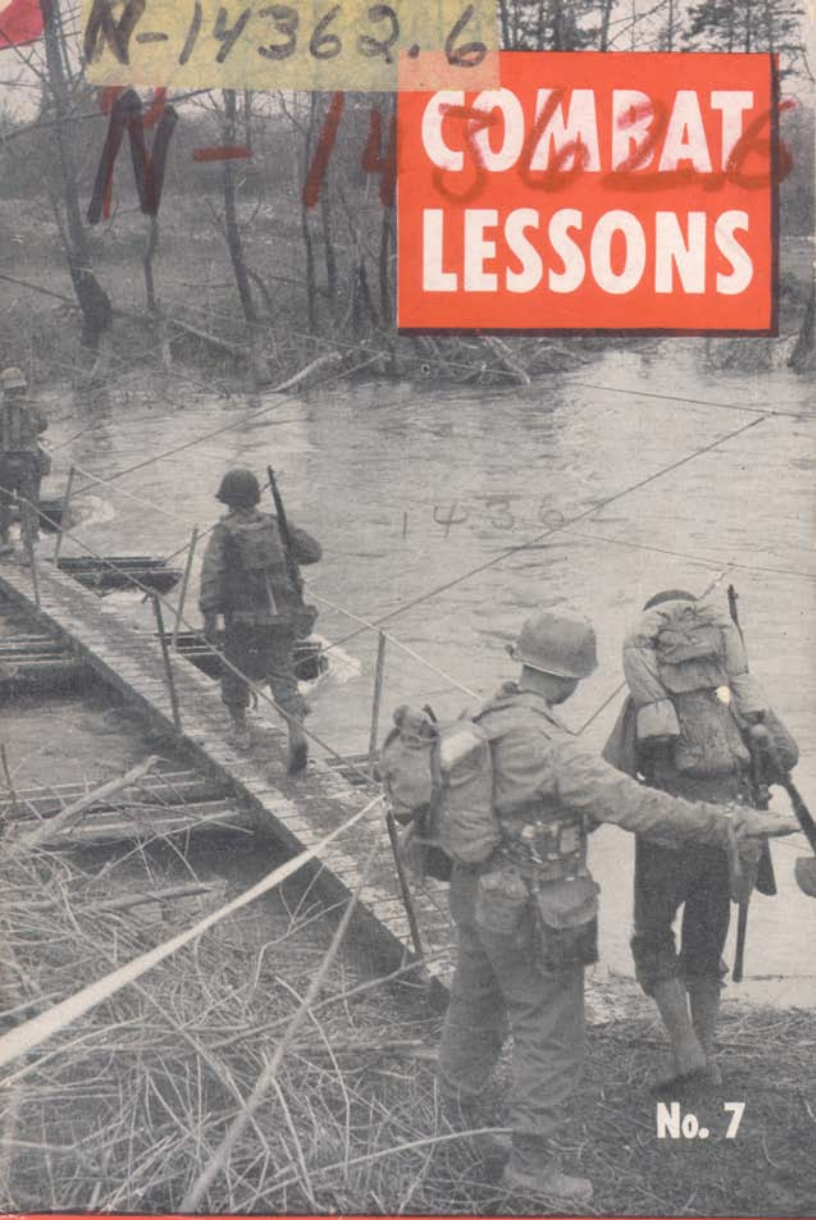
COMBAT LESSONS



No. 7

COMBAT LESSONS

No. 7

Rank and file in combat:
What they are doing
How they do it

WAR DEPARTMENT WASHINGTON, D. C.

Introduction

Our Armies in Europe have won their victory. Veterans of the campaigns in North Africa and Europe are now joining forces with the veterans of the Pacific for the final assault against Japan. They are coming to grips with a foe quite different from the German soldier, different as an individual fighting man and different in the tactics employed. Even the most experienced soldier of the European battlefields will have much to learn.

We must now bring to bear against the Japanese all the experience we have gained in every theater. The suggestions made in "Combat Lessons" are drawn from such experience. Since, to be effective, they must reach the soldier promptly, publication is not

delayed to insure that they always represent the thoroughly digested views of the War Department.

The great combat lesson learned from every operation is the 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.

Ryukyu Islands: Geruma Shima Shrine at H+30 Minutes.

Contents

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. Photos by U. S. Army Signal Corps furnished by Army Pictorial Service. Cartoons by Major Carl R. Giegerich.

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.

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).

Refer to FM 21–6 for explanation of distribution formula.

Leadership

"Too much stress cannot be placed upon the necessity for developing intelligent, aggressive troop leaders in all echelons. . . ." So says *General Omar N. Bradley, Commander of the Twelfth Army Group.*

"However, to use the battlefield as a schoolroom for the training of leaders is to sacrifice needlessly the lives of our men. The habit of command and the technique of troop-leading must be learned thoroughly by all leaders prior to entry into combat. . . .

"Not only must the leaders learn their own jobs thoroughly but they must also be given ample opportunity to operate in the command capacity of the

"Are you sure this is what they intended, sergeant?"

next higher echelon in order that qualified replacements will be available."

The Junior Leader's Responsibility

Field leaders constantly emphasize the need for junior officers who will share the responsibilities of their superiors and take charge when emergencies arise in battle.

Comments *Major General John P. Lucas, Commander of the VI Corps:* "Prior to battle we must develop the feeling of responsibility in junior officers and noncommissioned officers. I suggest doing this during field exercises by suddenly and unexpectedly declaring the commander a 'casualty' and placing the second-in-command in charge."

The *Commanding Officer* of the *119th Infantry*, GERMANY, makes this statement: "In battle, nothing is more important than having leaders who will share their commander's responsibility for the accomplish-

ment of the mission. One of the most difficult tasks for the junior leader is getting the men to move forward under fire. Issuing the orders is easy, but seeing that the orders are carried out may call for every ounce of energy and initiative the officer or NCO possesses."

The work of *Captain Leo L. Sautter,* in an action near ZAGAROLO, ITALY, is an illustration of what these commanders have in mind.

Responsible Leadership in Action

Captain Sautter was at his CP when a soldier came in to report that two wiremen had been wounded by an enemy sniper about 500 yards away. He immediately took four men and set out to assist the wounded men. Before arriving at their goal, the captain and his men observed a group of wiremen pinned down in an open field by enemy machine-gun fire. Captain Sautter spotted the enemy machine gun and ordered his men to covered positions, but himself took an exposed position from which he could fire upon the machine gun. He opened fire suddenly and killed six of the enemy crew, making it possible for the wounded men to be evacuated in safety and for the wiremen to continue their work.

By that time, Captain Sautter had observed more serious trouble in the vicinity. An enemy armored car was parked beside a building some distance away. The captain knew that part of another advancing regiment was in the sector covered by the enemy vehicle. He immediately sent back for a .50-caliber machine gun at the CP and for two tanks to cover the oncoming regiment during its approach. While waiting for these

reinforcements, he collected a few of his men and resumed fire on the enemy, with the result that many were forced to flee and 18 were wounded.

While this was going on, Captain Sautter was informed that all officers of one company with the approaching regiment had become casualties. He immediately took charge and reorganized the company so that when other officers came up the unit was well-dispersed and under control. He then gave first aid to the wounded officers and saw that they were evacuated to a safer location for further care.

The tanks arrived in time to assist the other regiment's assault upon the enemy positions, and the objective was successfully taken. Had it not been for Captain Sautter's timely and decisive actions, casualties among our men would have been extremely heavy and attainment of the objective questionable.

For his contribution in this emergency, Captain Sautter was awarded the Silver Star.

Responsible Leadership as the Soldier Sees It

Another fine example of responsible and inspiring leadership is given in the following account of the part played by *Lieutenant William E. Everett, 141st Infantry, 36th Division,* in an action in ITALY. This account was written by three of the enlisted men who served under him during that action:

"Our company led the attack on a hill and took it. The enemy counterattacked, laying down heavy artillery, mortar, and machine-gun fire that knocked out a large number of our men and every officer except Lieutenant Everett.

