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PART ONE: GERMANY

Section I. U. S. WOUNDED DISCUSS AXIS MINES AND BOOBY TRAPS

1. INTRODUCTION

A number of U. S. soldiers, who were wounded by Axis land mines and booby traps during the Tunisian campaign, have made interesting and useful comments based on their experiences with such devices. The following extracts from their remarks should be regarded as supplementary to three articles which have appeared in previous issues of this publication: "Booby Traps" (*Intelligence Bulletin* No. 1), "Minefields in Desert Terrain" (*Intelligence Bulletin* No. 5), and "Recent Trends in the Use of Mines and Booby Traps" (*Intelligence Bulletin* No. 10).

2. COMMENTS BY U. S. WOUNDED

We had laid a good many British Mark V mines in the approach to Faïd Pass. The Germans, realizing that we were about to lift our own minefield, sneaked up at night and booby-trapped the mines on the edges nearest them with antilifting devices.

When the Germans lay their "bouncing babies" ["S" mines] ¹ in shell holes and craters, they generally set the mines for pressure.

¹ Several of the most widely used types of enemy mines, including the "S" mine, are described and illustrated in this issue. See pp. 8-19, 29-31, and 43-46.

What the enemy hopes is that our boys will hastily jump into the holes to take cover, without even suspecting the presence of mines. It doesn't take our men very long to learn that the enemy is always trying to outguess us, that he's smart, and that caution pays.

I'd like to say something about "double bluffs," as we call them. You see something which looks like a trip wire, and which would ordinarily lead to a pull-igniter. The wire is taut. Also, it's out in full view—suspiciously so. If you cut the wire, a hammer sets off a charge of some kind—perhaps not a mine at all. It's just another instance of the enemy trying to outguess us.

You've probably heard about the German "butterfly bombs."² A shallow foxhole usually affords sufficient protection against butterfly bombs, but who digs a shallow foxhole any more when he has time to dig a deep one? That's one thing I've certainly learned—to dig deeper and feel safer.

An important point to remember about enemy methods is that they aren't cut-and-dried. You can't depend on the Axis always doing the same thing, day in and day out. The enemy goes in for variety to catch us off our guard.

I can certify that going blindly up a gully which may be the wrong one is a damn fool stunt! The reason I lost a leg is simply this: I didn't pick out landmarks carefully enough in the daytime, and when I was retracing some ground in a jeep at night, I deviated just a little from a route I'd gone over only once before. I was heading for a certain gully. Instead of being absolutely sure that I was entering the right one, I took a chance and entered what I vaguely guessed was the right gully.

² Butterfly bombs are dropped in a container which holds 23 bombs and which is fuzed to open after falling a predetermined distance from a plane. Each butterfly bomb, in turn, is fitted with one of three types of fuzes: (1) A fuze designed to operate while the bomb is still in the air, or on impact; (2) a clockwork fuze which can be set to function at any time up to 30 minutes after the bomb becomes armed; (3) a highly sensitive antihandling (booby trap) fuze which becomes armed on impact, but does not detonate until subsequently disturbed.

A Tellermine got the jeep, and it got me, too. What I should have done was to go back a bit and get my bearings.

If I were to go through the North African campaign again, I'd train myself better in using my eyes at night,³ and I'd form the habit of noting landmarks more carefully during the daytime. Even though a lot of terrain features are lost at night, there's always a good chance that a remembered landmark will remind you of the position of another, in relation to it.

If you see a sign saying *Achtung! Minen!* or "Attention! Mines!", that's one time when you want to believe in signs! We learned not to play the smart-aleck game of firing or throwing stones at objects in an area where there was a warning sign. This kind of tomfoolery sometimes disturbed delicate mines and booby trap mechanisms so that they were harder to detect and neutralize later. Also, there was an ever-present danger of "sympathetic detonation," whereby one explosion would cause another—and of course you couldn't predict where.

I lost my right hand by picking up a German "egg" grenade that I saw lying on the ground, with its pin apparently in. Feeling confident that it was safe, I went right ahead and picked it up. It hadn't occurred to me that fine piano wire might lead from the other end of the grenade to a stake sunk into the ground directly underneath.

Something even worse happened to a British squad leader I knew over in Tunisia. The squad came across a nice German Luger [semiautomatic pistol] lying on the ground, just waiting to be picked up. The squad leader was wary. He said, "It's probably booby-trapped. I want all you men to stand aside and watch carefully while I show you a safe way of testing it." He tied a cord to the trigger guard, and carried the other end of the string over to a foxhole, which was about 15 or 20 feet away. "Now here's what I'm going to do", he said. "I'll crouch

³ The reader is referred to "How to Use Your Eyes at Night," *Intelligence Bulletin* No. 6, p. 66.

in the foxhole, and draw the cord so that the Luger will move and detonate any pull-igniter which may be attached to it."

The squad leader jumped into the foxhole, and instantly there was an explosion. The Germans, anticipating just what his line of reasoning would be, had mined the foxhole with a couple of "bouncing babies" set for pressure and, incidently, hadn't even bothered to booby-trap the Luger at all.

I'd like to say something very frankly to fellows who haven't yet had experience in fighting the Germans. Everybody in my outfit will back me up in this, too. Remember that the enemy is just as smart as you are, and possibly smarter. Don't be careless—this is just what the Germans hope you *will* be. And don't form the habit of showing off, either. Cockiness can be the curse of green troops.

When the Germans abandon a gun position, they are likely not to lift the mines surrounding it. Instead, the enemy leaves them there for us to stumble onto, later on.

The Germans think ahead. They try to anticipate what we'll do under every circumstance. If our fellows take this fact into account every minute, and move as surely and as carefully as Indians, they aren't going to be caught unaware.

It's true about Tellermines being laid in the shoulders of roads, especially where vehicles are likely to swerve out somewhat, as on turns. I was the guard in a jeep that got blown up that way. Two men were killed, and I lost my right leg and my left foot. I'd been over the road once before, but it was the driver's first time. There's a possibility that the mine had been laid at night by a German slipping back into our territory, but of course it may have been there all the time. We went over on the shoulder as we rounded a curve, going a little too fast.

Our M3 tanks were advancing across a plain, and were engaged in hot and heavy action. A Tellermine got the left track of my tank. None of us realized that the track had been

smashed; we didn't notice this particular explosion, and we weren't thrown against the sides of the tank or anything like that. We were in the heat of battle, and were firing continuously. I tried to back off to execute a maneuver, and only then did I realize that the track was broken and off. At this point we were hit by an 88 and were set on fire. I gave the order to abandon the tank. The driver was wounded as he was climbing out.

A couple of minutes later I was lying on my belly, keeping as well down as possible and trying to dress the driver's wound. He was lying on his back. There was a hell of a lot of action going on. More than ever. I happened to move my leg just a little, and it may have caught a wire which detonated an anti-personnel mine. I hadn't noticed any wire, because I'd been so busy trying to dress the driver's wound and meanwhile avoid all the fire which was going on overhead. Maybe the pressure of my foot or leg would have been enough to detonate a pressure-type igniter—even while I was lying prone. I'm not sure about this.

[NOTE.—It is entirely possible. The soldier in question is heavy-set, and, when he shifted his leg, he may have brought it down on the igniter with considerable force.]

The terrain was characterized by sandy stretches and grass clumps. Even though I was in a mighty hot spot, I wish now that I'd investigated the ground in that immediate neighborhood for trip wires, or for those little three-pronged igniters that stick up just above the ground, or for suspicious signs of any kind. When I realized that a Tellermine had got our tank track, I should have had sense enough to suspect the presence of antipersonnel mines, too. The Germans very often lay "S's" and other antipersonnel types near their "T's."

I don't want to sound at all boastful, but up until this time I hadn't felt nervous, and honestly I still didn't. Perhaps it was because so much hell was popping that no one thing had a demoralizing effect. Anyway, when the mine got my foot—it put

a good many fragments here and there in both legs, too—I had to leave the driver and start crawling back across the plain. I crawled back more than a mile. I kept looking for buried mines, too, believe me! Eventually I was discovered by a British tank.

The Germans use mines so liberally, especially when they're on the defensive, that you've got to suspect every inch of terrain. I'm not trying to make a high-sounding statement for effect. I'm speaking literally!

The Germans mine natural tank runs. During a withdrawal they are especially likely to lay Tellermines in positions that afford good defilade for tanks.

By and large, you won't find booby traps in places that are inaccessible. If you make your own trail, you're likely to be a lot safer.

We soon learned to leave suspicious-looking objects alone and notify the engineers. Once my platoon worked for the better part of a day in a little clearing, paying absolutely no attention to a beautiful silver watch that lay on the ground right smack in the middle of it. When we finally left the clearing, the engineers still hadn't come up. Even so, we left the watch lying there. Don't think we didn't arrive at this state of discipline through experience, though!

In paths and defiles the Germans used a number of antipersonnel switches that they had captured from the British. An antipersonnel switch is a pressure-release device, shaped like a pencil.⁴ It usually is sunk in a path or narrow defile and its $\frac{3}{4}$ -inch tip concealed with mud, dirt, or leaves. It projects a bullet upwards. Our nickname for these switches is "castrators"—but most of the time what they really do is go up through your foot, or through the tire of a vehicle.

⁴ For further details about the British antipersonnel switch, with a sketch, see pp. 80-82.

Section II. TELLERMINE, "S" MINES, AND NOTES ON THEIR USE

1. TELLERMINE (FOUR TYPES)

The German Tellermine¹ is widely used against tanks and other vehicles. References to the tactical employment of this weapon have appeared frequently in the *Intelligence Bulletin* (see index, p. 83). To date, four different versions of the mine have been encountered.

a. Tellermine No. 1 (see figs. 1 and 2)

This circular mine, which contains 11 pounds of TNT, is about 1 foot in diameter. It has a slightly dome-shaped lid, from the center of which the top of the striker mechanism projects. The mine is detonated by a weight of about 300 pounds. As secondary firing devices, for booby trapping, pull igniters may be screwed into the sockets in the side (opposite the handle) and bottom of the base.

(1) *To Arm*.—Turn the screw on top of the igniter so that the white dot on it is moved opposite the white

¹ *Teller* is the German word for "plate," and is intended to suggest the appearance of the mine. To many Americans, however, the weapon looks more like the lid of an old-fashioned ice cream freezer.

mark (*Sicher*—safe) to the red mark (*Scharf*—danger). After burying the mine or concealing it with appropriate camouflage, withdraw the safety pin by means of the wire attached to it.

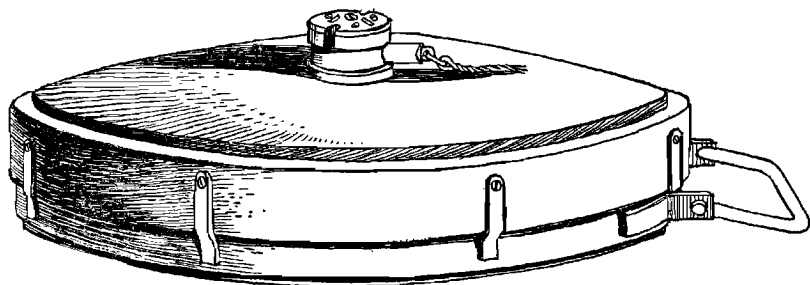


Figure 1.—Tellermine (German antitank) No. 1.

(2) *To Neutralize.*

(a) With finger and thumb, gently try to push the safety bolt all the way in. If the bolt will not go in easily, leave it alone.

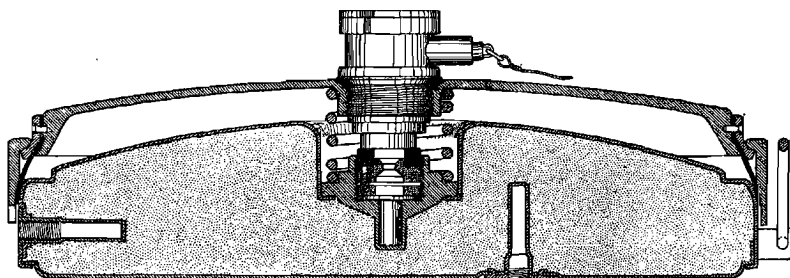


Figure 2.—Tellermine No. 1 (cross section).

(b) Turn the screw on the igniter so that the red dot is opposite the white mark (*Sicher*). If it will not turn easily, leave it alone.

(c) Since the mine may be booby-trapped, do not attempt to lift it by hand until you have neutralized the side and bottom igniters (if they are present). Carefully find the handle of the mine, and then neutralize the igniter on the opposite side. Find the bottom igniter, which is about halfway between the handle and the center, and neutralize it.

