

# JAPANESE WEAPONS

## TABLE OF CONTENTS

TITLE	PAGE NO.
INTRODUCTION	1
<u>PISTOLS, REVOLVERS, and RIFLES</u>	
Pistol, Automatic, 8 mm, Type 14 (1925)	3
Pistol, Automatic, 8 mm, Type 94 (1934)	5
Revolver, 9 mm, Pattern 26 (1893)	7
Rifle, 6.5 mm, Type 38 (1905)	9
Carbine, 6.5 mm, Type 44 (1911)	11
Rifle, 7.7 mm, Type 99 (1939)	13
<u>MACHINE GUNS</u>	
Light Machine Gun, 6.5 mm, Type 11 (1920)	15
Light Machine Gun, 6.5 mm, Type 96 (1936)	17
Light Machine Gun, 7.7 mm, Type 99 (1939)	19
Light Machine Gun, Caliber .312	21
Machine Gun, 7.7 mm, Type 92 (1932)	23
Machine Gun, 7.7 mm, Tank, Type 97 (1937)	25
Machine Gun, 7.7 mm Aircraft, Type 89, (1929)	27
Machine Gun, 12.7 mm, Aircraft, (Browning Type)	29
Machine Gun, 13 mm, Type 93 (1933)	31
<u>AUTOMATIC CANNONS</u>	
Automatic Cannon, 20 mm, Anti-tank, Type 97 (1937)	33
Automatic Cannon, 20 mm AA/A T, Type 98 (1938)	35
Automatic Cannon, 25 mm, Anti Aircraft	37
Automatic Cannon, 40 mm, Anti Aircraft	39
<u>ARTILLERY</u>	
37 mm Gun, Type 94 (1934)	41
37 mm Gun, Anti-Tank, Type 97 (1937)	43
47 mm Gun, Anti-Tank, Type 1 (1941)	45
70 mm Howitzer, Type 92 (1932)	47
75 mm Mountain Gun, Type 41 (1908)	49

JAPANESE WEAPONS  
TABLE OF CONTENTS

ARTILLERY (CONT.)

75 mm Mountain Gun, Type 94 (1934)	51
75 mm Field Gun, Type 90 (1930)	53
75 mm Anti-Aircraft Gun, Type 88 (1928)	55
3" Anti-Aircraft Gun, Type 10 (1921)	57
105 mm Howitzer, Type 91 (1931)	59
105 mm Gun, Type 92 (1932)	61
12 CM. Gun, Coast Defense	63
15 CM. Howitzer, 4th year type (1915)	65
15 CM. Howitzer, Type 96 (1936)	67

MORTARS AND GRENADE DISCHARGERS

50 mm Flare Discharger, 10th Year Type (1921)	69
50 mm. Grenade Discharger, Type 89 (1929)	71
70 mm. Mortar, Barrage	73
81 mm Mortar, Type 99 (1939)	75
90 mm Mortar, Type 94 (1934)	77

MINES, GRENADES, AND BANGALORE TORPEDOES

Armor Piercing Mine (Magnetic)	78
Mine, Type 93 (1933)	79
Grenade, Fragmentation, Type 91 (1931)	80
Grenade, Fragmentation, Type 97 (1937)	81
Grenade, Potato Masher Type	82
Grenade, High Explosive	83
Grenade, Booby Trap, Type 23	84
Bangalore Torpedo, Type 99 (1939)	85
Rifle Grenade, Hollow Charge	86

FLAME THROWER

Flame Thrower, Type 93 (1933)	87
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TANK

Tank, Type 97 (1937)	88
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# JAPANESE WEAPONS

## INTRODUCTION

On the following pages are described the standard Japanese weapons. No attempt has been made herein to go into an exhaustive technical study of these weapons, only such information being given as will help you to recognize, field strip, and use them against the enemy.

The information we have gained about these weapons has helped in preparing tactics and weapons of our own to impair the effectiveness of the enemys attack and defense. Any knowledge you help gain of modifications, improvements or new designs of enemy weapons and ammunition may save our lives or those of our comrades. On the other hand any information with-held from your Intelligence Officer (S-2), by removing or damaging any part of an enemy weapon to obtain souvenirs may cost you your life or result in the death of your closest friend.

If any enemy weapon or equipment turned in by you to your Intelligence Officer will add nothing to this important body of knowledge arrangements can be made to have it returned to you.

The collection of intelligence about enemy weapons is as much a part of the war effort as putting a bullet in his heart. It is one other way you can help to win the war.

