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PART ONE: JAPAN

Section I. LAND MINES, GRENADES, AND BOOBY TRAPS

1. GENERAL

The Japanese, as compared with the Germans, have used land mines and booby traps on a small scale to date. This is largely due to the fact that the Japanese were on the offensive until our invasion of Guadalcanal—and even there the enemy held most of the island for several months afterwards and, almost to the end, maintained high hopes of annihilating us. As a rule, no enemy will lay mines and booby traps on a big scale if he expects to move over the area himself sometime in the immediate future. When the Japanese are forced to assume the defensive on a large scale, with little hope of advancing, they are expected to use mines and booby traps extensively. The use of such weapons would certainly be expected of an enemy who has been highly deceptive and treacherous in many other respects.

If our soldiers are alert and have a general idea of the appearance and function of mines and booby traps, they should not entertain any great fear of these weapons. As one Guadalcanal observer pointed out, we should never assume that an area recently occupied

by the enemy, or equipment therein, is safe until it is thoroughly checked. A death caused by an enemy booby trap is considered a needless and useless sacrifice. Enlarging his remarks about the Japanese, the observer said:

Whenever the enemy abandons an area which has been held against siege, or which has been in his possession for any length of time, he will usually attempt to lay traps for the forces occupying the area. These traps usually consist of simple improvised devices, such as antipersonnel mines placed under loose boards likely to be walked on, antivehicle or tank mines placed in the tracks of a narrow road, or devices fastened to doors or laid across narrow paths.

The purpose of such traps is twofold: (1) to cause front-line casualties, and (2) to slow the advance of the attacking forces.

At the present time, the Japanese are known to have three types of land mines and two types of grenades which can be used in such traps as those described above.

2. LAND MINES

a. Antivehicle

The Japanese antivehicle mine, officially known as Type 93, is commonly called "the tape-measure mine" because it resembles an ordinary rolled-up tape measure (see fig. 1). The weapon weighs 3 pounds, and has a diameter of $6\frac{3}{4}$ inches and a thickness of $1\frac{3}{4}$ inches. It is filled with 2 pounds of a picric acid compound. The mine container, which consists of two light-metal sections, is painted either yellow

or olive drab. In the center of the top is a brass dome or plug, which screws into the mine and covers the fuze. The plug, $1\frac{1}{2}$ inches in diameter, has a $\frac{3}{8}$ -inch red band painted around it. On opposite sides of the circular weapon are two rings, spaced 2 inches apart, which often have small loops of rope secured to them. The rope can be used in carrying the mine, in hanging it up when it is not in use, or in dragging it across the path of a tank.

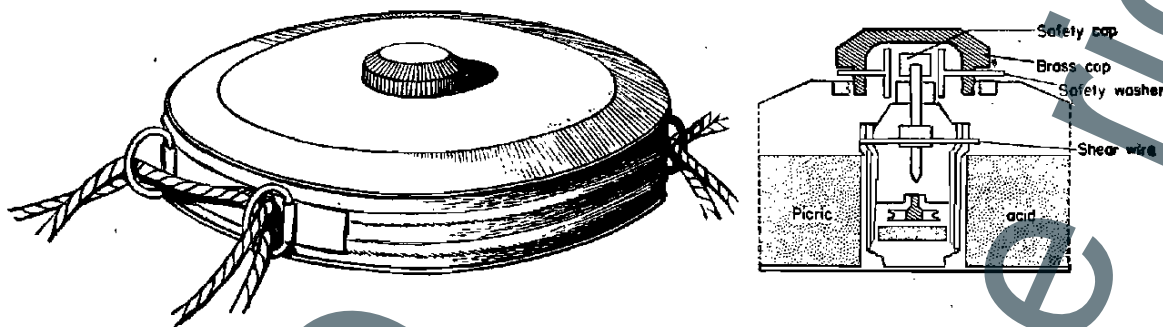


Figure 1.—Japanese Antivehicle Mine (Type 93)

The mine is exploded by pressure applied on the brass plug. Normally more than 200 pounds of pressure is required to activate the weapon, but no chances should be taken. Actually, a shear wire—which holds the firing pin in a cocked position—determines the pressure necessary to explode the mine. The wire may vary in strength according to the tactical use of the weapon. Some reports indicate the use of shear wires which require a pressure of only 70 pounds to break. Pressure applied to the brass plug first crushes the top cover; the brass plug then contacts the top of the firing pin, thereby putting stress on the shear wire and causing it to break. When it breaks, the mine explodes.

firing-pin spring locking plug limits the spring at the upper end of the igniter body. The steel balls are held in place by the firing pin, which has a continually increasing internal diameter from the open end; and

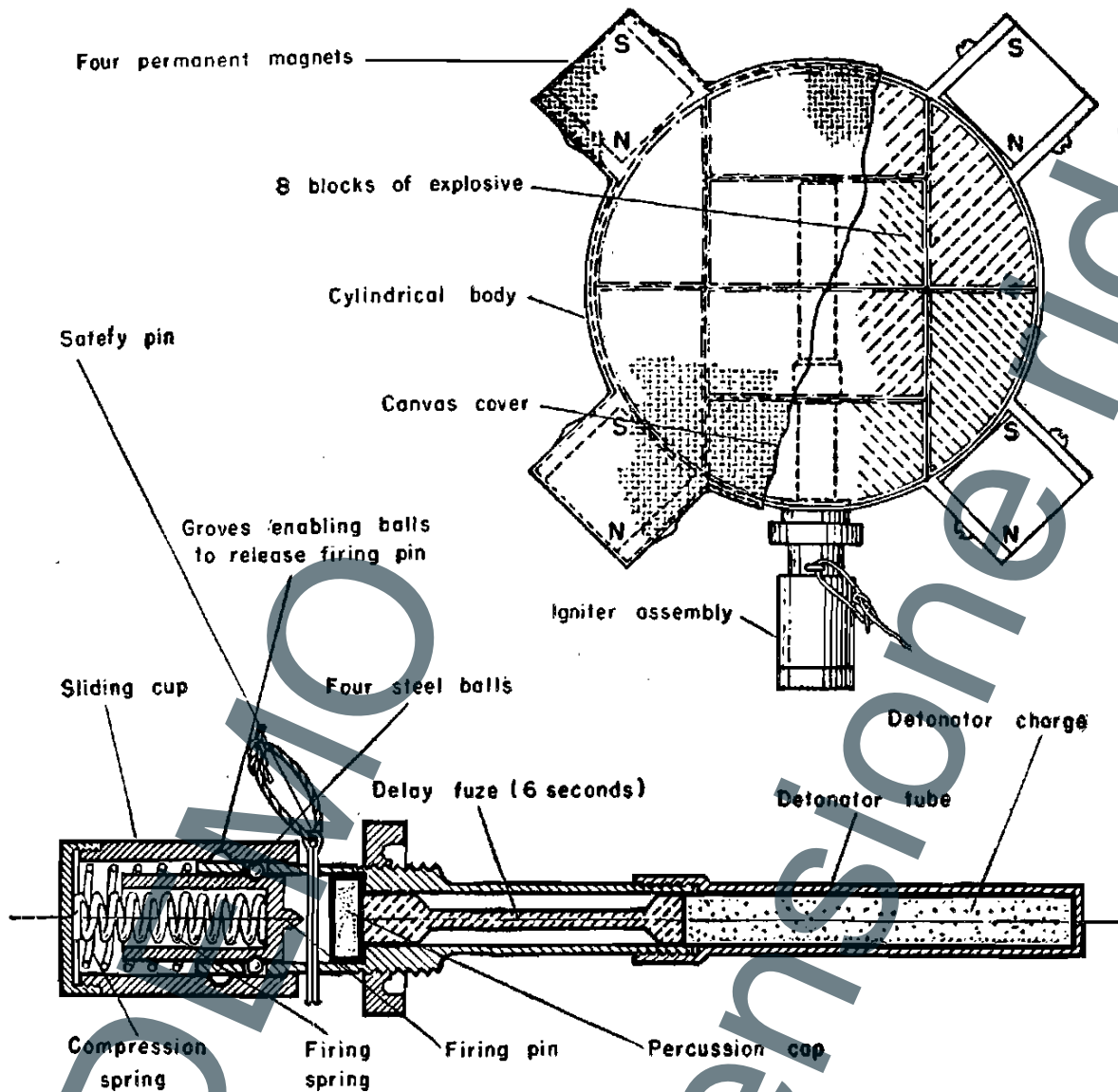


Figure 2.—Japanese Armor-piercing Mine (magnetized)

as the firing pin is depressed against the firing-pin spring, the steel balls are forced from their position by pressure of the firing-pin spring on the firing-pin assembly, thus allowing the firing pin to go forward.

The firing pin is prevented from being depressed by a safety pin positioned in the safety-pin hole in the igniter body. A length of cord is attached to the firing pin for withdrawing purposes. The primer and delay element screws into the igniter body. The detonator element screws onto the delay element. The primer is of the percussion type, and the delay element is of the pressed black-powder type, with a burning time of approximately 10 to 12 seconds. The igniter body is provided with a fusible plug to allow escape of the gases from the delay element.

This type of mine is intended for direct use against armored vehicles, shields on gun mounts, doors of pill-boxes, and so forth. The mine is placed in contact with the iron or steel object and adheres to it by action of the magnets. The safety pin is withdrawn, and the firing pin is depressed, actuating the igniter and exploding the mine in approximately 4 to 5 seconds. During this time the attacker must make his escape.