(3) *Comments.*

(a) If the mine has been fought over or subjected to blast, or if the safety bolt or screw on the igniter offers resistance, unscrew the igniter from the mine. Push home the safety bolt, turn the safety screw to *Sicher*, and replace the igniter in the mine. If the safety bolt will not go in, or if the screw will not turn, the igniter is unsafe and must not be put back in the mine.

(b) If the risk of detonation can be accepted, the precautions outlined in (c), above, may be omitted, and the mine may be pulled clear of its position by means of a 50-yard length of signal cable tied to the handle.

b. Tellermine No. 2 (see fig. 3)

This mine, which is similar to Tellermine No. 1, is circular in shape and about 1 foot in diameter, has a slightly dome-shaped cover, and is painted dark gray. It contains 12 pounds of TNT. Tellermine No. 2 differs, however, in that its pressure plate is fluted and covers only about half of the top of the mine; also the main igniter is intended to be slid, rather than screwed, into its socket.

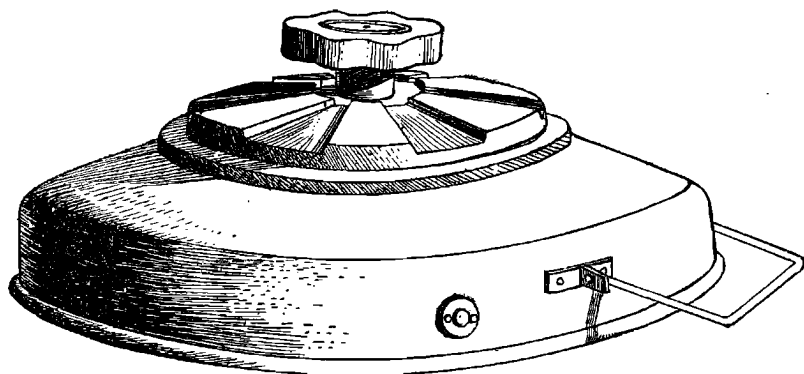


Figure 3.—Tellermine No. 2.

The pull-igniter sockets are in positions different from those in Tellermine No. 1. The side socket is 4 inches from the handle, and not opposite it. The bottom socket is 2 inches from the center.

(1) *To Arm.*

(a) Unscrew the six-sided nut, and push in the igniter assembly, together with its detonator. The latter should be attached to the bottom of the igniter.

(c) Screw down the six-sided nut tightly.

(2) *To Neutralize.*

(a) Unscrew the six-sided nut.

(b) Remove the igniter and detonator.

c. Tellermine No. 3 (see fig. 4)

This also is similar to Tellermine No. 1, but has a fluted top and is adapted to take either the German standard brass igniter or the igniter assembly of Tellermine No. 2. In this latter case, after the igniter

assembly has been inserted, the screw cap is replaced on top. (This mine has also been found with a screwed "adaptor," instead of the cap.) The additional igniter sockets are situated as in Tellermine No. 1.

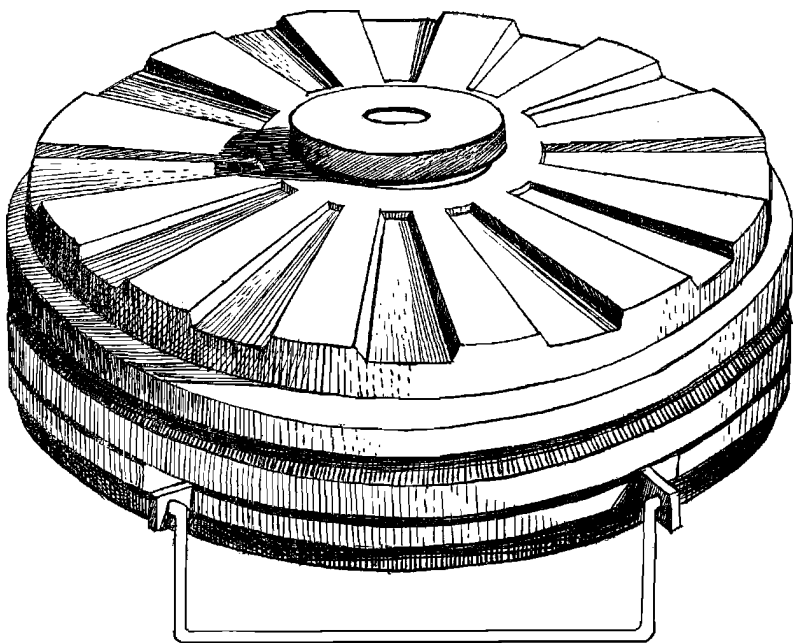


Figure 4.—Tellermine No. 3.

d. Tellermine No. 4 (see fig. 5)

The chief difference between this and the other Tellermine is that the cover plate of the No. 4, which is $7\frac{1}{2}$ inches in diameter and painted black, is entirely separate from the body. Neither the cover nor the body is fluted. The additional igniter sockets are situated as in Tellermine No. 2.

The mine functions when pressure on the cover plate crushes it down on the igniter, which is like that of the Tellermine No. 2.

(1) *To Arm.*

- (a) Unscrew the cover plate.
- (b) Insert the igniter assembly.
- (c) Replace the cover plate.

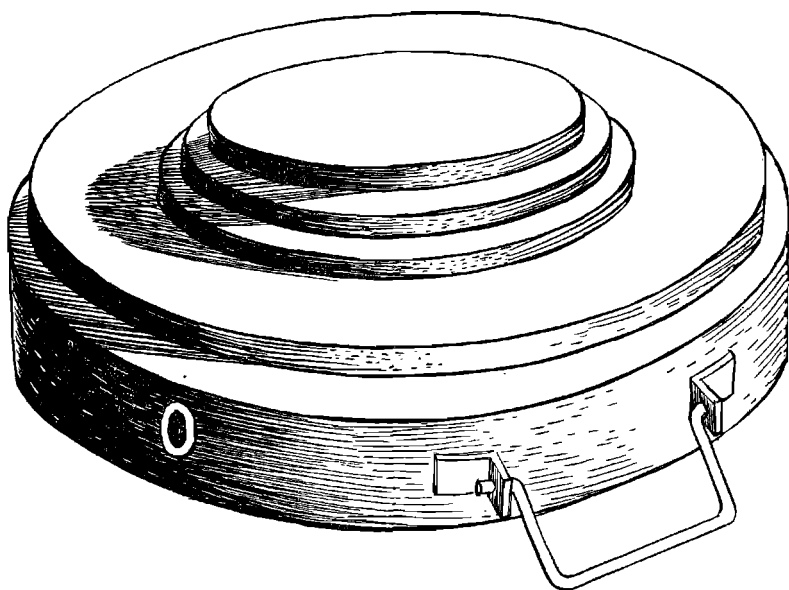


Figure 5.—Tellermine No. 4.

(2) *To Neutralize.*

- (a) Examine the mine for additional igniters, and neutralize them.
- (b) Unscrew the pressure plate, and remove the igniter assembly.

e. Comparison

The pressure plates on Tellermines No. 1 and No. 3 extend over the entire top of the mines, but the pressure plates on Tellermines No. 2 and No. 4 cover only the center portion of the mine. Accordingly, a tank might pass over the edge or rim of Tellermines No. 2 and No. 4 without detonating the mines, whereas the same load passing over the edge or rim of Tellermines No. 1 and No. 3 would detonate the mines. It is possible for a spread-out load of fairly low intensity covering the whole top of Tellermines No. 1 and No. 3 to detonate them, while a heavier and more concentrated load is necessary to detonate Tellermines No. 2 and No. 4.

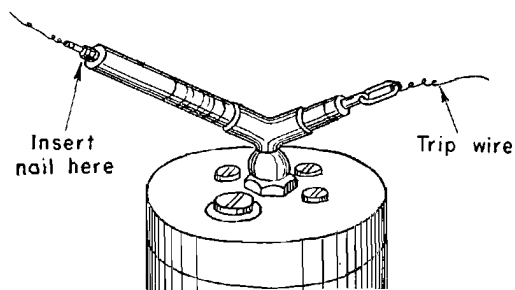
2. "S" MINE² (see fig. 6)

This antipersonnel mine, widely known to U. S. soldiers as the "bouncing baby," is cylindrical, and about 5 inches high and 4 inches in diameter. When it is fired, it is projected from 3 to 5 feet into the air, where it explodes and scatters approximately 350 steel balls in all directions. Sometimes the mine is filled with small diamond-shaped pieces of steel, instead.

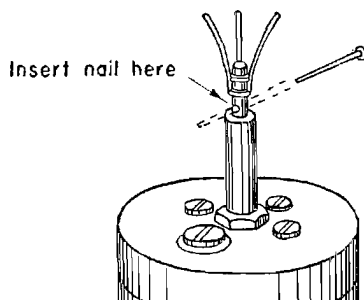
a. To Arm

Unscrew the plugs and insert three standard non-electric detonators, open end downwards, in the detonator tubes. Replace and screw in the plugs. Remove the screw cap, and screw any of the three types of igniters on the tube, making sure that the safety pins

² *Schutzmine*—protective mine.



WITH 2 PULL IGNITERS



WITH 3 PRONG PRESSURE IGNITER

Figure 6.—“S” (German antipersonnel) Mine.

are in place. Finally, after the mine has been laid, remove the safety pins.

b. To Neutralize

The method of neutralizing an "S" mine depends on the type of igniter with which it has been armed. The most common method of arming is with the standard 3-prong pressure igniter. Another method is that of using one or two standard pull-igniters. When these are used, an adaptor is fitted. A third method is that of using the 3-prong pressure igniter (electric).

(1) *With Standard 3-Prong Pressure Igniter.*—Insert a nail into the safety pin hole, and unscrew the igniter.

(2) *With Standard Pull-igniters.*—Insert a nail into the safety pin hole, and cut the trip wires. Unscrew the igniters. Inspect the other end of each trip wire for other "S" mines or booby traps.

(3) *With 3-Prong Pressure Igniters (Electric).*—On finding a 3-prong pressure igniter (electric) with a wire leading away from it, trace the lead until you find the "S" mine. Cut all wires leading from the mine. The Germans often lay a number of these electric igniters within effective radius of a single mine.

3. NOTES ON TACTICAL USE OF MINES

The following instructions dealing with certain aspects of the tactical use of land mines have been extracted from a German Army training document. The instructions apply mainly to German use of these devices in retreats and withdrawals.

a. The use of land mines may enable even a weak defending force to maintain its positions.

b. "Wild" minelaying may hinder our own troops; therefore, "planned" laying is essential.

c. The decision to lay mines is made, and the tactical purpose of minefields is decided on, by divisional or higher commands. Commands of smaller, independent units may also make such decisions in an emergency. Repair of damaged minefields may be ordered by sector commanders, and is a task for the engineers.

In an emergency—for example, in defense against tank breakthroughs—Tellermines (only) may be laid by any commander responsible for holding a position.

d. Tellermines are primarily for use against tanks; "S" mines are primarily for use against personnel. "S" mines may be negotiated by tanks without danger to their crews.

For all purposes—against tanks, motor transport and other vehicles, and personnel—improvised mines may be used. These are exploded by pressure, trip wires, or the cutting of taut wires.

e. Mine plans will be drawn up for every minefield. These will clearly show the types of mines employed. In doubtful cases, the types of igniters will be shown.

The careful drawing of mine plans is the duty of the unit responsible for laying the mines.

Mine maps are also very important. These are large-scale maps (1:10,000 or 1:25,000) showing the whole layout of the minefields. In addition, for each minefield or each instance of scattered minelaying (such as the mining of roads and paths) a plan 1:2,500 must be drawn up, giving the exact position of the minefields and the number and types of mines employed, together with map references and distances. Every corner or gap must be pin-pointed by the use of two references.

The headquarters responsible for the laying of the mines will forward mine maps to its superior headquarters, up to and including Army headquarters, and down to battalions.

Mine plans will be sent to the engineer battalion, Army headquarters, and Engineer Directorate at the *Oberkommando des Heeres* (High Command of the Army). Full details, in writing, must be handed over to relieving units. The relieving unit has the right to ask for a handing-over party to show the minefield on the ground. Arming pins and safety pins must also be held by the engineer battalion concerned, and must be handed over similarly.

f. The headquarters responsible for ordering the laying of mines will also give orders as to whether they are to be armed or not, according to the situation. In any case, it must always be possible to arm a minefield at a moment's notice.

g. Minefields containing Tellermines which are laid for long periods, whether armed or not, must always be fenced if they are within our [German] main battle position. When the minefields are in our advance area, they should be fenced in a manner similar to the rest of the wiring in no-man's land.

It has been found useful to lay, at the same time, strands of ordinary wire connecting with our own positions. These strands serve to guide our own patrols when they crawl forward.

Minefields containing "S" mines must, at all times, be fenced against accidental entry by our own troops. Such fences should be unobtrusive, and should be changed frequently.