"Lieutenant Everett took over the difficult and dangerous job of keeping the company under control without any communications whatever. We had become so short of men that even the runners had to stay on the line fighting hard to help hold the ground we had won. At the time Lieutenant Everett took charge, the enemy were coming up three sides of the hill and our men were in trouble.

"The Lieutenant ordered us to open fire with everything we had while he took an exposed position on the side of the hill and called fire orders to our mortar. Our mortar fire finally stopped the advancing enemy. He then located an enemy mortar that had been giving us trouble all day and adjusted our mortar on it, knocking it out with a direct hit on the third round. He personally eliminated two enemy snipers who had wounded several of our men.

"It was largely through his daring and determination that we were able to beat off the strong enemy counterattacks. For 3 days and 4 nights he risked his life by going from one platoon to another under enemy machine-gun fire, keeping the men under control and helping them meet each problem as it came. At times he himself helped carry the wounded to safer places. The Lieutenant was sick during all this fighting, yet he never thought of his own discomfort but stuck by the men who might have lost out if it had not been for his leadership."

Discipline—First Function of Leadership

In the frequent discussions of battlefield leadership we are often prone to overlook the first function of

leadership—the development of unit and individual discipline.

"The battle is the pay-off," said *Lieutenant Colonel Ralph Ingersoll,* and it is exactly that—the pay-off on the leadership which welded individuals into a smoothly functioning team.

Discipline Applies to All

Captain Jack Gerrie, Company Commander of the *11th Infantry* writes: "Discipline is sometimes the determining factor between winning and losing.

"I once listened to a wounded officer back from fighting in Africa, who said 'forget the formalities in the field, forget the officer and NCO distinction in the field. Keep all the eight-balls—they will fight like hell.' I do not believe he had seen very much action or he would not have made such a statement. I have had a few 'eight balls' who did 'fight like hell.' But I have also had a lot of men who never caused me trouble, who were quiet, confident, and well-disciplined, and these men fought much better."

Discipline Is Based upon Confidence

Only a few hours after he had lost both legs in combat, *Lieutenant Tichenor,* who had acted as a platoon leader with the *5th Division, Twelfth Army Group,* made this comment to a military observer: "Our officers have to be real leaders. Discipline in combat depends largely upon the men's knowing that the officer in charge of them knows his business and is not reluctant to take necessary risks."

A battalion commander of the *6th Armored Division* in FRANCE makes a similar comment: "Unless the officer or NCO knows his job completely, the men can

have no faith in him; unless the men have faith in their leaders their battle discipline will be poor."

COMMENT: A leader who has not gained the respect and confidence of his men during training has two strikes against him when he enters combat; the element of doubt in the minds of his men may be the difference between success and failure of a mission.

A Definition of Discipline

Says *Colonel E. L. Munson, Signal Corps:* "True discipline is voluntary; it is based on knowledge, reason, sense of duty, and idealism. A good leader develops in his men a cheerful and willing obedience that wants to respond—that *wants* to carry out his orders. This kind of discipline will in the end bring combat results as no other kind possibly can."

Confidence in the Leader Is Vital to Success.

Replacement Orientation

Replacement Instruction—the Wrong Kind

A Lieutenant comments on his ominous introduction to front-line existence: "On my way to the front as an officer replacement, I met several individuals who had come back from the line. Invariably they recounted to me their hair-raising experiences—their outfits had been 'wiped out,' or 'pinned down for days'; 'officers didn't have a dog's chance of survival,' etc. One platoon sergeant went statistical on me; he said his platoon had lost 16 officers in one 2-week period. I expected confidently that I would be blown to bits within 15 minutes after my arrival at the front.

"Later experience has shown me that enlisted men who come in as replacements are subjected to similar morale-breaking tales. I have tried to get my old men to give the new replacement a break by being careful not to exaggerate their battle experiences or in any way distort the picture of front-line existence. Give the new men a common-sense introduction to the combat zone and there will be fewer men going on sick call before an attack."

Noncoms and privates of *Company "K," 11th Infantry,* ETO, draw attention to the same problem:

"Our replacements come to us filled with tenseness and dread caused by stories they have heard in the rear. Special instructors from the front should be used at replacement centers to talk the new men out of this unnecessary panic. Of course, the soundest remedy is to have the replacements occupy a defensive position for a time, but even then the kind of treatment they are given upon arrival at the front makes a big difference in the amount of good they will do their new outfit."

COMMENT: Company commanders and platoon leaders should meet, orient, and indoctrinate all replacements so that they gain an authentic picture of current battle conditions. This should be done even though battle indoctrination has been started in replacement

Don't Scare Hell out of Replacements.

centers. Knowing what to expect, even when the expected is bad, is better than not knowing and consequently imagining the worst.

—the Right Kind

Poor orientation of replacements may seriously affect the fighting ability and survival chances of the men themselves and may also endanger the unit with whom they first serve. For these reasons, leaders of platoons, squads, and companies should find out exactly what orientation and training have been given the men and should provide essential orientation "on the spot" in so far as is practicable before sending them into combat. If a divisional training plan similar to that described below is in operation, the problem of inducting new men into the smaller units is much simplified, and lower-unit orientation can be modified accordingly.

This effective training system is described by the *Chief of Staff, 83d Division,* ETO: "Our division has received thousands of replacements since its first combat experience in Normandy. More than 90 per cent of these replacements have been infantry. Many of the replacements came into the division lacking confidence in their ability and paralyzed by apprehension engendered by loose talk before and upon their arrival.

"Some time ago we started a course of instruction for our replacements. It lasts 2½ days and is conducted by battle-experienced personnel. Particular emphasis is placed upon the following points:

"a. *How to live in a foxhole.* This includes construction of the foxhole and information on preserving health and maintaining bodily cleanliness under combat conditions.

"b. *Development of an aggressive attitude.* We emphasize particularly their better chances for survival if they avoid being pinned down.

"c. *Use of the fragmentation grenade, antitank grenade, and bazooka.* We give about 25 per cent of the replacements a chance to fire the grenade and bazooka; all of them observe the effectiveness of these weapons.

"Throughout the course, the men are trained in groups of 12. They are later assigned to organizations by these same groups so that each man always has some acquaintances when he joins his combat unit.

"We have found that this course of instruction gives the replacements much greater self-confidence; it 'debunks' the notions they have picked up at the rear. The course has definitely improved not only the morale but also the fighting ability of our replacements. We expect to continue the plan for all replacements who come to this division."

Common Failings

Says a successful *Third Army Rifle Company Commander,* ETO: "The following failings are common among replacements. They must be strictly and promptly eliminated if excessive casualties are to be avoided and combat efficiency obtained:

"Lack of ordinary discipline (saying 'Yeah' instead of 'Yes, sir,' etc.).

"Jumping at the sound of every outgoing or incoming artillery shell.

"Unwillingness to use the rifle. (Many have been told never to fire without direct orders for fear of revealing positions.)

"Lack of pride in self, organization, work.

"Poor physical condition.

"A tendency to 'bunch' together when in danger.

"Freezing under fire.

"Slovenliness in care of equipment.

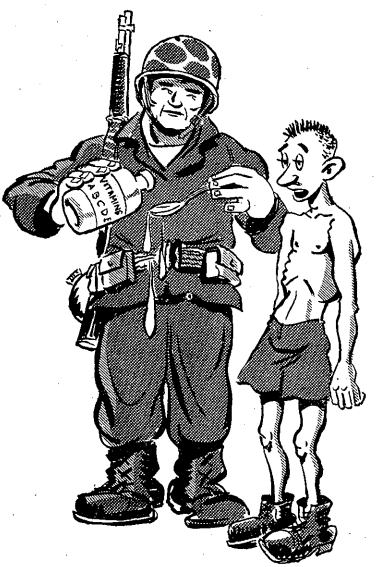
"Lack of skill with rifle and other infantry weapons.

"Fear of the night.

"Ignorance of squad formations.