PISTOL, AUTOMATIC, 8 MM, TYPE 14 (1925)



PISTOL, AUTOMATIC 8 MM, TYPE 14 (1925)  
Empty Magazine is shown in the lower left hand corner

# PISTOL, AUTOMATIC, 8 MM, TYPE 14 (1925)

## 1. GENERAL:

This pistol, of approximately .31 caliber, has a mechanism of distinctive design which is entirely different from that of any other automatic.

## 2. CHARACTERISTICS:

Operation \_\_\_\_\_ Short recoil

Weight \_\_\_\_\_ 2 Lbs. (approx.)

Magazine capacity \_\_\_\_\_ 8 Rounds

Length \_\_\_\_\_ 9 Inches

Rifling \_\_\_\_\_ 6 grooves, Right hand Twist.

## 3. FIELD STRIP:

a. Remove the magazine. b. Remove the stock retaining screws and the wood stocks. c. Push the barrel against a hard surface and press in the magazine catch. Slide the trigger group toward the bottom of the pistol. d. Remove the magazine catch and spring. e. Press in the locking stud in the rear face of the cocking knob and unscrew the cocking knob. f. Withdraw the locking stud and the attached firing pin spring. g. Remove the barrel and the breech block from the frame.

## 4. FIRING:

Push a loaded magazine into the butt until the magazine latch engages. Pull cocking knob to the rear and allow to return. This carries a round into the chamber and cocks the firing pin. Turn the safety catch forward, the pistol is now ready to fire. Release the empty magazine by pushing the magazine catch.



CARBINE, 6.5 MM, TYPE 44 (1911)

SAFETY KNOB

FLOOR PLATE CATCH

CARBINE, 6.5 MM, TYPE 44 (1911)

## LIGHT MACHINE GUN, 6.5 MM, TYPE 11 (1922)

### 1. GENERAL:

This light machine gun is gas operated, air-cooled, hopper fed. The hopper has a capacity of thirty rounds and is loaded by placing six, five round clips, one clip on top of the other in hopper and lowering the follower on top of cartridges. Cartridges are oiled as they are fed into the chamber by an oiler located on top of the receiver.

### 2. CHARACTERISTICS:

Caliber	6.5 mm. (.256")
Weight of gun	22 1/2 pounds
Length of gun	43 1/2 inches
Rear Sight:	
Elevation	328 to 1,040 yds.
Windage	none
Cyclic rate of fire	600 rounds per min.
Effective rate of fire	150 rounds per min. in five round bursts.
Muzzle Velocity	2,375 ft. per sec.

### 3. FIELD STRIP:

Back Plate:- Remove the back plate pin by turning down to a vertical position and pulling out. Remove the back plate group and operating spring. Bolt:- Pull cocking handle to rear and remove operating slide, bolt and bolt lock. Align lugs on cocking handle with openings on side of receiver and remove cocking handle, to the left side. Feed Mechanism:- Pull back on hopper lock on front right side of receiver and pull hopper out to the left.

### 4. FIRING:

Fill the hopper with 6 five round clips of 6.5 mm. rifle ammunition and lower the follower onto cartridges. Pull bolt to the rear until caught by the sear. The gun is now ready to fire.

**LIGHT MACHINE GUN, 6.5 MM, TYPE 96 (1936)**



**LIGHT MACHINE GUN, 6.5 MM, TYPE 96 (1936)**



## LIGHT MACHINE GUN, 6.5 MM, TYPE 96 (1936)

### 1. GENERAL:

The Japanese Type 96, Light Machine Gun is an aircooled, gas operated, magazine fed weapon. The 6.5 mm cartridges used are stripped from a magazine which has a capacity of 30 rounds. The weapon may be fired from the hip or from a bipod. It may be found supplied with a telescopic sight.

### 2. CHARACTERISTICS:

Caliber \_\_\_\_\_ 6.5 mm (.256")

Weight (Including magazine  
and bayonet) \_\_\_\_\_ 21 lbs.

Length \_\_\_\_\_ 41 1/2"

Operation \_\_\_\_\_ Full Automatic

Cyclic Rate of fire \_\_\_\_\_ 550 Rds. per min.

Muzzle velocity \_\_\_\_\_ 2400 ft. per sec.