While it is reported that the mine may be thrown by hand, it is considered, from the shape and design of the mine and igniter, that it is not suitable for this purpose and must be placed by hand in direct contact with any metallic part of the objective. Provided that a suitable type of igniter is used, the mine may be set up as a booby trap if placed under a loose board or arranged in other ways, as suggested for the hand grenades. The igniter designed for this mine is not particularly suitable for booby trapping. Other types of igniters could be used with this mine for booby-trapping purposes.

3. FRAGMENTATION GRENADES

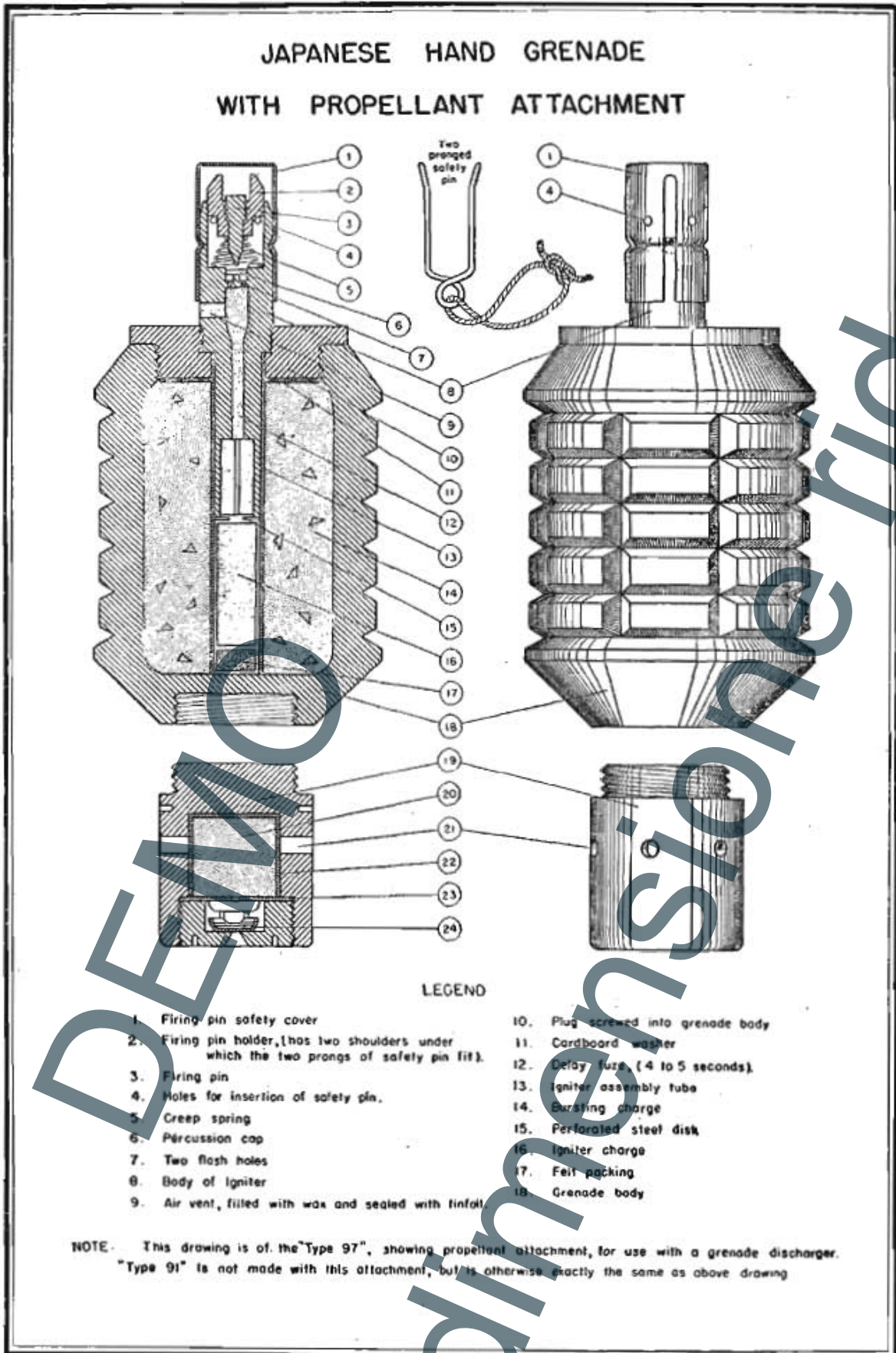
The Japanese are known to have at least four types of fragmentation grenades, but all are constructed along the same general lines. They differ slightly in dimensions, and two of them have added attachments. It would be possible to use any of these grenades in devising booby traps.

a. Type 91

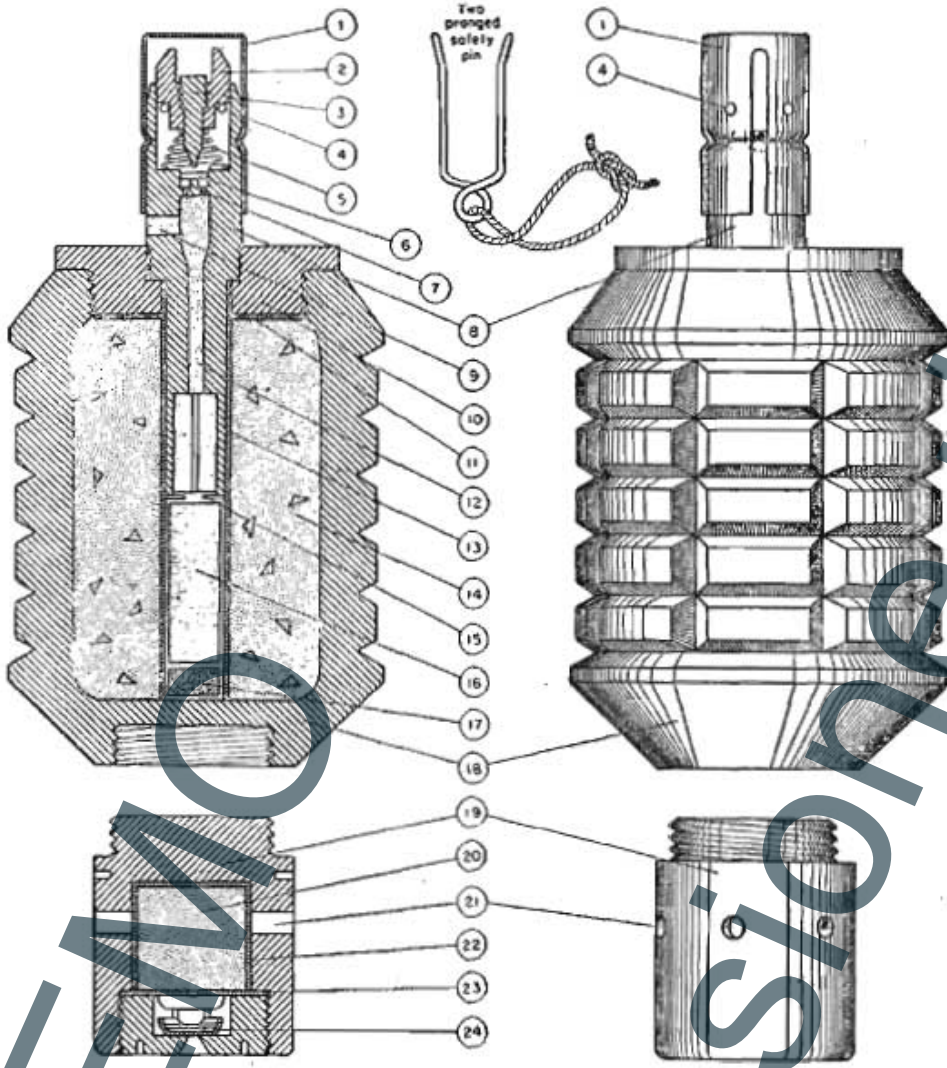
This is a hand grenade, and is believed to be a revised version of the "10-year type" grenade. The latter type, which is not being widely used, will not be discussed here since it is very similar to Type 91, the most common of all types, and the one most likely to be used in devising booby traps.

The Type 91 grenade has a cylindrical body. Its outer surface has both horizontal and vertical grooves, which form rectangular notches (see fig. 3). These grooves are designed to cause the grenade to break into small pieces at the time of detonation. Actually, however, the grenade does not fragment as much as intended. In some cases, according to observers, the weapon has been known to break into only two pieces. U. S. observers on Attu reported that it was not as effective as our fragmentation grenade.

The fuze, made of brass, screws into the top of the grenade, the base of which is solid. The fuze has a cap on the upper end. This cap holds a spring-loaded striker in the body of the fuze. Holes are drilled through both the cap and fuze—near their ends—for the insertion of a safety pin.