"Ignorance of field sanitation and of personal hygiene in combat areas."

COMMENT: Replacements who exhibit these deficiencies have usually not had the advantage of such a training system as described above.



Replacements Must Be Physically Conditioned.

River Crossing Suggestions

"Practice makes perfect," the adage says, and American Armies have used all the rivers between Paris and Berlin for "practice" in river crossings in the face of the enemy. While they don't claim to be perfect yet, the engineers and assault infantry who have done the dirty work in spite of "hell and high water" have learned a lot about river crossings. Typical of the lessons reported from many sources are the selections quoted below.

Crossing by Assault Boats

Assault Boat Handling

A *Battalion Commander* of the *Fifth Division* strongly emphasizes the responsibility of the individual

soldier in conserving assault boats during resisted crossings: "Personnel in leading waves of river-crossing assaults should make every effort to conserve boats for succeeding waves by diligently applying principles learned in training. Strict observation of the following cautions results in smaller losses of boats, personnel, and time:

"Load personnel in the boat properly to avoid capsizing in rough water and to facilitate steering. A zigzagging boat takes longer to cross and, if the current is swift, lands you far below the rest of your unit—sometimes face to face with the enemy, in which case both personnel and boat may become casualties.

"Avoid shifting weight in the boat when you come under fire or when casualties occur; if you aren't careful on this point while crossing over rough water, you are sure to end up swimming.

"If there is no engineer crew to row the boat back, don't abandon the boat to the current when you disembark—pull it up on the bank or tie it.

"Don't lose the paddles.

"If it is your job to return the boat to the near bank, and the current sweeps you far below the embarkation point, make every effort to pull, push, or drag the boat back to the embarkation point or at least near enough to that point so that the boat may be used for further crossings.

"Remember that these boats serve as your only life line until the engineers have succeeded in building the bridge. Make every effort to keep your boat available for crossing the men and supplies still on the near bank."

Awaiting H-hour for the Roer Crossing.

Life-Saving Precautions

From *Headquarters* ETO after the ROER crossing: "Each man crossing was required to wear a life preserver. Life booms were constructed from rope suspended between floats. Power boats were posted downstream from crossing sites. Engineers were posted along the banks to help men who fell into the river. With these precautions, not one case of drowning occurred in spite of the fact that the crossing was made at night."

From the *Commanding Officer, 143d Infantry*, FRANCE: "A rope supported by several colored buoys

should be stretched from the near to the far shore by one boat in the leading wave of each company. The rope serves as a guide to succeeding waves and may also be of help to personnel whose boat has been sunk or overturned during the crossing."

Another ETO report includes this suggestion: "Red signal lights were used to guide troops to loading points and to assist in maintaining direction during the crossing to the far shore."

From a British report: "Briefing of boat personnel, after stream reconnaissance, helps avoid losses caused by hitting shoals and/or landing on islands, etc."

Footbridge-Construction Shortcuts

The Cable Problem

Comments from engineers after the ROER crossing: "As we had anticipated, the main problem in footbridge construction was the crossing and anchoring of the cable. Once that problem was solved, bridging proceeded rapidly in each case.

"At one site, the men were able to get the cable across during the night before the main crossing took place; they left it slack until time for its use.

"At another site, six unsuccessful attempts were made and the unit had to find a more suitable location before they were able to anchor their cable."

Projecting Cable by Mortar

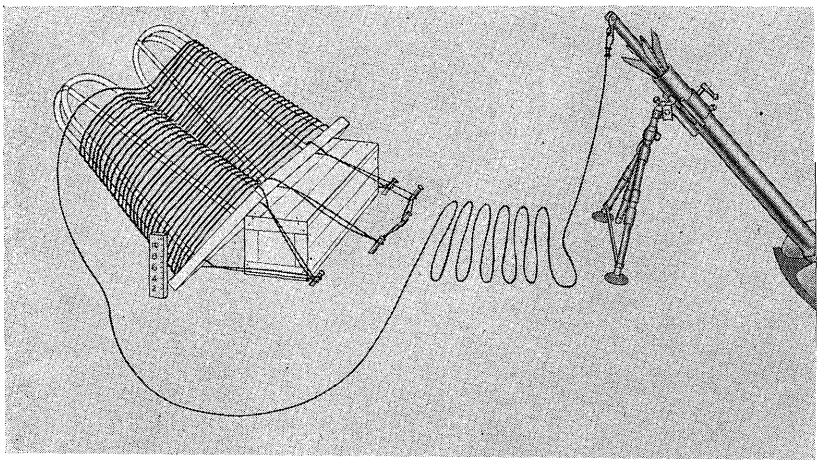
Officers of the *39th Infantry*, GERMANY, report a successful solution to the problem of crossing the cables needed in footbridge construction: "We have used the 81-mm mortar successfully for projecting cable across obstacles or streams. We remove the

charge from a high-explosive or smoke shell and insert into the nose of the shell a 1-in. pipe long enough to project past the muzzle of the mortar when the shell is seated. Four fins or grapnels are welded to the upper end of the pipe and a U-bolt is screwed or welded to the same end. A ¼-in. cable is bolted to the U-bolt by means of a cleat or shackle welded to the cable.

"The cable should be at least 215 yards long, although the range of the device will be somewhat less. The projectile will reverse itself in flight and land shell-end first.

"Great care must be taken to insure that the cable pays out freely; failure to do so may allow whipping and result in injuries to the men. To minimize friction, we used an improvised cable-holding plate (about 3 ft. x 5 ft.) to which were welded two winding-posts sloping sharply to a point. The cable should be figure-eighted onto the posts carefully; no kinks or overlappings may be allowed. Before firing, the plate should be tilted up at an angle of 45 degrees, the

Cable-projecting Device.



posts pointing in the direction of fire. About 30 feet of cable should be laid out and coiled in front of the mortar to allow for play and to prevent a violent jerk. When the cable has been fired and anchored on the far end, a vehicle winch can be used to pull the cable to desired tautness."

Boating the Cable Across

From the *Executive Officers* of the *135th and 1103d Engineer Groups*, GERMANY: "We had little success in crossing ¼-in. and ½-in. cables until we tried a method of using two reels and a husky eight-man assault-boat crew. A single length of cable was wound on two reels—one being set up on shore and the other in the stern of the assault boat. By securing the cable to the boat we were able to paddle part way across, dragging the cable out from the reel on shore.

When the drag became too great for the paddlers to make any headway, we simply released the cable from the boat so that it could pay out from the reel in the stern, and continued across."

Footbridge Expedient

Says the *Commanding Officer, 319th Engineer Combat Battalion,* GERMANY: "When the swift current turned the floats on end, making construction of a standard footbridge impracticable, we built a footbridge by using M2 assault boats for floats and lashing the duckboards to the boats with rope. Each boat was secured to both the float cable and the anchor cable."

Communications at the Crossing

By Spiral-Four Cable

From the *Signal Officer, 102d Infantry Division,* GERMANY: "During the ROER river crossing we used spiral-four cable in preference to field wire for wire communication across the river. The first cable was carried across by the assault wave. When it was knocked out, a new cable was laid by wire crews operating from assault boats. Both cables were laid under water. When the footbridge was completed, an alternate spiral-four cable was laid thereon."

By Radio

Says another ETO report: "Communications immediately after crossing were entirely by radio. Radio silence was ordinarily observed until contact with the enemy was made.

More Wire for the Bridgehead.

By Wire

"In some battalions, each company carried across a wire line in the hope that at least one of the lines would be operable after crossing.

"Several units reported success in shooting wire lines across the narrow stream by attaching light lines to grenades or bazooka shells." (See page 46, Combat Lessons No. 6.)

From the *84th Infantry Division*, ETO: "During the river-crossing operation, our communication wires were repeatedly cut by enemy artillery until we moved the wire some distance from the crossing sites."