If "T" mines are used in "S" minefields, they should be laid on the edge of the field facing the enemy or on the flanks. This hinders the enemy from neutralizing the minefield by driving over it with his tanks. If time allows, the "T" mines may be armed against removal by a pull-igniter underneath.

"S" mines laid in "T" minefields should be laid in blocks, with regular intervals between blocks and between mines.

Unauthorized laying of "T" and "S" mines is forbidden.

h. If minefields have been fired over or passed over by vehicles, personnel will experience certain difficulties in lifting the mines, and in such minefields the following mines should be detonated:

(1) Those which have been moved from their original positions.

(2) Those which have been damaged.

(3) Those with mechanisms which resist disarming, even to a slight degree.

The mines in irregularly laid minefields of any type will be donated.

Section III. TANK HUNTING

1. COMBAT PRINCIPLES

In all branches of the German Army, outstanding soldiers are chosen to serve as members of tank-hunting squads. These squads, each consisting of a leader and at least three men, are given special training. Like the combat engineers, they are continually ready for close-in combat with tanks and other armored vehicles.¹ When a need arises, squads are combined into tank-hunting groups. In general, the Germans use tank hunters if there are no armor-piercing weapons at hand, or if the fire of these weapons fails to prove effective against attacking tank forces.

The equipment for close-in tank hunting consists of incendiary bottles, Tellermines, TNT, automatic weapons (both German and captured), submachine guns, Very pistols, hand grenades, smoke grenades and candles, flame throwers, crowbars, hatchets, and camouflage material.

It is a German principle that hostile tanks and infantry must be separated so that they may be destroyed more easily. If armor-piercing weapons are available, their fire is directed against the approaching

¹For simplification, this article will hereafter mention tanks only.

tanks, while the remaining weapons are used primarily against the infantry accompanying the tanks. Infantry riding on tanks are destroyed before the tank hunters attempt to assault the vehicles. If the tanks arrive without infantry, the fire of all available weapons is concentrated against the vulnerable parts of the tank, to create conditions favorable for close-in assault. If this fire support by other weapons is impossible, the tank-hunting squads proceed without it.

The carrying-out of close-in combat largely depends on the immediate situation. The number, types, and tactics of the attacking tanks, the terrain, the Germans' own position, and the effect of German defensive fire always vary, and the tank hunters attempt to meet this variation by showing adaptability and maneuverability. A tank-hunting squad assaults only one tank at a time. If several tanks attack together, and if only one tank-hunting squad is available, the squad assaults that tank which appears to be the most dangerous at the moment, or which promises the quickest success if attacked. If enough squads are available, the Germans make an effort—especially in defense—to hold one or more squads ready, in the rear, to assault tanks which break through.

The general procedure for tank hunters is: first, to blind the tank, then to halt it, and finally to destroy the vehicle and its crew in close-in combat.

Whether the tank hunters advance at the beginning of a tank attack, whether they remain in their fox-holes until just before the assault, or whether they conduct the entire assault from under cover depends

entirely on the situation. The foxholes are narrow, and have no parapets; this makes them harder to identify. They are well camouflaged with local brush and, whenever possible, are surrounded by a belt of Tellermines. (In village fighting, the corners of houses, and even bushes and fences, serve as hiding places from which tank hunters make their close-in assaults.) Obstacles of all kinds, dummy mines and guns, and signs saying "Warning! Mines!" are used to lead hostile tanks into terrain unfavorable for them, but tactically advantageous for the assault squads and antitank weapons.

The tactics employed by tank hunters of course depend to a considerable extent on whether the tanks are moving, or have halted voluntarily or involuntarily.

When preparing to attack a moving tank, the tank hunters, remaining well concealed, permit the tank to come close to them (20 to 7 yards). Then, by blinding the tank, they try to halt it or at least slow it down. By using explosive charges, the tank-hunting squad makes an effort to destroy the tracks of the tank and cripple it. The final step is to assault the tank, and destroy it and its crew.² In the case of a halted tank, the squad stalks up on it, using the terrain to the best possible advantage.

Around every tank there is a "dead space" which it cannot cover with its principal weapons. The higher a tank, the larger, as a rule, is its dead space. In general, the radius of dead space from

²Close-in combat weapons and how the Germans use them in the "Blind, halt, and destroy" procedure are discussed in paragraph 2 of this section.

the turret gun is about 20 yards; from the machine gun, about 10 yards (see fig. 7). To combat targets

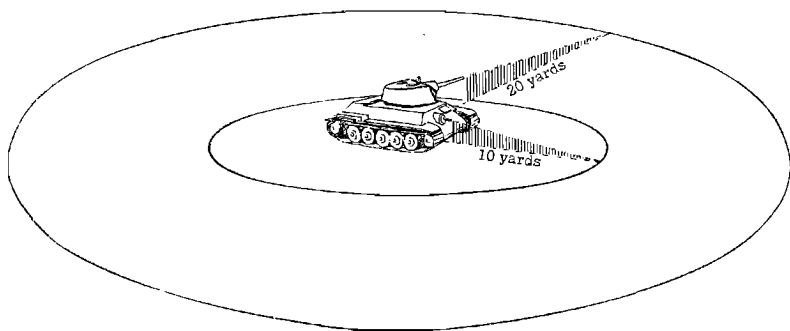


Figure 7.

in the dead space, tanks have slits through which pistols and submachine guns can be fired. When assaulting a tank, German tank hunters make all possible use of the dead space. They try to approach a tank from the direction opposite the direction of its principal weapons. This is also opposite the direction of its principal observation (see fig. 8).

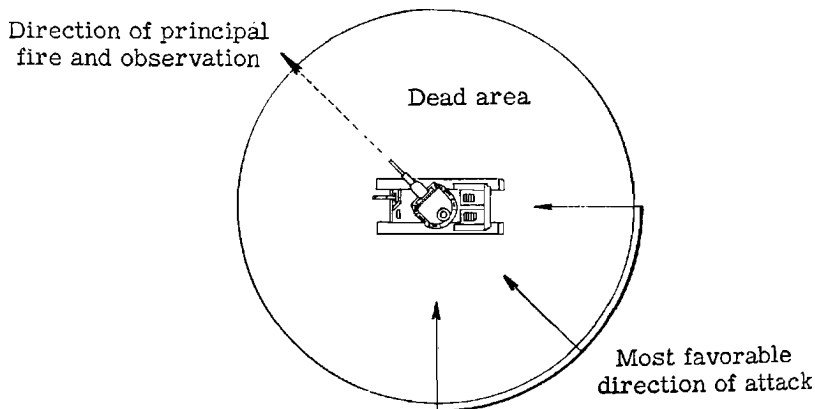


Figure 8.

The tank hunter with the principal close-in weapon uses it against the tank while the other tank hunters support him with their fire. If he is hampered by this fire, the others cease. If members of the tank crew, becoming aware of the assault, open the turret hatch in order to defend themselves with hand grenades, the tank hunters seize this moment to fire against the open turret and wound the crew. German doctrine states that crews of stalled or burning tanks who do not surrender when getting out will be destroyed in close combat. If the tanks are still undamaged, the Germans render them useless by removing the guns' breech blocks, by damaging the guns, and by setting fire to the gasoline tanks.

2. TANK-HUNTING WEAPONS AND THEIR USE

The tank-hunting squad is equipped with blinding, incendiary, and explosive materials. (Some of these serve a double purpose. For example, flame throwers are used not only as incendiary agents, but as blinding agents.) The type of armored vehicle, its position, and the terrain determine which of the available weapons are to be used and how the employment of several may be combined. The leader of the tank-hunting squad is obliged to decide quickly which to adopt under the circumstances.

The following comments on these weapons and their use have been extracted from a German Army document.

a. Blinding Agents

(1) *Smoke Candles and Smoke Grenades*.—Smoke candles or several smoke hand grenades, thrown in front of a tank with allowance for wind direction, interfere with its vision and force it to slow down.

(2) *Smoke*.—Ordinary smoke may be used. To produce it at the right moment, distribute straw or other highly inflammable material in the probable avenue of approach, drench it with gasoline or kerosene, and ignite it with signal rockets when tanks approach. The detonation of grenades and artillery shells also creates clouds of smoke. Moreover, the firing of armor-piercing grenades against the vision slits can be very effective. Smoke should be used only when a tank has come so close that we can no longer fire on it without endangering our own personnel and therefore must destroy the tank at close range.

(3) *Signal Rockets*.—Signal rockets shot against vision slits have a blinding effect, particularly at dusk and in total darkness; also, the vehicle is illuminated for our antitank weapons. (Note that signal rockets begin to burn only after traveling 25 yards.)

(4) *Flame Throwers and Incendiary Bottles*.—Flame throwers and incendiary bottles are aimed at vision slits.

(5) *Covering of Vision Slits*.—For this purpose a tank hunter jumps onto a tank, preferably from the rear, or approaches its side, and covers the vision slits or periscopes with a blanket, overcoat, shelter half, etc., or applies mud, paint, or grease. This is possible only when the tank is moving slowly or has halted, and when it is not supported by fire from accompanying tanks or infantry. A tank crew will be especially demoralized by the presence of an enemy on top of the tank.

b. Incendiary Agents

(1) *Flame Throwers*.—Flame throwers are aimed at weapon openings and engine ventilators to set a tank afire.

(2) *Incendiary Bottles*.—Incendiary bottles, which ignite when

they hit a hard surface and break, are thrown at engine ventilators, vision slits, and imperfectly closed hatches. (In street and house fighting, they are also used against personnel.) The bottles may be thrown in two different ways: A tank hunter may grasp the neck of the bottle and throw it by swinging his arm, or he may grasp the body of the bottle and pitch it as in shot-putting. In general, the position of the thrower will determine the type of throw. In a prone position he will not be able to swing his arm, and therefore will have to pitch the bottle. Whenever possible, it should be thrown like a stick hand grenade, because the accuracy of aim will be greater and the possible range will be increased.

(3) *Improvised Incendiary Bottles*.—When a tank approaches, the wick of an improvised incendiary bottle is lighted and the bottle is thrown. When it breaks, the fluid is ignited by the wick and is distributed over the tank and its engine. Generally the tank catches fire. If additional bottles are to be thrown against the tank, they need not be ignited before they are thrown. Even initially, a bottle without an ignition device can be used. After the bottle has broken against the tank, the liquid can be ignited with signal rockets, hand grenades, smoke candles, smoke grenades, burning torches, or burning gasoline-drenched rags.

(4) *Gasoline*.—Several quarts of gasoline are poured over the engine housing of a tank, and ignited in the manner described above. Gasoline may also be poured into the hatch, and ignited by a hand grenade.

(5) *Hand Grenades*.—Often a tank crew will open the hatch for better observation. This presents an opportunity to throw grenades in a high arc into the interior of the tank. The crew can thus be destroyed and the tank set afire. Sometimes it may be possible to open the hatches with crowbars or bayonets, and then to throw grenades into the interior.

(6) *Smoke Candles or Smoke Grenades*.—When smoke candles or smoke grenades are thrown inside a tank, they may set the tank afire, or at least force the crew to get out because of the thick smoke.

(7) *Signal Rockets*.—Signal rockets shot into open hatches with a Verry pistol may set the tank afire.

c. Explosives

(1) *Hand Grenades*.—Hand grenades detonated in the muzzle of the cannon (see figs. 9 and 10) yield excellent results.



Figure 9.

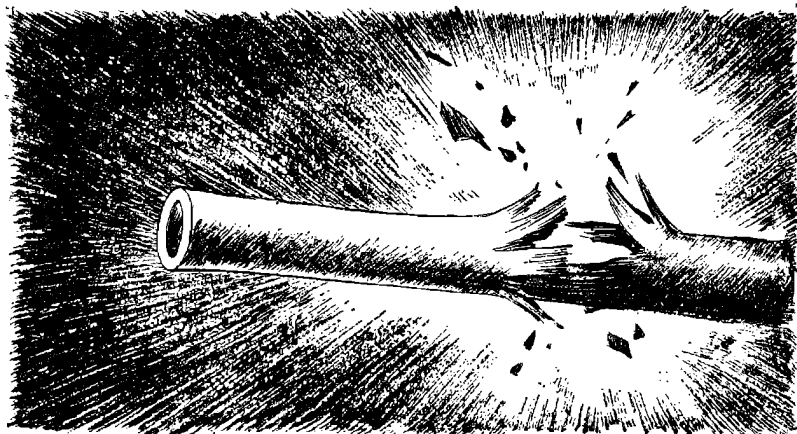


Figure 10.