JAPANESE HAND GRENADE
WITH PROPELLANT ATTACHMENT



LEGEND

- | | |
|---|------------------------------------|
| 1. Firing pin safety cover | 10. Plug screwed into grenade body |
| 2. Firing pin holder, (has two shoulders under which the two prongs of safety pin fit). | 11. Cardboard washer |
| 3. Firing pin | 12. Delay fuse (4 to 5 seconds) |
| 4. Holes for insertion of safety pin. | 13. Igniter assembly tube |
| 5. Creep spring | 14. Bursting charge |
| 6. Percussion cap | 15. Perforated steel disk |
| 7. Two flash holes | 16. Igniter charge |
| 8. Body of igniter | 17. Felt packing |
| 9. Air vent, filled with wax and sealed with tinfoil. | 18. Grenade body |

NOTE: This drawing is of the "Type 97", showing propellant attachment, for use with a grenade discharger. "Type 91" is not made with this attachment, but is otherwise exactly the same as above drawing

Figure 4.—Japanese Hand Grenade (type 97).

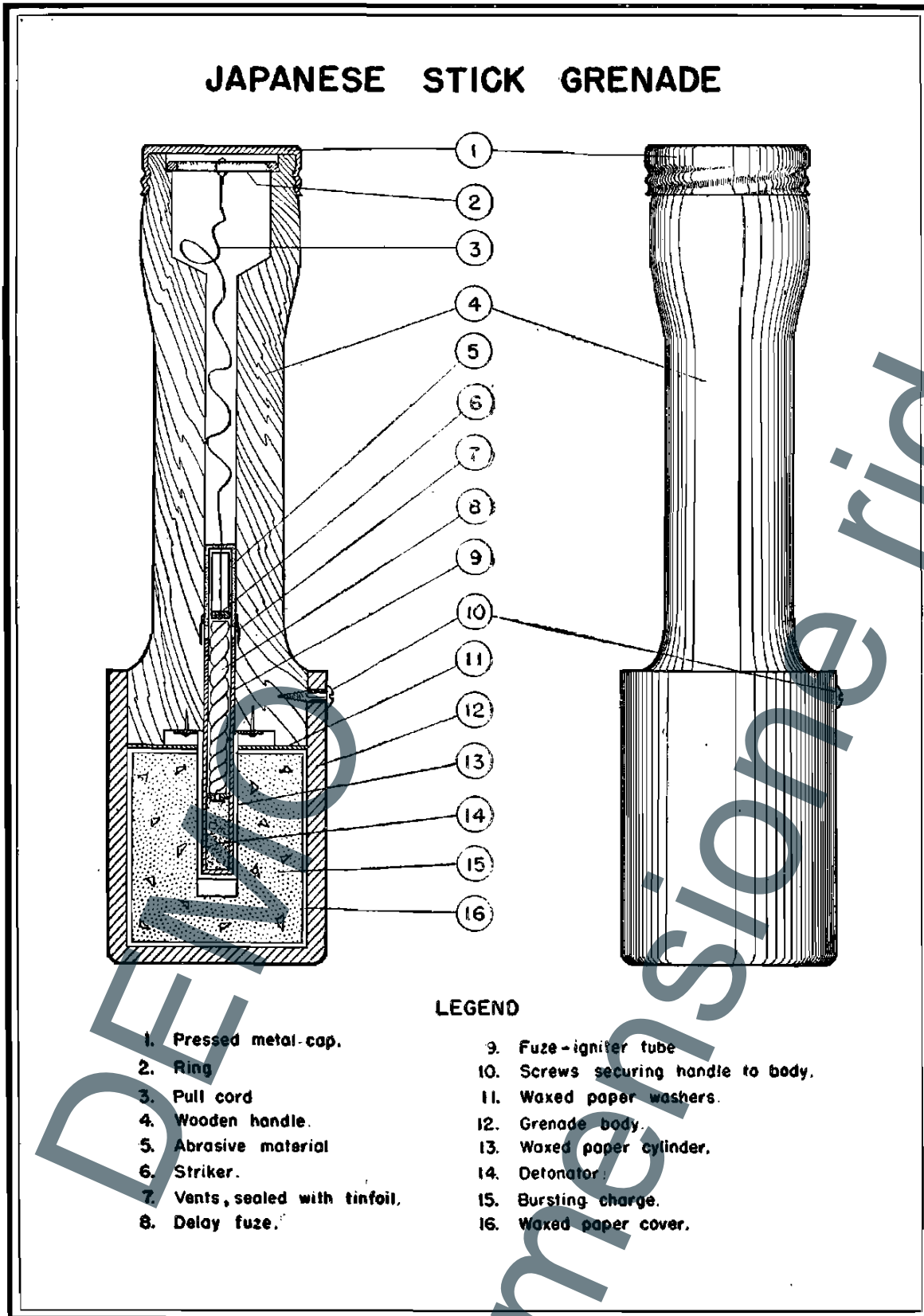


Figure 4.—Japanese Stick Grenade.

such as a door, vine, or trip wire across a path or trail, or to a souvenir. To neutralize the booby trap, simply cut the wire, replace the ring in the handle, and screw on the cap.

4. ELECTRIC BOOBY TRAPS

Watch out for electrically detonated booby traps. Any vehicle, searchlight, generator, light circuit, or other electrical gear can be rigged easily so that the current will detonate an explosive charge. Before any captured equipment is handled, it should be examined for electrical as well as mechanical booby traps.

5. BANGALORE TORPEDO ¹

The Japanese Bangalore torpedo is not likely to be used in booby traps, but our soldiers should be familiar with its appearance and operation. The weapon consists of an explosive charge placed in a piece of common iron pipe, 2 inches in diameter and 40 inches long, with a cap on each end. It can be further identified by a red ring painted around the pipe.

To fire this type of Bangalore torpedo, a lanyard is attached to a braided cord which hangs out one end of the pipe; by jerking the lanyard, a friction igniter starts a delay train, which, in turn, sets off the explosive charge. There is a delay of 6 to 7 seconds, enabling personnel to take cover.

This weapon is used to cut barbed-wire entanglements—the fragments of the pipe sever the wire.

¹ Another type of Japanese Bangalore torpedo, with a bamboo body, is described in *Intelligence Bulletin*, Vol. 1, No. 10, page 83.

Section II. NEW JAPANESE WEAPONS FOR INFANTRY SQUAD

1. GENERAL

For the purpose of increasing fire power, the Japanese Army for some time has been replacing the 6.5-mm (.256-cal.) weapons of its infantry squad with 7.7-mm (.303-cal.) weapons. These include the Model 99 (1939) 7.7-mm rifle and the Model 99 (1939) 7.7-mm light machine gun. They have been designed to take the place of the Model 38 (1905) 6.5-mm rifle, the Model 11 (1922) 6.5 mm light machine gun, and the Model 96 (1936) 6.5-mm light machine gun.

Details of all these weapons except the Model 99 light machine gun have been given in previous issues of the *Intelligence Bulletin* or in other Military Intelligence Service publications. An Ordnance study of the Model 99 rifle was published in *Intelligence Bulletin*, Vol. I, No. 7. The Model 96 machine gun is described in TM 30-480 (as revised Sept. 21, 1942), while the Model 38 rifle is described in TM 30-480 and also in *Intelligence Bulletin*, Vol. I, No. 5.

The Model 99 rifle and light machine gun both fire Model 99 rimless¹ 7.7-mm ammunition, which also is

¹ In *Intelligence Bulletin*, Vol. I, No. 7, p. 5, par. 2, line 4, change "semi-rimless" to "rimless."

adapted for firing in the Model 92 (1932) 7.7-mm heavy machine gun. This latter weapon originally was made to fire only 7.7-mm Model 92 semi-rimless ammunition. The Model 99 weapons will not, in turn, fire the semi-rimless ammunition, or any caliber .30 U. S. ammunition, or any caliber .303 British ammunition. Although originally designed to fire the semi-rimless ammunition, the Model 92 heavy machine gun has a somewhat higher cyclic rate of fire with the Model 99 rimless ammunition.

A muzzle velocity between 2,250 and 2,300 feet per second was obtained in firing the rimless Model 99 ammunition in the Model 99 rifle, the Model 99 light machine gun, and the Model 92 heavy machine gun.

On Attu whole units were found armed with the Model 99 rifle and light machine gun. On Guadalcanal a small number of the new rifles and new light machine guns were observed.

2. MODEL 99 RIFLE

The following notes on the Model 99 rifle supplement the information about this weapon published in *Intelligence Bulletin*, Vol. I, No. 7:

The Model 99 rifle is known to the Japanese soldier as *Kyu Kyu Tan Shojū* (99 short rifle). It is marked *Kyu Kyu Shiki* (Model 99) on top of the receiver, just below the Imperial Seal. It is capable of delivering deadlier and possibly more accurate fire than Model 38. However, the new rifle has a pronounced muzzle flash, which is not the case with Model 38. Model 99 also has a normal amount of recoil, which may affect the

marksmanship of the Japanese soldier, who is accustomed to the very slight recoil of Model 38. Because of this difference in recoil, some prisoners of war have stated that they prefer the old rifle.

The new weapon may be distinguished from the old by the following features:

- a. It is 5 inches shorter.
- b. A monopod mount, which is attached to the lower band and which can be folded forward to catch on the stock when not in use.
- c. A rubberized sling attached to swivels on the left side of the rifle instead of to the bottom.
- d. The slide of the rear sight has an arm extending to the left and one to the right for use when firing at aircraft. The arms, which, when opened, extend $2\frac{3}{8}$ inches from the center of the rifle, are folded upward against the sight during ground firing.

3. MODEL 99 LIGHT MACHINE GUN

a. General

The Model 99 light machine gun is a 7.7-mm version of the Model 96 light machine gun. The two weapons are very similar in general appearance, and the greatest care must be taken to distinguish them from each other. Many parts are common to both guns.