Speeding the Crossing

Battalion CO Supervises

Comment from the *Division Engineer, 5th Infantry Division*, GERMANY: "During river-crossing opera-

tions, it has been found very desirable to have the infantry battalion commander or one of his staff officers present at the crossing site so that he can supervise his own troops during the crossing, direct men who have become separated from their organizations, and, by maintaining liaison with leaders of succeeding waves, minimize the time lag between waves."

Rehearsals Speed the Crossing

Recent British reports reemphasize the necessity for training and rehearsals: "Pretraining of personnel who are to launch and carry the boats pays off in efficiency. Careful organization and drill in loading and shoving-off procedures are similarly important."

Pretraining Pays off in the Moselle Crossing.

Engineer-Infantry Cooperation

From a *First Infantry* report: "There must be at all times, both before and during a river crossing, the closest possible cooperation between infantrymen and engineers. Each must understand the other and have complete reliance on the other to carry out his mission as expected."

DUKW's Expedite Supply

DUKW's have given excellent service as supply vehicles during several crossings but require special provisions for loading and turning, according to a report from the *80th Division*, FRANCE. "If DUKW's are used, crossing sites should be near roads and well away from intended bridge-crossing sites; turnarounds for loading and unloading should be provided on the near and far shores. Ramps, too, should be set up on both banks."

"In the Moselle crossing, the steepness of the river banks made it necessary that the DUKW's be moored alongside the bank during the loading and unloading.

"When currents are rapid, the DUKW's must be steered well upstream from the intended landing points."

Fast Crossing Method

From the *279th Combat Engineer Battalion*, ETO: "Enough boats to cross two battalions were lined up on the near bank. On signal, the first wave (one battalion) picked up every other boat, moved quickly to the water, and crossed. When that battalion landed

on the far shore, its boats were held against the far bank, and the second wave was given the signal to make the crossing. Thereafter boats recrossed individually, picking up infantry squads according to predesignated priorities."

Mum's the Word

Reported by the *279th Combat Engineer Battalion:* "When we move heavy equipment up to a river-crossing site, we practically eliminate noise by placing blanket padding over the hoods and equipping each truck with an extra muffler and an extra section of tail pipe."

Drying the "Dunked"

In the MOSELLE operation, one small building on each bank was kept warmed and supplied with enough clothing to provide for men who had become wet.

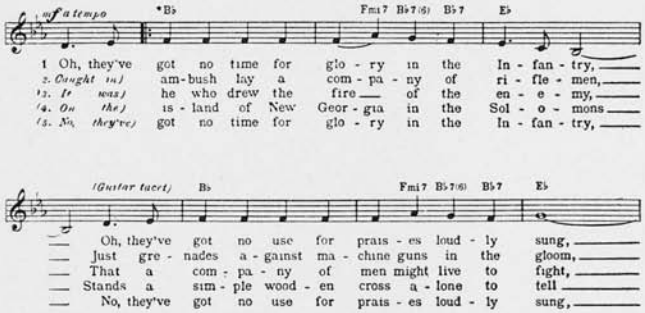
Rope Insures Rapid Withdrawal in an Emergency.

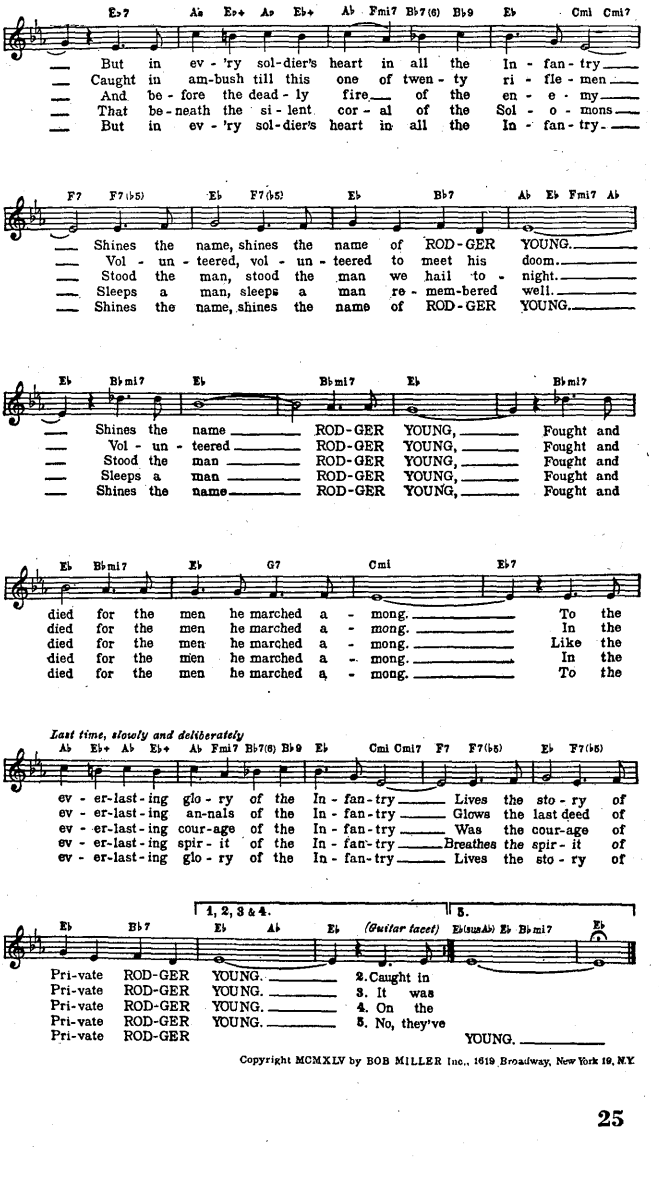
A Song about a Soldier . . .

This song is the story of a harmonica-playing infantryman of the 37th Division, a G. I. Joe known to his buddies as "Fuzz" Young. For over a year after Rodger Young's heroic death in the jungles of New Georgia this story lived on the lips and in the hearts of "the men he marched among." Now Private First Class Frank Loesser has set "Fuzz" Young's story to music. The result is a ballad which honors not only Rodger Young but heroic infantrymen everywhere.

"Rodger Young"

BY PFC. FRANK LOESSER





Rodger Young

"On July 31, 1943, the Infantry company of which Private Young was a member, was ordered to make a limited withdrawal from the battle line in order to adjust the battalion's position for the night. At this time, Private Young's Platoon was engaged with the enemy in dense jungle where observation was limited.

Caught in ambush lay a company of riflemen.
Just grenades against machine guns in the gloom.

"The platoon was suddenly pinned down by intense fire from a Japanese machine gun concealed on higher ground only 75 yards away. The initial burst wounded Pvt. Young.

It was he who drew the fire of the enemy
That a company of men might live to fight,
And before the deadly fire of the enemy
Stood the man, stood the man we hail tonight.

"As the platoon started to obey the order to withdraw, Private Young started creeping toward the emplacement. Despite a second wound, he continued his heroic advance, attracting enemy fire and answering with rifle fire. When close to his objective, he began throwing hand grenades, and while doing so was hit again and killed.

On the island of New Georgia in the Solomons
Stands a simple wooden cross alone to tell
That beneath the silent coral of the Solomons
Sleeps a man, sleeps a man remembered well.

"Private Young's bold action in closing with this Japanese pillbox and thus diverting its fire, permitted his platoon to disengage itself, without loss, and was responsible for several enemy casualties."

Patrol Pointers

Allow Time for Preparation

A Fifth Army training memorandum brings out the following points which should be of interest to all officers who have responsibility for patrol assignment, selection, and supervision: "The most frequent error in the assignment of patrol missions is the stipulation of a return time which cannot be met if the mission is to be properly executed and the required items of information obtained. The factor usually left unconsidered is the time required for essential preliminaries—selecting patrol members, assembling personnel, providing the patrol with special equipment, initial reconnaissance by the patrol leader, briefing of personnel, and movement to the starting point.

"Commanders and staffs, as well as patrol troops, should be made to realize the amount of detail essential to proper preparation of a patrol for each mission. Emphasize the fact that the patrol leader must be given the means and time to accomplish his mission.

