

Intelligence Bulletin

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MILITARY INTELLIGENCE DIVISION • WAR DEPARTMENT • WASHINGTON D. C.
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Have You Learned A Lesson About The Enemy?

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VOL. III NO. 7

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INTELLIGENCE BULLETIN



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Germany's Rocket and Recoilless Weapons

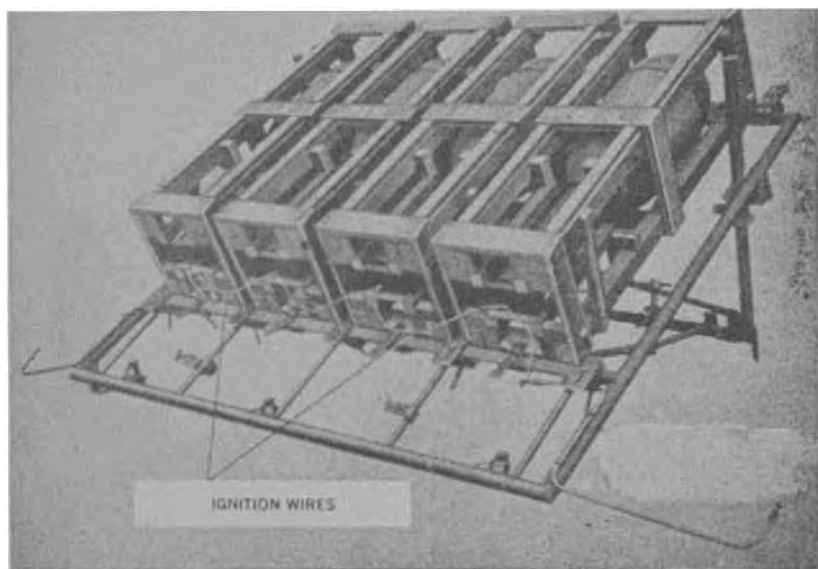
The capabilities of German rocket and recoilless weapons warrant serious study by U. S. soldiers, not only because they are highly effective and mobile but because they are being used increasingly, in view of Germany's raw material shortages, as substitutes for conventional artillery and antitank weapons. When the Germans began this war, they believed that their Stuka bombers—the *Ju 87* and the *Ju 88*—would take over a high percentage of direct infantry-support missions from the field artillery. No matter how well these aircraft may have accomplished their missions during the campaign in Poland, Norway, the Low Countries, and France, their inability to take over a field artillery role became evident after Germany had attacked Russia and had encountered masses of Russian artillery. However, by the time the attrition of the war with Russia had had its cramping effect on German industry, it was too late for Hitler to build up his artillery arm sufficiently to gain the necessary superiority.

The Wurfrahmen 40 is here shown in action. Four wooden rocket-carrying crates are in place on the plates on the side of the half-track. The last of the four rockets has just been fired.

Before the war the Germans, like the Russians, had been experimenting with rocket developments. When the need for artillery substitutes became apparent, the Germans naturally turned to rockets and rocket launchers since these were relatively inexpensive and could be produced quickly. In contrast to artillery, rockets do not require electric-furnace steel, carefully forged tubes, or heavy carriages with delicately machined recoil and counterrecoil mechanisms.

The first German rockets were those launched from the *Schweres Wurfgerät 40* ("heavy throwing apparatus") and the *Schweres Wurfgerät 41*. These fire either 180-pound high-explosive or 196-pound incendiary rockets. These rockets are 280-mm and 320-mm in diameter, and weigh 180 and 196 pounds respectively. The *Schweres Wurfgerät 40* consists merely of a wooden frame (*Wurfgestell 40*) which fires rockets from wooden shipping crates; the *41*, of a steel frame (*Wurfgestell 41*) holding either wooden or steel shipping crates. The launcher *Schweres Wurfrahmen 40* consists of plates on the side of an armored half-track. Each half-track mounts a total of six plates, three on each side. The rocket-carrying crates are secured to the plates, and the latter are then inclined at a right angle for firing. Rockets also are fired from a *Wurfgerät* by the simple process of inclining the "heavy throwing apparatus" (shipping crate) in a trench (or against a firm rest) and setting a correct angle. The 300-mm high-explosive rocket also may be fired in this manner.

In 1941 there appeared the now-famous *15-cm Nebelwerfer 41*, or rocket projector, which U. S. soldiers have nicknamed the "Screaming Meemie." (The literal translation of *Nebelwerfer* is "smoke thrower.") This weapon launches its rockets from six grooved tubes, which are 5.9 inches in diameter. Although the tubes are mounted on a two-wheeled carriage with a split trail, the whole apparatus is so light that two men can

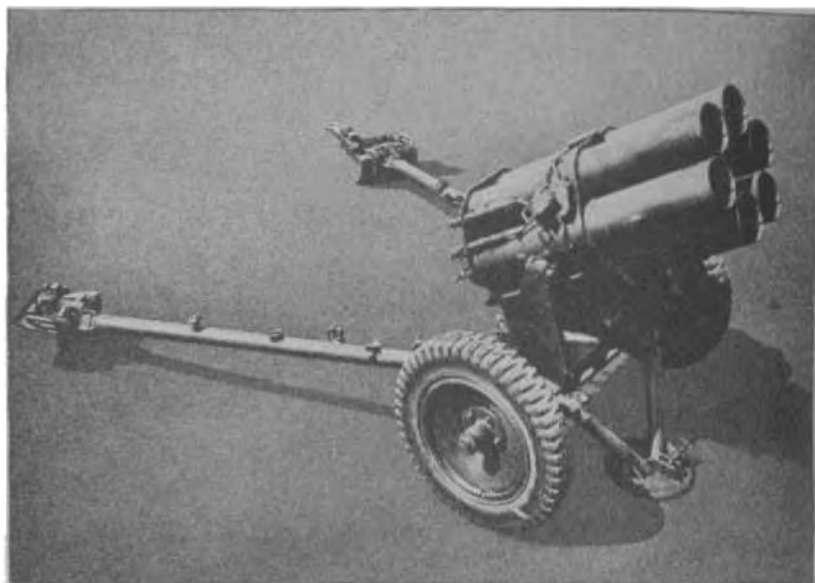


The Wurfergerät 41 consists of a frame of steel tubing on which may be placed 280- or 320-mm rockets in either wooden or steel crates. (The wooden crates are illustrated above.) The rockets are fired from these crates.

manhandle it easily. The *15-cm Nebelwerfer 41* is supposed to fire in batteries of six pieces, with each piece launching a six-round salvo every 8 minutes. (Misfires are common.) The crew takes shelter in a slit trench before firing, and discharges the six rockets by remote control, following a prescribed sequence. The rockets' maximum range is about 8,000 yards.

Similar to the *15-cm Nebelwerfer 41* is the five-tube *21-cm Nebelwerfer 42*. This launcher fires 8-inch rockets as far as 8,600 yards. Its high-explosive rockets are shaped like artillery shells, and the Germans consider these rockets their most effective long-range rocket projectiles.

To give their larger rockets greater accuracy and to speed up the firing, the Germans have provided two-wheel carriages



Of the heavy rocket weapons, the six-barreled 150-mm 15-cm Nebelwerfer 41 has been encountered by U. S. troops more widely than any other. It is generally referred to loosely as "the Nebelwerfer."

with pneumatic tires. These carriages and launchers differ from those for the 150-mm and 210-mm *Nebelwerfer*. The larger launchers consist of steel frames into which the shipping crates are inserted. The most common of these launchers—the 28/32-cm *Nebelwerfer 41*—has six frames, which fire either the 320-mm incendiary rocket or the 280-mm high-explosive rocket, as fired from the *Wurfgeräte* and *Wurfrahmen*. For the latter, liners are fitted inside the frames. These rockets may be fired at the rate of one salvo (six rockets) in 10 seconds. Theoretically, the battery of six pieces is supposed to fire simultaneously. Each piece has a crew of seven men. When they are ready to fire, they take cover in two slit trenches about 30 yards to the rear of the right side of the piece. The time allotted to reload each *Nebelwerfer* is 5 minutes. The ammunition usually

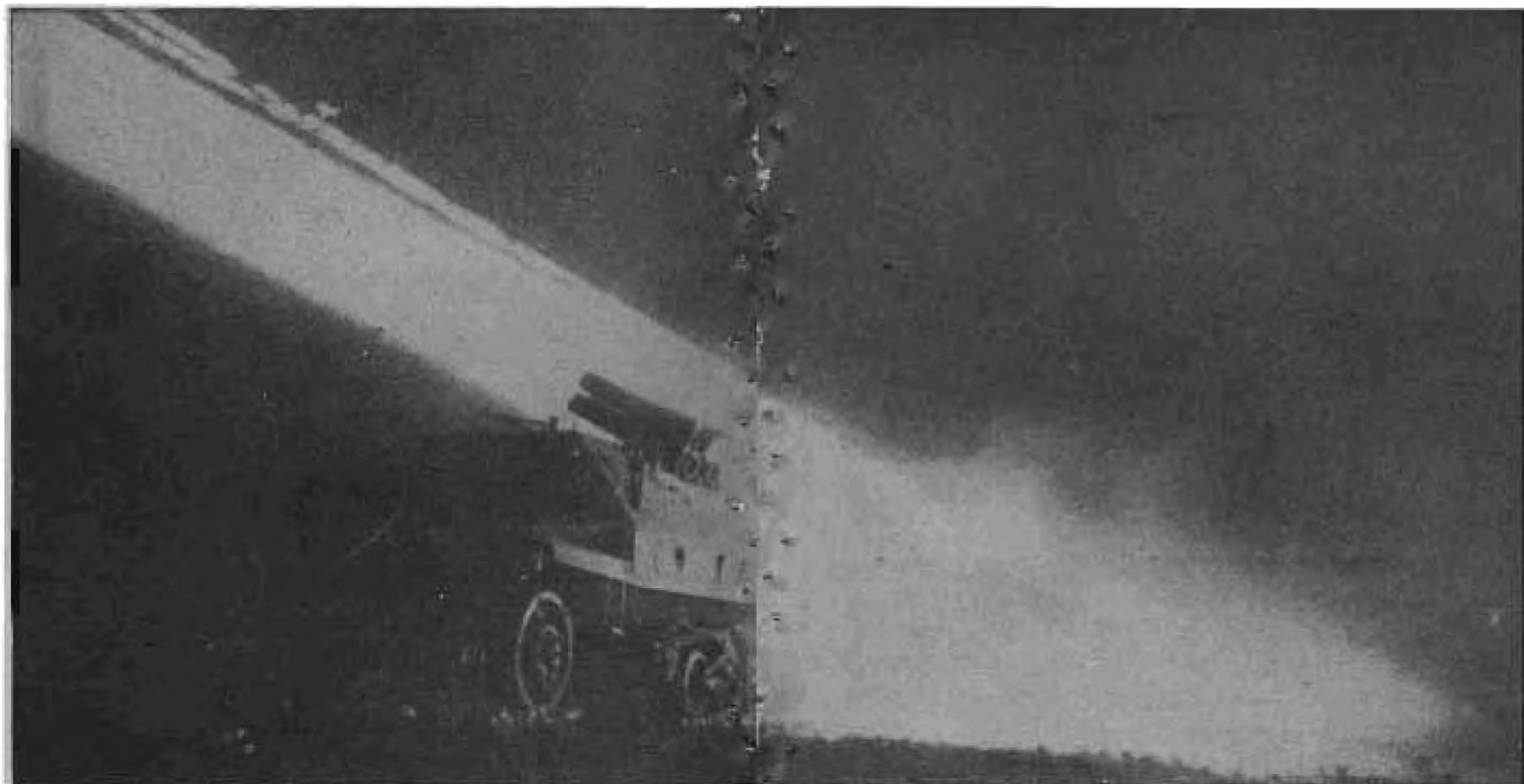


U. S. soldiers inspect a captured 28/32-cm Nebelwerfer 41. The weapon is loaded, but electrical leads are not connected to the bases of the rocket motors. Note the box (shown open) which protects the sight.

is piled on the ground to the right and left of the piece. The maximum range for the 280-mm high-explosive rocket is only 2,100 yards; and for the 320-mm incendiary rocket, 2,400 yards. The minimum range is 1,375 yards. It is reported that the Germans prefer ranges of from 1,870 to 2,090 yards.

The 300-mm launcher 30-cm *Nebelwerfer* 42 is constructed along much the same lines as the 28/32-cm *Nebelwerfer* 41.

Dissatisfied with the slow rate of fire of these launchers, the Germans conducted experiments in an effort to attain a faster rate. Their research resulted in production of the 15-cm *Panzerwerfer* 42. This consists of two banks of 15-cm *Nebelwerfer* launching tubes, with six tubes in each bank. The launching unit is mounted on an armored half-track. Since the crew need not dig slit trenches, but can take cover in the vehicle instead, fire can be delivered somewhat faster than from other *Nebel-*



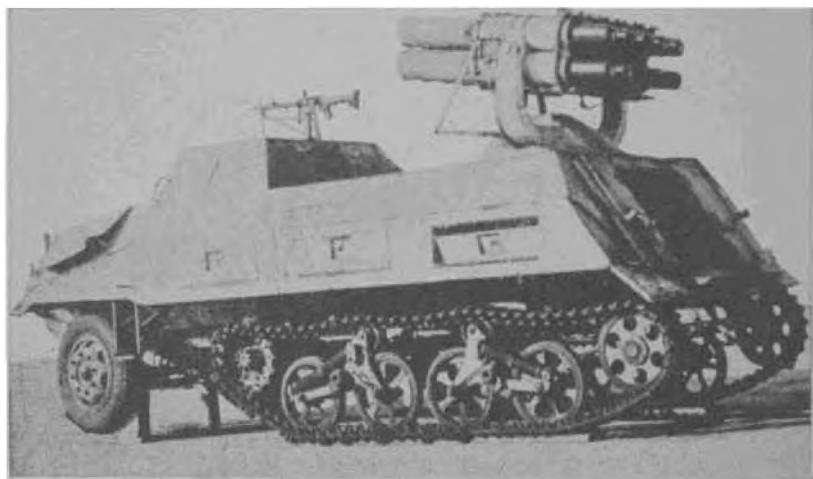
A night-firing 15-cm Panzerwerfer 42 makes an impressive display of fire and smoke as it salvoes rockets from its 10 launchers. All multi-barreled rocket launchers fire salvoes in ripples.

werfer. Panzerwerfer are organized in the standard rocket-launcher battery of two platoons of three pieces each.

Although the name *Nebelwerfer* implies that the original purpose of these rocket launchers was to lay down smoke concentrations, it must be remembered that these same launchers can serve as projectors for gas-loaded rockets. Their thin-skinned

projectiles can carry far more gas, incendiary, or smoke-generating material than can thick-walled artillery shells. (The 300-mm rocket, for example, carries 10 gallons of incendiary material.) Since pinpoint accuracy is not necessary in building up smoke concentrations, the *Nebelwerfer's* lack of preciseness is of little importance when chemical rockets are used.

High explosive is a different matter. A great deal of high explosive can be crammed into these rockets (the 280-mm can-



The Panzerwerfer 42 fires the same rockets as the 15-cm Nebelwerfer 41, but has 10 instead of six barrels. The barrels are shown loaded.

ries 55 pounds of high explosive), but since direct hits on personnel and installations must be scored, inaccuracy is a seriously compromising factor. In general, *Nebelwerfer* firing high explosive are useful only against area targets, such as towns. The walls of the rocket yield little fragmentation, and the effect is chiefly blast.

Smoke trails from the flying rockets betray the battery locations, no matter what type of ammunition is fired. For this reason, the Germans try to make the most of initial surprise concentrations, especially with the shorter-range rockets. In prolonged fire frequent shifting of battery positions is necessary if counterbattery is to be avoided.

With their customary eagerness to turn their shortcomings into assets, the Germans have tried to make capital out of the spectacular effect of rocket trails and have even gone so far as to put coloring matter in the propellants. The enemy believes

that the scream of the rockets and the loud bursts of the heavily laden but inaccurate projectiles weaken the morale of Allied troops meeting these phenomena for the first time.