(2) *Blasting Slab*.—A slab of explosive weighing 1 kilogram (2.2 pounds), when placed on top of a tank, has about the same strength as a concentrated charge of seven hand grenades and can give the crew a severe shock. Two such concentrated charges can damage the turret hatch considerably, and for a short time leave the crew unable to fight because of the powerful concussion. Two or three such charges combined into a multiple charge, and tied on a curved board to be slid over the ground (like a ski), can damage the tracks so severely that they will soon break under use. Machine-gun and cannon barrels can be destroyed by two 1-kilogram charges tied together, hung like a saddle over the top of the barrel, and detonated. (A cannon barrel will be so bent that an attempt to fire the gun will completely destroy it.)

(3) *Concentrated Charges*.—The bodies of seven stick grenades are tied together securely with wire. Only the middle grenade is fitted with the usual handle, which has an internal igniter. This charge is ineffective against the armor or tracks of heavy tanks. But when it is exploded on top of the tank, its concussion is so great that the crew is knocked out temporarily.

The concentrated charge of 3 kilograms, which is found ready for use in the infantry engineer platoon, infantry engineer platoon motorized, engineer companies, and engineer battalions, will pierce about 60 mm of armor. It is best to place the charge over the engine or the driver's seat. The crew will be wounded by small fragments of the inner walls spattering off. Moreover, the concussion is unbearable.

A combination of several 3-kilogram charges is even more effective.

The throwing radius for a concentrated charge is 10 to 15 yards. When throwing the charge, the soldier must consider the length of the fuze (about $\frac{1}{2}$ inch burns in 1 second). The thrower aims at the tracks or at the belly of an approaching tank.

The concentrated charge can also be used as a multiple charge or as a slide-mine as described in paragraph (2) above.

(4) *Sliding Mines*.—Charges of 3 or 6 kilograms can be built into a two-sided skid. To secure this sliding mine against premature detonation, which can result from falling or turning over, two woodblocks should be inserted (see fig. 11).

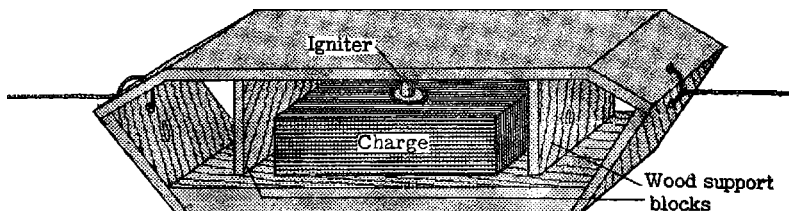


Figure 11.

Two to four sliding mines are linked together, and at each end of the group is a 20-yard cable or rope.

Tank hunters sit in two foxholes about 20 yards apart. The sliding mines are camouflaged and are placed somewhere between the holes so that they can be pulled in either direction. When a tank approaches, the mines are pulled under its tracks (see fig. 12). This sliding-mine technique may be employed on a larger

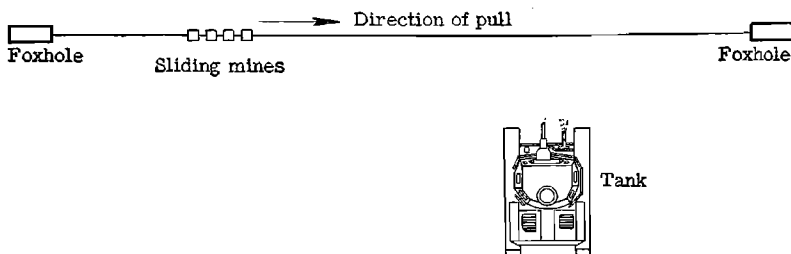


Figure 12.

scale by several pairs of soldiers using an extended series of foxholes.

(5) *Tellermines*.—Instead of concentrated charges, Tellermines can be used, either as multiple charges or as sliding mines (see fig. 13). However, because they have a high radius of fragmentation, they can only be worked from splinter-proof positions. (Fig. 14 illustrates the springing of a turret.)

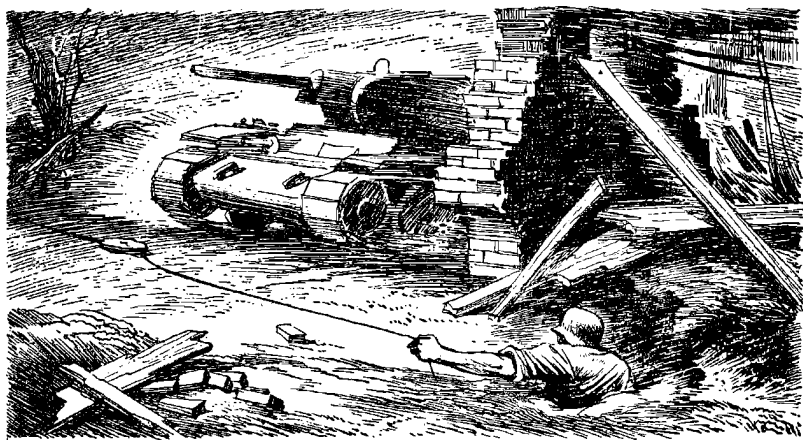


Figure 13.



Figure 14.

d. Crowbars and Hatchets

Crowbars and hatchets are used to bend the barrels of machine guns (see fig. 15).



Figure 15.

3. ASSAULT DECORATION

Tank hunters and other German Army personnel who destroy tanks in close-in combat are awarded an assault decoration (see fig. 16), which is worn on the upper right sleeve.

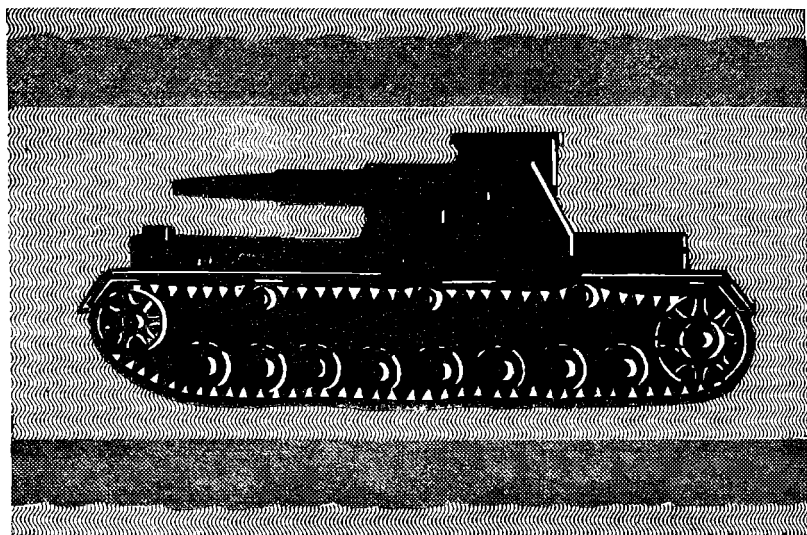


Figure 16.—German Assault Decoration.

Section IV. ENGINEER ASSAULT TACTICS

1. INTRODUCTION

This section deals with German engineer assault tactics developed since the battle of Crete. Since the information has been obtained from German prisoners of war (engineers) captured in Tunisia, it should be accepted with the reservations customary under such circumstances.

2. ATTACKS ON PILLBOXES

a. Composition of Detachment

An engineer assault detachment (*Pioniersturmzug*), whose principal task is the assaulting of pillboxes, may be composed of any or all of the following:

(1) From two to six men with pole charges or tube charges. (These tubes are said to be about 2 yards long.)

(2) From one to three flame-thrower teams of two men each. There is also said to be a third man, who accompanies them and serves as an alternate, if needed.

(3) From one to four men with hollow charges and explosives.

(4) Light machine-gun covering detachments.

The engineer assault detachment in action is normally divided into two sections (*Gruppen*).

b. Assault Tactics

The assault is normally preceded by a concentration of artillery fire. One purpose of this fire is to make craters in which the advancing engineers can take cover. When the assault detachment reaches the wire surrounding the enemy pillbox, Very signals are fired, calling for all available artillery fire to be placed on the pillbox and its immediate surroundings.

It is reported that, at this point, a smoke screen is laid by two men of the detachment, using smoke grenades (similar to stick grenades), smoke candles, or smoke canisters. Also, there are reports that smoke screens are put down as soon as the artillery is compelled to cease fire because of the proximity of the assault troops.

Men armed with wire cutters cut a lane through the wire obstacle, hidden by the smoke screen. As an alternative measure, men with tube charges go forward and push their charges under the wire. These tube charges, which are similar to Bangalore torpedoes, contain 18 to 20 pounds of explosive. When the charges are in place, a designated engineer calls out "Ready for ignition!" (*Fertig zum zünden*), whereupon the commander of the obstacle-blasting party replies "All together, ignite!" (*All zusammen zünden*). The

engineer then ignites the fuze and calls out "Burning!" (*Brennt*) to warn personnel nearby to get under cover. The explosion of the tube charge opens a lane in the wire. The engineers nearest the lane then shout "Gap here!" (*Hier Gasse*).

Besides blinding the defenders of a pillbox by means of smoke, the Germans also fire antitank guns directly at the embrasures of the pillbox.

(It seems highly probable that the shouting drill has been developed to enable the engineers to keep in touch with each other when visibility is poor or zero, and because of the difficulty of commanding the whole operation from a central command post.)

The flame-throwing detachment, having advanced with the remainder of the assault party from crater to crater, now moves through the gap in the wire and attempts to reach a point 5 or 6 yards from the pillbox.

Now that artillery fire has lifted from the area around the pillbox, the task of keeping the defenders' heads down is taken over by covering machine guns. The flame-thrower operators direct jets of flame at the various embrasures in the pillbox, in accordance with orders given before the operation began. The blinding effect of the jets enables the men with the pole charges to advance. When the flame-throwing detachment is about to run out of fuel, a designated engineer shouts "Last jet!" (*Letzter Strahl*). Each man who is carrying a pole charge advances to an embrasure and detonates his charge inside it. Prisoners state that

these charges are effective even against closed embrasures.

If the pillbox continues to hold out, either of two alternatives is possible:

(1) The engineers may throw smoke candles into the pillbox to drive out the occupants.

(2) The engineers may blow in the roof, using a charge weighing about 110 pounds. This charge, which may be carried in two pieces, is fitted with handles for easy transport. It is circular, and has a concave undersurface and convex upper surface. It is said to be about 10 inches thick in the center, but thinner toward the edge. Since the charge is constructed on the hollow-charge principle, it can penetrate normal concrete or armor. It is detonated by a friction igniter.

As soon as an important pillbox has been taken, a swastika flag is draped over it as warning to friendly dive bombers. A pillbox in a fortress, for example, is considered especially "important."

3. ATTACKS ON TRENCHES

German engineers who have taken part in exercises involving attacks on trenches state that they have used ordinary assault methods, preceded by a liberal use of hand grenades.

For this purpose, certain men are trained as short-distance throwers (*Nahwerfer*) or as long-distance throwers (*Weitwerfer*). The flame-throwing detachments move directly behind the hand-grenade throw-

ers, and the whole party is covered by machine-gun fire from the flanks.

[NOTE.—The Germans, having devised these tactics, are thoroughly familiar with the methods of defense against them, one of the most important of which is the use of pressure and trip antipersonnel devices in the vicinity of the dead angles of bunkers. Extremely meticulous intelligence is an essential for this type of assault.]

Section V. MISCELLANEOUS

1. INSTRUCTIONS IN CASE OF CAPTURE

Like the troops of other nations, German soldiers are instructed to reveal nothing more than "name, rank, and serial number" in case of capture, and are reminded that in accordance with international law, any other information may (and must) be refused. In addition, the German Army warns its soldiers to obey certain special instructions:

a. If you believe you are in danger of being captured, destroy all papers that you have on your person. Above all, tear out page 4 of your *Soldbuch* (pay book), which mentions your unit.

b. If you are captured, be strictly military and, at the same time, polite. Don't be influenced by friendliness on the part of the enemy, or by threats.

c. Never speak the enemy's language.

d. Always remember that the most trivial things, to which you attach no importance, can often give valuable information to the enemy.

e. No interest in technical questions is to be shown, not even when the questioner tries to provoke an argument by belittling German weapons.

f. Don't try to deceive by false answers.

g. Don't let yourself be fooled by an assumed knowledge, on the questioner's part, of the subject under discussion.

h. Don't discuss military matters or details of operations with your fellow prisoners.

In North Africa the German Army regarded the following information as especially valuable to the United Nations, and warned its troops that they must take every precaution to keep it secret:

- a. The unit to which you belong, and its location.
- b. The effectives of your unit, and its losses.
- c. The other units which belong to your regiment or your division. The other units which were engaged at the same time as yours, and their effectives.
- d. When, and by what means, you arrived in the theater of operations, what you saw on your way, and when you had your last leave.
- e. What weapons the German Army has, whether you have seen any new ones, and if and when new or repaired tanks may be expected to arrive.
- f. The morale of German troops; details regarding supplies and matériel.
- g. The morale at home; the effect of United Nations bombing.