Contact With the Main Force

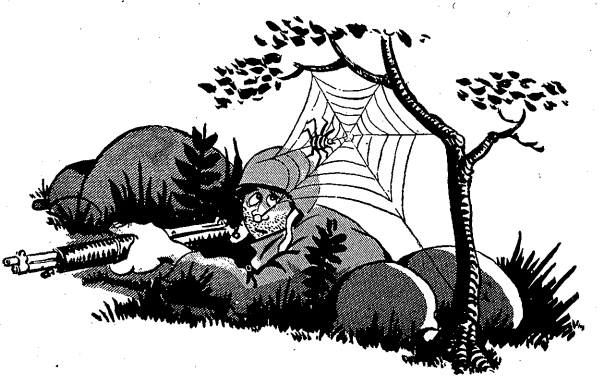
"Leaders of flank or security patrols should be impressed with the importance of maintaining contact with the main force at all times. Loss of contact has often proved disastrous; the opposite extreme, how-

ever, can also have serious results. One patrol leader, overly zealous about maintaining contact, caused the attack to involve the main body and develop into a major action for which the latter was not prepared.

Patrol Leadership

"Strictest discipline must be maintained during a patrol operation. Rigid control should be exercised to eliminate unnecessary noise, talking, sneezing, and—most important—ill-advised firing. All movement must be regulated to take full advantage of propitious conditions such as rainstorms, temporary obscuring of the moon by clouds, etc.

"One patrol had almost completed its mission when its presence and location were revealed to the enemy through an unguarded movement by one of its members. This betrayal nullified the entire effort of that particular patrol. Patience is of the utmost importance in patrolling.



"Patience Is Important in Patrolling."

"The success or failure of a patrol depends, in the final analysis, upon the qualities of leadership possessed by the patrol leader. In most cases, the commanders have selected their best officers and NCO's to perform this duty.

Organizing "Professional" Patrols

"Some commanders have gone so far as to organize permanent patrol groups whose principal function is to furnish personnel for battle missions. The officers selected for these groups are volunteers—the most aggressive, tough, and rugged officers in the unit. They are permitted to select from the unit men who possess the same qualities. After a period of intensive training in scouting, patrolling, battle drill, and physical hardening, the patrol group is attached to the unit headquarters from which it receives its missions.

"Fatigue and strain endured by battle patrols make it impracticable to assign them more than one major mission every two or three days. Upon completion of a mission, the men should be moved to a rear location, fed, rested, and prepared for their next assignment.

"By the very nature of their duties, these 'professional patrols' eventually achieve distinction within the unit, and a fine esprit is developed within the group. The unit commander learns to know the men of the patrol, their capabilities and limitations, and is therefore able to employ them to fullest advantage."

COMMENT: The presence of a professional patrol group in a unit should not be considered a complete

solution to the patrolling problem, nor should it operate to curtail the training of individual riflemen in scouting and patrolling. The professional group should be used for difficult or special missions, while normal patrolling continues as well.

Communications for Combat Patrols

From the *115th Infantry*, FRANCE: "Combat patrols, regardless of size, can and should be furnished with communications equipment that enables them to call for prearranged fires. Mortar fire is particularly effective in support of such groups. The practice of providing combat patrols with communications for calling for mortar support when needed has been of invaluable assistance."

Patrols Should be Furnished Adequate Communications.

How Not to Patrol

A Sixth Army report includes this account of an unsuccessful patrol action in NEW GUINEA. Though some members of the patrol exhibited splendid courage and initiative, the mission was not accomplished and casualties were high. The negative results of this patrol action were due in large part to several violations of basic patrol principles as pointed out below. A map of the area is shown on the opposite page.

Terrain

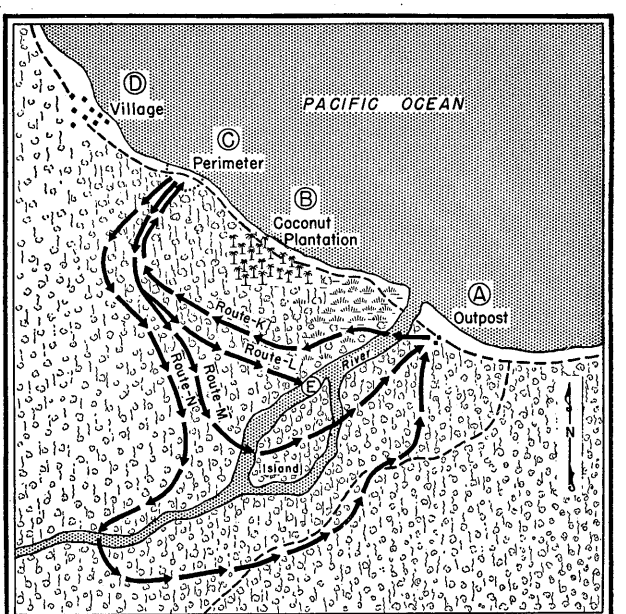
"The coastal flat northwest of the river is covered with Kunai grass 2 to 5 feet high, interspersed with wooded areas; travel is difficult and exhausting. Trees in the wooded areas are not close together, but the underbrush is dense and visibility is limited. A track paralleling the beach is about 8 feet wide and clear of underbrush. Along the beach is a 4- to 8-ft. embankment suitable as cover against small-arms fire from inland.

"The width of the river varies from 15 feet in some places to 35 feet in others; its current is swift. The stream bed is rocky and relatively shallow except for the main channel, which at the time of this patrol action was more than 6 feet deep as a result of recent rains.

The Patrol

"The patrol consisted of a rifle platoon reinforced by two 60-mm mortar squads, one intelligence man, a radio operator, and an aid man. Second Lieutenant Y, the platoon leader, was in command. First Lieutenant X from Y's company was attached to the patrol as observer and coordinator."

"The higher commander keeps the accomplishment of the mission in mind when he selects the patrol leader; the more important the mission, the more careful his selection must be. A good leader should have judg-



ment, initiative, courage, endurance, and be a highly skilled leader." (FM 21–75.) The attachment of Lieutenant X as coordinator not only divided responsibility, but also indicated a doubt in the commander's mind as to Y's ability to lead the patrol.

The Mission

"The mission of the patrol was to cross the river in the vicinity of A (a battalion outpost), to reconnoiter the coastal area from the mouth of the river to the village at D, and to destroy any enemy found in the area."

"The mission assigned by the higher commander to the patrol leader must be specific and unmistakable; indefinite missions invite confusion, casualties, and failures. One patrol cannot be expected to execute efficiently a number of missions." (FM 21–75.)

"Reconnaissance patrols are used primarily to secure information, maintain contact with the enemy, or observe terrain. . . . They avoid unnecessary combat and accomplish their mission by stealth. Reconnaissance patrols engage in fire fights only when necessary to accomplish their mission or to protect themselves." (FM 21–75.)

"A combat patrol executes missions which may require fighting to accomplish, or to help accomplish. . . . Every combat patrol secures information as a secondary mission." (FM 21–75.)

This patrol has been given two primary missions—reconnaissance and combat—without any indication as to which has priority. The directive to destroy any enemy found in the area, if taken as the primary mis-

sion, will preclude successful operation as a reconnaissance patrol. The mission should have been either combat, with reconnaissance as a secondary mission, or reconnaissance alone, in which case the patrol would engage in combat only to the extent necessary to complete its reconnaissance mission.

The Trip Out

"The patrol departed from outpost A at 1015, leaving one 60-mm mortar squad to furnish fire support of the crossing on call. A rope secured to both banks was used to help the patrol wade across the stream. Weapons and ammunition were ferried across in a 2-man rubber boat. The 60-mm mortar squad which had protected the crossing was last to cross. By 1115, all personnel and equipment had been crossed and were waiting for the scheduled artillery concentration before moving forward. At 1130, 80 rounds of 105-mm ammunition were fired on the coconut grove at B and along the coastal track in both directions from the grove.