Model 99 (see fig. 5) is known to the Japanese soldier as *Kyu Kyu Keiki*, and is marked "*Kyu Kyu Shiki*" on top of the receiver.

b. Distinguishing Features

Model 99 may be distinguished from Model 96 by the following features:

- (1) A heavy, adjustable monopod, which is attached to an extension at the bottom of the butt plate.

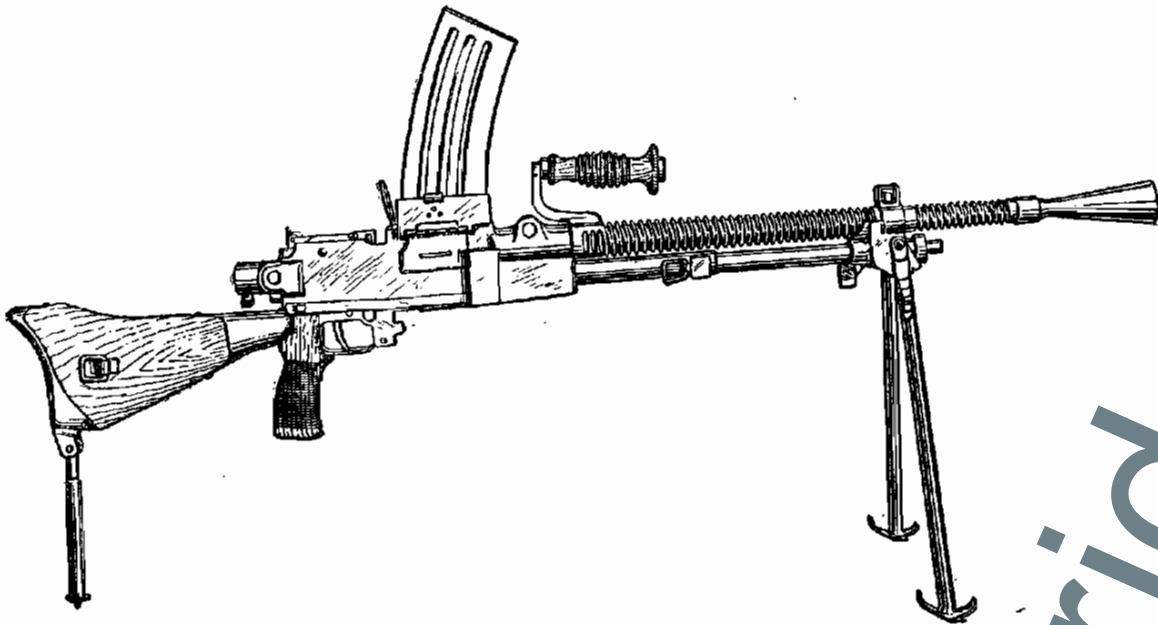


Figure 5a.—Japanese Model 99 Light Machine Gun (showing distinguishing rear monopod).

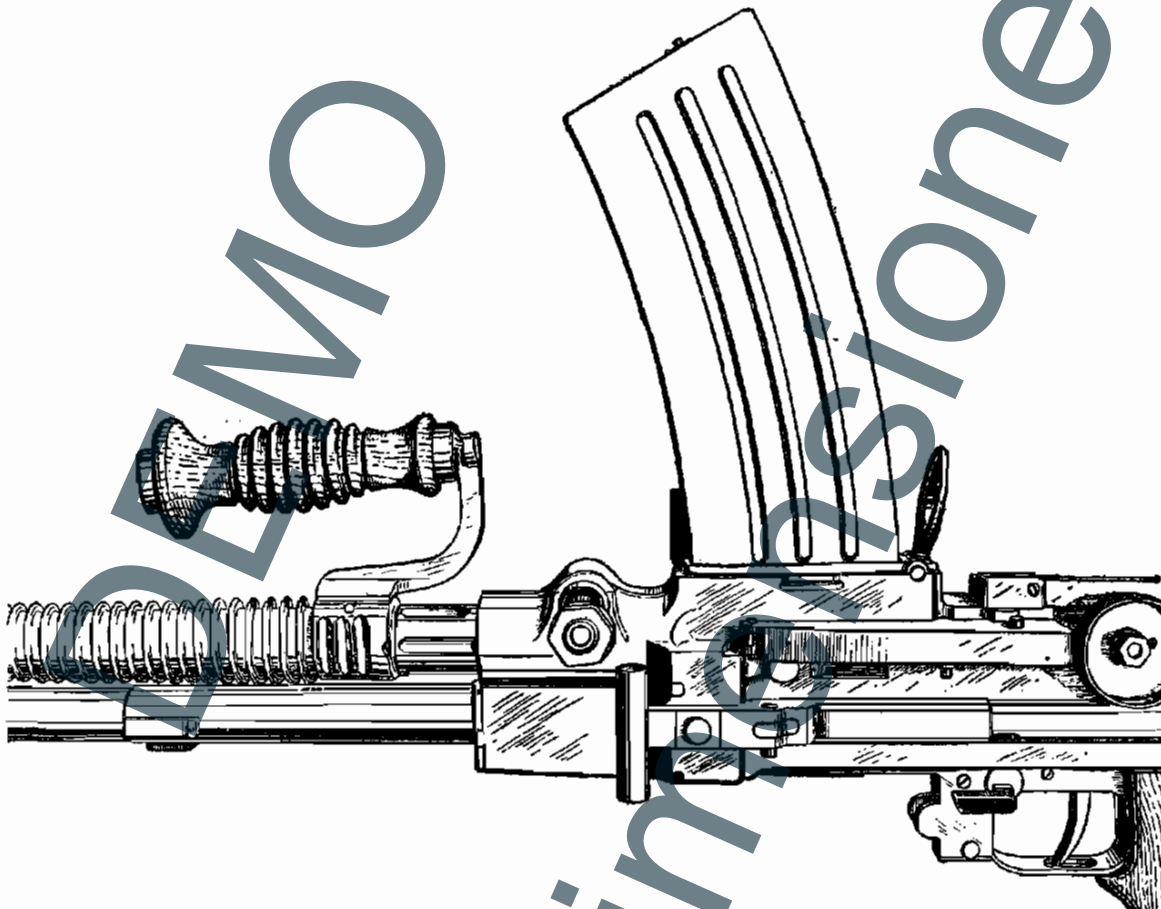


Figure 5b.—Japanese Model 99 Light Machine Gun (showing barrel partly withdrawn).

(2) A trigger safety which is located on the left-hand side of the trigger guard instead of on the right-hand side, as on Model 96.

(3) The method of locking the barrel to the receiver. On Model 99, the barrel locking bolt, which holds the barrel in the receiver, is held on by a heavy six-sided nut marked from 1 to 8. On Model 96 the barrel is retained in the receiver by a locking swivel, which has an outside handle lying parallel to the barrel.

(4) The flash hider of Model 99 screws onto the end of the barrel, which is threaded to receive it. The flash hider of Model 96 locks onto the barrel with a bayonet-type lock.

(5) The barrel of Model 99 is somewhat heavier than that of Model 96, but both are of the same length.

(6) The magazine of Model 99 is about 1 inch longer and somewhat less curved than that of Model 96.

c. Comment

Model 99 is considered a more effective weapon than Model 96, particularly because of the support given by the adjustable monopod at the rear and its heavier ammunition. It is believed that the effective range of Model 99 is possibly 200 yards greater than that of Model 96. The former has a high cyclic rate of fire, about 700 to 800 rounds per minute, in contrast to an estimated cyclic rate of 550 rounds per minute for the Model 96.

Section III. TYPE 98 AA/AT GUN

1. GENERAL

The Japanese Type 98 antiaircraft-antitank gun, 20-mm, is considered one of the enemy's best constructed and most efficient weapons. Most of its features were copied from a 20-mm rapid-fire gun manufactured by the Oerlikon Company, of Switzerland. In fact, some of the bearings in the carriage of a Type 98 recently examined by U. S. Ordnance experts bore a Swiss stamp. The Japanese weapon, weighing approximately 840 pounds, is relatively light and very maneuverable.

2. TABLE OF CHARACTERISTICS

| | |
|--------------------------|-----------------|
| Weight | 840 lbs |
| Elevation | -9° to +81.9° |
| Traverse (pintle type) | 360° |
| Maximum horizontal range | 5,450 yds |
| Maximum vertical range | 12,000 ft |
| Rate of fire | 120 rds per min |
| Muzzle velocity | 2,720 fs |
| Length of barrel | 70 calibers |

3. DESCRIPTION OF COMPONENT PARTS

a. Tube

A stamp on the tube of the weapon examined indicated it was made in December 1940.