German soldiers in other theaters of operation receive similar warnings. The Germans caution their troops not to believe that better treatment will be given them if they consent to talk. It is stressed that even after a soldier has been interrogated, he must be careful when talking to other comrades in the camp, because of the possibility that a listening apparatus may have been installed. Troops are warned, too, that strangers in German uniforms may try to win their confidence, and that these strangers will certainly be spies. Speaking over the radio, making phonograph recordings, and writing of war experiences are strictly forbidden.

Of special significance is the German Army's threat of future punishment if these orders are not fully obeyed:

Every prisoner remains a German soldier. You must realize that after your return you will, if necessary, be called upon to answer for your behavior during your time of captivity.

2. PRISONERS' RUSE

According to a German prisoner, the following trick may be attempted by German soldiers who are about to be taken prisoner. Sometimes, just before a man is captured, he empties his aluminum canteen, slits it from base to neck, places his automatic pistol in the hollow space, and presses the sides of the canteen together again. He also presses the sides against the weapon to keep it from rattling. He then draws the canvas cover over the canteen. The weight of the pistol is approximately equal to the weight of a canteen filled with water.

If a man who follows this procedure is not detected, he will be able to carry his pistol into an internment camp, where he can use the weapon against his captors, either while he is attempting to escape or in some other situation.

3. USE OF ROVING GUNS

The following extract from a German Army document discusses the tactical use of roving guns:

The two principal reasons for using a roving gun are:

a. To avoid betraying the location of the actual battery positions if the target can be dealt with by a few guns.

b. To camouflage the fire of our own activity by offering considerable protection against enemy flash-spotting and sound ranging

In the first case, each battery will site a gun 200 to 300 yards to the flank of the battery position. From a gunnery point of view, it is technically desirable to site the roving gun well on the flank of the No. 1 gun. It is not an advantage to displace it further by putting it forward or to the rear of the actual gun position, because fire control thus becomes more difficult and enemy observers can more easily identify the explosions of individual guns. If the gun is merely put 200 to 300 yards forward or to the rear, it may deceive as to the location of the other guns of the battery, but it also will bring the battery position within the 100-percent zone of fire¹ directed against the roving gun. All ranging and harassing fire can be carried out by these guns. The roving guns of a battalion or even larger unit may be concentrated against important targets.

In the second case, the best camouflage will be obtained if provision is made that all firing be done as far as possible by concentrated fire and by as many batteries as possible. Batteries will lay down the concentration only after fire from the roving guns has been seen or heard. The roving guns will fire until the batteries have concluded their concentrated fire.

¹ That is, within the dispersion pattern.

PART TWO: ITALY

Section I. B2, S. C. G. AT MINE AND B4 ANTIPERSONNEL MINE

1. B2, S. C. G. ANTITANK MINE (see fig. 17)

a. Characteristics

The B2, S. C. G., which is the principal Italian anti-tank mine, is a rectangular metal box, 3½ feet by 5 inches by 5 inches, weighing 33 pounds and containing about 7 pounds of explosive. The box has an over-all cover attached by chains at each end. There are two inspection lids (with hinged flaps) in the cover. The charge is placed in both ends of the box, and the firing mechanism is in the middle. The striker is held clear of the cap by a wire. When the lid is pressed down, this wire is sheared by a knife edge on the underside of the lid.

b. To Neutralize

(1) *If Lifting by Hand Is Ordered*

- (a) Search for booby traps and neutralize them.
- (b) Open both inspection lids gently.

(c) Remove the cap holder carefully, but do not touch the lever.¹

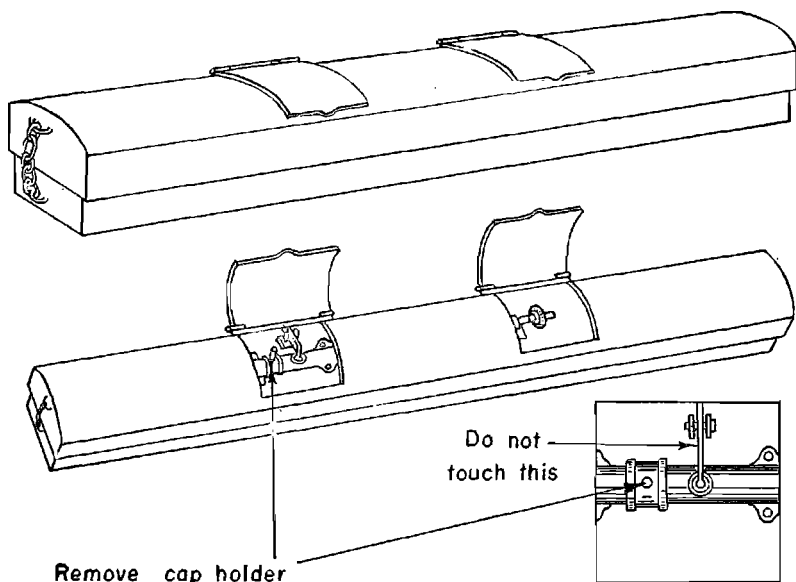


Figure 17.—B2, S. C. G. (Italian antitank) Mine.

(2) *If Pulling Clear Without Searching for Booby Traps Is Ordered*

- (a) Pull clear with 50 yards of cable.
- (b) If the mine is still intact, carry out (b) and
- (c), as above.

¹There is a newer model of the B2, which has a safety-pin hole between the cap holder and the lever. When neutralizing this model, insert the safety pin or nail or stout wire through the hole before removing the cap holder.

2. B4 ANTIPERSONNEL MINE (see fig. 18)

a. Characteristics

The B4, which is the principal Italian antipersonnel mine, is a shrapnel mine which scatters scrap metal when detonated. Since the mine does not have the "jack-in-the-box" effect of the British and German types, it is generally fixed to a tree or a post. However, there have been instances in which B4's have been buried in the ground. The B4 is fired by trip wires or tension release.

b. To Neutralize

(1) Insert a nail or a stout wire into the safety-pin hole in the striker.

(2) Pull out the cap holder.

(3) Cut the tension wire and trip wires after checking the other ends for booby traps.

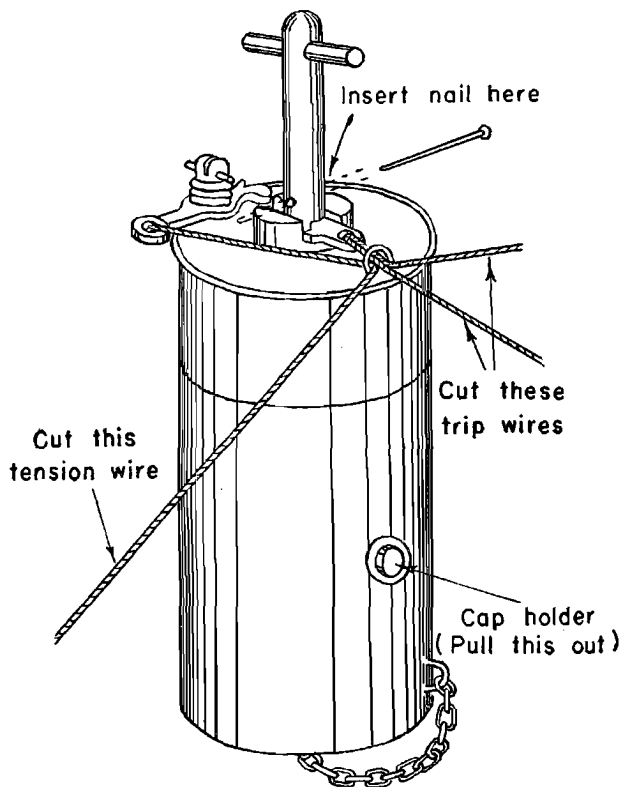


Figure 18.—B4 (Italian antipersonnel) Mine.

Section II. NOTES ON ATTACK

1. INTRODUCTION

The following notes on attack were written by an Italian commander to correct what he termed some very bad errors in elementary tactics. The notes, addressed to "all officers," discuss a familiar Italian weakness—failure to organize a defensive position after a successful advance.

2. THE NOTES

Attacking units which have little or no opposition frequently stop after reaching their objectives, deciding that their part of the action has been completed. Not only does this affect discipline, but it neglects the most elementary defense and safety precautions, as the soldiers put themselves in full view of the enemy, and break ranks to gaze around and wander about the area. The results that could derive from such inconceivable conduct are evident and understandable. Such conduct occurs at the most critical and difficult phase of the action—when enemy reaction is to be expected more or less immediately, either in the nature of artillery fire or counterattack.

The regulations for such cases are clear and explicit, and therefore I do not deem it necessary to quote their contents since they constitute the basis of technical professional training.

However, I wish to make quite clear certain tactical necessities which should be kept in mind and practiced.

a. During Attack

- (1) Cover your exposed flank with the machine-gun platoon.
- (2) Keep flanking units within sight, and coordinate your fire with theirs.
- (3) See that units don't get mixed up.
- (4) Overcome the tendency to close up.

b. When Objective Has Been Gained

- (1) Proceed immediately and speedily beyond the objective, and organize a defensive position (use your engineers).
- (2) Maintain the greatest cohesion within units, keeping under cover and out of sight of the enemy.
- (3) Get your weapons into firing position.
- (4) Re-form the reserves.
- (5) Watch the flanks.

c. During Rest Periods

- (1) Keep the unit under control.
- (2) Dispose units in the positions best suited for observation and fire.

The above notes reveal clearly the importance of the infantry squad in fighting, and therefore their application is the specific job of noncommissioned officers. Company and platoon commanders will insist on the proper execution of these measures.

PART THREE: JAPAN¹

Section I. AMERICAN WOUNDED TELL ABOUT JAPANESE ON ATTU

1. INTRODUCTION

In recent individual interviews, U. S. soldiers wounded on Attu described the lessons they learned in combat with the Japanese. The statements made by these wounded men are reproduced here with only a few changes to eliminate repetition. In compliance with a policy of the Military Intelligence Service, the names of the men interviewed are omitted.

2. THE INTERVIEWS

Private (rifleman)—The Japanese are sneaky and treacherous. They shot and injured one of our men, who then started making his way toward our lines. The Japanese withheld their fire until our man was within 100 yards of our troops; then the Japs shot him enough to break him down so he couldn't go any further. They figured that we would send several men out after him, and that they could kill all of them. After waiting some time for us to try a rescue, the Japs killed the wounded man.

¹ In *Intelligence Bulletin* No. 11, page 75, the title of paragraph 4 should read "Defense Against Aircraft."

Maybe other soldiers going into combat zones could profit by the lessons I learned the hard way. Never stand up while digging a foxhole. Lie on one side and dig awhile, then on the other. If you are lying down when a mortar shell strikes near you, it won't hurt so much—and you won't make a good target for a Jap rifleman or machine gunner. I was one of those who stood up to dig foxholes—and now I'm in the hospital suffering from a concussion. Had I listened to what was taught me in training, I might still be out there helping to get rid of those Japs. I was a good marksman but not a good soldier—because a good soldier takes every advantage offered. I've learned my lesson now.

Sergeant (rifle platoon)—Apparently the Japs are easily confused. Even when we pretended to throw a hand grenade, they would scatter in all directions—thus becoming easy targets for our riflemen. They were not equal to our soldiers in hand-to-hand combat.

One thing that impressed me was the accuracy the Japanese attained with their grenade discharger . . . They could place a shell on a machine gun in two rounds—our machine gunners will live longer if they change positions frequently.

Private First Class (machine gunner)—The Japs used the fog in a smart manner. When the fog lifted in the morning, they fired one long and one short mortar burst on our platoon area to get the range. We did not move our positions, so in the afternoon the Japs opened right in the middle of us with their mortars. The shells buried themselves in the soft ground before exploding, and were not as harmful as they would have been otherwise.

My most lasting impression was of the calm and efficient manner in which our medical men, unarmed, went into the battle zones to bring out the wounded.

1st Sergeant—The Japs like to fight in small groups, and will try to halt a group many times their strength. They move fast, so you have to be ready at all times to engage them.

I don't believe the Japs are good marksmen. Many times when they picked us for targets we got out of their field of fire by hitting the ground and rolling 3 or 4 yards to the right or left (they would continue for a few rounds, firing in a path).

Our equipment and weapons are better than those of the Japs, and careful planning and use of good, clear minds will always beat them. The Japs' mortar is their best weapon, although the firing methods used with it were not good.

I found that many of our men fired when they were not sure of their target. This sometimes resulted in the drawing of mortar and machine-gun fire and in loss of position.