"After completion of the artillery fire, the patrol reconnoitered along route K to the beach at C. Except for the killing of three Japs by the rear point no contact was made and the trip was uneventful. At 1405, the patrol arrived at C. A perimeter defense was established while plans were made and the patrol reorganized.

"For purposes of command and control, the patrol was then divided into 3 sections, consisting, respectively, of Second Lieutenant Y and 10 men, the platoon sergeant and 13 men, and First Lieutenant X and 20 men."

"The Patrol Reconnoitered along Route K."

Actually, command and control were not improved by this organization as was demonstrated later. Lieutenant Y in addition to commanding the patrol was also commanding one of the sections. Lieutenant X as a section leader was now under the command of his junior, Lieutenant Y.

"At this time, radio communication with the battalion commander at outpost A was established. However, the radio soon went out and did not function thereafter.

Contact

"The first contact with the enemy came shortly after the reorganization had been completed. About 20 Japs armed with automatic weapons attacked the perimeter from the southwest. Apparently this group had fol-

lowed the trail made by the patrol while enroute to the coast. In the brief ensuing skirmish, 10 enemy were killed and the remainder dispersed.

"The patrol then moved southeast along the coastal track toward the coconut grove at B. A party of about 10 Japs (presumably the remainder of the party which had previously attacked) followed a parallel inland route, and a running exchange of fire continued for about 20 minutes. When the advance elements of the patrol reached the northwest edge of the coconut grove, they received heavy machine-gun, rifle, mortar, and hand-grenade fire from their front and right flank. Three members of the patrol were wounded. It was

A Running Exchange of Fire Continued.

estimated that about 50 enemy were in the grove. First Lieutenant X assumed command, and because of the heavy fire ordered the patrol to return to the former beach position at C. Two of the wounded men had to be assisted.

"After their arrival at C the firing stopped and a temporary perimeter defense was organized. Lieutenant X, finding the men too closely grouped, ordered two sections to move farther inland. Neither section moved as far as Lieutenant X intended, so he signaled them to move farther. Apparently this signal was

Patrols Must Know Prescribed Signals.

interpreted to mean that the sections were to return to the river via separate routes, as had been discussed earlier when the patrol first reorganized at C, because both sections moved out leaving Lieutenant X at C with his section of 20 men."

"The patrol must be directed, regulated, and controlled at all times. Patrol members must be familiar with all prescribed signals. The leader may arrange a few additional signals for special purposes." (FM 21–75.) In this instance, the loss of control can undoubtedly be attributed to the poor chain of command

in the patrol organization, to the sudden change in command from Lieutenant Y to Lieutenant X while the patrol was in contact with the enemy, and to a failure to reach a clear understanding of plans and signals.

The Trip Back

"The platoon sergeant with his 13 men followed route M to the river without incident, crossed, and reported to the battalion commander at outpost A at 1600 hours. Second Lieutenant Y and his 10-man section made a wider circuit over route N and reported to the battalion commander an hour later without having contacted the enemy.

"When First Lieutenant X realized that the other two sections had gone, he proceeded to the river via route L with his section and the wounded men. One of the wounded died enroute and the body was carried. The section reached E without difficulty but found that a crossing at that point would be almost impossible. Here the river was about 30 feet wide, the current was very swift, and there were many boulders. Crossing at this point would have been dangerous even for excellent swimmers. An attempt to reach the original crossing site near A was unsuccessful because of enemy in position along the northwest bank of the river between E and A."

Patrols should return from a mission over a different route to avoid ambush. Alternate crossing points could have been determined by reconnaissance before the combat patrol was sent out. It appears that the enemy allowed the patrol to cross the river unopposed and planned to ambush it by closing in behind.

"Upon returning to E, Lieutenant X set up a perimeter in anticipation of an attack by the enemy he had contacted while attempting to reach the original crossing site at A. A sergeant was then sent out with the mission of crossing the river and reporting to the battalion commander at A for help.

The Rescue

"Meanwhile the battalion commander had received a situation report from the leader of the section which had returned over route M. Acting upon this information, the battalion commander had formed a group of about 20 men and had proceeded to the vicinity of E on the island. This group was preparing to cross the river to aid the remainder of the patrol when they observed Lieutenant Y and his section crossing about 800 yards farther upstream. Believing this to be the balance of the patrol, the battalion commander returned his group to the outpost. Shortly after the commander and his group had departed from E, the sergeant from Lieutenant X's section crossed the river and proceeded to A to report. Again the battalion commander proceeded with his group to the island, this time contacting Lieutenant X at E.

"In order to evacuate the wounded, it was decided that a rope must be used. Several attempts by Lieutenant X to cross with the rope were unsuccessful. Finally the battalion commander and four others grasped hands and formed a human chain out into the water. Lieutenant X removed his clothes and tied the rope to his waist. From a point upstream he plunged into the river and was successful in reaching

the hand of one of the men in the human chain as the current carried him downstream.

"As the men in the human chain with the aid of others on the bank were pulling Lieutenant X and the rope ashore, an enemy machine gun opened up from the northwest bank. Although the rope was eventually secured on the island one man had been killed and five wounded, including the battalion commander. The wounded were evacuated to the outpost, where the battalion commander died within an hour."

Although his bravery was commendable, the inadvisability of a battalion commander participating in a patrol action is obvious.

"The Rope Was Eventually Secured."

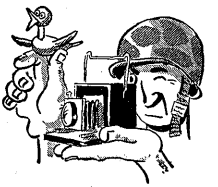
"Subsequently the enemy subjected the island to heavy machine-gun and mortar fire; however, the men on the island stayed in position to cover the crossing of the remaining 17 men on the far bank. One of the 2 wounded men with this group of 17 was successfully evacuated, but the other was swept away and drowned while trying to cross. Of the remaining 15 men only 8 succeeded in getting across the river before the Japs closed in. These men said they had been subjected to heavy mortar and grenade fire, and it was believed that the others were killed.

"It is believed that all of the uninjured men in the group could have crossed the river before the enemy closed in on them, if they had not chosen to 'stick it out' in the hope of getting the wounded across."

The patrol crossed a difficult obstacle and moved rapidly deep into hostile territory where the enemy situation was obscure. There was apparently very little reconnaissance on the part of the patrol, and it was unaware of the enemy strength in the immediate vicinity.

The patrol was of sufficient strength to fight its way out against a superior number of enemy, but when control was lost and the patrol was disorganized and split up, it was susceptible to defeat in detail.

Photo-Orientation Methods



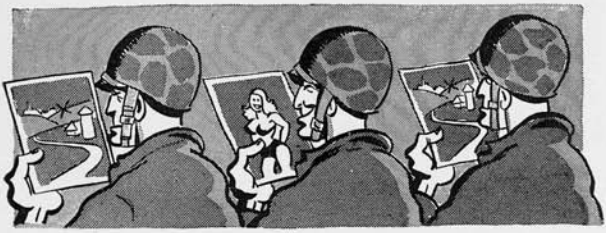
Preattack Orientation by Ground Photo

Reported by Headquarters, 4th Tank Battalion, ITALY: "Ground photographs of the zone of advance assist considerably in coordination of units engaged in an attack.

"For an infantry-tank operation involving direct-fire support against an enemy strongpoint in the Central Apennines, a ground photo of the objective area effectively supplemented maps and aerial photos. The picture was 'shot' from a forward position about 1,500 yards from the strongpoint.

"Enlargements (8½ x 11) were made and distributed to echelons down to and including each tank commander. Known enemy points of resistance and other likely positions were marked on a master sheet, and from that a number of targets were selected. These targets were assigned to specific sections within the supporting tank company.

"All tank commanders were taken into the front lines to observe their own targets from the positions their tanks were to occupy. Azimuths to the individual targets were shot and quadrant elevations were figured so that accurate fire could be brought to bear



"Photographs Made Orientation Easier."

even if adverse weather conditions prevailed during the attack. In addition to the data on its own target, each tank crew had all other targets marked by number, and the exact range to each one was marked on the individual photograph.