### 3. FIELD STRIP:

a. Unlock the handle of the barrel lock lever and set to extreme forward position. Remove the barrel assembly by pulling it forward. b. Unlock the buffer locking pin and withdraw. Remove the buffer housing and guide, and operating spring. c. Withdraw the piston and slide assembly. d. Remove bipod by turning the bipod assembly 180 degrees to the right. e. Remove body locking pin and separate breech assembly from butt assembly by pulling apart.

### 4. FIRING:

Install a loaded magazine into the feedway. Put the safety in a horizontal position. Pull the charging handle to the rear limit and return to its forward position. The weapon is now ready to fire.

LIGHT MACHINE GUN, 7.7 MM, TYPE 99 (1939)



LIGHT MACHINE GUN, 7.7 MM, TYPE 99 (1939)

## LIGHT MACHINE GUN, 7.7 MM, TYPE 99.

### 1. GENERAL:

The Japanese 7.7 mm, Type 99, Light Machine Gun is very similar to the familiar 6.5 mm Type 96 LMG. However, besides being a heavier caliber, the cyclic rate of fire is 785 rounds per minute, in comparison with 550 rounds per minute for the Type 96 LMG. A few of these have been captured in this Theatre.

### 2. CHARACTERISTICS:

Caliber \_\_\_\_\_ 7.7 mm (.303'')

Weight, without magazine \_\_\_\_\_ 22 lbs.

Overall Length \_\_\_\_\_ 46 3/4''

Length of Barrel \_\_\_\_\_ 21 1/4''

Muzzle Velocity \_\_\_\_\_ 224 feet per sec.

Operation \_\_\_\_\_ Full Automatic.

### 3. PRINCIPLE VARIATIONS FROM THE TYPE 96 LMG:

a. An adjustment for headspace is incorporated in barrel retaining bolt. b. An adjustable stock rest is provided which is mounted in a recess in an extension of butt plate. c. A flash hider is screwed to the barrel in the conventional manner. d. The staggered box type magazine is longer and slightly less curved than one used for Type 96.

### 3. AMMUNITION:

A new type of Rimless 7.7 mm Ammunition must be used with this gun. The standard 7.7 mm Semi-rimmed cartridge used with the Type 92 Heavy machine gun cannot be used in the Type 99 LMG. However, the new ammunition can be used in type 92 Heavy Machine Gun -- increasing its cyclic rate of fire from 350 rounds per minute to 415 rounds per minute.



1. GENERAL:

This weapon is a recoil operated machine gun of the Vickers type. The gun has attachments for remote control and the ammunition feed is a disintegrating metallic link belt. High explosive armor piercing, ball and tracer ammunition for this gun have been recovered.

The barrel is a typical air-cooled light machine gun barrel with a perforated barrel jacket. A bullet guide is machined in the rear end of the barrel both above and below the chamber mouth. The volute barrel return spring bears on a star shaped locking plate which fits over the muzzle and is prevented from turning by flats on the barrel. The muzzle cone has slots in the base which engage the arms of the locking plate giving a wide range adjustment to the cone and enabling it to be positively locked in any position.

The trigger motor is mounted on top of the front cover and is operated by pressure on a single steel wire that passes through a guide on top of the front cover to a lever mechanism which operates the firing plunger that contacts the trigger.

MACHINE GUN, 12.7 MM, AIRCRAFT (BROWNING TYPE)



MACHINE GUN, 12.7 MM, AIRCRAFT (BROWNING TYPE)

## MACHINE GUN, 12.7 MM, AIRCRAFT (BROWNING TYPE)

### 1. GENERAL:

The gun illustrated was recovered from an Oscar by Crash Intelligence Officers at Munda. It is a Browning Type fed by disintegrating belt, and is smaller and lighter than the U.S. Machine Gun, .50, M2, Aircraft. This is made possible by the fact that the propellant charge of the Japanese cartridge is approximately thirty percent less than that of American Caliber .50 ammunition.

### 2. CHARACTERISTICS:

Weight	52 lbs.
Caliber	12.7 (.50'')
Length	48'
Length of Barrel	33''
Number of Grooves	6
Twist of Rifling	Left Hand, 1 turn in 15'
Operation	Recoil, Aided by muzzle up.
Ammunition	Armor Piercing Tracer, High Explosive, Incendiary.

### 3. FIELD STRIP:

This gun can be stripped in a similar manner to the U. S. Machine Gun, Caliber .50, Aircraft, M2.

### 4. OPERATION:

The weapons recovered do not have a reversible feed like the U. S. model. The firing cycle is the same as that on the U.S. Machine Gun, Caliber .50, Aircraft, M2.