Private First Class (rifleman)—My impression is that the Japs are very poor shots with a rifle or machine gun. Watch out for their grenade discharger, though. They really use it a lot against personnel. If our men keep plenty of interval, there won't be much danger. Failure in this respect was one of our faults. Our unit didn't have enough room for the number of men we had on line when we tried to assault a hill, and we lost too many men to finish our mission.

Private First Class (rifleman)—The Japs work in pairs, and change positions quite often. They'd even use our artillery shell holes to machine-gun us.

To me, the Japs are fast, tricky, and treacherous. They used camouflage expertly, and were darn hard to see. Their uniforms looked like burlap and were a yellowish green.

Sergeant (squad leader)—Our advance was uninterrupted except for some dummy installations, which were nothing more than the top layer of earth turned over to confuse our aerial photos . . .

The night we arrived at Temnac Bay we soon found that the Japs were not very well disciplined about lights or smoking at night. With the help they gave us from their lights, we didn't have to wait until daylight to start our mission. The few Japs who weren't killed that night in tents by hand grenades were finished off the next morning.

Private (rifleman)—A marine once said that you could detect Japs at close range by a peculiar odor [see *Intelligence Bulletin* No. 5, page 37]. This is hard to explain, but we also detected the odor on Attu when the wind blew from their direction.

The Jap is hard to see, but once you get him in the open he's licked. He surely doesn't like hand-to-hand combat.

Special efforts are made by the Japs to pick off our men who wear insignia, or those who give hand signals.

The Japanese guns and helmets are not as good as ours.

Private (rifleman)—The greatest mistake we made was taking to the valley. The enemy was fortified on the sides of the hills where they could fire right down on us. The important thing is to stay separated, and to lie as low as possible. Make your rushes fast and short, and never lie where you fall. Always roll over two or more times, and always have the next landing place picked out before you get up.

Private First Class (observer)—The Japs didn't seem to aim their machine guns; they just moved them slowly from one side of our lines to the other—sometimes they fired into the fog when they couldn't even see our positions.

In my opinion, the M1 is the best rifle the individual soldier can have; also, our hand grenades are much more effective than the Japs'.

Corporal (rifleman)—In my brief encounter with the Japanese, I found that their rifle squads appeared to be very careless in maneuvering (they made a lot of noise, and had a tendency to bunch together). Their riflemen were poor shots and showed poor judgment.

Private (rifleman)—A machine gun got me. The Jap snipers are not so hot.

Our medics were swell. They did a job that is hard to describe, and they worked as long as 27 hours at a stretch.

Private First Class (machine gunner)—I was under fire four days. First of all, I had to dig a slit trench to keep the enemy from seeing and shooting at me. Cover was not hard to find.

My impression is that the Japanese soldier doesn't have the guts the American men have. He gives up very easily in hand-to-hand fighting.

One thing to be careful of is hidden explosives.

Private (rifleman)—Most of our casualties resulted from failure to take cover while advancing. The Japs are good snipers, and are always around where you least expect them. Watch out for dummies in trenches. They fooled us a couple of times.

Instrument Corporal—The Japs did an excellent job of fortifying and camouflaging their trenches, foxholes, and other emplacements, and their sniping was quite accurate.

Private First Class (BAR man)—I learned that the Japanese like to do all their close fighting at night, and keep out of sight during the day. In my opinion, they are not very brave fighters.

Private First Class (messenger)—There is one thing I want to stress. Every soldier should take good care of his entrenching tool, because it saved many men's lives on Attu.

Colonel (Medical Corps)—The condition of the wounds upon arrival at this station was indicative of very excellent first-aid care. There were very few infections, even though many wounds were still open. The use of sulfanilamide or sulfathiazole powders or crystals on open wounds was evidently largely responsible for the lack of infection. We feel that no prolonged attempt should be made to remove bullets, shell fragments, or other foreign bodies in the immediate combat zone. Sterile dressing should be applied and the patient evacuated to a more stable area.

Section II. NOTES ON HOW JAPANESE ATTACK PILLBOXES

1. INTRODUCTION

The information in this section is based on a translation of six handwritten loose sheets of notes, which probably belonged to a Japanese officer who was killed or wounded in the Buna area of New Guinea. The notes apparently do not give the complete Japanese doctrine on attacking pillboxes, although some phases are described in detail.

The use of poison gas as one means of reducing pillboxes is casually mentioned in one place in the notes. This indicates that at least some Japanese troops may be trained in certain uses of poison gas; however, there are no confirmed reports to date that they have used it against American, British, or Australian troops. Numerous reports from China indicate that the enemy has used poison gas on some occasions in the Chinese theater of operations. It is probable that the notes presented below were based, at least in part, on Japanese experience in the use of gas in China.

To bear the major burden of attack against pillboxes, the Japanese—according to the notes—organize

a "Pillbox-attack *Butai*," with regular front-line units usually assisting the *Butai*. [The word *butai* is loosely used to denote any group of soldiers.]

2. ORGANIZATION, AND ATTACK DUTIES

The organization and duties of various units or detachments which constitute the Pillbox-attack *Butai* are listed below. (It is essential that all concerned cooperate very closely).

a. Assault *Han*¹—Its principal object is temporary neutralization of the pillbox. It will be composed of a machine-gun or an engineer detachment, and, if needed, a reserve *han*. In order to take advantage of the terrain and to insure speedy movement, this *han* should have a bare minimum of personnel (less than six men, if possible).

b. Assisting Fire-power Detachment—This is composed principally of a light machine-gun squad and a heavy machine-gun squad.

c. Mopping-up *Han*—Its objective is to mop up the enemy completely.

d. Obstacle-demolition *Han*—This can be a machine-gun detachment, or—depending on the situation—an engineer detachment, or both. (This *han* is necessary if the Mopping-up *Han* needs demolition work done before it can complete its mission.

e. River-crossing Construction *Han*—This will be a machine-gun or engineer detachment.

3. WEAPONS AND EQUIPMENT

Make the equipment light—carry only a minimum of weapons and instruments. Machine-gun and engineer units engaged in construction will not carry rifles.

¹ This unit normally is roughly equivalent to our squad; however, in practice its strength has a wide variation. It usually corresponds to what we would term a "detachment."

Carry as many hand grenades, gas grenades, or other close-combat weapons as possible.

Be equipped for silent movements.

Wear bullet-proof jackets if necessary.

If you attack at night, select passwords and erect appropriate markers. Carry flashlights, ropes, and the signaling equipment necessary for liaison with our own troops.

The weapons and equipment to be carried by each individual unit or detachment of the Pillbox-assault *Butai* are listed below.

a. Assault Han:

- (1) Rifle, bayonet, and shovel;
- (2) Hand grenades, gas hand grenades, and smoke candles;
- (3) Flame thrower or gas spray; kerosene or fuel oil;
- (4) Instrument for blocking loopholes (a loophole-shaped piece of metal attached to a rod which is about 3 yards long), or a loophole-blocking sandbag;
- (5) Signaling equipment;
- (6) Equipment for demolishing wire entanglements;
- (7) Materials to aid in the crossing of rivers; and
- (8) Bullet-proof jackets or shields.

b. Assisting Fire-power Detachment:

Smoke bombs or gas bombs, which may be fired from accompanying guns.

c. Mopping-up Han

In addition to carrying the same type of weapons as the Assault *Han*, the Mopping-up *Han* should have, if deemed necessary, a bangalore torpedo, a hand-sprinkling poison gas can, and a sandbag.

[No mention is made here of specific items of equipment for the Obstacle-demolition *Han* or for the River-crossing Construction *Han*.]

4. METHODS OF ATTACK

a. Assisting Fire-power Detachment

From the line of general approach, advance as close as possible to the front of the pillbox—to a point from which it is most convenient to fire into the loophole. Get close enough to see the opening and closing of the loophole with the naked eye, and wait for a suitable time to start firing. (The best time for approaching is at night.)

The required standard strength for observing and neutralizing the loophole is as follows:

- When armed with rifles----- 1 squad.
- When armed with LMG----- 1 LMG (1 in reserve if necessary).
- When armed with Hv MG----- 1 Hv MG.
- When armed with rapid-firing 1 gun.
gun or Mt gun.

b. Assault *Han*

This unit must cooperate closely with the Assisting Fire-power Detachment, and, with the aid of its fire, close in on the pillbox during a lull in hostile fire.

One method of approach is to divide the *han* into small groups and close in on the pillbox from several directions.

In any approach, consider the effects of enemy flanking fire, and utilize the terrain as skillfully as possible. Careful use of creeping tactics, when enemy fire was heavy, has recently proved to be better than individual rushing, or the direct-advance method.

We usually suffer considerably more casualties while at a halt than we do while advancing. However, we must not return fire received when we first halt, unless the situation is favorable. Usually we should skillfully change our positions immediately after halting, getting the best cover available. Then it is permissible to commence firing.

c. Mopping-up *Han*

Wait for your opportunity near the Assisting Fire-power Detachment, and advance immediately after the Assault *Han*'s charge and mop up the enemy. Cooperate closely with the Assault *Han* in order to make good use of its gains.

d. Machine-Gun or Engineer Detachment

This detachment, in charging and mopping up, will occupy those places which are concealed from enemy flanking fire, such as loophole dead spaces. Sometimes suitable places can be discovered in communication trenches or other excavations at the rear entrance to the pillbox. It is comparatively safe to lie on top of a flat pillbox, but not on one which has a sloping roof.

Loopholes usually are closed by use of loophole-closing equipment or sandbags. When such items are not carried, use a shovel—climb on top of the pillbox and place the shovel over the loophole.

Hand grenades or gas hand grenades are very useful to attack the defenders near the pillbox openings. Recent experience shows that the simplest method of attack is to throw hand grenades into the ventilation hole—however, first determine whether the ventilation hole is covered by any kind of netting.

If tactically desirable, you can prevent the closing of the loophole by throwing hand grenades at the loophole door.

In attempting to penetrate the pillbox by way of the rear door, you must take the initiative and not give the enemy time to fire. Also, watch out for pistol fire. If you fail to penetrate the rear door—after having used hand grenades and other equipment—block it with sandbags to prevent escape of the enemy.

Flame throwers, or rag bundles soaked with gasoline, kerosene, and so forth, are quite effective weapons, once you get close enough to use them.

[At this point the Japanese notes mention “methods of releasing persistent or nonpersistent gas before attacking guards.” However, no details are given.]

When using explosives, not less than 20,000 grams of powder are necessary to make a gap in pillboxes, the sides of which are a yard or more thick—we have encountered countless numbers of such pillboxes in this campaign [probably in China]. Therefore, the explosive method is used mostly for bursting doors or widening loopholes to aid in the mopping-up activities.

e. Night Attacks

If the attack is made at night, each unit or detachment of the Pillbox-attack *Butai* should penetrate the pillbox area as silently as possible. The commanding officer will indicate a position from which a surprise attack will be made.

The terrain, enemy situation, and particularly the degree of darkness will determine the exact method of attack.

Close liaison must be maintained at all times, and care must be taken to prevent friendly troops from firing at each other by mistake.

f. Assistance by Other Troops

In addition to the Pillbox-attack *Butai*, the front-line troop units, during their advance, will also carry out attacks on pillboxes.

Their object is not necessarily the direct capture of pillboxes. These units will infiltrate the pillbox area in order to capture the entire depth of the enemy's front-line positions.

When advancing at full length, it is necessary to use leap-frog methods. For example, the No. 2 line unit will leap-frog the No. 1 unit.

Throughout the day, these units must maintain close liaison with the fire-power unit in the neutralization of enemy fire. Also, the Mopping-up unit must stay in the immediate rear of the No. 1 unit at all times, in order to protect the advancing front line from harassing rear attacks.

5. DESTRUCTION BY BOMBARDMENT

Even if the decision is to destroy pillboxes by bombardment, it is still necessary to organize a Pillbox-occupation Detachment. However, in actual combat, the bombardment method is seldom used.

Experience has shown that in order to destroy a pillbox 90 centimeters (approximately 3 ft.) or more thick, it is necessary to use 150-mm artillery.

Section III. DEFENSE TECHNIQUES

1. POSITIONS

If possible, the Japanese choose defensive positions which are flanked on one or both sides by natural obstacles, such as the sea, rivers, creeks, steep hills, and mountains. In Burma the positions invariably included tank obstacles, which usually were natural barriers. If natural obstacles did not exist, the Japanese generally utilized the terrain most easily converted into obstacles.

In hilly country, the Japanese—like the Germans—prepare their main defensive positions on the reverse slopes. They tunnel into the hillsides, and build dugouts which afford adequate protection against field guns, except for direct hits. Well-constructed earth-works protect the Japanese from normal infantry supporting weapons.

On a steep hill in New Guinea, the Japanese arranged defensive positions which consisted largely of one-man pits and platforms, cut into the sides of the hill. The pits usually were about 4 feet deep, about 18 inches in diameter, and situated an average of approximately 20 feet apart. The platforms were

approximately 14 feet by 6 feet, and appeared to be sited to conform with the general defense layout. Ammunition strips and cartridge cases were found on these platforms, which also were used for sleeping purposes.