Less spectacular, but more practical, are the recoilless weapons used in antitank warfare.¹ When the Russian T-34 medium tank appeared in 1941, the Germans realized that all conventional antitank guns smaller than 75-mm in caliber would become obsolete. Already hard-pressed for artillery, the enemy simply could not produce enough heavy antitank pieces approximately the size of field guns. Therefore, when the U. S. bazooka was introduced, they promptly adapted the weapon for their own use. Then they developed their *Panzerfaust* series. The latest *Panzerfaust*, the 60, is known to have a maximum range of about 90 yards. Its folding sight, in a downward position, acts as a safety. Raised, it has three rectangular holes. When the target is aligned with a stub on the upper edge of the projectile, sighting through the lowest hole gives a 33-yard range; through the middle hole, a 66-yard range; and through the upper hole, an 88-yard range. This *Panzerfaust* will penetrate better than 7 inches of armor. Like all the German one-man recoilless weapons, the latest *Panzerfaust* fires a hollow-charge projectile. However, the *Panzerfaust* 60's projectile is unusual in that the head with the explosive charge may be carried separately; just before firing, the head is attached to the stick and vanes, which have been kept in the launching tube.

There are two types of German bazooka both of which the German soldiers call *Ofenrohr*, or "stovepipe." The newer is the 8.8-cm *R. Pz. B. 54*; its shield for the firer is the feature which principally distinguishes it from the earlier *R. Pz. B. 43*. According to the Germans, the *Ofenrohr's* 88-mm, 7.5-pound, hollow-charge round can achieve penetrations on any Allied

¹ See *Intelligence Bulletin*, Vol. III, No. 3, pp. 74-79, excepting the incorrect illustration of the *Panzerwurfmine*. The *Panzerwurfmine* is correctly illustrated in the present issue.



Well-armed German infantrymen in position at a Netherlands cross-road. Note (left to right) such hand grenades, a Panzerfaust 100, a Kistner rifle (Kar. 93), and another Panzerfaust 60.



The Panzerfaust 100 (top) and Panzerfaust 60 (bottom).

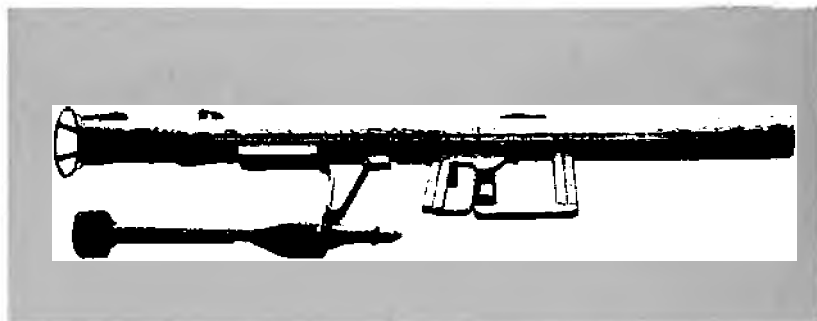
armored vehicle at ranges up to 160 yards, but is not suitable for use against unarmored targets. Larger and clumsier than the U. S. bazooka, the *Ofenrohr* has projectile guide tubes, which wear out after about 300 rounds have been fired.

German directives call for each rifle company to form rocket-launching personnel into at least one antitank section.² The section consists of a leader, a driver (for a horse-drawn vehicle), and two squads of six men each. Each squad has three rocket launchers. Ten rounds are allotted to each launcher. Launchers and ammunition are carried in a two-wheeled towable infantry cart (*I.F. 8*). If possible, personnel of the entire section

²It should also be noted that each Volksgrenadier division contains a bazooka company (the 14th). This company has 3 platoons, with 10 bazookas in each platoon. The platoon has 3 sections, with 5 bazookas in each section. The section has 2 squads, with 3 bazookas in each squad.



Recently captured Ofenrohr have had very noticeable fore and rear sights and shields to protect the users.



The Ofenrohr is here shown with its 88-mm projectile.

are provided with rifle grenade launchers, suitable antitank and smoke grenades, and magnetic hollow charges for antitank close combat. A German antitank bazooka team consists of two men, the loader and the firer. If the firer is operating the shieldless *R. Pz. B. 43*, he wears special gloves and headgear.

The Germans specify that the section should be used as a whole, whenever possible. Each squad is dug in so that the fires of its three bazookas interlock. Slit trenches in what the Air Forces would call a "V of V's," with the prongs of all the V's facing the opposing force, is the favorite German way of digging

in each squad.³ The V-shape of each slit trench permits the loader to take shelter and yet remain close to the operator and the weapon.

Alternate positions are prepared, with communication trenches dug so that personnel can change positions in battle without unnecessary risk. If sections are held in reserve for any reason, they prepare positions ahead of time for possible use, and reconnoiter covered approach routes by which the positions may be occupied. To give reserve sections time to deploy, and to ensure that forward bazooka squads are alerted, the Germans try to devise extensive warning systems to indicate the approach of hostile tanks.

As the tanks approach, *Ofenrohr* teams are supposed to keep cool and to withhold fire until short ranges have provided the best opportunities for scoring hits. Such waits also increase the possibility of surprise, and permit teams to get a maximum number of tanks within range. The German intention is to destroy as many tanks as possible before the vehicle can take evasive action or drawback out of bazooka range. Usually the choice of target and the moment to open fire are left to the initiative of each bazooka operator. Sometimes section or squad leaders may give fire orders in advance, as a means of ensuring surprise fire effect. To open fire, the launcher is lifted above ground level, and then is brought back into the trench for reloading.

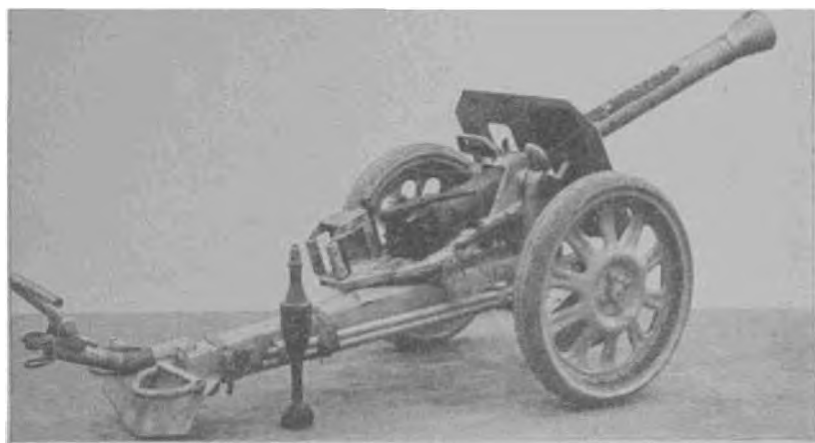
Of incidental interest is the following extract from an order by a German regimental commander:

In recent fighting it was discovered that projectiles fired at a tank from an *Ofenrohr* at a range of 5 yards did not explode, but bounced harmlessly off the armor. In the future, therefore, tank hunters must take pains to fire the *Ofenrohr* at a minimum range of 32 yards.

³This tactic was discussed in *Intelligence Bulletin*, Vol. III, No. 6, pp. 13-14.

The *Püppchen* ("Dolly"), a carriage-mounted rocket launcher with breechblock, fires the same 88-mm rocket that is used with the *Ofenrohr*. The breech prevents any flash to the rear while firing is in progress. To lower the *Püppchen's* silhouette, the wheels may be removed and the piece left standing on two sled-like rests. In preliminary positions the ground is dug out so that the horizontal section of the lower carriage and trail will lie below the surface. For an all-around prepared position, circular trenches with an inner radius of about 2 feet are prepared. The barrel is left just clear of cover, as is done in the case of the preliminary positions. The lower carriage is dug in and the trail wedged, so that the piece can be fired at an angle of 180 degrees. Positions are prepared in defilade or on reverse slopes, and are well camouflaged. In general, enemy doctrine governing the preparation of positions and the conduct of fire is similar to that for the *Ofenrohr*, except that only two projectors of the *Püppchen* type are considered necessary for satisfactory interlocking fire.

The maximum effective range of the *Püppchen* is considered to be 220 yards, although badly dispersed fire up to 275 yards is possible. For this reason the *Püppchen*, like the *Ofenrohr*, is employed in the foremost infantry positions. For added protection from artillery fire, the launcher may be detached from its carriage and removed to a shelter some distance away from the prepared position. Alternate positions are prepared only when the terrain restricts the field of fire and provides good cover for the maneuvering piece. In such terrain each position is constructed so that the *Püppchen* can be run in and out on wheels. Since the *Püppchen* is harder to conceal than the *Ofenrohr*, the Germans believe that it is necessary to furnish the larger weapon with antitank protection in the form of obstacles, natural or artificial, supplemented by mines. Because the *Püppchen's* carriage is not strong enough to stand up under



The Püppchen is a recoilless weapon firing the same ammunition as the Ofenrohr. It has no rearward flash and has a greater range than the Ofenrohr.

motor towing at high speed, and since horse-draft sacrifices valuable time and involves the problem of replacing animal casualties, the *Püppchen* generally is transported on trucks and is used only in positional warfare.

The 88-mm rocket used in both the *Ofenrohr* and the *Püppchen* is heavy enough to cause ammunition-supply difficulties in battle. (A box of three rounds weighs 24 pounds.) This is why the Germans try to build up supplies in all main and alternate positions.

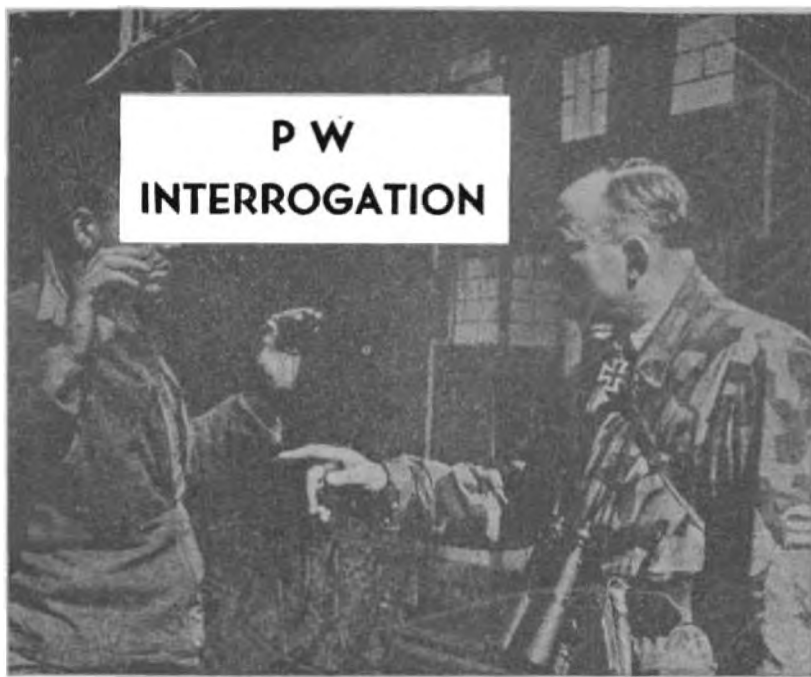
Although the German bazooka, the *Panzerfäuste*, and the *Püppchen* have a very definite military value, they and the larger rocket weapons are now employed on such a large scale because shortages of materials, labor, and industrial facilities prevent the Germans from producing the requisite number of

conventional artillery and antitank weapons. For instance, the average antitank company, which formerly was armed with from 9 to 12 guns, now has either around 3 guns and 36 bazookas, or no guns and about 54 bazookas. Probably the *Panzerfaust* is the most useful of these weapons, enabling the infantry squad and comparable units to stop Allied tanks.

Add Booby Traps

Each month new German booby-trapping devices are encountered in Western Europe and in Italy. One of the most recent tricks is a good example of the lengths to which the enemy will go in devising traps that are not only deadly, but elaborate.

A standard U. S. aluminum canteen and cover was found attached to the pistol belt of a dead American soldier. The bottom of the canteen had been cut with a sharp tool and folded inward. About three-fourths of the interior had been packed with a cream-colored, putty-like plastic explosive. A booster charge had been inserted in the center of the explosive. From the booster charge, a detonator and 5-second length of time fuze extended through a hole in the base of the canteen cover. A pull-friction fuze had been used. The pull-friction fuze had been pegged into the ground with a nail or small piece of wood. When the canteen had been booby-trapped in this manner, its weight was approximately that of a canteen filled with water.



THE GERMANS MEAN BUSINESS

Deprived of opportunities for extensive air reconnaissance, the Germans have come to depend increasingly on prisoner-of-war interrogation for information about the strength and dispositions of Allied forces, as well as about new weapons, military installations, Allied morale, and other vitally important matters. German interrogation, which was skillful even at the beginning of the war, today is a highly developed technique in which every move is deliberately calculated to serve a purpose. The latest

procedures, as practiced by an enemy Army Group now engaged in combat, should be more widely known. Although German interrogators still like to get their hands on an Allied officer whenever they can, they seldom miss a chance to put an enlisted man through the mill.

The Army Group in question does not make a practice of commencing interrogation immediately after capture. It recognizes that any attempt to get an Allied soldier to talk at such a time is almost certain to fail. As a rule, then, the "preliminary interrogation" begins soon after the prisoner reaches a collecting point.

THE PRELIMINARY INTERROGATION

The interrogating officer launches an extremely general conversation. In the course of this, he casually requests the prisoner to fill in a personnel form. This form of course goes much further than "Name, rank, and serial number." Any information already available concerning the man's unit and its mission is used as a check on the accuracy of the statements made on the personnel form. The Germans know that instead of stopping at "Name, rank, and serial number," an overconfident prisoner, intending to have a little fun at his captor's expense, may answer the questions incorrectly. (Official U.S. Army comment on this misguided effort to be clever is "Don't attempt to give any answers at all!")

If a prisoner lies, or loses his temper and behaves in an undisciplined manner, "a rougher treatment (within the limits of the Articles of the Geneva Convention) or a lengthy solitary confinement may be of help," this Army Group has been told. Such treatment even may be accorded a prisoner who observes the rules of military courtesy, but who scrupulously refuses to tell more than his name, rank, and serial number. However, the prisoner who conducts himself with absolute propriety is

the winner in the end; the *Wehrmacht*, if not the SS, entertains a certain respect for the Allied soldier who says, "In obeying orders, I am behaving with the same correctness that you would expect a German soldier to display in the same circumstances." Loyalty to one's own military organization inspires a grudging admiration in the German mind.

During the preliminary interrogation, the interrogating officer is likely to express doubts as to the effectiveness of U.S. weapons—introducing the subject offhandedly, as part of a seemingly friendly conversation. The purpose, of course, is to lead the prisoner to contradict the interrogator and supply further information unwittingly. Or the interrogator may go to extremes in boasting about the effectiveness of German weapons—again with the hope that he will be contradicted and that the truth will be forthcoming.

The Germans know that it is useless to assume that an Allied soldier harbors any sympathy for National Socialism. Interrogators generally refrain from introducing politics into the conversation, although they sometimes probe around to find sore spots—telling a British prisoner that the Americans are letting his people do all the fighting, and vice versa. Or remarking to a British or American soldier that the Soviets are merely using the Western Allies as pawns. Since Allied prisoners usually are quick to recognize the motive behind such slurs, the Germans are likely to talk about sports, instead, knowing that Allied prisoners are genuinely interested in this topic. It is not unusual for the Germans to ask something like "What do you think of the St. Louis Cardinals?" as a possible tongue-loosener before touching on military matters in a casual fashion.

German interrogating officers have been warned that clumsy or premature questions do more harm than good.

When dealing with prisoners of war who have been discovered among the civilian population or who have been found

wearing items of civilian clothing, the Germans usually threaten to treat such prisoners as sabotage agents *unless* they prove their identity by naming their units and giving many sorely needed details about these outfits.