MACHINE GUN, 13 MM, TYPE 93 (1933)



MACHINE GUN, 13 MM, TYPE 93 (1933) Shown above are the left and right side views of this weapon.

## MACHINE GUN, 13 MM, TYPE 93, (1933)



Shown above is the weapon on a twin mount in its original Anti-Aircraft emplacement. Wooden plugs can be seen in the muzzle of each gun as a protection against rain.

### 1. GENERAL:

This weapon is a 13.2 mm, or 0.52" caliber weapon firing ball and tracer ammunition. It is an aircooled, gas operated weapon of the Hotchkiss type, fed from a vertical box type magazine holding 30 rounds. It has been found in both single and dual mounts.

### 2. FIELD STRIP:

Push in the Spring Loaded Pin at the end of the Butt Plate and drive out the Butt Plate Pin. The Butt Plate, Bolt, and Piston Group can then be removed.

### 3. FIRING:

Insert a magazine loaded with oiled cartridges. Cock the piece by pulling the Cocking Handle to the rear. The gun on the single mount is then fired by pressing the Trigger on the Butt Plate. The guns on the dual mount are fired by pressing the foot pedal on the mount. Fire is full automatic only, there is no safety. When the last round has been fired, the magazine will be released and the bolt will remain to rear until a full magazine is inserted and the firing mechanism is again operated.



AUTOMATIC CANNON, 20 MM, ANTI-TANK, TYPE 97 (1937)



AUTOMATIC CANNON, 20 MM, ANTI-TANK, TYPE 97 Shown above are right and left hand views of this weapon.



# AUTOMATIC CANNON, 20 MM, ANTI-TANK, TYPE 97 (1937)

## 1. GENERAL:

This is a single purpose, automatic, gas operated, anti-tank weapon; with the aid of handles it could be carried by hand to the most inaccessible places. It is easy to hide because of its low silhouette (16 1/2" high without the shield). Its sight does not permit accurate aiming. Tracking is difficult inasmuch as traversing must be done by shoulder control and there is no fine adjustment device.

## 2. CHARACTERISTICS:

Weight (complete) \_\_\_\_\_ 150 lbs.

Weight (without handles or shield) \_\_\_\_\_ 15 lbs.

Length \_\_\_\_\_ 82 1/2"

Sight Graduations \_\_\_\_\_ 0 - 1000 meters.

Ammunition \_\_\_\_\_ Armor Piercing Tracer,  
High Explosive.

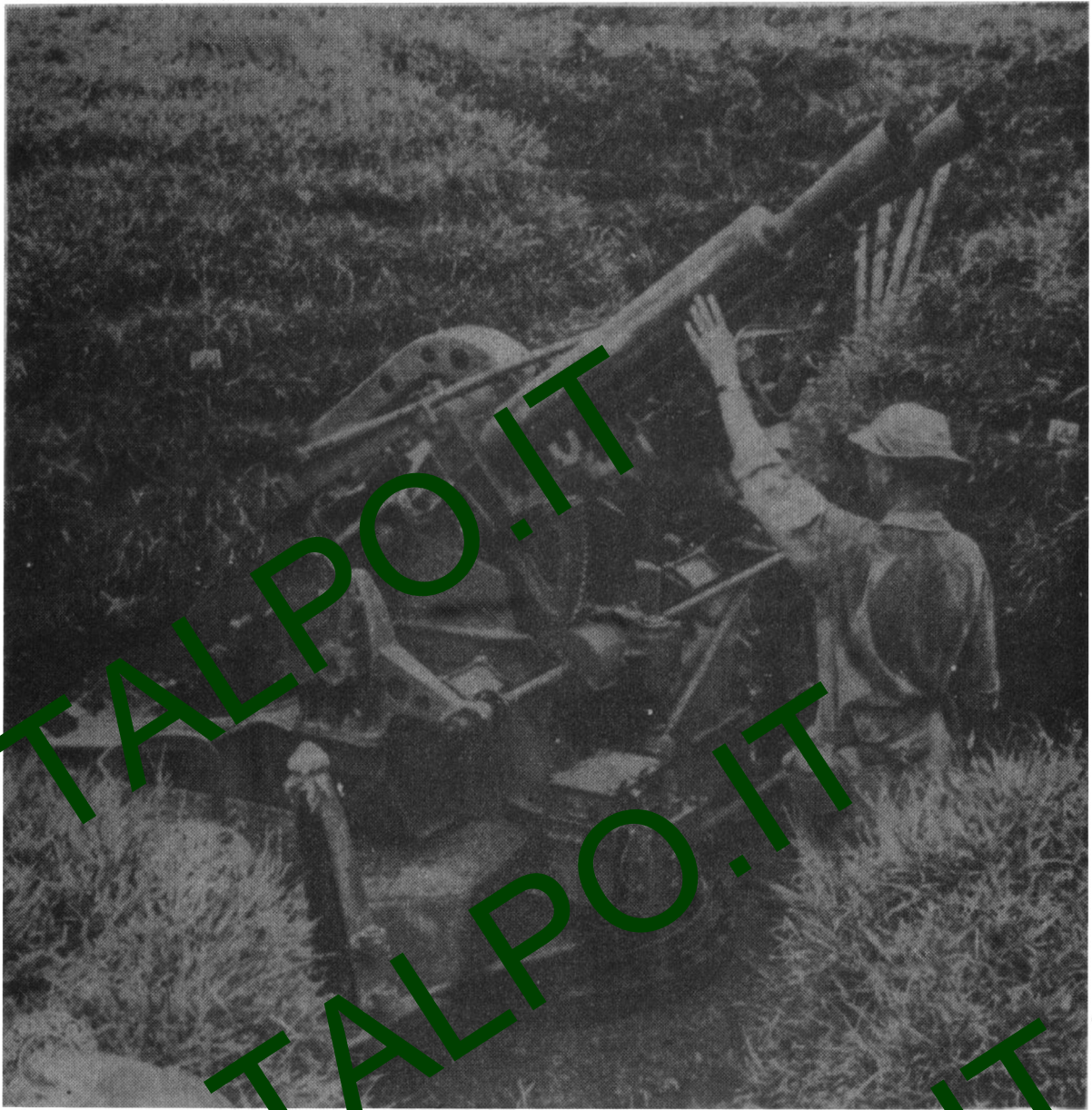
## 3. FIELD STRIP:

a. To remove Barrel pull retracting handle to the rear until the Sear engages. Then turn Barrel Bushing 1/6 of a turn clockwise (from rear of gun) and pull barrel straight out. b. Pull the trigger and allow operating group to go forward. c. Push forward on Back Plate and take out the Back Plate Pin from the right side of Receiver. Remove back plate and Return Springs. d. Pull the Retracting Handle to rear, remove Gas Piston, Bolt Lock, and Bolt.

## 4. OPERATION:

Cock the gun by pulling the Retracting Handle to the rear. Insert a full magazine. Turn Safety to firing position. The gun is now ready to fire. When the magazine is empty, bolt will remain to the rear until a full magazine is inserted and trigger pulled.

## AUTOMATIC CANNON, 40 MM, ANTI-AIRCRAFT



AUTOMATIC CANNON, 40 MM, ANTI-AIRCRAFT, TWIN MOUNT



Shown above are five of the different varieties of ammunition used in this weapon. From left to right are the following: Armor Piercing - High Explosive, High Explosive with Time fuze, High Explosive with Dummy Fuze, Round with empty Projectile and High Explosive with Point Detonating Fuze.



## AUTOMATIC CANNON, 40 MM, ANTI-AIRCRAFT



AUTOMATIC CANNON, 40 MM, ANTI-AIRCRAFT, TWIN MOUNT

This water cooled automatic gun has been recovered in single and dual mounts.. Similar guns were found among anti-aircraft defenses on New Georgia and Kolombangara. It is fed from a disintegrating link belt. Some of the ammunition was of British manufacture. One of the guns found in a single mount bore a nameplate indicating it was a Vickers-Armstrong Model 1931 40 mm Automatic Cannon.