"The attacking infantry called for concentrations by using a code word followed by a number. This was relayed to the commanding officer of the supporting tanks, and he in turn gave that concentration to the tank already laid in on the target. If additional fire was to be brought to bear, all tanks would be called to come in on the target; this could be done in a very short time. Because of the accuracy of this direct fire, it was possible to give very close support to the infantry without fear of casualties from our own fire.

"These ground photographs can also be used by the infantry in the selection and designation of routes of approach. The photographs make it a great deal easier to orient personnel before an attack.

"FO's, too, were assisted by these enlargements. Exact coordinates for key points could be worked out

beforehand, and when an attack occurred, it was easier to locate exactly the points of enemy resistance."

Panoramic Photos for Orientation

Suggested by the *First Special Service Force:* "While in a defensive position along the French-Italian border, we used enlarged panoramas taken from all forward ground OP's to assist in orienting patrols, agents, civilians contributing information, and artillery observers."

Gridded Panoramas for OP's

From a *Regimental S–2,* ETO: "The accuracy and speed of target designation by OP personnel were greatly improved when we supplied each OP with a gridded panorama of its sector of observation. Duplicate copies of photographs and grids were given to the Battalion CP, the Regimental CP, and the Battalion Artillery Liaison Officer. To designate a target, the observer would merely locate the corresponding point on the photograph, orient the grid on the photograph, and then transmit the photograph number and target coordinates to the CP.

"These designations are extremely accurate for close and medium ranges but are inaccurate at long ranges to the point of being unsuitable for artillery fires. To meet this difficulty, observers were taught to select map coordinates for distant targets after checking against reference points marked both on the map and the photograph.

"Panoramic views taken from the OP's were the most effective. However, in one situation we sub-

stituted satisfactorily some low-angle aerial obliques taken by artillery liaison planes from locations immediately above the MLR.

"The coordinate grid can be drawn on pieces of cellulose acetate. Each copy of a photograph must bear identical orientation marks and the photograph number."

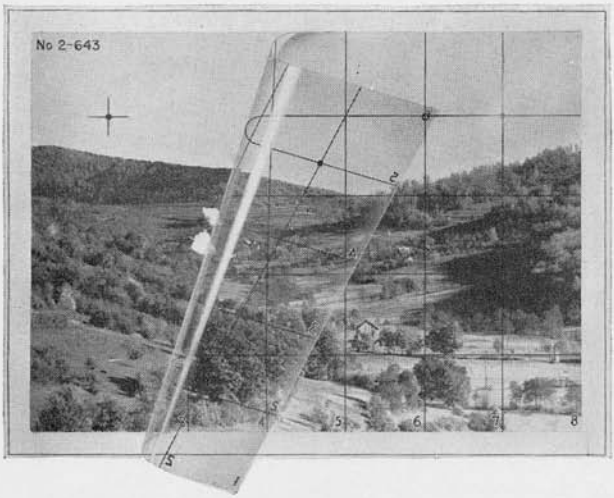


Photo Coordinate Grid.

Engineering Ingenuities

Supply—in Spite of High Water!

Reported by *Staff Sergeants Lewis E. McKenzie and James R. Gaveske, 135th Infantry,* ITALY: "On the first crossing of the Volturno River, we came up after dark to the regimental CP and found that there was no way to cross the river by truck. Rations, water, and ammunition had to be gotten across.

"First, we tried a jeep, but the jeep went downstream. The next thing we tried was pulling a 2½-ton 6 x 6 truck across by its winch. This worked okay so we loaded a jeep and supplies on the truck and then dragged it across. We kept that up until we had 4 jeeps across with which we could haul the supplies out to the companies about a mile away. We moved all of the rations and ammunition that night by the same process. We also took all of the casualties back that way."

Bridge Construction Expedient

The successful use of an expedient bridge near Soputa, NEW GUINEA, is reported by *Captain Ralph E. Reed, Company Commander, Combat Engineer Battalion:* "The Girua River is a shallow, sandy-bottomed stream subject to flash floods during the

rainy season. These factors made impossible the construction of a standard trestle bridge. Equipment was not available for either a ponton trestle or a pile bent bridge. The method shown below was used to provide the needed bearing for trestle bents. It also prevented scour that would have occurred with standard trestle erection. The entire construction was from round timber.

"Small piling, 4 to 6 inches in diameter, were driven under each sill to form a series of 8 to 10 X-shaped supports (see Figure 1). The crossed piling were so driven that the crossing points were at a depth which permitted the sills to bear on the stream bed when fitted into the upper angle. Empty 25-pounder shell cases were used on piling tips to prevent damage from sledging. The upper arms of the piling were wired together and windlassed. Directly upstream from the trestles, holdfasts were driven (see Figure 2). The erected bents were anchored by cable to these holdfasts.

"This bridge crossed the stream at a width of 200 feet. It withstood all types of Class 5 traffic and was subjected to many severe floods but was still in good condition when replaced after 6 months."

To the Engineer in the Woods

A *VI Corps* report recommends: "Tank dozers are the most effective means of removing abatis and other log obstacles commonly encountered in wooded areas.

"In the soft loam generally found in wooded terrain, corduroy roads will accommodate heavier traffic and require less maintenance than any other type of improvised surface."

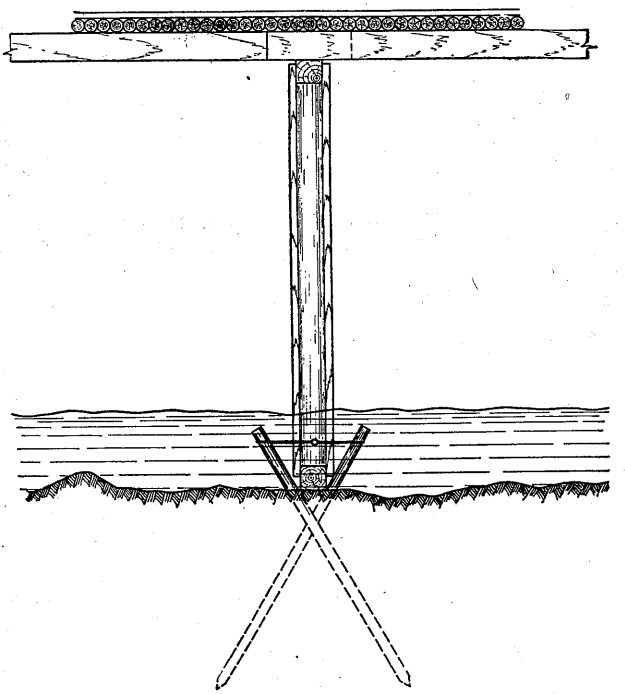


Figure 1. Crossed-piling Support for Sill.

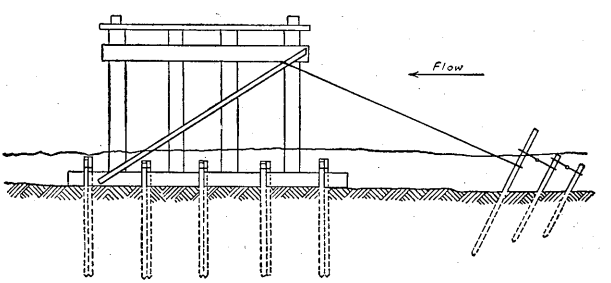


Figure 2. Holdfasts for Anchoring Trestle.

Third Army Troops Corduroy French Road . . .

Cording Roads

Sergeant Norman J. Roenbaugh, Infantry, SOUTHWEST PACIFIC: "The only road that seemed to cope with the heavy mud in the Central Solomons was the heavy-timber corduroy type. The engineers used expedient sills made of 18- to 20-in. logs for stringers."

Preventing Bent Truck Frames

A helpful hint for road-building engineers comes from *Captain Clyde G. Grant, Northwest Service Command,* NORTHWEST CANADA: "When using the 1½-ton dump truck for extensive road-surfacing operations, it was found that the frame bent at a point between the rear of the cab and the front of the dump bed. The condition was corrected by welding a sheet of ⅝- by 6-inch steel plate along the frame on each side."