After the preliminary interrogation, the examiner writes out his impressions of the prisoner's personality, mentality, and so on, and, if possible, indicates what kind of information possibly can be extracted from him in the course of the main interrogation.

During the first few days, prisoners are permitted, and even encouraged, to write to their relatives and friends. The Germans always hope that such letters not only will contain descriptions of events preceding the capture, but will dovetail with other prisoners' letters and thereby reveal much useful data.

THE MAIN INTERROGATION

The main interrogation is based on the results of the first questioning, on information derived from documents recently captured and evaluated, and on a summary of all information already known regarding the prisoner's unit as well as of the most important questions which need to be answered.

An interrogating officer best suited to the character and temperament of the prisoner is detailed to perform the job, on the theory that the prisoner's reserve possibly will thaw in an atmosphere of congeniality. Sometimes this necessitates the use of a second interrogating officer for the more highly specialized questions.

Although, on the surface, the main interrogation may seem much like the preliminary interrogation, the two differ greatly; in the second questioning the enemy has much more data on which to base queries, and can work toward more definite objectives. To their annoyance the Germans have found the

average U. S. soldier security-conscious and extremely stubborn about refusing to talk. ("He has been very well trained in this respect," an official German source observes.)

The way a prisoner will react depends on the individual method of treatment, the Germans believe. This is why so much emphasis is placed on judging each man's personality beforehand. Having analyzed each case as carefully as possible, the interrogator tries to decide which of the following approaches will yield the most favorable results:

1. Speedy, exact, and pointed questions.
2. Cordial introductory conversation about personal interests—family, profession, sports, weapons, reminiscences about military experiences, and so on.
3. Casual revelation of information at hand about Allied units, with the implication that, since everything is already known, there is no need to bother about concealing anything.
4. Indication—whether true or false—that the prisoner's officers already have given information.
5. Comment that, if the prisoner refuses to talk, documents which have been found on him and which he should have destroyed (marked maps, and so on) may be shown to other prisoners of war—thus suggesting subsequent unpleasantness in store for him.
6. Offer of cigarettes or a drink, and a promise to see to it that the prisoner's relatives will immediately be informed of his capture, either by mail or over the radio.

This Army Group makes a great point of not allowing an interrogation to seem what it really is. The atmosphere of a voluntary and pleasant conversation is sought. The interrogating officer is alone with the prisoner, and does not take notes. Under no circumstances is a stenographer permitted to take

down, in a prisoner's presence, the information that he gives; if necessary, however, the stenographer will take down the information while remaining out of sight. (The usual procedure is for the interrogating officer to write down, as soon as the questioning is finished, all the information he has obtained.) Sometimes a prisoner is questioned during the course of an outdoor stroll—after he has been in solitary confinement long enough to make him well disposed toward the person who apparently has arranged for his release.

Persistently stubborn prisoners of war may be quartered with stool pigeons, or with prisoners from the same Allied unit so that their conversation may be picked up by microphones. However, an interesting development has restricted this particular Army Group's use of stool pigeons. Double-crossing has been so prevalent that permission to use this method now is granted only in very special cases. [It is not stated whether the trouble has been caused by anti-Nazi Germans or by Allied prisoners determined not to aid the enemy.]

To summarize, the Army Group pursues a policy that a sympathetic, but clear and methodical, approach should be the standard operating procedure when dealing with U. S. prisoners of war. "The better the interrogating officer can put across the idea that he already has an abundance of information about



the prisoner's unit and about the Allied forces in general, the sooner the prisoner will talk. It has proved helpful to discover and memorize the names of prisoner's immediate superiors, and to introduce into the conversation plentiful allusions to what the man's outfit has been doing in recent months."

Leading questions (such as "Your outfit sailed from Boston, didn't it?" and "Your commanding officer really didn't know his stuff, did he?") are avoided, since it is believed that they lead prisoners to make deliberately vague and incorrect replies.

Knowing that the enemy uses such interrogation methods as the foregoing, the U. S. soldier who is taken prisoner must be doubly on his guard, and must on no account permit himself to go farther than giving his name, rank, and serial number. The cigarette may look too good to be true, and so may the shot of *schnapps*—the interrogator may sound like a good guy and really know his World's Series—the alleged opportunity to get word to the family right away may seem like a lucky break—the opportunity to talk big and pull the wool over the interrogator's eyes may be tempting—

but

It's still got to be "name, rank, and number" and "That's all I can say, sir."



MINES IN THE SPOTLIGHT

Although Tellermines and S-mines still are predominant in German land-mine warfare, the trend is toward weapons that are cheaper to make and harder to detect. Glass, wood, plastics, and clay are replacing metal wherever possible.





The German Army is making greater use of antilifting devices and new mines which cannot be detected or which are difficult to detect with present standard electronic detectors.

Not that the old standbys have disappeared. Tellermines of all types still are the leading antivehicle mines, and the *S-minen* 35 and 44 still are the principal antipersonnel mines. The *Holzmine* 42 (commonly called the German wooden-box mine), the *Potmine*, the *Schü-mine* 42, the *Stockmine* (a concrete stake or picket mine), and the *Riegelmine* 43 remain very much in the picture. (All these have been discussed in previous issues of the *Intelligence Bulletin*.) Instead of abandoning any of these types, the Germans have supplemented them, not only with numerous improvisations and such standard non-German mines as the French light and heavy antitank mines, but with entirely new devices.

The most notable of the new developments are the *Topfmine*, the *Glasmine* 43, the *Schnellmine* A and B, the *E. Z. 44* pressure-release mine, antipersonnel and antitank clay mines, the *T.Mi.Z. 43* fuze for Tellermines, and the new *Ki.Z. 43* tilt fuze.

Earlier in the war, Germany and Italy experimented with a variety of wooden-box mines, but most of these contained enough metal parts in the fittings and fuzes to cause a standard detector to react. A more recent trend, to eliminate this reaction and to foil detection, has been toward the manufacture of mines made almost entirely of such materials as concrete, glass, bakelite, and compressed paper. The glass-and-paper *Topfmine*, an antitank weapon which may be detonated by a pressure of 330 pounds or more, is an unusual development along this line.



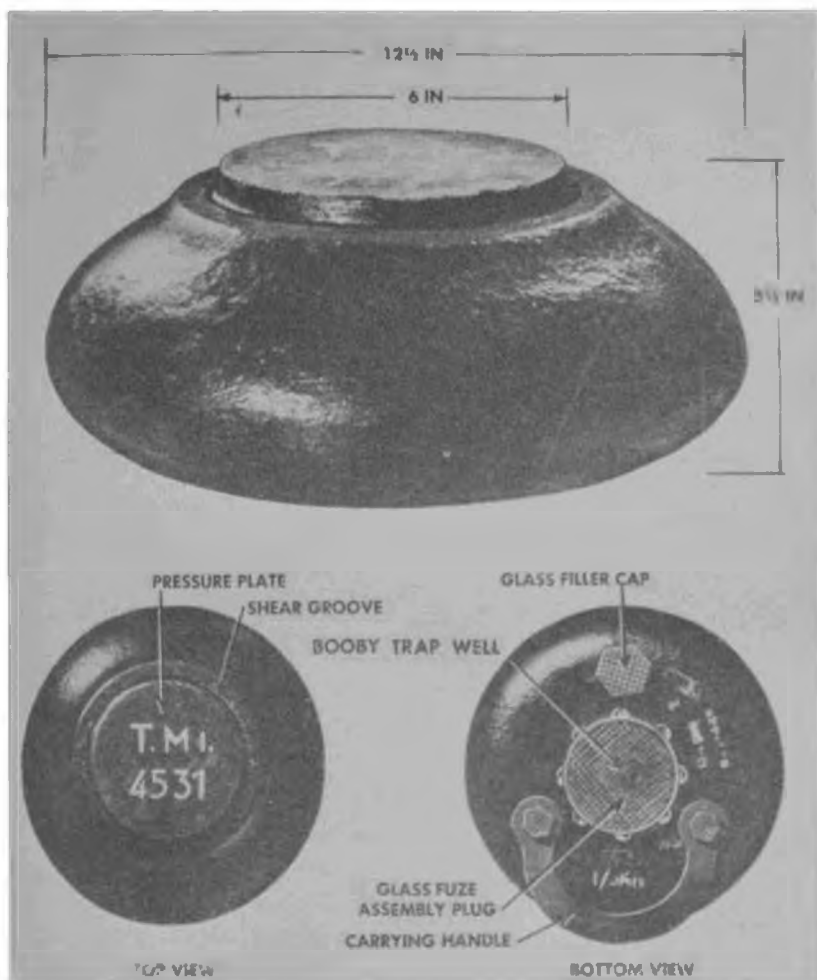
THE TOPFMINE

The *Topfmine* ("saucepan mine"), which is $12\frac{1}{2}$ inches in diameter and $5\frac{1}{2}$ inches high and weighs 21 pounds 4 ounces, is encased in compressed bituminous cardboard material, 1 inch thick and has a black tar finish. This finish makes the mine look something like a gigantic licorice cough drop. Of the total weight, the filling of Amatol 50/50 accounts for $12\frac{1}{2}$ pounds. A fixed pressure plate is raised slightly above the flat top of the mine. In the bottom is a circular recess, $4\frac{1}{2}$ inches in diameter, to accommodate the booster and fuze assemblies. A black pasteboard carrying handle is attached to the underside of the mine by two glass hex-headed bolts. A third bolt, larger than the others, is used as a filler plug.

The booster assembly consists of a wooden booster housing a glass screw cap, which seals the base of the mine. The top face of the booster housing has a threaded recess to accommodate the *Topfmine* fuze. In the glass screw cap is a socket which can accommodate a pull fuze when the mine is to be booby-trapped against lifting.

The booster and fuze assemblies are inserted into the mine through the opening in the bottom. This opening is then closed by the glass screw cap.

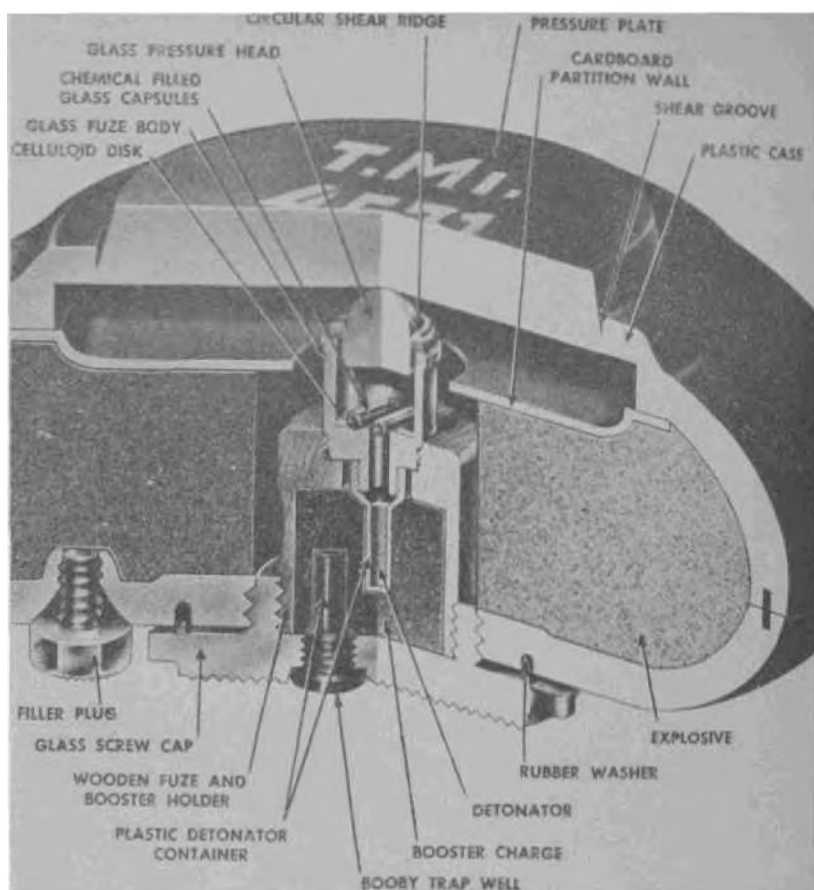
The *Topfmine* fuze, which has no safety device, consists of a cylindrical glass body, a hemispherical solid-glass pressure head (held in place with Scotch tape) with a circular shoulder which shears off, and two small glass ampoules containing



Exterior views of the Topmine.

chemicals and held in position by a celluloid disc. The fuze body has two screw threads; the larger engages the booster holder, and the smaller engages a bakelite pocket to protect the detonator from moisture.

Pressure of at least 330 pounds causes the pressure plate to shear along the shear groove. The resulting weight on the pres-



Cross-section of the Topmine.

sure head of the fuze crushes the two glass ampoules when enough pressure is exerted to separate the pressure head from the shear ridge. The two chemicals react and cause a flash, and this flash fires the detonator, booster, and main charge.

A German field manual states that the *Topmine* should be laid in the same manner as the *Tellermine 42*. Burying is considered preferable to laying on the surface, which is permissible only if an Allied attack is imminent. To avoid symp-

thetic detonation, the distance between two *Topf* mines will be not less than 7 feet when the mines are buried, and not less than 14 feet when they are laid on the surface.

The manual also points out that the earth within a radius of 3 feet from a buried *Topfmine* should be loosened to ensure effective results. A camouflage layer of no more than 2 inches may be placed over the pressure plate. A mine armed with the standard *Topfmine* fuze will always be laid with the pressure plate upward.

When the mines have been found lying on the surface of the ground, they generally have been camouflaged with pine boughs or other vegetation.

The familiar electric metallic mine detector SCR-625, will not detect the *Topfmine*, and the AN/PRS-1 ("Dinah") will detect it only under very favorable conditions.

The Germans sometimes use the *Topfmine* with a tilt fuze (see page 43) and a trip wire attached, or with a tilt fuze and an extension rod camouflaged with a branch to resemble a sapling. When used with the tilt fuze, the *Topfmine* is laid upside-down, and the fuze is screwed into the booby-trap well.

Personnel authorized to disarm the *Topfmine* may do so by (1) uncovering the mine completely after searching for booby traps, (2) feeling cautiously underneath to make sure that the mine is not armed with a pull fuze and trip wire, (3) lifting the mine, resting it on one side, and unscrewing the fuze assembly plug, (4) unscrewing the fuze from the wooden booster housing, (5) unscrewing the protective detonator pocket from the fuze, and (6) carefully removing the detonator and replacing the protective pocket on the fuze.

Topfminen stamped *T.Mi. 4531* are not completely waterproof, and are considered undesirable for use in marshy ground, whereas *Topfminen* stamped *A4531* with a white cross added have been fully waterproofed.

THE GLASMINE 43

The *Glasmine 43* is an antipersonnel mine made almost entirely of transparent glass, and is capable of causing casualties within about 3 yards of it. This weapon can be made watertight; when thus treated, it becomes especially suitable for underwater use in fords, near river banks which offer suitable landing places, and in beach defenses. Large quantities of these mines have been found in German engineer dumps.

The body of the *Glasmine* consists simply of a glass jar about 6 inches in diameter, which is divided into upper and lower compartments by a sheet-metal diaphragm which rests on a ledge about halfway up the inside wall. The lower compartment houses the explosive charge, while the upper houses the fuze. A thin glass shear plate rests on a ledge at the top, and may be sealed against moisture by means of putty or coal tar. A thick glass pressure plate, which will break under a pressure of 30 to 40 pounds, is placed over the shear plate.



A Glasmine with a lever fuze in position, ready for the glass shear plate.