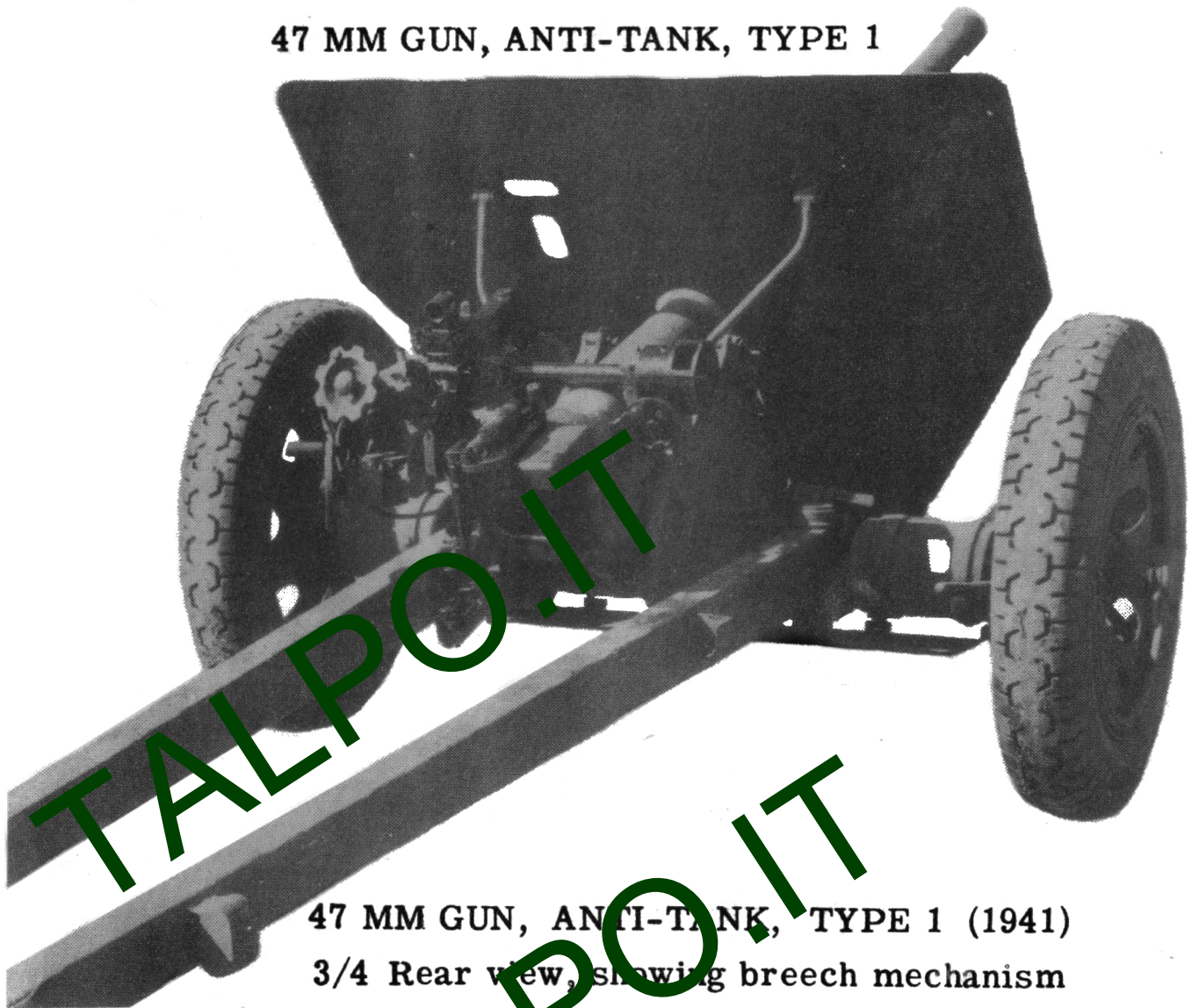


37 MM GUN, TYPE 94 (1934)



37 MM GUN, TYPE 94 (1934)

## 47 MM GUN, ANTI-TANK, TYPE 1



47 MM GUN, ANTI-TANK, TYPE 1 (1941)  
3/4 Rear view, showing breech mechanism

### 1. GENERAL:

This anti-tank gun has the most modern design of any artillery piece captured in this Theatre. It is apparently a development of the Type 97, 37 mm anti-tank gun. The wheels are independently sprung and a lock is provided on each wheel for locking the springs out of action. The gun has a semi-automatic horizontal sliding breech block. The armor piercing ammunition is 15.5 inches long and weighs 6 lbs. 5 oz. The case is quite large and long, indicating a high muzzle velocity.

### 2. FIRING:

Lock the travelling springs out of operation before firing. It is believed that further steps in firing are similar to those for the U. S. Army 37 mm Anti-Tank guns.