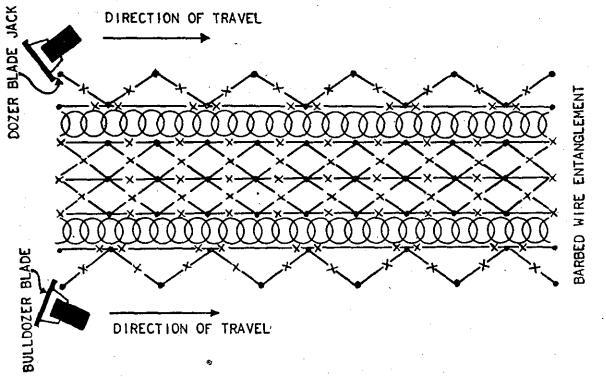
. . . With Timber Cut on the Spot.

Getting Cable Across Streams

Commanding Officer, Reserve Combat Command, 6th Armored Division, FRANCE: "Cables can be carried over streams by boat or shot over by grenade.

"When using the boat method over swift streams, the first boat should be a light one with a small outboard motor, carrying two or three men and a light line for drawing the cable. Large boats are harder to handle before the cable is in, and the larger propellers are likely to strike obstacles and become disabled.

"On one occasion when two boats had been lost while attempting to carry a cable over a swift stream, we used a rifle genade to do the job. Engineer tape was tied to the grenade and fired across the river. Men on the far shore then pulled over a telephone wire and, finally, the cable."



"Bulldozing" Beach Wire Entanglements

Suggested by *Lieutenant Elmer F. Bronke, 156th Engineer Port Construction and Repair Company,* after experience near CHERBOURG: "When removing barbed-wire entanglements (especially beach entanglements) by bulldozer, I always instruct the driver to approach almost parallel to the entanglement, hook the blade-jack of the dozer blade onto the barbed wire, and proceed in reverse. (See diagram.) This method causes the barbed wire to roll up and has several advantages.

"a. It avoids fouling of the bogie wheels and undercarriage of the dozer, as invariably happens when the wire is pushed ahead of the dozer.

"b. The rolling action of the wire exerts an upward pull on the stakes instead of driving them into the ground or merely bending them as does the pushing method.

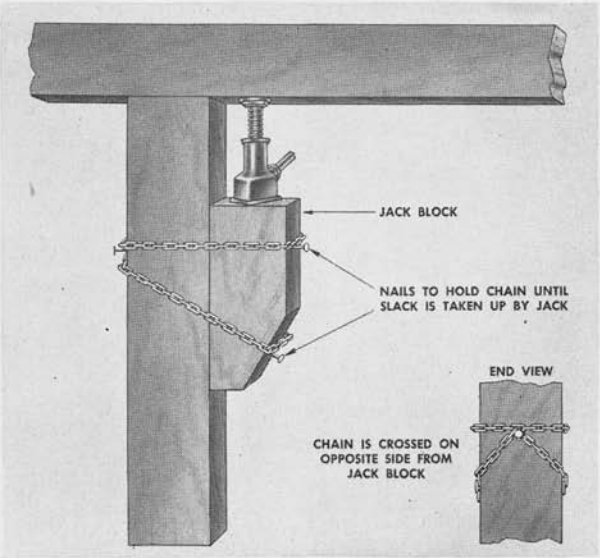
"c. Mines and booby traps that are detonated in this process have only lateral effect on the bulldozer

and driver; in the pushing method, both driver and dozer are directly over the mine when it is detonated.

"The initial path of the dozer should be swept for mines before the dozer traverses it in the next drag. After the barbed-wire entanglement has been removed the area should be thoroughly swept again, this time to locate deeply buried mines."

Raising Bridge Caps

An *Engineer General Service Regiment*, MIDDLE EAST THEATER, has sketched a simple but effective way of raising a bridge cap for shimming, which often becomes necessary because of the sinking of the piers of military bridges soon after construction.



Preventing Brake-Hose Tears

Prevention is easier than repair according to the *634th Engineer Light Equipment Company:* "To eliminate the catching and tearing of the brake hose on vehicles by the loose ends of tire chain, we removed two links from the inside longitudinal chain. When being mounted the chain must be laid out to insure that the short chain is on the inside."

Road-Repair Expedient

"A nearly impassable 200-yard stretch of road was effectively repaired by the use of such unorthodox materials as baled hay, building bricks, and roofing tile," reports the *Commanding Officer, Company A, 297th Engineer Combat Battalion,* ETO. "The road was a quagmire to a depth of 3 feet. To stabilize the mire, 30 bales of hay were spread over the road and covered with a thick layer of building bricks mixed with more straw. This was topped by a 3-in. layer of roofing tile. Each layer in turn was packed by passing traffic. The resulting surface was excellent."

Using Mine Detectors Under Water

Standard mine detectors have been waterproofed and used successfully under water by Engineer troops in Italy. From *Allied Force Headquarters, Engineer Section,* came the following data: "One end of half a 10.50–16 inner tube is closed by means of a Jubilee clip. The open end is drawn over the detector and up the detector arm. The sleeve of a gas cape is pulled over the other end and placed inside the end

of the inner tube. The two are fastened together around the detector arm by another Jubilee clip.

"A weight of 6 to 10 lbs. is required to counteract the buoyancy of the rubber tube. This weight may be supplied by placing a brick between the coil and the rubber bag, or by draping a sandbag full of gravel in saddlebag fashion about half-way up the detector arm, lashing it round, and anchoring it.

"After immersion in water for three hours, this model showed no seepage and the detector worked normally, picking up metal in deep water at 1, 2, and even 3 feet under the detector."

"I think you'll find this calls for special preparation, Bud!"

OP and CP Security

Even at this late date, needless casualties, delays, and expenditures of effort are being caused by breaches of OP and CP security rules. The inevitable results of security carelessness are pointedly illustrated by the three following incidents.

Carelessness Costs Lives

Reported by *Technician Fifth Grade Ernest J. Langie, 135th Infantry:* "We stayed in one CP for 2 weeks without drawing a shell and felt quite secure, for we had been told that the enemy hadn't been shelling in that particular vicinity for the past 30

days. Eventually, however, a few of the men either forgot or disregarded their instructions. They washed some white towels and shirts and hung them out to dry—an effective signal for enemy artillery fire upon our CP. Three of our men were killed in the shelling that followed this breach of security."

Learning Security the Hard Way

Reported by an *Infantry Battalion Commander*, ETO: "After being shelled out of two CP locations (the first time with severe casualties) we reorganized a sadly depleted CP group and opened for business in another building. A third-story battalion OP in the same building could be reached only by passing a large open window on a stair landing. Since the entire village was under enemy observation and direct fire, it was necessary to crawl past this open window. To insure that this would be done, a sentry was stationed in the stairway. All went well until it was discovered that the Sergeant Major had just covered the opening with a huge sheet of tin 'so that the sentry could be released for work with the wire team.' We abandoned the CP in haste and moved to an already established alternate CP (the only remaining location in the town). The last men had hardly left the building before it was taken under direct artillery fire and rapidly disintegrated.

"This incident thoroughly impressed our personnel with the folly of signalling OP and CP locations to the enemy by altering the outward appearance of a building after occupancy. That particular error was not repeated."

One Mistake Is Too Many

Reported by the *Commanding General, 1st Infantry Division:* "Officers visiting front-line units should be warned against actions that might reveal to the enemy the locations of our installations.

"In one case, an observation post was located in a wrecked building. Inside walls of the rooms had been camouflaged to give a dark background, instruments had been set well back in the rooms, the observers were careful to move about only in the shadows. All went well until the day when some visiting officers stopped by. They moved about freely, even leaning out of the windows with their field glasses. Within half an hour, the building was completely destroyed by enemy fire. One of our observers was killed."

"You sure have a fine view from this OP, Sergeant."