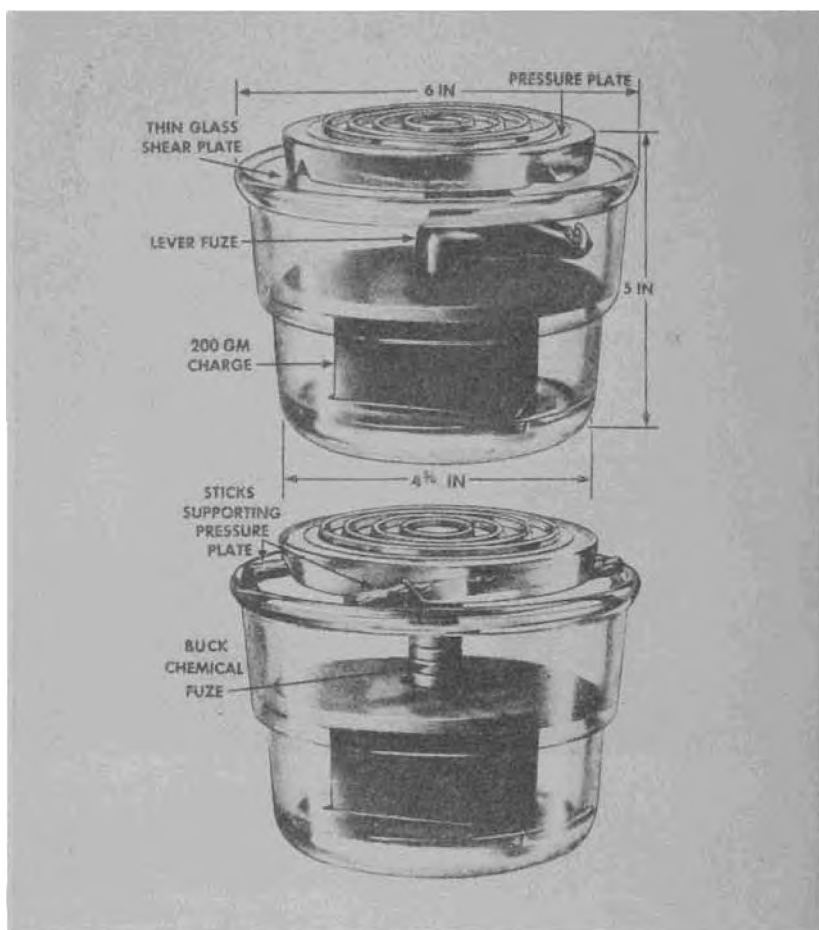


Exterior view of the Glasmine.

The charge, which may be either the 200-gram prepared charge *Sprengkörper 28* or a bakelite container filled with 200 grams of loose explosive, is packed securely in the lower compartment, and the metal diaphragm is placed in position over it. In the center of the diaphragm there is a hole coincident with the fuze well in the charge. In the case of either the *Sprengkörper 28* or the bakelite container, the fuze screws into the socket.

The Glasmine 43 may be armed either with the Buck chemical fuze or with the lever-action pressure fuze known as the *Hebelzünder*.

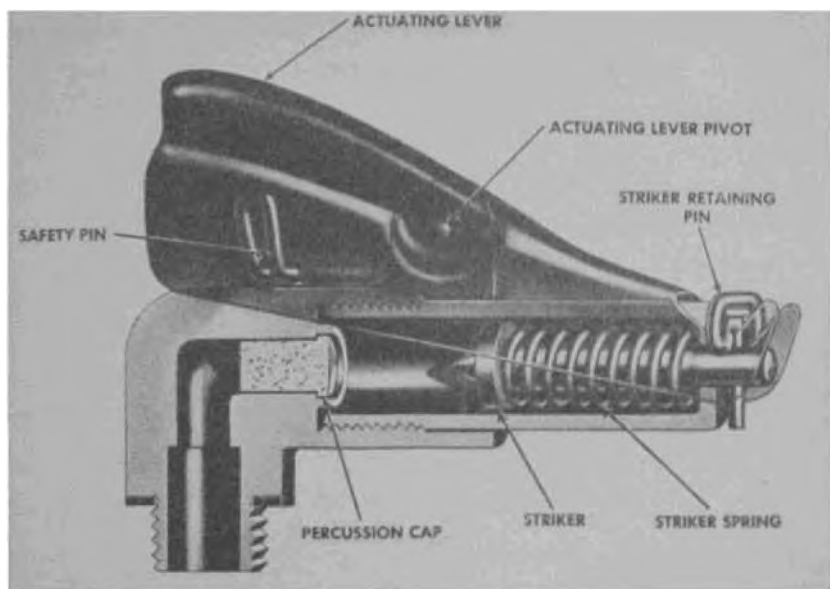
The Buck fuze has a glass ampoule containing acid, sur-



Cross-sections showing the two types of fuze which may be used with the Glasmine.

rounded by a composition which is ignited when the ampoule is crushed and the acid released. This flash ignites the detonator. In the German Army it is forbidden to lift mines fitted with the Buck fuze, because of the extreme fragility of the ampoule. The mines are destroyed in place.

The *Hebelzünder* (sometimes called the *Schuko* fuze) is something new in German fuzes—introducing, as it does, the



Lever fuze used with the Glasmine.

lever principle. (It should be noted that this lever action lends itself readily for use in improvised mines and booby traps.) When the safety pin is removed, and pressure of from 14 to 25 pounds is applied to the upper end of the lever, the lever pivots on its pivot pin and forces the prongs upward, withdrawing the actuating pin. This releases the striker, which sets off the percussion cap.

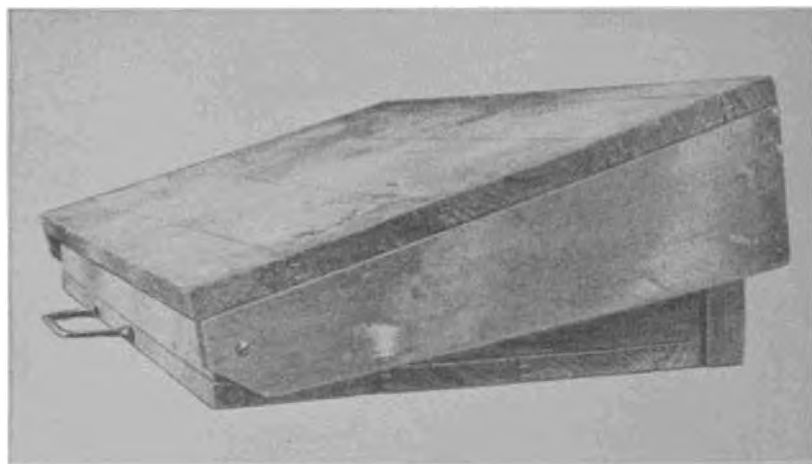
If the glass mines are used on land, they normally are laid 2 inches below the surface of the ground, and from 3 to 6 feet apart.

Personnel authorized to do so may disarm the *Glasmine 43* armed with the lever fuze by (1) removing the pressure plate and shear plate, (2) inserting a safety pin into the fuze, and (3) unscrewing the fuze from the charge and removing the detonator.

THE SCHNELLMINE (A and B)

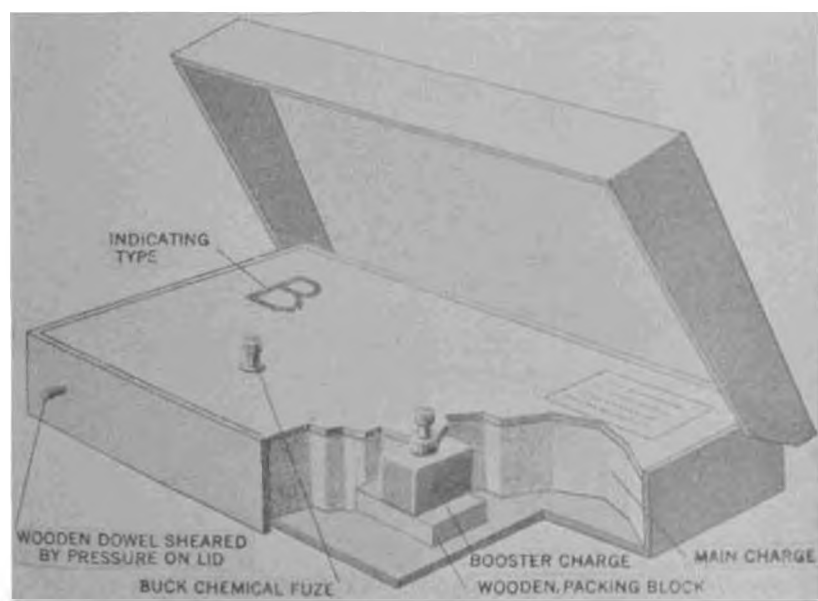
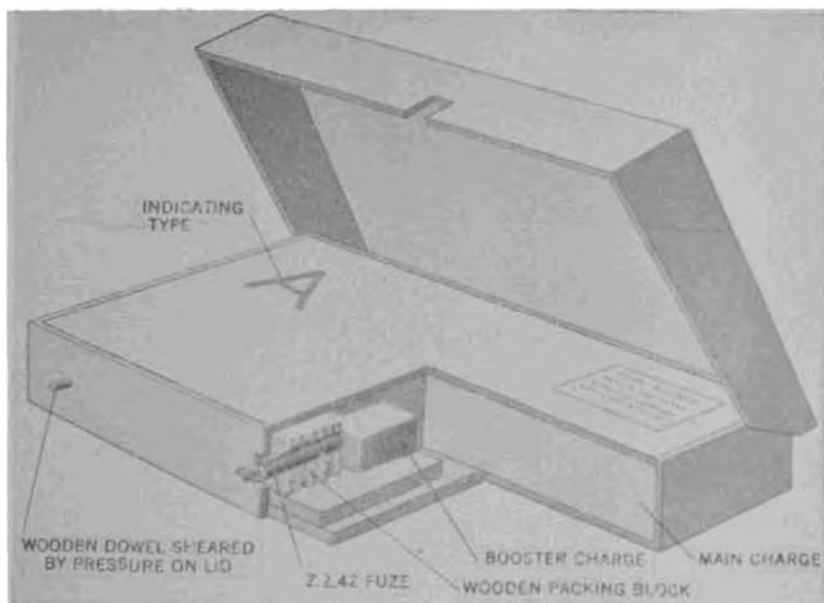
Two versions of a new German "quick-action" antitank mine, the *Schnellmine* (or *Panzerschnellmine*, to give it the full German name) have been encountered on the Western Front. Each version looks very much like a large *Schü-mine*. Since the cases contain nails, as well as a metal carrying handle on the hinge side, the *Schnellmine A* and the *Schnellmine B* have been picked up by certain mine detectors. Both mines are filled with about 13 pounds of picric acid encased in moisture-proof paper.

Schnellmine A is actuated when pressure on the lid shears two $\frac{1}{2}$ -inch wooden dowels, knocking out the T-pin of a Z.Z. 42 fuze. Personnel authorized to neutralize *Schnellmine A* should unscrew the fuze, taking great care not to dislodge the T-pin.



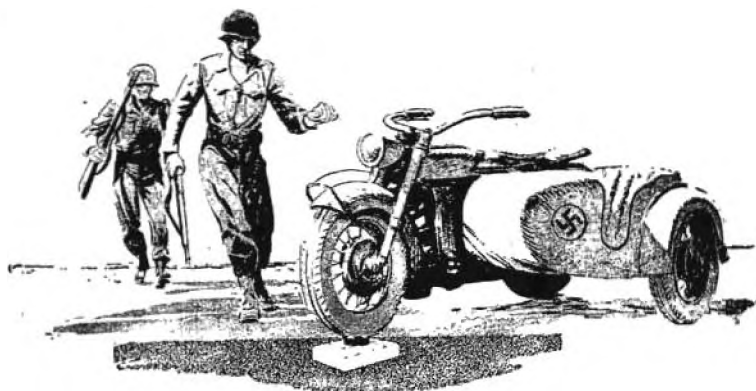
This photograph of an armed Schnellmine looks like a small, harmless packing box.

Schnellmine B is actuated when pressure on the lid shears $\frac{3}{4}$ -inch wooden dowels and bears down on the Buck chemical fuze. It is believed that the wooden dowels are used to prevent the mine from being fired as an antipersonnel mine.



The Schnellmine (A and B)

THE E.Z. 44 PRESSURE-RELEASE MINE

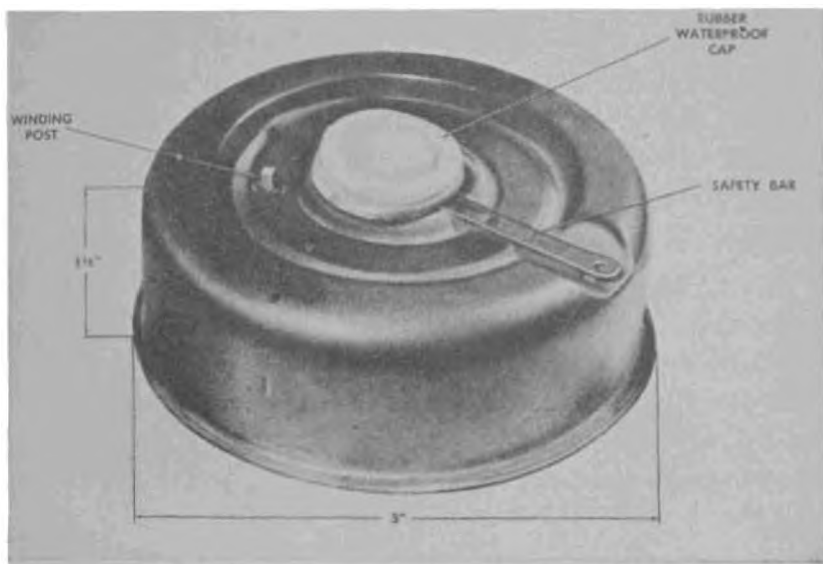


The E.Z. 44 (*Entlastungszünder 44*), a new German anti-lifting device which in effect is a pressure-release mine, *cannot be neutralized after it has been armed*. Large quantities of this new weapon, which is designed primarily for use in booby-trapping antitank mines, have been found on the Western Front. The Corps of Engineers advises that it be destroyed in place.

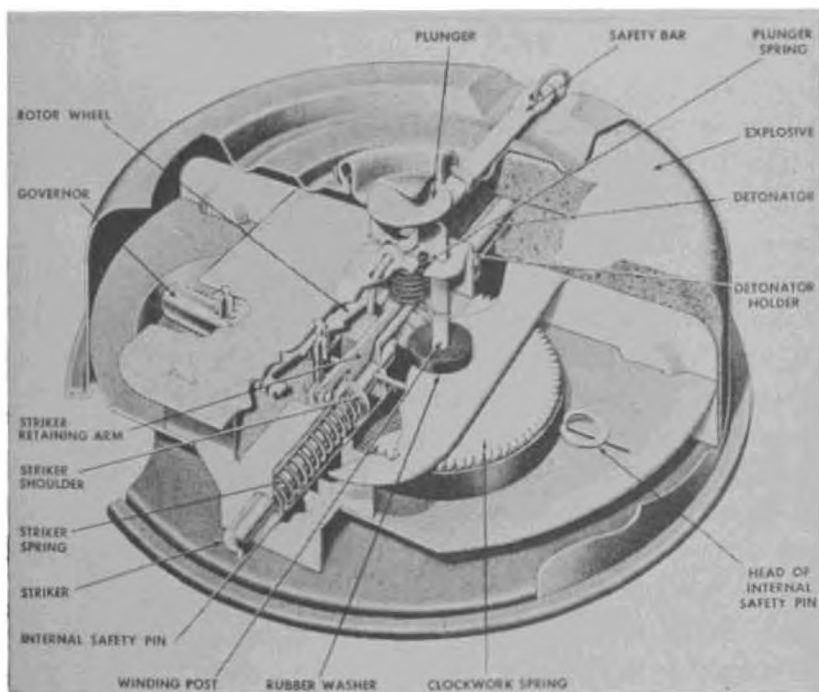
Weighing 1 pound 3 ounces, of which $7\frac{1}{2}$ ounces are TNT, the E.Z. 44 is $4\frac{3}{4}$ inches in diameter and $1\frac{3}{4}$ inches high. The circular steel housing contains a clockwork mechanism, the explosive charge, and the detonator assembly. A release button protrudes through a 1-inch opening in the top of the housing.