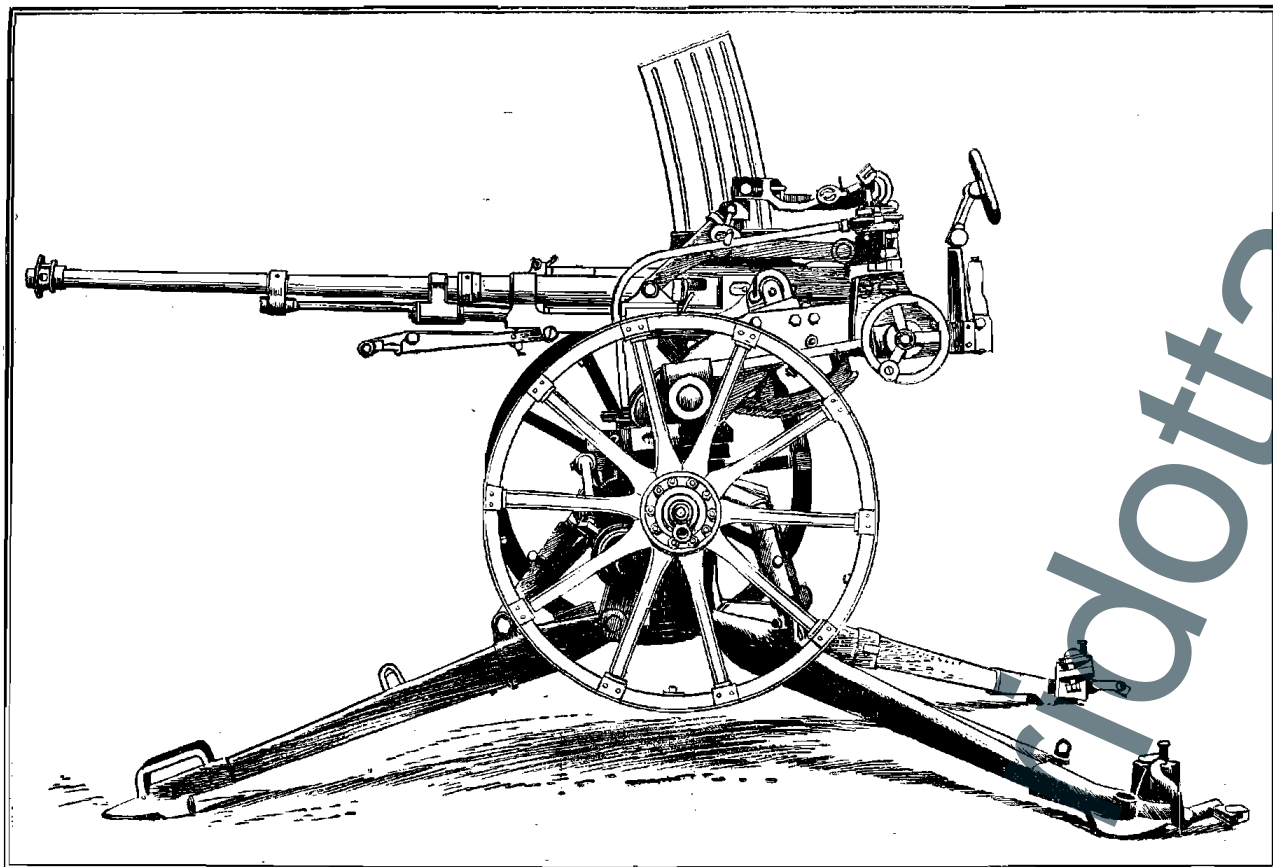


Figure 6.—Japanese Model 98 AA/AT Gun (20 mm).

DEMO
dimensione

a. Obstacle in Depth

This type of obstacle is constructed to a depth of about 33 feet. It consists of ordinary wire fences erected at intervals of about 5 feet and connected with crisscrossed plain wire (see fig. 7). The spaces be-

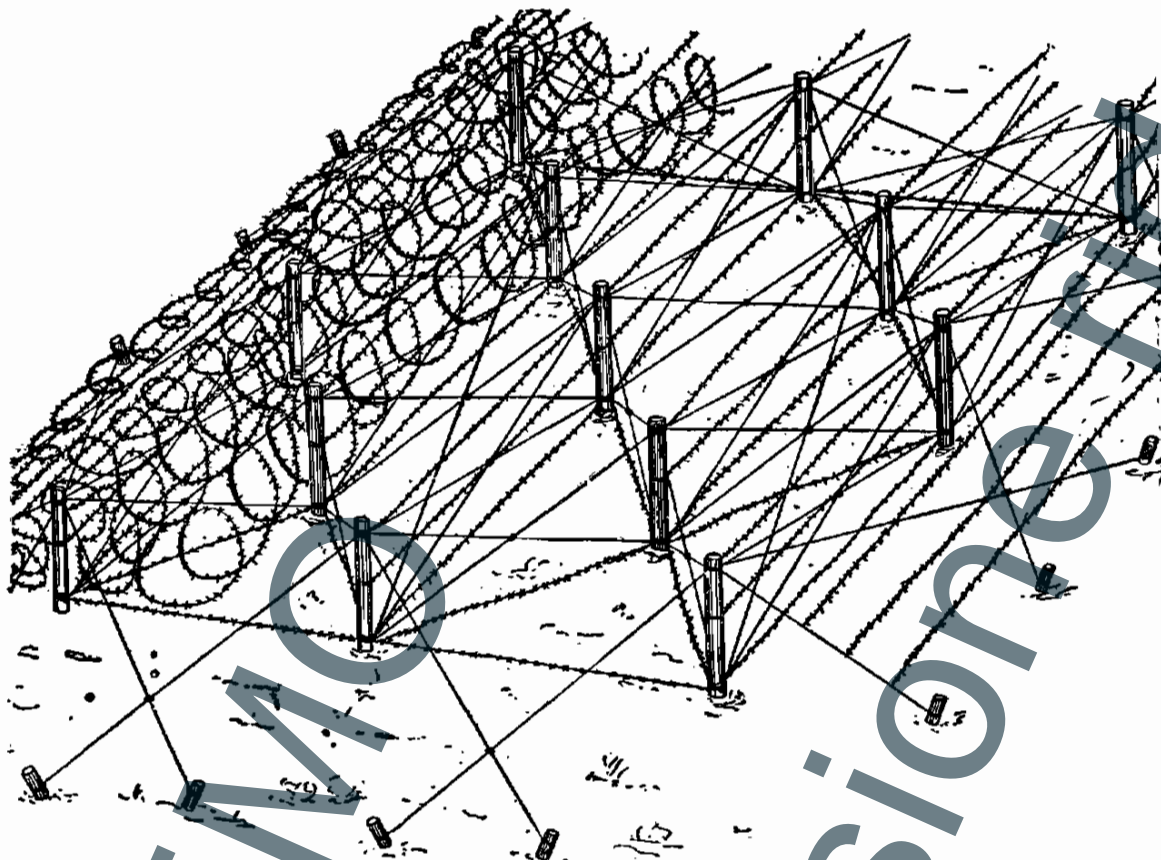


Figure 7.—German Obstacle in Depth.

tween the fences are filled with barbed wire in spirals. These spirals are fastened to each other and to the pickets of the crisscrossed wire. When obstacles of this type are erected in woods, trees are often used to support the wire.

Wire obstacles in depth are usually installed in places where they will be screened as far as possible

against observation by opposing forces. Woods, hollows, sunken roads, and heavily overgrown reverse slopes are sites especially favored by the enemy.

b. Wire-netting Fences

The Germans use wire netting as an emergency obstacle against infantry. They believe it to be most effective in woods and on the near side of hedges, and recommend that it be secured to the ground with wire and pickets. An obstacle of this type illustrated in a German training manual is 6 feet 6 inches high.

c. Trip-wire Obstacles

German training doctrine prescribes that these obstacles be at least 30 feet in depth. Irregular rows of wooden pickets, 2 feet high and 3 inches in diameter, are driven into the ground, and barbed or plain wire is stretched between pickets, at a height of 4 feet 8 inches. The interval between pickets in a row is 10 to 13 feet, and the interval between rows is 7 to 10 feet. Freshly cut pickets are painted to blend with the surroundings.

Trip-wire obstacles can be concealed effectively in gullies and on ground covered by low growth, especially if rusted wire is used. Mines and booby traps, equipped with pull-igniters, may be combined with these obstacles.

Section IV. TYPES OF CONCRETE ANTITANK OBSTACLES

This section deals with the principal types of concrete antitank obstacles erected by the Germans in the coastal defense zones of France, Belgium, and The Netherlands.

1. WALLS

a. General

The Germans make a practice of constructing concrete antitank walls in all coastal areas where a strong defense is planned. Walls of this type are used to block streets and roads in coastal towns, at the approaches to strategic points, and on the outskirts of towns, generally. Often the Germans prepare a continuous obstacle along the entire sea front of a town by constructing concrete walls in line with the front elevation of existing buildings. First, rough timber shuttering is erected along the site proposed for a new wall, and then the concrete is poured. Light steel reinforcement is sometimes used, but often there is no reinforcement at all. Often metal hooks project from the top of a wall, to serve as anchors for barbed wire (see p. 41).

To improve the effectiveness of a concrete antitank wall, the Germans often dig a ditch in front of the

It has been reported that in certain European coastal areas the Germans use an interesting type of staggered double road block. These obstacles consist essentially of a pair of walls or barricades, sited one behind the other, but projecting from opposite sides of a road. Each wall projects across $1/2$ or $2/3$ of the width of the road. These walls, which are never less than 6 feet thick, may be of masonry or concrete, or may simply consist of log barricades filled with earth or sand. The horizontal and vertical logs are about 1 foot in diameter. The vertical logs are driven deep into the ground, and additional resistance is provided by diagonal bracing. Obviously, such obstacles are intended to slow down advancing vehicles, and thereby render them much more susceptible to attack.