All the pits were linked together with trails, which were not visible from the air because the defense area was under heavily branched trees. A fence, 4 feet high and made of small logs, extended across the area. An alarm wire, about ankle high, was strung beyond the fence. Tin cans were tied to the wire at about 5-foot intervals.

2. WEAPONS

In Burma the Japanese followed the normal practice of using machine guns as the principal weapon of defense. Medium machine guns were sited well forward. They generally were sub-allotted to platoon areas, and were often found on high terrain or dug into the sides of steep terrain. These weapons often were sited singly, and always were provided with alternate positions.

It is important to remember that Japanese medium machine guns, on the defensive, sometimes fire along a line about 10 yards from the forward edge of the Japanese main line of resistance. And assaulting soldiers—if unprotected by smoke or darkness—may suffer heavy casualties immediately in front of the enemy position, particularly if they become bunched in converging on the objective.

Next to machine guns, mortars and grenade dischargers are of great importance to the Japanese on defense. Mortars 3 inches or more in caliber may be allotted to rifle companies on a scale of one per company, but the 50-mm grenade discharger is more frequently used by the forward units—each platoon being equipped with three or four of these dischargers.

3. TACTICS IN COMBAT

The Japanese, cleverly concealed, hold their fire during an attack until the opposing forces are close—too close for the latter to receive support from artillery, mortars, and medium machine guns. Then the Japs cut loose with a heavy volume of machine-gun fire. They also throw showers of grenades, particularly if the attackers are advancing uphill.

In Burma the Japanese launched immediate counterattacks against soldiers who had captured a part of an area. These attacks were on a small scale, a dozen men led by an officer. They were preceded by a shower of grenade-discharger shells. A wild cry, to which the shout “Charge!”, in English, was sometimes added, gave warning of the counterattack.

On numerous occasions during the fighting on Attu, the Japanese would withdraw—or be forced—from ridge lines, drop down the reverse slope to positions just below the military crest, and wait for U. S. soldiers to come over the top. Then the enemy opened up with machine guns, rifles, and grenade dischargers. Therefore, to capture a ridge, it was necessary for our

soldiers to take the reverse slope to a point just beyond the military crest as well as the ridge itself. Many of the Japanese counterattacks were launched on reverse slopes so steep that the enemy had to crawl on all fours to advance. Moreover, in doing this, the Japs were excellent targets for our forces armed with M1 rifles and hand grenades.

Section IV. NOTES ON JAPANESE SECURITY MEASURES¹

1. INTRODUCTION

Some of the security measures observed by the Japanese are given below in the form of extracts taken from Japanese documents. Although the facts contained in these extracts have not been changed, they have been reorganized and edited for the sake of clarity.

These extracts are presented with the view that such information will stimulate the security efforts made by our own troops, in addition to familiarizing them with Japanese security methods. It must be kept in mind throughout that these extracts are statements of Japanese doctrine and must not be confused with our own.

2. GENERAL SUPERVISION

The Japanese state that the observance of proper security measures and the maintenance of good military discipline are very closely related. Almost invariably, troops who halfheartedly observe security regulations are poorly disciplined troops.

¹ See FM 30-5 for a discussion of U. S. security methods.

The following quotation gives an indication of Japanese thought about security duties:

“In case secret information leaks out, soldiers should be trained to take the same action against their soldier and civilian friends that they would take against soldiers and civilians who are strangers.”

Although the Japanese have security regulations to cover all units and situations, the documents quoted in this section deal mainly with the battalion. Each battalion has a security committee which consists of a president (senior Hq company officer), the battalion adjutant, and one officer from each unit.

The duties of the committee, as outlined by the Japanese, are as follows:

The president controls and supervises the security training, and decides what action, if any, will be taken against offenders. He is assisted by the committee in gathering materials for security instruction and in fostering a state of security-mindedness among all personnel. The president, the committee, and the commanding officer of each unit utilizes the time of internal inspections to conduct special security investigations. The committee holds meetings from time to time to study security matters and to determine the most efficient methods of putting security measures into operation.

All unit commanders and committee members, noncoms and above, are particularly expected to give detailed instructions concerning means of carrying out security measures.

The battalion security committee will see that timely security bulletins are published from time to time to prevent troops falling into a condition we might call security “stagnancy.”

3. PRECAUTIONS

a. In Handling Classified Matter

(1) Distribute only a list of documents to units within the battalion—the documents not directly necessary for an individual unit will be held by battalion headquarters and examined only when necessary.

(2) Collect all documents of no further value, and have them burned under supervision of the depot unit's noncom orderly of the week (day).

(3) Tightly seal secret military documents for dispatching, and get a receipt for same to insure against loss.

(4) Do not mix things classified as secret with material of a lower classification; do not put them in map cases or similar containers which could be dropped and lost. Even if things are not classified secret, do not leave them lying around.

(5) Treat as extremely secret all documents concerning instructional organizations, plans for maneuvers, and lists of personnel.

(6) Make only the number of copies absolutely necessary [in preparing secret documents].

(7) Make certain that the person so designated disposes of classified documents after their use.

(8) Prohibit persons outside the unit from seeing, or even being aware of, the presence of classified documents.

(9) Be cautious in selecting the custodian of secret documents.

(10) Be sure that the security box for secret documents is strong and has a lock. It must be kept under supervision at all times.

(11) Guard the receptacle in which secret things are carried and the method of transportation, and see that the receptacle is not opened, dropped, or lost.

b. Regarding Military Personnel

(1) Don't talk carelessly about military matters outside the barracks, even when among soldiers.

(2) Forbid subordinates to take notes of secret military matters during instruction periods.

(3) Don't mention secret military matters in talking over the telephone; communicate in writing, or make contact personally. If the person at the other end of the line mentions secret matters, caution him immediately.

(4) Make it impossible for anyone to determine, by marks of destination, the proper name of a unit, the number of personnel, and so forth.

(5) Appoint a person in charge of security in every room [barracks].

(6) Enforce the display of security slogans, epigrams, and the like in soldiers' rooms, canteens, passages, public places, and so forth.

(7) Pay particular attention to security in the official bachelor quarters outside the barracks.

(8) Forbid typists in each headquarters department to read or compare each other's notes.

(9) Strictly control rumors and baseless lies. Dispel idle talk and uneasy curiosity by promptly informing every individual about matters they are entitled to know.

c. Regarding Inspections and Censorship

(1) Watch for letters, parcels, and articles brought into barracks, and enforce their strictest inspection.

(2) Be strictly secret in censoring personal communications.

(3) Assign a censor for personal communications at headquarters of battalions and companies. Unless such communications bear the franking seal of said officers, the former will not be accepted at the post office.

(4) See that personal correspondence of persons living in barracks is written on post cards. Sealed letters may be used only with the permission of unit commanders.

(5) Forbid persons living in barracks to post mail outside the barracks (this also applies during field maneuvers, and so forth).

(6) Never use the proper name of your unit except as author-

ized by regulations. The common designation will be used on all ordinary documents.

d. In Dealing with Civilians

(1) Increase security vigilance when you come in contact with persons outside your unit (when bivouacking in the country, and so forth).

(2) Be sure that outsiders do not observe our organization, equipment, or the techniques of combat during drills, maneuvers, marching, and inspection. Post guards to prevent the approach of outsiders.

(3) Keep employed laborers or coolies from observing our military strength or tactics.

(4) Strictly inspect articles brought in or taken away by visitors—except in the case of visiting commissioned officers.

(5) Warn clerks and other civilians of the importance of vigilant security precautions. In particular, supervise and guide printing personnel, typists, and telephone exchange operators.

(6) See that printers retain no proofs.

(7) Pass the prints of commemorative photographs through the hands of the responsible person, and see that the negatives are collected.

(8) Take precautions with civilians connected with canteens, cooking, construction, newspaper delivery, and photography.

(9) Greatly restrict the movement of civilians through barracks, and the coming and going of groups of persons.

(10) Investigate the personal history of merchants having dealings at barracks or camps, and make frequent secret investigations into their means of livelihood. In liaison with the military and provincial police, increase these considerations tenfold where Koreans are concerned. Carefully supervise the coming and going of merchants.

(11) Have business conversations conducted only by those in charge of such matters. Be cautious with documents relating to business transactions—because information about organization,

equipment, and number of personnel can be deduced from the amount and number of transactions.

(12) Determine the best time and place to make purchases, from the standpoint of security.

(13) Supervise newspapermen as follows: Have a definite entrance and exit; see that they do not talk with persons other than those in charge; and see that no photographs are taken without permission.

e. Regarding Foreigners

(1) See that military personnel have none except official contacts with foreigners. Take particular precautions with Englishmen, Americans, Russians, and "Anti-Hitlerites"—of whom there are a large number despite the fact that they are German—in order to prevent discovery of our intentions.

(2) Report with all speed any foreigners or suspicious persons discovered wandering around in the vicinity of barracks or bivouac areas.

(3) Exercise thorough precautions and supervision in respect to Christianity. Control the relationships of Korean Christians with Englishmen and Americans.

4. EXAMPLES OF VIOLATIONS

In order to illustrate some of the common violations of security regulations, the Japanese have published a long list of military personnel who have broken security rules. The list gives the full name and the unit of the offenders in each instance, the nature of the violation, the scope of leakage, and the measures taken by security authorities.

A few examples of the violations are given below to illustrate some of the ways a soldier can imperil his

country and endanger the lives of his comrades by being careless, indifferent, or criminal with regard to security.

a. Sergeant—wrote in a letter “. . . at this time, to tell the truth, we are secretly preparing for war.”

b. Sergeant—wrote a military transportation schedule on the wall of a railroad station, where he was assigned to duty in a line-of-communication unit, and frequently left his post unguarded.

c. Private—“It seems that pretty soon I shall be setting out for X. Our regiment is making steady preparations We have been issued battle kits, and so forth.”

d. Officer—wore a combat uniform and carried a military sword (wrapped in white cloth), thus disclosing at a glance that he was leaving for the front. While attending a banquet, he said: This is our last drink with you.”

e. Officer—“Now is the day for field units and replacement units to prepare for action. It is difficult to measure in the hearts of the people whether it shall be peace or war. This depends on the international situation. I feel sad when I think of our lack of materials for weapons I shall go to Kantosho, Manchukuo”

g. Military laborer—“The European crisis has been brought closer. Feeling on the Soviet-Manchurian frontier [some time before Dec. 7, 1941] has also suddenly become worse, and the reservists are being posted one by one to military stations”

PART FOUR: UNITED NATIONS

Section I. HOW BRITISH DEAL WITH ROAD CRATERS, OBSTACLES

1. INTRODUCTION

In the British Army, troops of all arms are instructed how to deal with road craters and road obstacles when prompt action is required in an emergency. The following is an extract from a British Army document on this subject:

2. CRATERS

First, look for antitank mines, antipersonnel mines, and booby traps, within or around the craters. Then look for a detour and use it if possible, cutting down fences and ramping all low banks. If a suitable detour exists, it will nearly always be more advisable to use it than to repair the crater.

If it is necessary to fill in the craters, slightly different methods will be used for dry and wet craters.

a. Dry Craters

Trample down all loose earth inside the crater.

Start filling the crater with all the loose soil available. As soon as the depth has been sufficiently reduced, a tracked vehicle

should be driven across the crater to consolidate the soil, and this procedure repeated at intervals. Where brushwood is available, alternate layers of brushwood and soil should be laid. The brushwood will help to consolidate the soil, and at the same time distribute the load. Any rock, stone, or gravel thrown up by the explosion should be saved, and used later in making the road surface.

Continue filling until the depth of the crater has been reduced to 3 feet. As a rule, any filled-in craters of this depth will be passable for tracked vehicles, $\frac{3}{4}$ -ton trucks, and even $1\frac{1}{2}$ -ton trucks.

If it is essential to make a passage for all military vehicles, cut ramps on opposite sides of the crater, and shovel the soil from these two cuts into the crater. If each ramp is cut 10 feet long, enough soil will be made available to reduce the depth of the average crater so that it will be passable for all vehicles.

The surfacing of a filled-in crater should be completed before any but the most essential vehicles are permitted to cross, unless the crater is completely dry and likely to remain so. Otherwise, vehicles crossing over will churn up the soil and soon render further crossing impossible. The surfacing should consist of the stones and gravel which have been reserved for this purpose or of fascines [brushwood bundles]. A maintenance party will be needed to look after the surface until an engineer repair party can take over.