The arming bar serves two purposes. It holds down the release button, and it prevents movement of the clockwork mechanism, which, when released, slowly withdraws a safety wire from the striker. A post is provided for winding the clockwork mechanism.

When the device is laid exactly under the center of a Tellermine, and when the weight of the Tellermine exerts sufficient pressure on the release button ($4\frac{1}{2}$ pounds or more), the arming bar can be removed, starting the previously wound clockwork. After 60 to 90 seconds, the clockwork withdraws the



The E.Z. 44 pressure-release mine.



Cross-section of an E.Z. 44 pressure-release mine.

safety wire from the striker, and the *E.Z. 44* now is fully armed.

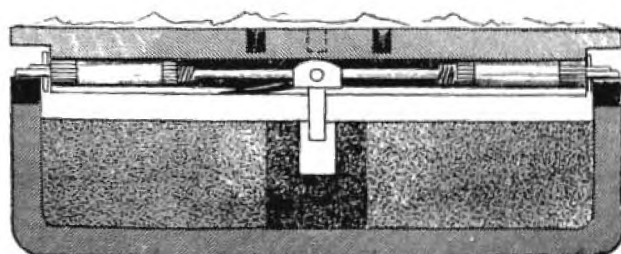
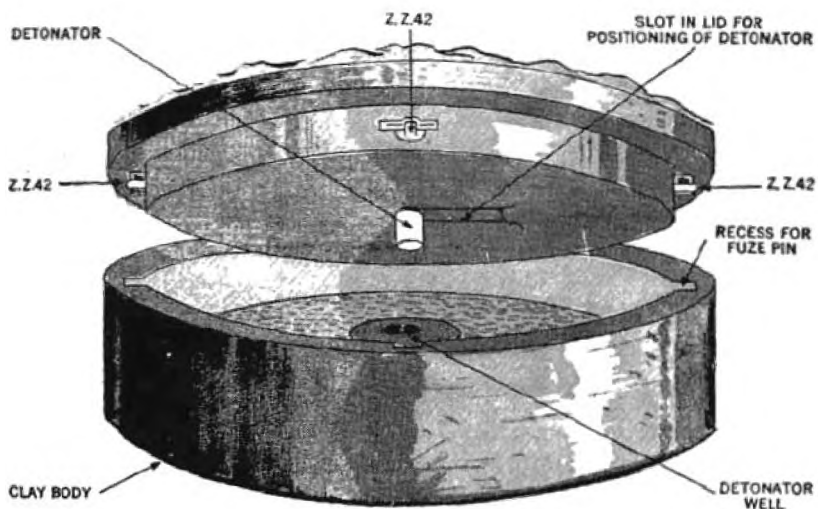
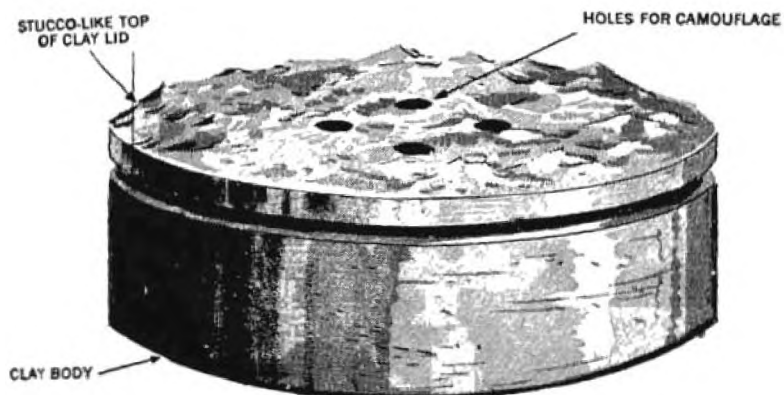
The pressure of the Tellermine holds down the shear which is engaging the beveled stop on the striker spindle; if the Tellermine is removed, the striker is free to fly forward under the compression of the striker spring, hitting the percussion cap and the detonator, which fires the explosive charge.

Because the lifting of mines equipped with the *E.Z. 44* is impossible, the Germans employ it when they anticipate no necessity for lifting their own mines. If official German instructions for using this device are followed, mines equipped with the *E.Z. 44* will be found singly or scattered, and also interspersed in the same field with ordinary mines. The new device also may be used widely in booby-trapping.

ANTIPERSONNEL CLAY MINE

The Germans are using an antipersonnel mine which has a baked clay body and a stucco-like lid. The accompanying illustration, while reasonably accurate, is not wholly exact in detail.

The antipersonnel clay mine is about 8 inches in diameter and 3 inches high, with a wall $\frac{3}{8}$ -inch thick. There is a booster charge and detonator well in the center of the main charge of picric acid. The lid is flanged, and the lower part fits inside the body of the mine. Four holes, each about $\frac{1}{2}$ -inch in diameter, are drilled in the top of the lid, and are used to accommodate the stems of foliage for camouflage purposes. In the lower part of the lid, four *Z. Z. 42* fuzes are placed horizontally in sockets at 90 degrees to each other and leading to a central compartment. Each fuze is fitted with a detonator, and all fuze detonators are in position just above the main detonator. A slot in the bottom of the lid allows this main detonator to slide into the central compartment, where it projects about $\frac{1}{2}$



German Antipersonnel Clay Mine.

inch below the lid. The butterfly pins of the fuzes project beyond the lid and rest in recesses on the top rim of the body. The mine operates when pressure on the lid pushes out the pin of one or more of the Z. Z. 42 fuzes, releasing the striker to fire the main detonator, booster charge, and main charge.

Personnel authorized to neutralize this mine should lift the lid vertically and with care, and remove the Z. Z. 42 fuzes and the main detonator.

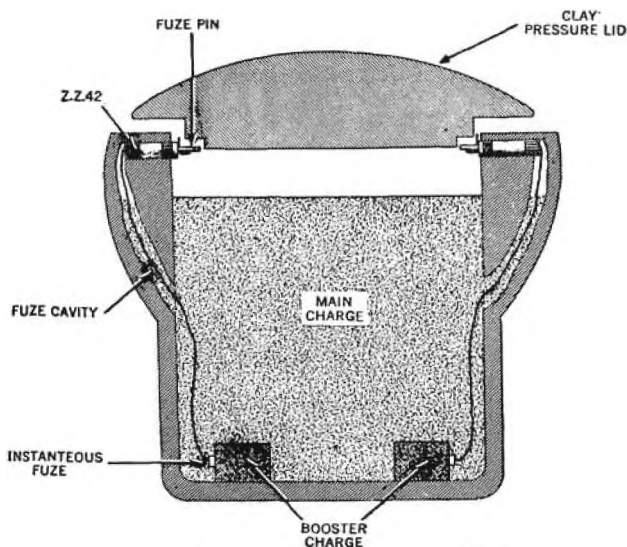
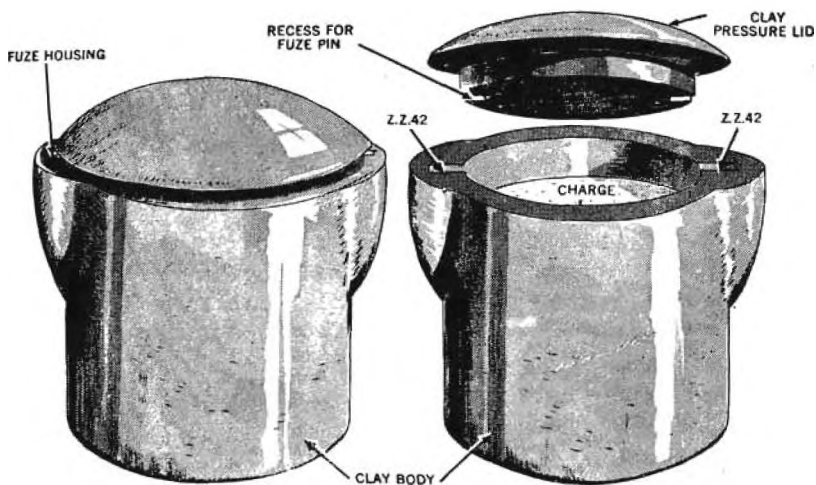
ANTITANK CLAY MINE

It is reported that the Germans are using an antitank mine which has a baked clay body and lid, and which bears a marked resemblance to an urn. (When armed, this weapon also can have an antipersonnel effect if a man steps squarely on the lid.) As in the case of the antipersonnel clay mine, the accompanying illustration is roughly, if not exactly, correct in detail.

The body of the antitank clay mine is $8\frac{1}{2}$ inches in diameter, $\frac{3}{8}$ -inch thick, and 10 inches high. On opposite sides of the top of the body are round bulges which house the Z. Z. 42 fuzes. The hollow passage leading down inside each bulge to the bottom of the body, through which the instantaneous fuze runs to the booster charge, is fitted with a plastic adaptor. A Z. Z. 42 fuze is placed horizontally in a recess in the top of each bulge so that only the wing pins project beyond the inside wall of the body.

The lid is about 8 inches in diameter and about 3 inches thick at the center. In the lower half of the lid are two recesses. These fit on the wing pins of the Z. Z. 42 fuzes directly opposite each other in the side of the mine body.

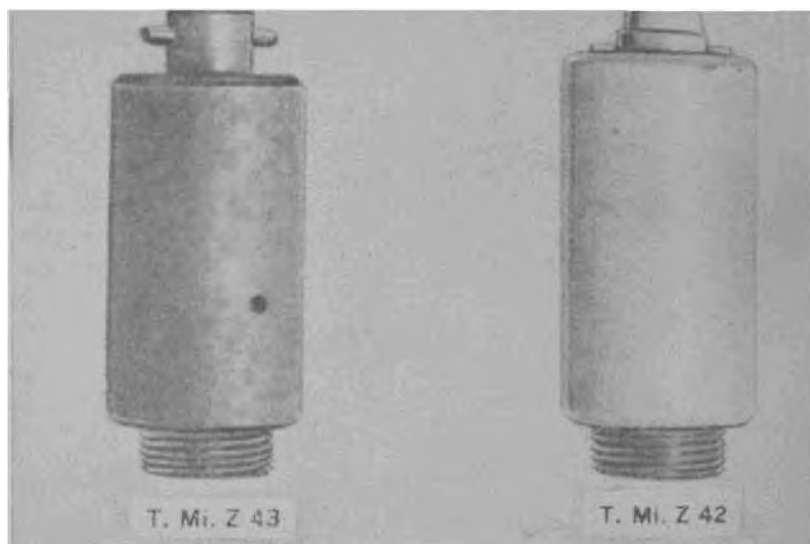
When the mine is armed, pressure on the lid pushes the pins out of the fuze, releasing the spring-loaded striker. The striker, in turn, detonates the instantaneous fuze, booster charge, and



German Antitank Clay Mine.

main charge. A man's weight would easily set off the mine, since only the pins in the fuzes hold up the lid.

Personnel authorized to neutralize this mine should lift the lid vertically and with care, and remove the Z. Z. 42 fuzes.



At the left is the new Tellermine fuze, T.Mi.Z. 43, which cannot be disarmed.

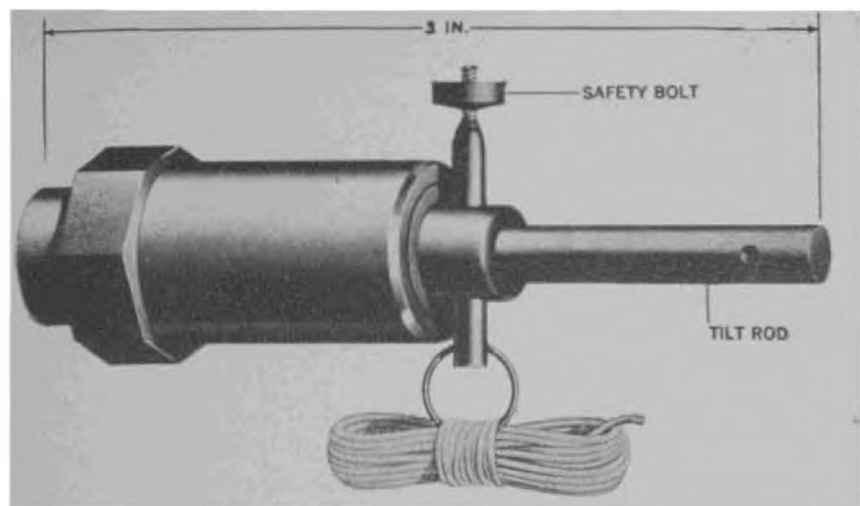
THE T.Mi.Z 43 FUZE

The new *T.Mi.Z. 43* fuze, intended to replace the *T.Mi.Z. 42* fuze, cannot be disarmed. When the *T.Mi.Z. 43* fuze is placed in a mine, and when the pressure cap is screwed on, a secondary shear pin is broken so that the mine explodes upon removal of the pressure cap.

It is almost impossible to tell whether or not a mine is fitted with the *T.Mi.Z. 43*. However, in the case of the *Tellermine 42*, if the threads of the pressure cap are clear and if the older *T.Mi.Z. 42* fuze is fitted, the cap will unscrew easily and the play in the threads can be felt. If threads are greased, rusty, or dirty, or if a *T.Mi.Z. 43* is fitted, there is a marked resistance to unscrewing, and the play in thread can only be detected by using a certain amount of force—a dangerous procedure.

The European Theater of Operations has ordered that *all* Tellermines be destroyed in place, or pulled out to a convenient place with a 50-yard length of rope and then destroyed.

A few mines armed with the *T.Mi.Z. 43* may occur in a panel of mines armed in the normal manner.



The Ki.Z. 43 tilt fuze. A slender extension rod is attached to the tilt rod.

THE KI. Z 43 TILT FUZE

By using a new and extremely sensitive tilt fuze, the *Ki. Z. 43* (*Kippzünder 43*), the Germans can arm Tellermines and Riegelmines for antipersonnel as well as antitank effect.

When the rod of the fuze is tilted in any direction, the flat base rocks, depressing the pressure piece against its spring. Two retaining balls escape into recesses in the pressure piece, releasing the striker under tension of its spring, and thereby setting off cap, detonator, and mine. Pressure of 1 pound 5 ounces in a horizontal direction against the rod is required to set off the device.

This tilt fuze can be used under a wide variety of conditions—even in wet soil or under water. In tall grass, grainfields, or reeds, personnel employing the best detectors would have difficulty in locating a mine equipped with the *Ki.Z. 43* and an extension rod, without causing detonation. Incidentally, the belly of a tank may hit the extension rod and fire a tilt mine, even though the treads themselves do not touch it.

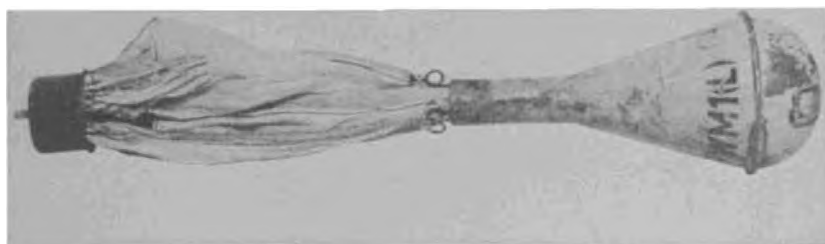


How to Throw the *Panzerwurfmine*

An antitank hand grenade has been developed by the Germans for use by infantry troops in close combat against tanks. Known as the *Panzerwurfmine*, this weapon is capable of penetrating 3 inches of homogeneous armor plate, and may be thrown as easily as an ordinary stick grenade.

The *Panzerwurfmine*, which weighs about 3 pounds, consists of a cone-shaped body with a hemispherical end, and with the stick handle attached to the other, or point, end of the cone. The most novel feature of this weapon is a set of four collapsible cloth vanes which are folded against the handle. When the grenade is thrown, the vanes spring open and presumably guide the projectile head-on to the target.