2. OTHER CONCRETE OBSTACLES

a. Dragons' Teeth

Concrete obstacles known as "dragons' teeth" are used by the Germans to block streets, exits from quays,¹ and well-defined beach exits where the level

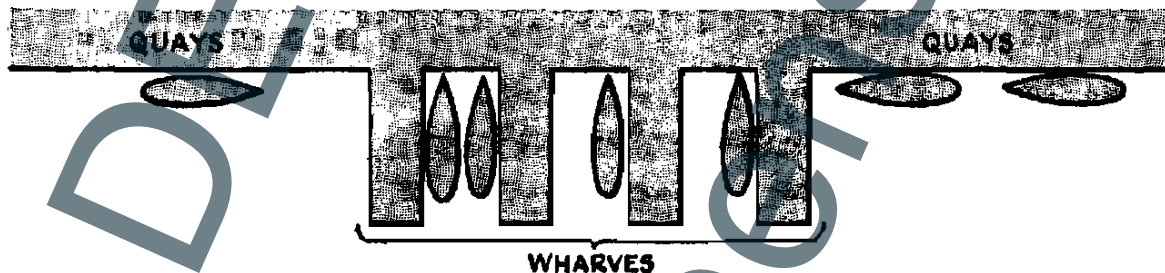


Figure 8.

¹Figure 8 illustrates the difference between wharves and quays. The latter are very common in European ports.

Section V. RECONNAISSANCE METHODS

1. INTRODUCTION

Russian fighting men have had excellent opportunities to learn about German reconnaissance methods. The information on this subject in the following paragraph has been collected and arranged by Lt. Col. L. Davidov of the Red Army. It should be of special interest and value to our junior officers and enlisted men.

2. ANALYSIS OF GERMAN RECONNAISSANCE

The Germans place great emphasis on reconnaissance. Dozens of orders and memoranda issued to German Army units include reminders that land reconnaissance must be conducted by all branches, regardless of whether or not this type of work is their primary responsibility.

During periods of inactivity on the fronts, German land reconnaissance attempts to learn:

- a. The location and extent of our defensive lines.
- b. The location and composition of our strong points.
- c. The differences between our day and night dispositions.
- d. The location of our obstacles and minefields.
- e. The movement and new positions of our units.

German land reconnaissance tries to report accurately and in detail the dispositions of our troops, heavy artillery, headquarters, and reserves. Regarding all changes in our units as significant, the enemy attempts to discover these changes and to draw conclusions which can be put to use. This reconnaissance

is carried out by observers, listening sentries, patrols, or battle (reconnaissance in force).

Special attention is given to the reports of the listening sentries. Under cover of darkness, these men crawl as close to our lines as possible, and try to plot and fix the location of various sounds—especially to gain information about our tanks, our reserves, the movement of our patrols, the location of our new artillery positions, and regions in which digging is in progress. Although the listening sentries can sometimes discover important data, we are repeatedly able to deceive them by means of ruses. Since the listening reports are checked in the daytime by German visual observation, we are obliged to deceive the visual observers, as well, for the sake of consistency. For example, if we imitate tank sounds at night for the benefit of German sentries in a certain locality, the next day we must see to it that there is some sort of camouflage in the same place.

Reconnaissance by combat patrols—usually a platoon—is most often done at night. These patrols, armed with hand grenades and machine pistols, generally operate without artillery support. They try to reach positions on the flanks of our units without attracting our attention, and then suddenly attack a previously assigned objective for the purpose of capturing a “tongue.” (In general, the objectives are those which have been discovered by lookouts and listening sentries). After capturing a number of outposts, the Germans send details of two and three men into our rear areas. Our wide-awake unit commanders often take advantage of these tactics for the purpose of counter-reconnaissance.

If the Germans are unable to locate our outposts and flanks, or believe them to be well hidden, reconnaissance by a patrol is preceded by artillery and mortar fire. Under such circumstances the raiding party is divided into attacking and supporting groups. As a rule, one or two small groups make a frontal advance, while the remainder attack the designated objective from the flanks. Two or three days before this type of

Section VI. FURTHER INFORMATION ABOUT GERMAN TANKS

1. ARMOR ARRANGEMENT

The sketches on the next three pages show the armor arrangement and armor thicknesses of the Pz. Kw. 3, Pz. Kw. 4, and Pz. Kw. 6. A question mark following a figure indicates that definite information regarding the thickness of a certain plate is not yet available. Two figures enclosed in parentheses indicate the presence of two plates, which are separated to form "spaced armor"; this arrangement occurs only twice, and only in the case of the Pz. Kw. 3.

2. SUBMERSIBLE TANKS

The delays and difficulties that the Germans have encountered in transporting tanks across the rivers of Eastern Europe have increased the enemy's interest in all possible devices which might enable standard Pz. Kw. to cross streams and rivers under their own power.

By the summer of 1941, the weight of the Pz. Kw. 3 had already been increased by additional armor, and it must have been clear to the Germans that future developments in armor and armament would necessarily involve still further increases in the weight of this tank. While the trend toward increased weight

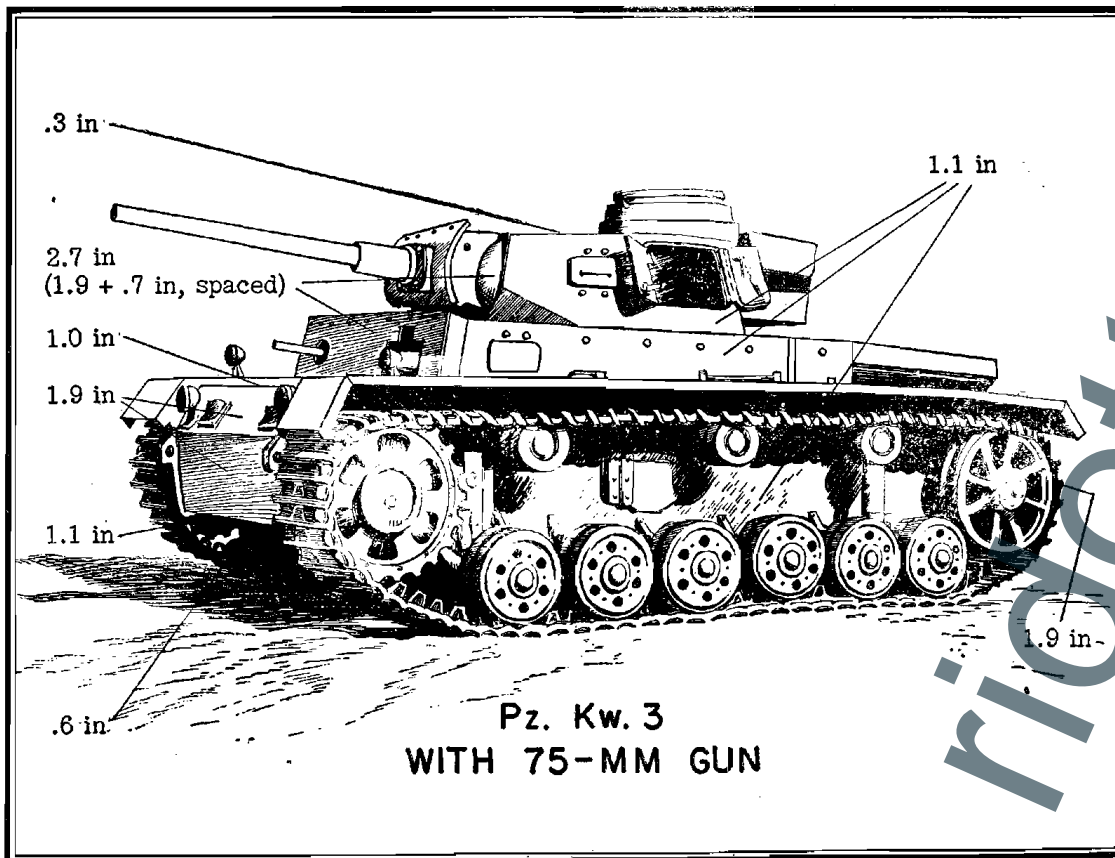


Figure 9.