70 MM HOWITZER, TYPE 92 (1932)



70 MM HOWITZER, TYPE 92 (1932)



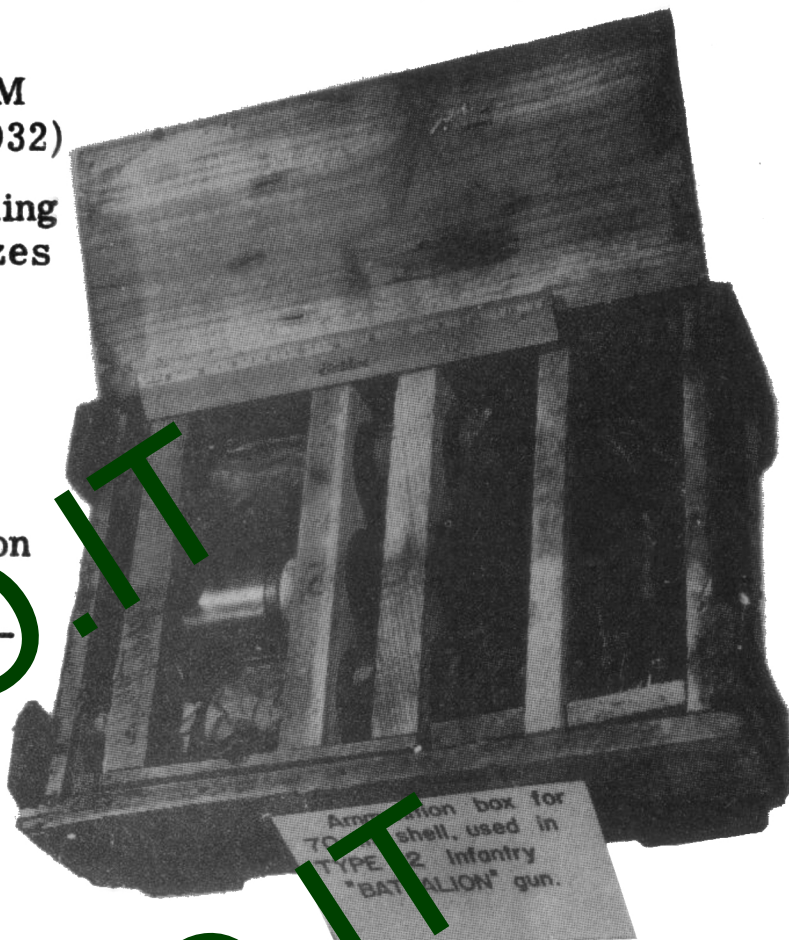
## 70 MM HOWITZER, TYPE 92 (1932)

### AMMUNITION FOR 70 MM HOWITZER, TYPE 92 (1932)

Shown in standard packing  
box, which includes the fuzes  
in separate cans.

#### 1. GENERAL:

The infantry battalion  
howitzer is capable of del-  
ivering fire from a range  
200 to 2800 yards.



#### 2. CHARACTERISTICS:

Howitzer weight	101 lbs.
Mount weight	77 lbs.
Mounted Howitzer and Caisson	420 lbs.
Length of Bore	24 1/2"
Over-all length	76" (approx)
Width of Wheel tread	27"
Effective Range	300 to 1500 yards.
Traverse	40 degrees
Elevation	-10 to +50 degrees.

The ammunition is semi-fixed with a brass cartridge case. The propelling charge is divided into four increments. High explosive, armor piercing, and smoke shells are used, high explosive complete round weighs 9.7 lbs. and is fitted with Type 88 point Detonating Fuzes.

75 MM MOUNTAIN GUN, TYPE 41 (1908)



75 MM MOUNTAIN GUN, TYPE 41 (1908)



## 75 MM MOUNTAIN GUN, TYPE 41 (1908)



### BREECH MECHANISM FOR 75 MM MOUNTAIN GUN

#### 1. GENERAL:

Prior to 1935 this was the standard weapon for Mountain Artillery Units. Since then the Type 94 Mountain Gun, described on the following page, has been replacing this gun. The type 41 gun is often referred to by the Japanese as the 'Infantry Regimental Gun'. It can be rapidly broken down for animal pack.

#### 2. CHARACTERISTICS:

Weight	1220 lbs.
Length of Barrel	54 1/2"
Length of Bore	43 1/2"
Overall Length	13 1/2 feet (approx)
Width of Wheel tread	3 feet
Elevation	+25 to -8 degrees.
Traverse	7 degrees.
Maximum Range	7800 yards
Rate of fire	10 Rounds per minute.
Ammunition	High Explosive, Armor Piercing-High Explosive.



**75 MM MOUNTAIN GUN, TYPE 94 (1934)**



**75 MM MOUNTAIN GUN, TYPE 94 (1934)**  
Shown above with trails closed and below with  
trails spread and in position for high angle fire.