The conical head of the grenade is filled with a hollow charge designed to direct the force of explosion in one direction—against the armor plate of the target. Built to detonate on impact, the grenade fuze is located in the butt end of the hollow wooden handle, which is filled with an explosive booster charge. The fuze—a striker pin held back from a primer cap by a weak spring—detonates when the force of impact overcomes the weight of the spring and throws the striker against the cap. A safety pin which fits into the top of the fuze assembly keeps the fuze in an unarmed condition until the grenade is thrown. The fuze assembly is housed in a thin metal cylinder fitted over the end of the wooden handle.



The Panzerwurfmine is a hollow charge, antitank hand grenade. When in unarmed condition, the cloth vanes, which tend to guide the projectile head-on to the target, are held folded against the grenade handle.

The grenade is armed in flight when the loosely scated safety pin is pulled free by the drag of air on a short cloth tape, one end of which is fastened to the free end of the pin.

Near the cone end of the handle, four spring steel ribs are secured in grooves. When extended, umbrella-fashion, these ribs are the framework for the cloth vanes. When the vanes are collapsed, the ribs are held under tension flat against the handle, and are secured in position by a metal cap which fits over the end of the fuze assembly and the free ends of the folded ribs. This cap is held in place by a metal tongue on the fuze assembly. The tongue passes through a slit in the cover.

During transport the tape attached to the safety pin is secured under a horseshoe-shaped metal clip which snaps around the outside of the fuze assembly, thus holding the safety pin in place. A short piece of string is tied from the clip to the end of one of the folded steel ribs.

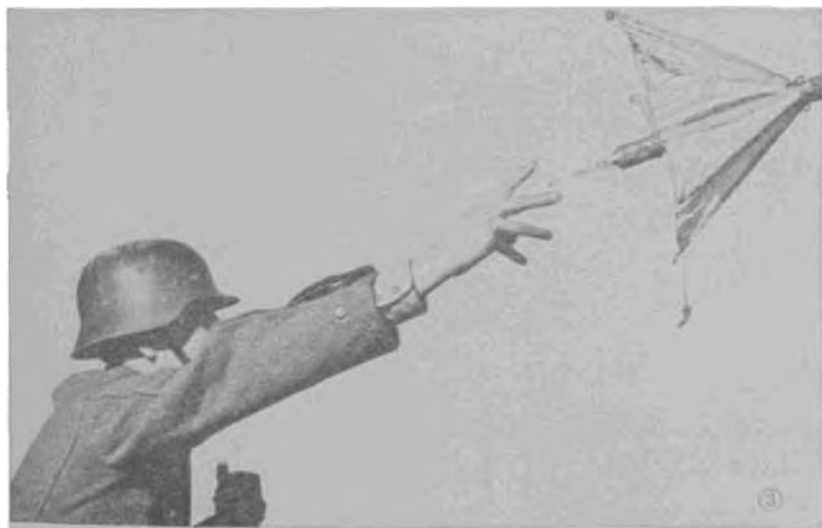
Although the *Panzerwurfmine* may seem easy to use, it requires a degree of caution upon the part of the thrower, who must be sure that the vanes remain closed—thus keeping the grenade unarmed—until the weapon leaves his hand.



① *The soldier who uses this grenade must grasp the handle in such a way that the collapsed vanes will be held closed against the handle when the retaining cover is removed. Then, and only then, can the cover be removed by straightening the metal tongue and slipping the cover free of the handle and fuze assembly.*

② *Once the cover is removed, the grenade is ready for throwing. The weapon is thrown in the same manner as the ordinary stick grenade. When the grenade leaves the thrower's hand, the steel ribs on the handle will be released from tension and snap out to extend the sail-like vanes.*

③ *When released in this fashion, the rib tied to the metal clip pulls the clip clear of the fuze assembly, releasing the safety-pin tape. The drag of air on the tape pulls the safety pin free, and the striker pin is armed to detonate when the grenade strikes the target.*





IN BRIEF

"WIR SCHIESSEN NICHT!"

A U. S. Army private suggests that a German expression used by a U. S. company commander who was quoted in the *Intelligence Bulletin* (Vol. III, No. 3, p. 43) is not idiomatically correct. The private is right. Here is the paragraph in question, from the company commander's discussion of pillbox warfare in the Siegfried Line. The preferred German phrase has been substituted.

"We have a man work his way close to the pillbox, so that he can throw in a fragmentation grenade or white phosphorus grenade. When there is a quiet moment, he shouts, '*Kamerad?*' and '*Wir schiessen nicht!*' ('We won't shoot!'). Often the occupants of the pillbox will give up at this stage. If they don't surrender, use of rifle grenades or the bazooka against the steel doors or apertures may have the desired effect. For safety's sake, other riflemen cover all fire ports while this is going on."

BICYCLE-MOUNTED TROOPS

Newly created Volksgrenadier divisions not only have a bicycle-mounted reconnaissance battalion or company, but also

have an entire battalion of infantry mounted on bicycles. In addition, the two engineer companies of the Division Engineer Battalion are bicycle-mounted. It may be assumed that some of the tactics employed by the bicycle-mounted company in the reconnaissance unit (*Fusilier Bataillon*) of the infantry division may also be used by the bicycle-mounted elements of the Volksgrenadier divisions. Here are several prison-of-war comments on this subject.

A prisoner remarks that when a bicycle-mounted squad is moving along a road as a point, anticipating contact with a hostile force, the squad leader and a runner are followed at a distance of about 50 yards by three machine gunners with a light machine gun, supported by a sniper, a semiautomatic rifleman, and two riflemen, one of whom is armed with a cup-grenade discharger. When the squad is fired on, the machine-gun detachment immediately deploys, while the remaining men drop their bicycles under the nearest available cover and take up firing positions.

The leading squad of a platoon is said to move with a rifleman, a semiautomatic rifleman, a machine gunner with light machine gun, a sniper, the squad leader and a runner, two machine gunners, and a rifleman armed with a cup grenade discharger—moving in that order. Fifty yards behind, the platoon commander and a runner, the platoon sergeant and a runner, a telegraph operator and a medical aid man, and an antitank rifleman follow—in the order named.

A prisoner from another unit comments that in his outfit it was common practice to send two bicycle-mounted scouts ahead of the point squad.

Prisoners remark that bicycle-mounted companies are expected to be able to cover up to 75 miles a day, but that, in actual operations, the figure seldom exceeds 50 or 60 miles.

Prisoners from certain bicycle-mounted companies say that they have been trained mainly in infantry tactics, and not primarily for reconnaissance missions. One unit was trained to move forward on its bicycles, leave them in farm buildings, and then go forward on foot to fight as infantry.

In Russia a company was detached from an infantry regiment, equipped with bicycles, and formed into a reconnaissance company. These men were given the mission of protecting the regimental flank upon contact with a hostile force.

ASSAULT GUN TACTICS

To teach German infantrymen some of the tactics used by assault guns, the Fifteenth German Army outlined the advantages and disadvantages of these self-propelled weapons so that the infantry could have a better understanding of how to cooperate with them in the field.

In reply to the question "What must the infantry know about the assault guns?" the Germans offer these comments:

The assault guns are the strongest weapons against hostile tanks. They engage all your most dangerous enemies, and destroy them or force them to take cover. Assault guns are strong when concentrated, but have no effect when used in small numbers. They are capable of forward fire only, since they have no turrets; therefore they are sensitive to attack from the flanks. This is why the guns must never be employed by themselves, but always in conjunction with infantry. These weapons may be considerably restricted by marshy land, thick woods, and natural or artificial obstacles; moreover, they constitute large targets. They can see and hear little. Even during a battle, the assault guns occasionally must withdraw to cover, and obtain fresh supplies of ammunition and fuel.

This brings us to the question of how the infantry should assist the assault guns.

Infantrymen must draw the guns' attention to hostile tanks and other targets by means of the signal pistol, prearranged light and flag signals, and shouting.

The infantry must neutralize hostile antitank guns.

The flanks of assault guns must be covered and protected by the infantry against hostile tank-hunting detachments, which are always ready to operate against our assault guns. Such protection is especially necessary in built-up areas and in terrain where visibility is poor.

The infantry must warn the assault guns of the proximity of anti-tank obstacles and mines, and must be prepared to guide the guns through such obstacles.

The infantry must take advantage of the guns' fire power to advance in strength via prearranged lanes not under fire.

The assault guns must be given sufficient time for reconnaissance. The guns and the infantry will formulate plans through personal consultation, and will ensure means of communication during battle.

Infantry should not stay too close to the guns, and should not bunch. Instead, deployment is advised, to lessen the danger of drawing hostile fire and to avoid injury by ricochets.

Since the driver of an assault gun has limited vision, infantrymen must keep in mind the danger of being run down, and must move accordingly.

Assault guns are "sitting targets" when they have to wait for the infantry; infantrymen can find cover almost anywhere, but the assault guns cannot.

Since the guns fire at the halt, the infantry must gain ground while the guns are firing.

Although the assault guns are of great assistance when ground is being gained, it is the infantry that must *hold* the ground.

Since the assault guns must keep their ammunition available for unexpected or especially dangerous targets, the infantry must engage all the targets that it can possibly take on with its heavy and light weapons.

Although the assault guns must withdraw after every engagement, to prepare for the next engagement where their assistance will be required, the infantry will *not* withdraw.

THE LIGHT MACHINE GUN IN FOREST FIGHTING

The comments of a German company commander on the use of the light machine gun in forest fighting on the Eastern Front are worth noting. In German training, this officer says, it is

always emphasized that in forest fighting the rifles are forward, with the light machine gun in the middle or rear of the squad. However, after commanding a company during 4 weeks of forest fighting, the officer decided that it was preferable to have the machine gun forward. He remarks that practically all forest fighting is equivalent to an assault operation, and that a German infantry training manual observes, in this connection: "Just before and during the break-in (*Einbruch*), the hostile force should be engaged at the maximum rate of fire by all weapons. The light machine gun will take part in the assault, firing on the move, alongside the rest of the squad." In forest fighting, however, the danger from ricochets is so great that the machine gun definitely should be forward, this enemy officer says, and adds that when his company had learned this lesson, it had considerable success in avoiding casualties by keeping the weapon well forward. He cites an example of the revised tactic:

My company was making an attack in a wood where a Soviet force had dug itself in, in a number of positions prepared in depth. The first firing failed to make the opposition reveal itself. My company was baffled at being held up in this manner. The machine guns then were brought forward, and, firing continuously from the hip, my company stormed in with spirit to take the first position. The fire forced the Russians to hit the ground, and gave them no opportunity to put down aimed defensive fire. Our casualties were practically all from mortar fire.

Having the machine gun forward has one further advantage. In woods, squads often get split up and scattered. If the machine gun is forward, however, the squad can easily rally around the machine gun, and, after taking a hostile forward position, is able to reorganize speedily and go on to take the enemy's second and third positions.

We found that it was not necessary, as the Infantry Training Manual suggests, to make the assault at the double. As a matter of fact, my men were in no physical condition to do so. In this type of fighting, we always advanced at a walk.

I also found that my men advanced more confidently, since, because of the noise of the machine guns and their own cheering, they could not hear the Soviet bullets. In defense, too, it is highly advisable to encourage the men to cheer as the enemy attacks.

From a high German echelon come the following comments on the company commander's observations:

1. When advancing in woods and in close touch with a hostile force, machine carbines and rifles (preferably the automatic rifles) will be detailed to scout and provide close protection forward of the squad. The machine gun therefore will move with the squad, and not ahead of it. When the machine gun goes first, it is detected too readily and the detachment is fired on before it can bring the weapon into action.

The more dense a wood is, the more the conditions of fighting approach those of close combat; that is to say, machine carbines, automatic rifles, and egg hand grenades play a decisive part.

2. As soon as a hostile force is encountered, the machine gun will be employed forward, for the reasons that this company commander has given in his report.

The usefulness of the machine gun here lies chiefly in the fact that, like the "cheering," it helps to keep morale high.

When a hostile force is well dug-in, and is thoroughly prepared to meet an attack, the initial crack in the opposition's front must be made by assault operation.



LEYTE VETERANS TALK ABOUT JAPS

"The Japs we met on Leyte were as tricky as ever. They used all the old tactics and ruses, and even introduced a few new ones." This is the opinion of a group of officers and senior noncoms from three divisions and two tank battalions that engaged the Japanese at the start of the present Philippines campaign. All the men were veterans of earlier operations from Attu to New Guinea.

"When we hit the beach," said an infantry sergeant, "there was not much opposition, although we ran into the usual snipers. One thing different about these snipers was that most of the men I saw who had been shot by a sniper were usually wounded through the shoulders or hips, enough to incapacitate them, but not to kill them. This happened so often that I got the impression the Japs must have been instructed to wound American troops deliberately rather than kill them, inasmuch as a wounded man would tie up an additional two or three men to take care of him."

"There were pillboxes on our beach," another sergeant said. "Some of these bunkers were equipped with periscopes, and were connected with each other by trenches. If it got too hot for the occupants of a pillbox, they were able to retreat through the trenches to another."

When the Japanese began to retreat from one sector of the beachhead, they placed heavy mortar fire on all the open areas. "This fire," a company commander added, "was particularly heavy in such places as corn fields and paddy fields. Apparently the retreat had been planned, and all open areas had been zeroed and registered by mortar and artillery fire before our arrival."

"After the fighting had settled down," a lieutenant said, "we began to run into Japs who used every type of deception. On one occasion a Jap on the crest of a hill started waving a white flag. When our troops ceased firing, he motioned to our men to come to him. As some of our men stood up, more Japs hidden around the base of the hill opened fire."

"On another occasion," a sergeant added, "several Japs came toward our positions, crying as though they were about to surrender. When they got close enough, they stopped and started throwing hand grenades at us. When we were in the vicinity of Dulag, the same trick was tried by a group of about 30 Japs who came toward our positions dressed as Filipino women. Once they drove water buffaloes toward the perimeter and followed in behind the animals."

It was also near Dulag that the Japanese placed a remote-



"About 30 Japs, who came toward our position dressed as Filipino women, started throwing grenades as soon as they were within range."



"Once they drove water buffaloes toward the perimeter and followed in behind the animals."

controlled machine gun in a tree. "The Japs who operated the gun were hidden in foxholes some 75 yards away. The gun was fired by a rope strung between the gun and the foxholes. The gun was aimed down the road toward our advancing troops," the sergeant explained.

"One thing we learned early in the campaign was to watch out for the coconuts—the ones that were lying on the ground around foxholes, or that were scattered along the sides of roads and trails." The lieutenant went on to talk about booby traps. "There were numerous cases where the Japs had cut a hole in the top of a coconut, scooped it out, and filled the hull with powder set around an ordinary Jap hand grenade. Some of these traps were detonated by trip wires; others, by pressure."

"One of the men in my platoon got caught by an old trick," a sergeant remarked. "He found a Jap pistol, but, before he picked it up, he tied a hook on a long string, fixed the hook over the pistol, and then backed off and pulled the pistol to him—just to make sure it wasn't a booby trap. He took the pistol back to camp with him, and that night, when he snapped back the cocking piece, the pistol exploded and blew off his hand."

"We found another kind of booby trap near one of the air-strips," another noncom said. "The Japs had placed bamboo

poles in zigzag fashion in various places around the strip, particularly near their gasoline trucks. Hand grenades had been stuck in each end of one pole, and trip wires were fastened to immovable objects nearby. Just step on, kick, or move the pole. . . .”

“After a jeep had been blown up, we discovered that some of the airstrips had been mined, too,” an infantryman added. “The Japs had used an old trick by planting armed 100-pound bombs in rows across the runways.”