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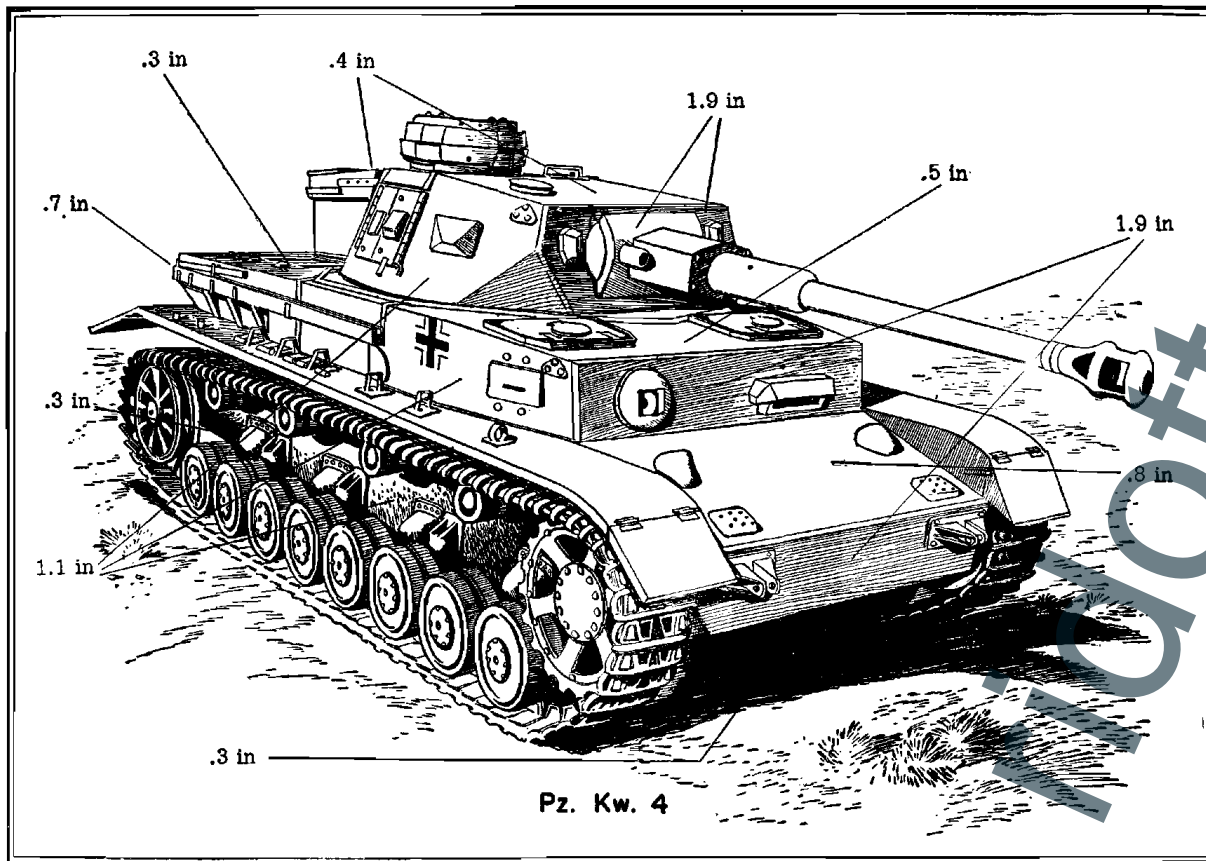


Figure 10.

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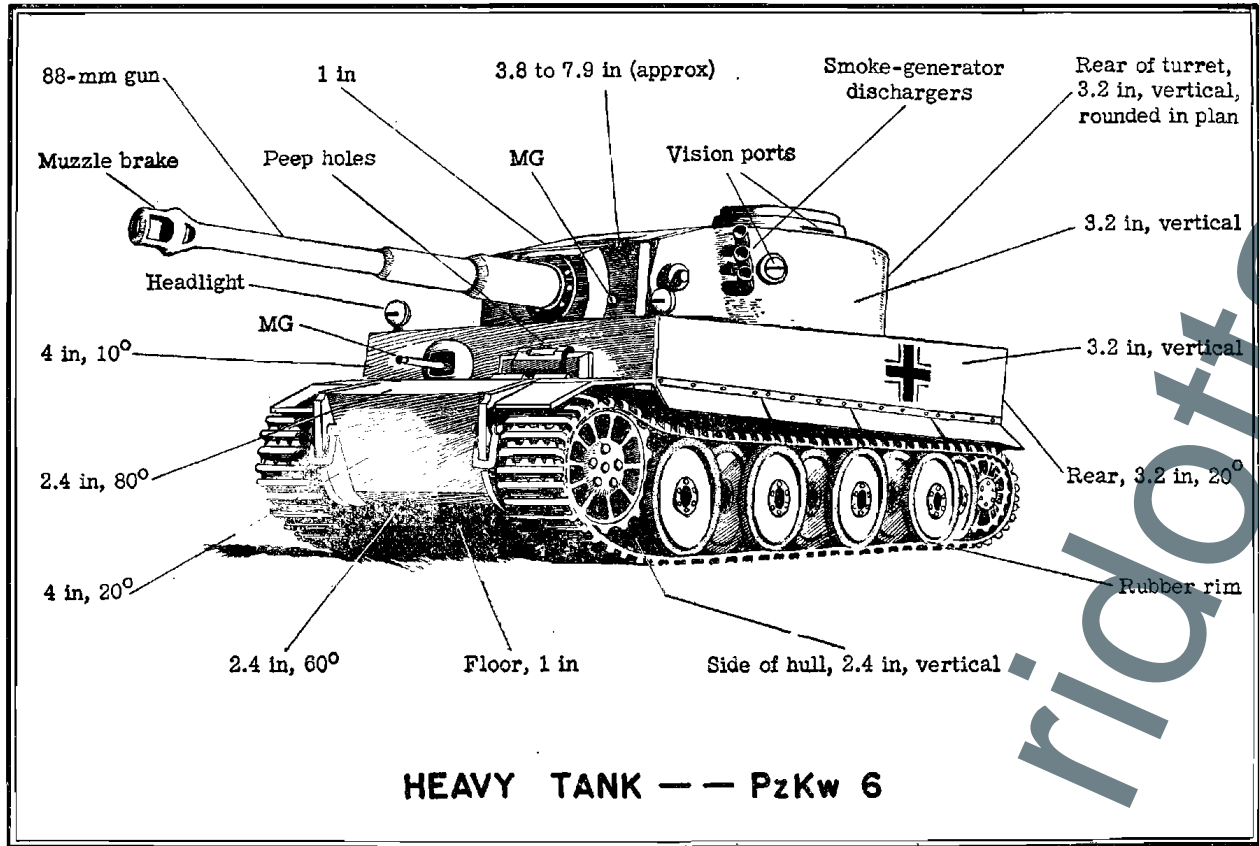


Figure 11.

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Section VII. MISCELLANEOUS

1. DIRECTIVE FOR DEFENSE OF POSITIONS

a. Introduction

A few months before the Axis capitulated in North Africa, the operations officer of the German Light Africa Division issued a significant directive. German officers in general—and junior officers, in particular—had been displaying certain weaknesses in defensive operations, and the operations officer was anxious to see an improvement in German tactics, especially with reference to the defense of positions. The document, which follows, has a special interest for us, inasmuch as it gives a clear indication of measures approved by the enemy, if not always practiced by him.

b. The Directive

(1) Each soldier must remember that the defense of a position will continue, if necessary, to the last man and to the last round. Every commander is fully responsible for the defense of the interdependent strong point assigned to him. It is not permissible, for instance, that the heavy-weapons platoon leader command the heavy weapons employed on the right flank of the company, as well as those on the left flank.

(2) All possible measures must be taken to prevent the opposing force from removing mines or other obstacles laid to the front of our position. Machine guns can be very effective for this purpose.

(3) All available machine guns are to be employed on the flanks whenever possible. At night the machine guns must command the entire terrain to the front. Shortly before dusk each machine gun—every light machine gun included—will therefore be sited so that it can cover a designated zone. The sector of fire will be marked by stakes on the right and left limits, and the elevation will be marked by a wire stretched horizontally.

(4) The heavy weapons and artillery will be so placed (in relation to the light infantry weapons) that their fire power can be directed primarily against important positions and terrain features which the opposing force might conceivably use during its approach.

(5) Officers of all grades will be held responsible for continuous preparedness for defense. Moreover, precise written orders are to be drawn up for each position. Each man must repeatedly be instructed in these orders, and must know them by heart. They must show, among other things:

(a) The position of the hostile force, the defense area, neighboring units, and the security toward the front.

(b) Day and night observation and scouting patrols.

(c) Supervision of order and alertness in the position, fire preparedness of the weapons, and the storage of ammunition.

(d) Action to be taken against hostile artillery fire (for example, "The soldier will take cover in his foxhole, with his machine gun or rifle.")

(e) Action to be taken against low-level air attack (for example, "Machine gunners will fire at their own discretion.")

(f) Action to be taken against thrusts by enemy assault troops (for example, "Alertness will be maintained to detect hostile feints.")

(g) Action to be taken in case of attack by infantry or attack by tanks.

(h) Action to be taken in case adjacent terrain is penetrated.

(i) Significance of pyrotechnic signals.

(j) Password.

(k) Security of communication net.

In forwarding this directive down to companies, the operations officer of the 200th Panzer Grenadier Regiment added, "The written orders mentioned in (5) are to be drawn up immediately for every defensive position, and will be presented to me, without further request on my part, whenever I make an inspection of the position."

2. BASIC INFANTRY TACTICS

A document issued by a German infantry division itemizes the essentials of German infantry tactical training. It is prefaced by a statement that in all situations the chief considerations are reconnaissance, protection, and the fire plan (ground and air). The document lists briefly the fundamentals of the approach march, the attack, and the defense. Certain similarities between German and U. S. tactics will be noted.

a. Approach March

- (1) The work of reconnaissance patrols must be extremely thorough.
- (2) Protection must be afforded by advance units (scouts, advance guards).
- (3) Fire protection must be provided in the assembly area.
- (4) The advance should be made by bounds.
- (5) The main body will be in the rear (commanders well forward).

b. Attack

- (1) Reconnaissance should lure targets into revealing themselves, and should deceive the hostile force as to the intentions of our own [German] units.

(2) There should be sufficient protection forward of the main attacking force.

(3) An organized fire plan is a necessity.

(4) The objective or task of each unit must be detailed.

(5) The point of main effort (*Schwerpunkt*) must be decided upon.

