. Leaving 40 mounted men at A to do plenty

of firing to deceive the Japs, the main body went on, making a 26-mile march to B, where we engaged the enemy in a big fight, successfully accomplishing our mission. We blocked two roads and all adjacent trails.

"We had quite a stroke of luck at point C, where we tapped the main Jap telephone lines and listened in on their orders. The Japs ordered a withdrawal across the river and 48 hours later started crossing in the vicinity of D. My three battalions were between B and C, while the bulk of the Jap division was coming south to cross the river. At one point on the river where the Japs were crossing, we had 36 machine guns sited on them; you can imagine the slaughter at that spot. The water in that area actually 'ran red.'

"I was weak in men, but my biggest difficulty was in trying to maneuver those I had. My men were so tired that I couldn't maneuver them as I wanted. We could have done twice as good a job here with mounted troops. As it was, we had to be content with the job we had already done, which wasn't bad. Although some Japs escaped southwest of D we got about 4,500 in this engagement—in one small area we counted 435 bodies."