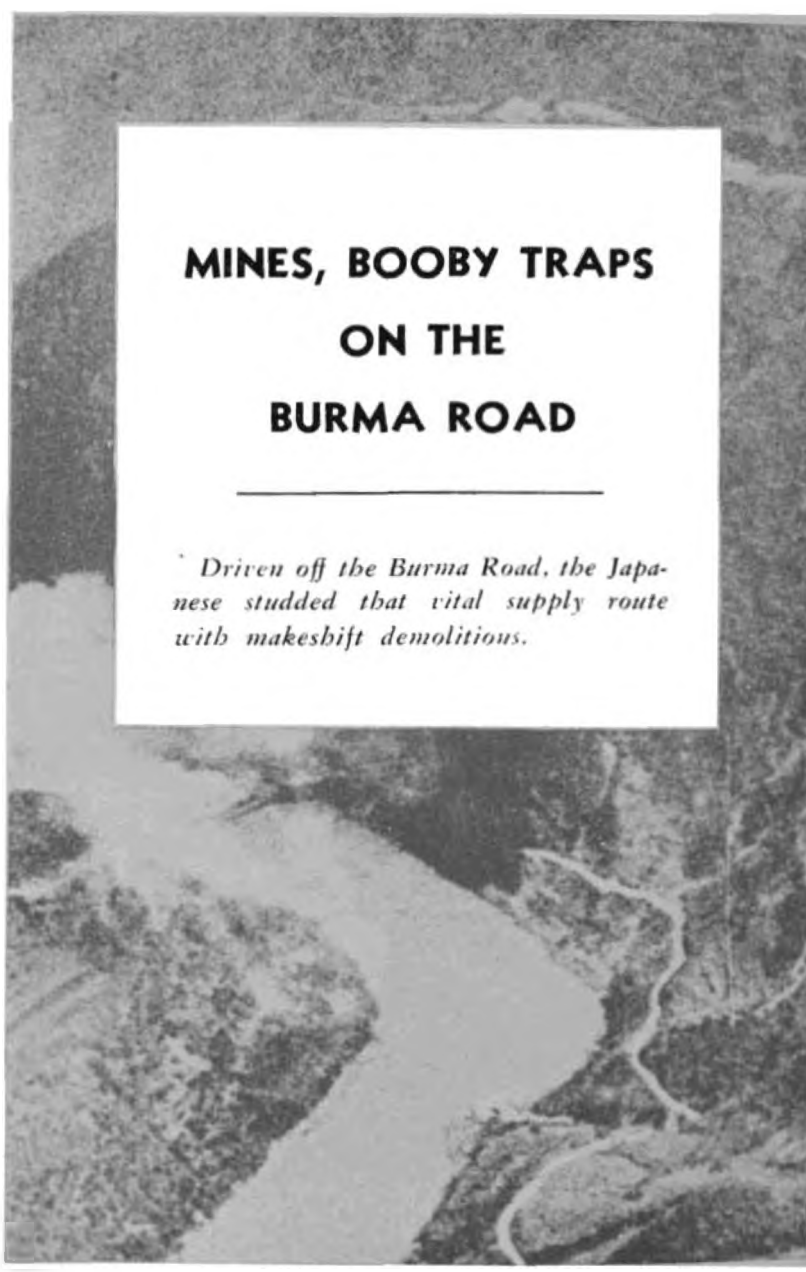
“In fact, we found the same thing on the road from San Jose to Carigara,” a tank lieutenant said. “Besides bombs, the Japs used standard land mines. They followed no regular pattern, but were laid at intervals from a few feet to 300 or 400 yards. A favorite spot for Jap minelaying seemed to be near bridges.”

“Another place the Japs laid mines was in rice paddies,” the infantryman said. “They placed them along rows of rice and then strung trip wires through the grass.”

“They not only laid mines, but they threw them,” a tank gunner said. “The mines had magnets on them and were supposed to stick on the side of a tank and explode. They weren’t very effective, though, and the Jap who threw one practically committed suicide by doing so.”

“A 10-pound charge of explosive was used much the same way,” the tank officer added. “During an action these Japs would try to sneak up and fasten the charge somewhere on the tank.”

“Yeah,” said the infantryman, “the Japs sure aren’t gettin’ any easier. . . .”

An aerial photograph of a wide river valley. A road runs along the right bank of the river, crossing a bridge. The surrounding landscape is rugged and forested.

MINES, BOOBY TRAPS ON THE BURMA ROAD

** Driven off the Burma Road, the Japanese studded that vital supply route with makeshift demolitions.*



The Japanese defenders who had held the Burma Road supply line to China did not abandon it without a last attempt to harass the advancing Allied troops. Before traffic could move forward on the re-opened route, an American engineer team followed the combat troops and removed mines and booby traps from stretches of the Burma Road.

The retreating Japanese resorted again to improvisation in preparing and laying their explosives. Much dynamite was used, as were 75-mm shells, specially fuzed. Explosives and shells often were combined to form a demolition charge—the average charge being two shells packed in about 10 pounds of dynamite. In only one case was a standard Japanese magnetic mine found, and it, too, was bolstered by added charges of explosive.

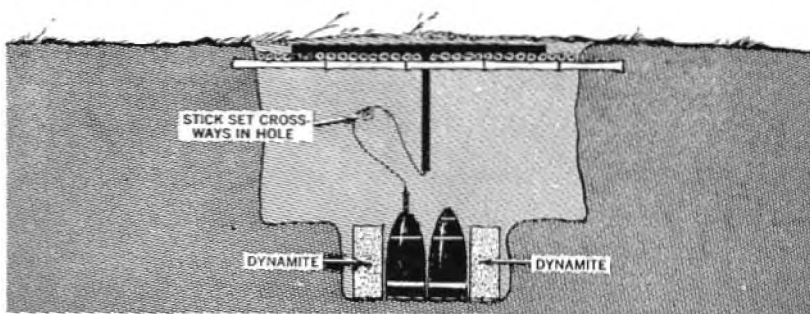
With every demolition except the standard mine, a pull-type fuze was used. This fuze is similar to the U. S. fuse lighter except that the Japanese version is enclosed in a metal or hard rubber case.

Almost all the mines and booby traps were very poorly concealed; and many of them could be detected in the daytime with no more effort than a casual inspection of the area. From the method in which the mines and traps were set, it is evident that the Japanese troops were withdrawing hurriedly and that the mining was more of a field expedient than a previously planned tactic.

MINES

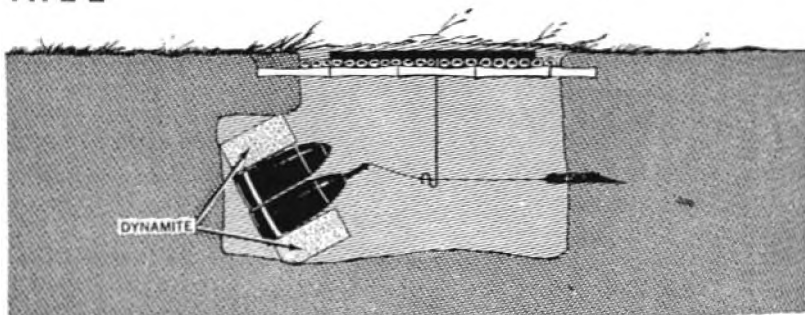
Most mines were found emplaced on probable bypass routes around demolished bridges, and around fallen trees used as road blocks. The improvisations were of three general types.

TYPE 1



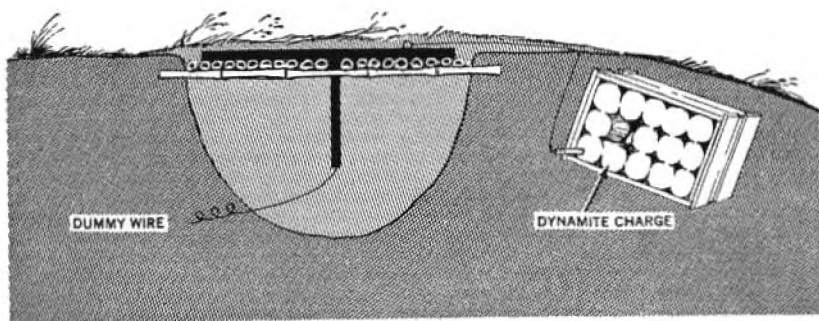
This mine employed two 75-mm shells reinforced by charges of explosive. The pull-type fuze was inserted in the nose of one of the shells. A hole in the road for the mine was covered by a camouflaged board cover supported over the hole at ground level by light bamboo sticks. A wooden post was nailed to the bottom of the cover, and a stick was set firmly in the hole at right angles to the post. The pull-string was attached from the fuze and was run over the stick to the end of the perpendicular post. In this way the stick acted as a pulley so that pressure on the board actuated the pull fuze.

TYPE 2



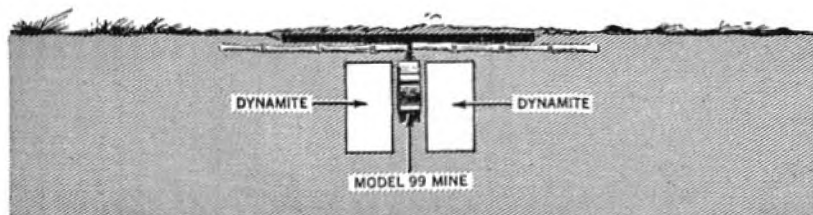
Another improvised mine. It resembled the Type 1 in that it made use of the same shell and dynamite charge in a hole under a board cover. However, the pull-string was stretched between the fuze and a peg driven into the side of the hole. Instead of a post, a length of stiff wire extended from the bottom of the cover and was hooked to the fuze string so that the string would pull the fuze if pressure were put on the board, or if an attempt were made to lift the cover.

TYPE 3



This mine was constructed to resemble the other two types with a board covering a hole in the road. However there was only a dummy fuze string stretched in the hole, and the actual mine—a large charge of explosive—was buried usually 6 feet away from the hole. The real pull string was tied from this charge to the board cover.

OTHER TYPES



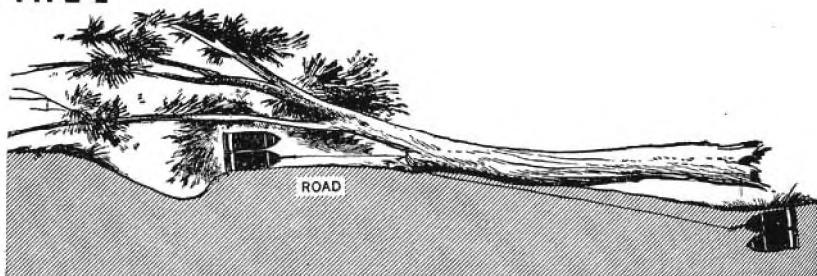
On one occasion a standard Model 99 magnetic antitank mine was used. The mine was buried vertically in the ground with two 10-pound charges of explosive. The regular pressure fuze of the mine was used as a detonator, and the safety pin had been removed and replaced with a piece of lighter wire. An 18-inch square board had been placed over the exposed fuze.

Some dummy mines were found where holes had been dug and covers laid. Usually several dummy strings led from the board cover at different directions into the ground.

BOOBY TRAPS

The booby traps, like the mines, also were hasty improvisations, but generally the booby traps were harder to detect. However, they were found attached to the branches of all tree road obstacles, and to most boxes, supplies, and similar articles scattered along the roadside. These booby traps generally were of five different types, with one or two 75-mm shells as the principle charge.

TYPE 1



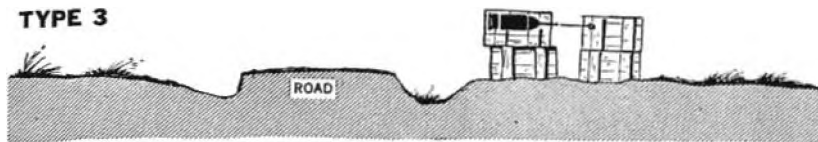
A tree placed across the road was sure to be booby-trapped with two or more charges. Usually trip wires were tied to light broken branches or to long pieces of bamboo. To walk through or around the obstacle was to risk stepping on a branch to which a pull string of bailing wire was attached. Shells with pull-fuzes attached were buried near the surface of the ground or camouflaged in branches and leaves of the tree.

TYPE 2



Sacks of rice placed along the roadside were sure to be trapped. Shells were usually buried in the ground under the sack, with a piece of bailing wire hooked in the sack and attached to a pull-fuze in the shell. With this type of booby trap, it was necessary for the object trapped to be heavy, such as a full rice sack, otherwise the 5- to 10-pound pull on the trip wire was quite noticeable.

TYPE 3



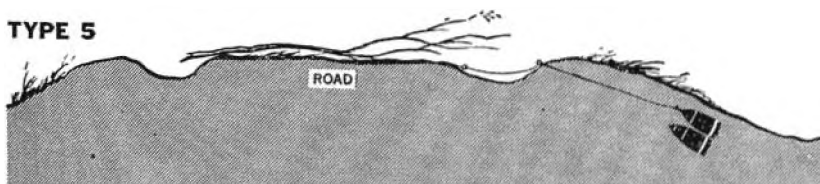
Booby traps were found set in stacked boxes of artillery ammunition. Here the retreating Japanese had removed the tops of some boxes and set pull-fuzes in the nose of a shell in each box opened. The lids had been replaced, and pull strings had been run from the fuzes, through the back of the trapped boxes, and fastened to the adjoining boxes.

TYPE 4



Entire boxes of dynamite were used openly as booby traps. These boxes were found balanced precariously on roadside embankments. Pull-fuzes installed in the boxes were tied to stakes in the ground. A careless movement in the vicinity of such a trap could have sent the box tumbling down the bank and thereby pulled the fuze.

TYPE 5



Seventy-five-millimeter shells emplaced to act as a combination booby trap-antivehicle mine also were encountered. Usually a light tree branch or a piece of bamboo would be placed between the ruts in the road, and two pull-fuzed shells would be buried at the roadside. The pull string from the fuze would be run through wire eyelet stuck in the ground, stretched across the rut, and tied to the branch. A vehicle running over the string, or a soldier moving the branch, would have detonated the buried shells.



NEW WEAPONS FOR JAP TANK HUNTERS

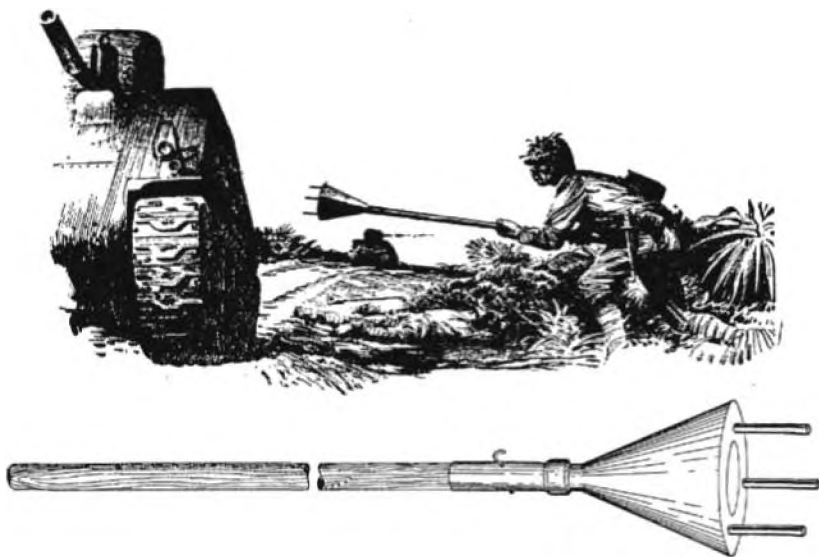
The effectiveness of U. S. tanks in operations against the Japanese has led the Japanese Army to devise an extraordinary series of hand-carried antitank demolitions. Specially designed to pierce armor plate or to damage vital tank parts, these weapons may well replace the familiar Model 99 (magnetic) armor-piercing mine as the primary weapon of Close-quarter Combat Units—the Japanese suicide tank fighters.

The Japanese are known to have been experimenting with such antitank charges, and, during recent operations, attempts to use weapons of this type have been reported.

LUNGE MINE

Perhaps the oddest of these antitank charges is the so-called “Lunge Mine” encountered on Leyte Island. This weapon—an armor-piercing charge on the end of a pole—derives its name from the way in which it must be thrust against the side of a tank in order to detonate.