(6) *Details.*—(a) The first objective should be visible. (b) As far as possible, the advance should be made under cover. (c) The main effort must be made against an estimated weak point. The main effort must be so flexible that, regardless of the location of the weak point, it can be adapted in any sector to meet the situation. (d) All supporting arms must be informed of the intended point of breakthrough. (e) Reserves may also be brought forward into the flanking sector.

c. Defense

(1) The main line of resistance (*Hauptkampflinie*) is the forward edge of the main defensive zone. The main line of resistance is often referred to as including the general outposts (*Gefechtsvorposten*) and the covering positions (*Vorgeschobene Stellungen*), although both are in reality forward of the main line of resistance. The fire of all weapons must be planned so that it can be concentrated forward of, and within, the main line of resistance.

(2) It is the task of reconnaissance and observation to discover the intentions of the hostile force.

(3) The covering positions must conceal the actual location of the main line of resistance. The personnel manning the covering positions will fall back slowly, fighting a delaying action.

(4) The general outpost must goad hostile targets into revealing themselves, and then withdraw to the main line of resistance.

(5) The fire plan must include the coordination of the fire of all arms, arrangements for barrages and concentrations, the numbering of targets, and indications as to whether the tar-

gets are suitable primarily for infantry or artillery fire.

(6) *Details.*—(a) The fields of fire allotted to positions manned at night will be under the personal supervision of the company commanders. (b) Platoon commanders must be informed about all positions, and about the tasks of support weapons located in their sectors. (c) Each squad must have its own orders for defense. (d) The company commanders will determine the need for local reinforcements, and will arrange for defensive fires within their own sectors. (e) Only regimental commanders may order local withdrawals.

3. TANK RUSE TO DECEIVE ARTILLERY

U. S. artillerymen—and forward observers, in particular—will be interested in a ruse which was employed by a German tank unit in Tunisia. This tank force was located by a U. S. observer, who immediately prepared fire data to rout the enemy. Fire promptly got under way. At the second volley, the Germans put into operation a plan designed to confuse our artillerymen:

The Germans calculated the time of flight of the projectiles, and then listened for the report of the third volley. When it came, they shrewdly took the time element into account and fired their own tank pieces to conform with the strike of our own artillery fire. The Germans directed their fire first to one of their flanks and then to the other, at various ranges. Since our own artillery fire fell simultaneously in the same general area, our forward observer was unable to distinguish our fire from the enemy's and therefore could not register.

diers, holding their rifles (with bayonets fixed) ready for action, were to march on either side, and to the rear, of the group. Prisoners attempting to break away and escape were to be dealt with immediately by the use of firearms.

c. Of the prisoners' possessions (besides their weapons), only documents, letters, plans, sketches, and photographs were to be confiscated.

5. "THIS MUST NOT OCCUR AGAIN"

The enemy's eagerness to capture U. S. documents is illustrated by this German divisional order, which should serve to remind *Intelligence Bulletin* readers of the paramount importance of security in the field:

Troops must pay greater attention to the collection of captured documents, and must submit them promptly to the proper authorities. Such documents include all official and personal mail found in the enemy's possession. It has been reported to the Division that filled mail bags belonging to the enemy have been left lying about and have not been brought in as booty. This must not occur again. Captured documents disclose important and reliable information concerning the enemy and provide clues to his formation, strength, and plans. These clues greatly facilitate our conduct of the war.

6. RAILROAD PATROL CAR (ARMORED)

In an effort to reduce the damage that Russian raiding detachments are inflicting on railroad tracks in German-held territory, the Germans are hastily improvising railroad patrol cars out of truck parts, captured Soviet reconnaissance vehicles, and the armor plate of partly destroyed tanks. The unorthodox result

is known as an "armored Zepp" (see fig. 12). An "armored Zepp" is employed to rush an assault detachment of Panzer Grenadiers to any section of a railroad where the presence of Russian demolition troops is suspected.

The Panzer Grenadier assault detachment can de-

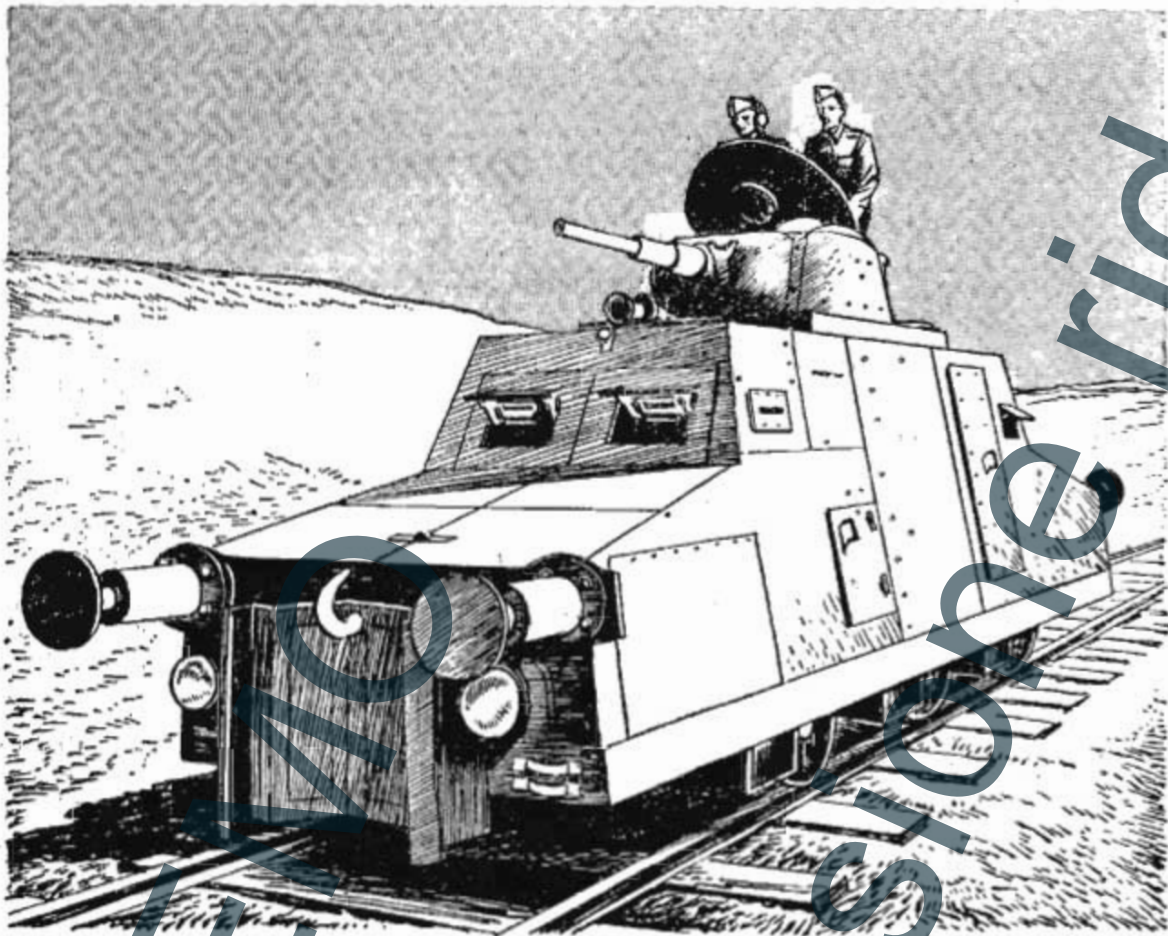


Figure 12.—German Railroad Patrol Car (armored).

liver fire from the railroad patrol car, and, equipped with rifles, machine pistols, and hand grenades, may leave the car to fight the hostile force. It is reported that sometimes the Germans also send supporting troops, who take up positions along the railroad embankment and give covering fire to the assault detachments, in cooperation with the heavy gun (37-mm

direct sunlight and high temperatures can affect them, are likely to expand and burst. This results in exposure of the TNT with which they are filled. (See *Intelligence Bulletin* Vol. I, No. 12, pp. 8-14 for a discussion of German Tellermines, with sketches.)

10. DEVICE FOR STRANDED FLYERS

It has been reported that certain German aircraft crews stranded in the Mediterranean area have worn an unusual openwork headgear of white webbing,



Figure 13.—German Device for Stranded Flyers.

PART THREE: UNITED NATIONS

Section I. LIVING IN THE JUNGLE¹

1. INTRODUCTION

To become effective jungle fighters, soldiers should study the problems of living and getting about in the tropics. They must look upon the jungle as a friend—it is just that when understood.

Almost the only thing to be afraid of in the jungle, or any other wild country, is fear itself. A soldier should not be afraid for two good reasons. First, the chances are 100 to 1 that there is nothing to be afraid of, and, second, a man afraid and therefore in a state of partial panic is useless in any situation. If you are dropped in a tropical jungle, in an unknown forest, or in the desert, the most important thing of all is to keep your head and calmly think out the situation. Fear is the last thing that will help you.

Remember that many of the things you have read about in these out-of-the-way places were written by men who went there in a spirit of adventure, and who practically without exception have emphasized, if not

¹ This section is based on three separate reports, one of which was prepared by the Smithsonian Institution, Washington, D. C.; one by the Division of Wildlife Management, U. S. Department of Agriculture, and the other by a British authority on jungle craft in Burma.

See FM 31-20, *Jungle Warfare*, for U. S. doctrine on fighting in the jungle.