The following table may be used as a guide to indicate the time and labor required for crater filling. If a party of 20 men, equipped with picks, shovels, and axes, go to work on a dry crater 25 feet in diameter and 7 feet deep, in medium soil, they can make it passable for

tracked vehicles.....	in 30 minutes
"4 x 4" (all-wheel-drive) trucks....	in 35 minutes
$\frac{3}{4}$ -ton trucks.....	in 40 minutes
all vehicles except buses.....	in 75 minutes
all vehicles	in three hours

b. Wet Craters

If a crater contains water, a modification of the above procedure will be necessary.

If rocks and stones are available, use them to fill the crater up to water level. If there are no rocks or stones at hand, fill the crater bottom with earth. Cover this with two layers of empty sandbags to form a seal. Lay 9 inches of brushwood, and then 9 inches of earth. Repeat this sequence of empty sandbags, brushwood, and earth until the depth of the crater has been reduced to 3 feet. Layers should be laid so that they slope upward toward the center of the road to allow for consolidation of the center.

After this, follow the procedure outlined for filling a dry crater.

Water-filled craters naturally take slightly longer to improve than dry craters.

3. OTHER ROAD OBSTACLES

Hastily contrived road obstacles—such as farm wagons, the wheels of which have been removed, or felled trees—will often be fairly easy to destroy or move. However, it should be taken for granted that they will be liberally bobby-trapped. There will seldom be enough time to wait for skilled engineer personnel to locate and neutralize these traps. Therefore, the first troops to arrive on the site will find it necessary to set off the traps by using hand grenades or by tying ropes to the obstacle and, from a safe distance, hauling it off the road. It must also be remembered that antitank mines will probably have been laid in the road underneath the obstacle; for this reason, an extremely careful examination of the road surface is a necessity.

Finally, it is strongly emphasized that if any possible detour exists, it is normally much quicker to go around an obstacle than to remove it. It must be expected that detours or obvious turn-outs will be imaginatively mined and booby-trapped.

Section II. BRITISH JUNIOR OFFICER TELLS COMBAT EXPERIENCES

1. INTRODUCTION

The following letter from a British platoon commander in North Africa to one of his friends in an officers school in England discusses German and British tactics, and makes a number of valuable suggestions. It is reprinted here for the information of American junior officers who may face similar combat problems.

2. "TIPS FROM THE FRONT"

DEAR TOM:

You asked in your letter for a few "tips from the front." Here they are.

In attack, get your platoon going on location of fire, observation, and intelligent use of all available information. Our initial tendency (and it wasn't altogether the platoon commander's fault) was to rush into the attack without a really thorough reconnaissance, and without going over with the noncoms every bit of information we had about the enemy's positions. Once you're in it, it's hell's own game trying to see where the bullets are coming from, unless you have a fair idea where the swine ought to be. Even then, it's not so easy.

We have lost a lot of officers through platoon commanders being too eager and moving right up with their leading squad.

You can fight your platoon a darned sight better by staying in a position from which you can maneuver your reserve (that is, your two rear squads) when you have seen what fire is drawn by the leading squad. The same applies to company commanders, of course. Practice lots of frontal attacks. Boche positions are so invariably mutually supporting that platoon flanking attacks are damned hard, especially as the bloke you are after is probably supported by medium machine-gun fire from somewhere out of range of your light machine gun.

Approach marches are important. You nearly always have several miles to cover, probably in the dark, before you reach the place from which the attack starts. The condition in which your men reach that assembly area is going to make a whole lot of difference in their performance when the big moment comes. If the march has been a scramble, and if they are rushed into the attack as soon as they arrive, morale will be low. If the march has been orderly, with plenty of time to check up on everything and rest the men at the assembly area, they will start off confident and be much more likely to do a good job.

Defense took rather a back seat at home—we were supposed to be “assault troops”—but, assault troops or not, most of your time will be spent in defense, because whenever you are not actually attacking, you have to be in a position to defend yourself. So it is well worth studying. However huge an area of country you are given, in placing your troops imagine that you have only three-quarters of your platoons. Put your spare quarter aside as a mobile reserve; then forget all the books and put the rest wherever your own common sense and your knowledge of Boche habits tells you. Whenever possible, you want to be on reverse slopes—any movement on forward slopes brings the shells down, and it is not easy to stay still all day. If the ground forces you to take up forward slope positions, keep the absolute minimum at battle posts to observe, and the rest in cover until you are attacked. It is then that your fire control comes in. The first time, unless you have been warning your men daily, everyone will blaze off at any range at the first Boche

to appear, giving all your positions away. It is much more satisfying to let the Jerries come up a bit, and then catch them wholesale on some open stretch. If by chance they knock out one of your posts and start getting in among you, you can thank God for the quarter you kept in reserve and start your counterattack straight away. If you have got a counterattack properly rehearsed with supporting fire, and so on, for each of your posts, you should be able to get it in almost as soon as they arrive, or, better still, get them in a flank as they advance.

In defense by night, the squad sentry should man the Bren in the same trench with the squad leader. The squad leader has his Tommy gun, a couple of grenades, and a Very pistol with plenty of cartridges, and is ready for anything. If a Boche patrol attacks, they will let off lashings of automatic fire at random, to draw yours, and when they retire, it will be under cover of mortars. The answer is, stay still and hold your fire until you can pick a certain target. At Djebel Abiod we were attacked by a patrol some fifteen strong. They fired literally thousands of rounds without causing a casualty. We fired about twenty rounds, and killed an officer and two enlisted men. I don't think it's worth chasing a retiring patrol—they want you to leave your trenches, so as to catch you with their mortars. Instead, you can sometimes guess their line of retreat and chase them with your own mortar fire.

The best patrolling troops we have come across are the Moroccan Goums, whose success as compared with any European unit is phenomenal. Even against the best of the Germans, they never fail. Why are they better than we are? First, because they are wild hillmen and have been trained as warriors from birth. Second, because the preparation of their patrols is done with such detailed thoroughness. No fighting patrol is sent out until its leaders have spent at least a day watching the actual post they are after, and reconnoitering exact routes and so forth. If the leaders are not satisfied at the end of the day, they will postpone sending out the patrol, and will devote another day to the preliminaries. Some of our men are a little too inclined to

think of a patrol at four or five in the afternoon, and send it out that same night. To be worth a damn, a fighting patrol must start off with an odds-on chance of two-to-one—not six-to-four or even money, but a good two-to-one bet. To make this possible, your information has got to be really good and up to date. As regards composition of fighting patrols, there is a wide divergence of opinion. In this battalion we go on the principle of maximum fire power with minimum manpower, and our patrols have usually consisted of an officer, a noncom, and nine men—in other words, an assault group consisting of an officer, three grenadiers, and three Tommy gunners, and a support group of a noncom and three Bren gunners. The type of reconnaissance patrol which has produced the best result is the one composed of an officer or sergeant and two men who go out at night, remain awake and observe all the next day, and return during the second night.

Slit trenches deserve a paragraph all to themselves. A few days after we landed, we spent literally a whole day at Tabarka being dive-bombed and machine-gunned from the air. This went on intermittently all the following week at Djebel Abiod, plus more than enough shelling. Since then, the men have dug slit trenches automatically, even if they arrive at a place soaking wet at three in the morning. Their trenches are a full 5 feet deep, too. Anyone will tell you tales of miraculous escapes due to slit trenches—shells landing a couple of feet away without hurting the bloke inside, and so on. I don't think you could ever shell our battalion out of a position—if only because we know we are safer in slit trenches than out of them.

Incidentally, machine-gunning from the air is perfectly bloody—worse than bombing or shelling. The accuracy of it is something I never imagined. An unopposed fighter can guarantee that he'll hit a solitary car. But, on the other hand, if you have dug good slit trenches, you don't suffer casualties from this type of attack, and you find that, after all, the noise was the worst part of it.

The Boche does much more air reconnaissance than we do. Every morning "Gert and Daisy" take a look at us, and if camouflage is bad, I suppose a photo of our positions goes into the album. You can almost tell how long a unit has been out here by looking at its camouflage.

It is worth learning something about antitank mines. There are usually plenty to be had, and if all your men can lay them, you are ready for the enemy's tanks almost as soon as you get into a new position. If you're lazy and wait for the Royal Engineers to lay them, you may never be ready! All our men carry Hawkins antitank grenade-mines.

Somebody once said, "Warfare consists of boredom punctuated by occasional moments of excitement." This is absolute rot! When you're living out in shocking weather, with nothing but a gas cape over your head and with thirty men expecting you to okay their letters for censorship, dish out NAAFI (Navy, Army, and Air Force Institutes) stuff, make the best of the rations, and get them gear from the "Q," there's too much to do to get bored. When you, in turn, have got to see that "they are always ready to fight, that they are in good heart, that they are clean and healthy, and that the noncoms are doing their jobs, you may get fed up but never bored. Discipline is the hardest and most important thing to keep going. You and the noncoms spend 24 hours a day with the men, and discipline is almost certain to slacken if you're not on your guard. I find that the best way is to keep a strict routine, however rotten the conditions. That is, I stipulate a definite timetable for everything which must be done daily. If you keep a firm hold on the men in these small day-to-day things, you'll find that you've got them under control when the trouble starts.

Finally, remember that "there are bad officers but no bad troops." This is horribly true. We have often seen it out here—second-rate men fighting magnificently because they were under a first-rate officer, and vice versa. It makes you realize the vital importance of your job. Motto—"It all depends on me."

Section III. DESCRIPTION OF BRITISH ANTIPERSONNEL SWITCH

1. INTRODUCTION

In Tunisia the Axis made liberal use of captured British antipersonnel switches. This switch is a device intended to be sunk in footpaths and trails. When pressure is put upon it and then released, a bullet is projected upward. The following notes on the weapon are reproduced from a British Army training pamphlet.

2. DESCRIPTION

The switch (see fig. 19) consists of a hollow metal spike (1) with a flange at the open end. The spike can be pressed into the ground or hammered with care into a road. Inside the spike is the firing assembly, consisting of a metal spindle (2) with a flange at the base and a wire umbrella catch toward the top. A spring (3) and a spring retaining sleeve (4) are threaded over the spindle and are held in compression by the umbrella catch. A striker with a hollow shaft (5) is placed over the top of the spindle. Resting on the striker is a rimless cartridge with a bullet (6), which projects slightly above the spike.

3. OPERATION

When a man's foot (or a tire) depresses the bullet, the striker moves down and releases the umbrella catch. The striker then

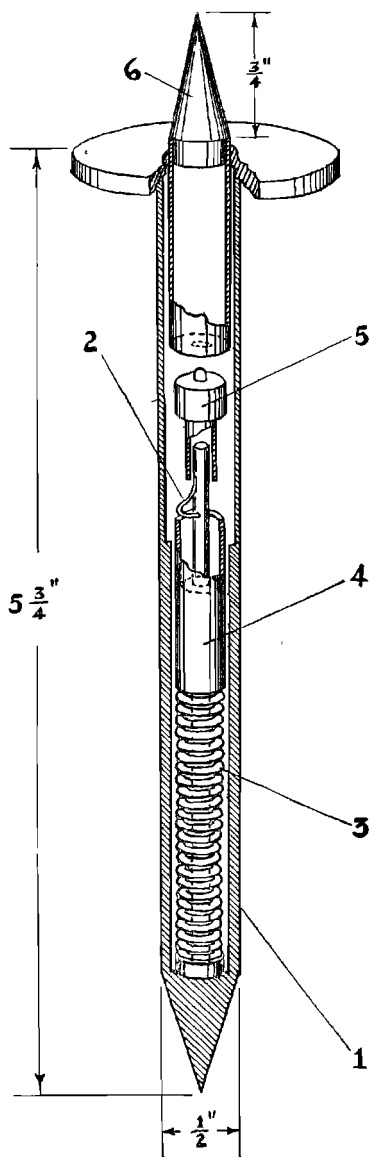


Figure 19.—Switch (British antipersonnel).

drives up under the influence of the spring, striking the cartridge cap and firing the bullet, which goes through the man's foot (or the tire).

4. ASSEMBLY AND TESTING

The switches will normally be issued in boxes of 50, with the cartridges packed separately. The firing mechanism, which is inserted in the hollow spike, is kept in position by means of a cork.

Should the mechanism not be loaded, place the sleeve—with the rounded end in contact with the spring and the faced end toward the striker—over the spindle, and depress until the catch engages. If difficulty is experienced in getting the catch to hold, it should be pried open a little further with a small screw driver. The striker can then be placed on the spindle.

To test the mechanism, push a pencil down the spike.

Never use the cartridge for testing!

5. CONCEALMENT

When the switch has been sunk into the ground, its protruding point may be concealed with a handful of dirt, sand, mud, a few leaves, or whatever blends best with the locality. A shallow water-filled pothole in a road is an excellent site, provided that the bullet's nose is beneath the surface of the water. In this case, however, the switch quickly rusts and becomes inoperative.

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