The mine is an explosive-filled, sheet-steel cone, about 12 inches long and 8 inches in diameter at the base. As in all hollow charges, the cavity in the bottom of the cone tends to guide the force of the explosion out from the bottom of the cone and against the armor plate of the target. A metal sleeve extends from the top, or point end, of the cone and houses the simple firing device—a nail on the end of the broomstick-like handle



The Japanese suicide soldier will use the Lunge Mine as he would a rifle and bayonet, thrusting the three legs of the mine base against the side of the tank. The mine explodes on contact.

which fits into the sleeve. The detonator is little more than an ordinary blasting cap set into the top of the cone, where the nail will strike the cap if the handle is jammed down in the sleeve. During transport, however, the handle is held immobile in the sleeve by a simple safety pin inserted through the sleeve and handle. A further safety feature is a thin holding pin, or shear wire, similarly installed through sleeve and handle. Three legs, $5\frac{1}{4}$ inches long, are attached to the bottom of the cone; the Japanese claim that these legs increase the penetrating power of the weapon. The penetrating effect of the charge is greater when the explosion occurs a few inches away from the armor.

The Japanese suicide soldier has been taught to wield this weapon as he would a rifle and bayonet. The prescribed method of operation is for the soldier to remove the safety pin as he

approaches the tank to be attacked, and to grasp the center of the handle with his left hand, and the butt end with his right. Then, holding the stick level, with the mine to the front, he lunges forward as in a bayonet attack, thrusting the three legs on the mine base against the side of the tank. The shock of contact will break the shear wire and the striker nail will be shoved into the detonator cap, thus exploding the mine as it is held against the armor. At this point the Jap soldier's mission ends for all time.

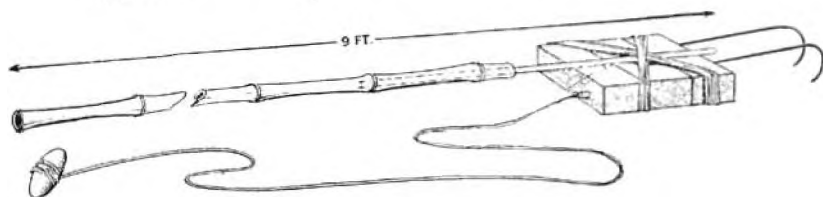
From experiments conducted in Manila, the Japanese claim that the 6½ pounds of explosive in the mine is capable of penetrating 6 inches of armor, provided that the mine contacts the plate squarely. However, if contact is made at an angle of 60 degrees, the mine is reputed to penetrate 4 inches of armor. To date all attempts by the enemy to use the Lunge Mine against our tanks have met with failure.

HOOK CHARGES

One Japanese division has advocated the use of a similar, although simpler, device designed primarily to damage the guns on a tank being attacked by ground troops. It consists of a heavy demolition charge of explosive blocks to which a short stick has been wired. One end of this stick then is inserted in the hollow end of a bamboo pole, thus forming an easily removable handle. Two heavy wires, bent like fishhooks, are fastened to the other end of the charge.

A short length of fuze rigged with a pull-type fuze lighter is installed in a demolition block near the handle, and a cord or rope about as long as the handle is tied to the fuze lighter.

When attacking a tank with this pole charge, presumably from ambush, the Japanese soldier is supposed to pull the cord and ignite the fuze as he approaches his target. On reaching the tank, he is supposed to hook the wire hooks of the charge over the tank cannon or machine gun. As he retreats he pulls



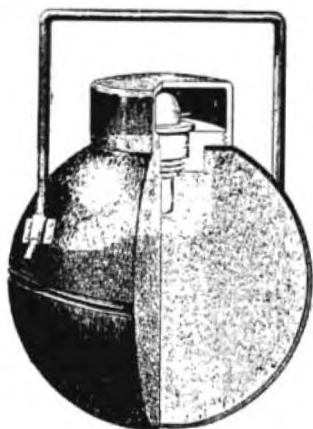
The Hook Charge, used to destroy tank guns, is fastened to the gun barrel by two wire hooks. The charge is detonated by a fuze and blasting cap lighted by an ordinary pull-type fuze lighter.

the bamboo pole loose from the charge, and the demolition hangs freely in position on the gun until the charge explodes.

A variation of this pole charge is a similar demolition on the end of a 4-foot rope. The soldier armed with such a weapon is supposed to sling the rope and explosive over the top of the tank gun barrel and then pull the rope back towards him until the wire hooks catch and hang on the barrel. Lacking opportunity to attack the tank weapons, the Japanese of this division were instructed to hang the explosives on the tank's camouflage net, or some other likely place.

HAND MINES

Besides the Model 99 magnetic mine, which already has been used on a wide scale, two other hand-thrown antitank demolitions are known to have been developed and experimented with by the Japanese Army. They are the Conical Hand Mine and the Experimental Hand-thrown Mine.



The Conical Hand Mine (right) and the Experimental Hand-thrown Mine (left, quarter-section view) are antitank grenades that detonate on impact. They can penetrate $\frac{3}{4}$ inch of armor.

The Model 3 Conical Hand Mine actually is an antitank bomb or hand grenade. This grenade has been found in captured ammunition dumps in the Philippines, although there have been no reported attempts by the enemy to use it. Of Japanese naval manufacture, it comes in two sizes—one weighing 2 pounds, and the larger weighing 3 pounds. Like the Lunge Mine, the Conical Hand Mine is a cone shaped, hollow charge designed to direct the force of explosion against tank armor.

The large end of the grenade cone is covered by a bowl-shaped wooden base. The whole body of the grenade is encased in a silk bag sewn to fit tightly around the explosive unit and the wooden base.

The fuze, which functions on impact, is located in the narrow end of the bomb, and is designed to detonate regardless of the angle at which the grenade strikes the target. To ensure detonation, the grenade must be thrown with force. To be safe from the effect of the explosion, the soldier who throws the grenade must be at least 35 feet from the target. The grenade reputedly can penetrate $\frac{3}{4}$ inch of armor.

Approximately 20 inches of hemp-palm fibers resembling a grass skirt are attached to the narrow end of the grenade, and serve as a tail or stabilizer when the grenade is thrown. This permits the grenade to strike base-first on the target.

The Experimental Hand-thrown Mine is a spherical bomb 4.7 inches in diameter. It is composed of 3 pounds of explosive encased in a black aluminum shell. Like the Conical Hand Mine, it is reported as capable of penetrating $\frac{3}{4}$ inch armor, and must be thrown from a distance of at least 30 feet from the target.

A carrying handle and a fuze cover are attached to the outside of the mine. During shipment the fuzes are packed separately, and must be inserted in the mine by unscrewing the fuze cover and inserting the fuze in the recess provided. The fuze is similar to that on the Conical Hand Mine, and is kept unarmed by a safety pin. Since the fuze will detonate the bomb upon impact with the target, the mine requires careful handling after the safety pin has been removed.



NEW WEAPONS CAPTURED AT ORMOC

Ordnance Intelligence men who advanced with combat troops into the Ormoc area of Leyte Island have recovered four new-type Japanese weapons, ranging from a hand grenade to an artillery piece. Some of these weapons had been known but not seen, and their capture in the Philippines indicates that the newest and best items from Japan's industrial arsenal will be met with increasing frequency as U. S. forces move closer to Tokyo.

CERAMIC HAND GRENADE

Of primary interest to the infantryman is the discovery of a ceramic hand grenade, the size and shape of a baseball. A short bottle neck protrudes from the sphere, and the external appearance of the grenade resembles an old-fashioned idea of a bomb. A loop of white tape is tied into a groove around the neck, apparently for carrying. The grenade body is made either of white porcelain or glazed pottery, and is covered with a close-fitting, tan rubber cover.

A rubber plug is cemented in the bottle neck and holds the simple fuze. This detonator is no more than a blasting cap crimped on to a five-second length of fuze. The other end of the fuze, which is outside the rubber plug, is covered with a



Two views of the Ceramic Hand Grenade showing (left) the grenade with carrying tape and exposed match-head fuze, and (right) the grenade with rubber cover and rubber fuze cap.

match-head composition. A slip-on rubber cap covers the whole neck, and fuze. A small, loose wooden block with an abrasive composition on one side is contained in the rubber fuze cover.

Weighing less than a pound, this grenade is easy to throw, but the thrower must be careful not to strike a nearby hard object, such as a tree, as the porcelain shatters easily. The grenade is ignited by removing the rubber fuze cover and scratching the striker block across the match-head composition. It also seems possible to light the fuze with a cigarette. The grenade should be thrown as soon as the fuze is lighted.

This grenade is entirely a concussion weapon, as there is considerable blast but little fragmentation resulting from the explosion.

MODEL 90 75-MM FIELD GUN

One of Japan's most modern weapons, the Model 90 75-mm field gun, has been recovered for the first time by U. S. troops. A long-barreled weapon, this gun is the weapon of first-rate Japanese artillery units only. It is equipped with a horizontal sliding breechblock, hydropneumatic recoil mechanism, split trails, muzzle brake, and automotive-type combat tires.

This gun has a reported muzzle velocity of 2,296 feet per second, and a reported maximum range of 16,350 yards—it is perhaps the most effective antitank gun the Japanese have, and, when equipped with pneumatic tires, it is highly mobile.



The Model 90 75-mm field gun, one of the most modern of Japanese artillery weapons. A suitable antitank weapon, this is the first of its kind to be captured by U. S. troops.

MODEL 2 120-MM MORTAR

A large-caliber mortar known to have been developed by the Japanese, but never before encountered by U. S. troops, was also taken near Ormoc. It is the Model 2 120-mm mortar, which resembles the U. S. 81-mm mortar in design, except for size, the firing mechanism, and the fact that the bipod and cradle break down to two assemblies. The very heavy, ribbed base plate, which is equipped with four carrying handles, has only one socket for the spherical projection on the barrel. The barrel is reinforced at the muzzle.

A movable firing pin is connected with a plunger that sticks upward and out from the breech of the barrel. After the piece has been loaded, it is fired by striking this plunger with a mallet or similar instrument. The blow on the plunger thrusts the firing pin forward thus detonating the propelling charge on the mortar shell.

The shell, which weighs 26.4 pounds, is the conventional "tear drop", fin-stabilizer type. It is fuzeed with the standard Japanese Model 100 mortar fuze.

81-MM BARRAGE MORTAR

The capture of an 81-mm barrage mortar has been reported. Sometimes called a "spike" mortar, this type of weapon consists of a mortar tube on a wooden base block on the bottom of which is a large metal spike. When fired, the barrage mortar shell, after reaching a definite range, expels a series of parachute-supported high explosive charges which detonate by time fuzes. Because of the crude spike and block arrangement for emplacing it in the ground, the mortar is considered highly inaccurate. It is believed to have been developed for use against low-flying aircraft, or for firing over the heads of hostile ground troops. The Japanese are known to have a standard 70-mm barrage mortar, but the 81-mm variety found at Ormoc is the first of its caliber to be reported.



IS HE JAP OR CHINESE?

Is it really possible to tell a Japanese from a Chinese? In other words, can you tell your enemy from your ally? The answer is simple: Most of the time you probably won't be

able to spot the Jap unless he's dressed in the Imperial Army uniform.

It is true that there are Japanese who may easily be identified as Japs, and there are Chinese who obviously are Chinese and nothing else. But between these two extremes there is a large proportion of the population of both countries who have, as a group, the same racial characteristics. In many cases, trying to tell a Japanese from a Chinese by physical appearance alone is like trying to tell a German from an Englishman in a shower bath before you've heard either man speak.

Granting that there are many Japanese and Chinese who look alike, there still are ways by which some Japs may be distinguished from many Chinese. This knowledge will become increasingly important to American troops as they drive further into the Orient, where they may expect an increase in the activity of enemy agents and infiltration troops disguised as Chinese or other people of the Far East. Indeed, in the Philippines the Japanese already have tried to impersonate Filipino guerrillas. In China the use of "plainclothesmen"—Japs dressed as Chinese civilians—has been widespread.

Most of the Japanese soldiers with whom Americans will be in contact have been conscripted from the peasant and fisherman classes of Japan. The racial background of the average Japanese of these classes is a mixture of the Mongol from ancient China, the Malayan from the South China Sea, and the Ainu—the primitive aborigines who were occupying the islands of Japan when the Mongol ancestors of the modern Japanese arrived.

This blend of races has produced an individual very similar to the people of South China. The average peasant Jap is a short individual with a long torso and short, thick arms and legs. His lower jaw tends toward being square, and the Mon-

goloid fold (or "slant eye") of the upper eyelid is less pronounced among his class. These characteristics do not permit certain identification, because many South Chinese may be



found to fit that description in varying degree. However, in a great many cases the heavy beard and body hair of the average Japanese peasant will distinguish him almost at once from the particularly hairless South Chinese. Also, the Japanese usually have poor teeth.

Extensive dental repair is common among the Japanese, who have a particular fondness for gold fillings. The Chinese have better, straighter teeth, which are less marked by dentistry.

The higher class Japanese, many of whom have been drafted into the army, often are almost impossible to distinguish from a large proportion of the Chinese people, particularly those from North China. This is the result of the Mongol ancestry of both Chinese and Japanese, which, in the case of Japs of the better class, has not been predominantly mixed with the Malayan and Ainu racial characteristics.



Consequently, the Chinese themselves are unable to identify many Japanese as Japs by physical characteristics alone.

Environment, more than heredity, has left its mark upon the Japanese, and there are certain cultural peculiarities and mannerisms which may be an aid to identifying the Jap.

Most Japanese who have had the equivalent of a high-school education have some knowledge of the English language. But the Japanese language contains no speech form equivalent to the English letter "l". Japanese, unless they are extremely adept, usually pronounce the "l" sound as an "r". On the

other hand, practically no Chinese have difficulty with the "l". In fact, in South China the people will substitute the "l" sound for "r" when speaking English words. (This is true only of that section of China.) A Jap also will tend to hiss the English "s" sound when speaking.

If you are in doubt as to the nationality of an oriental you have found wandering around in your rear area, try him with a sentence like, "Robin left the lousy rug." A Jap with little practice in English will repeat something like, "Robin reft the rous-sy rug." A South Chinese would tend to say, "Lobin left the lousy lug," while a Chinese from North or Central China will repeat the sentence pretty much as you do.

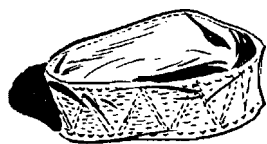
If you can't work the language on the suspect, make him walk, preferably without his shoes. Frequently the posture of the Jap is poor, and he is inclined to hunch slightly and shuffle along while walking. The next time you ambush a column of Japs on a trail, notice how they move with short, choppy steps—before the shooting starts. Conversely, the Chinese from North China and the interior are accustomed to standing upright, and will generally walk with a stride much like our own.

The average Japanese walks as he does because at home he is used to wearing a *geta*—a wooden clog held to his foot by leather thongs between his great and second toe. While you have the suspect's shoes off, take a look at his feet. Many



Japanese have a wide space between these toes caused by the clogs they have worn for years. They may even have callouses on the inside of the big toes caused by the chafing of the *geta* straps. However, remember that South Chinese—from rice paddy country—wear similar clogs and therefore have similar feet deformities.

If you are still suspicious, take a look at your prisoner's underwear. If he is merely a Jap soldier in disguise, and not a well trained agent, he may still be wearing the underclothing common to a large number of Japanese soldiers. This may consist of one or two articles: probably a loincloth, or G-string, made of light-weight cotton material supported by a narrow band of cloth tape tied around the waist. And maybe you'll also find a wide cloth belt embroidered with numerous stitches—the "belt of a thousand stitches" which is supposed to bring the wearer luck in battle.



While you are questioning the suspect, watch his face. Remember that the Chinese smile easily and naturally, and that the Jap, particularly if he is expecting to be shot, is generally pretty solemn. Remember also that it is habitual for most Japanese, when speaking, to inhale quickly at intervals through their teeth. A flustered Jap may fall unconsciously into that ingrained habit. But if you fail to make a positive identification, your best bet is to hustle him to the MP's.

The important thing to remember is that the real difference with the Jap is his ideas. The Chinese know this and say that, if you aren't sure enough to shoot, the best way to tell a Japanese from a Chinese is to ask him.

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