## 75 MM MOUNTAIN GUN, TYPE 94 (1934)



**BREECH BLOCK FOR 75 MM MOUNTAIN GUN**

### 1. GENERAL

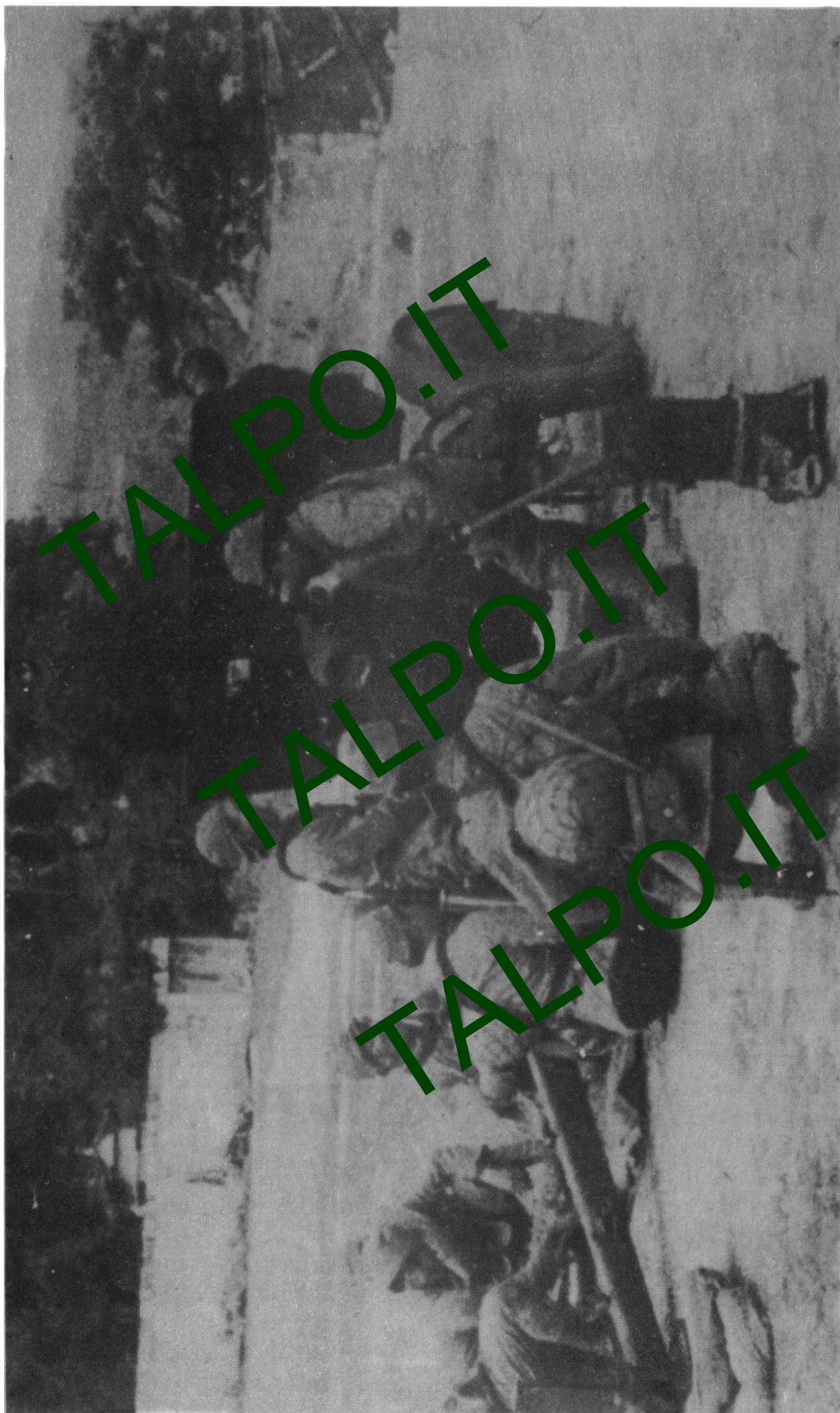
This infantry artillery piece is designed for rapid assembly and disassembly for animal pack. The gun breaks down into eleven assemblies, weighing a total of 1183 lbs. Each of the three heaviest single loads weighs approximately 210 lbs.

### 2. CHARACTERISTICS

Breech Block	Horizontal Sliding Type
Recoil system	Hydro-Pneumatic
Rifling:--	
No. of Grooves	28
Length of Rifling	49 3/8"
Depth of Grooves	.061"
Width of lands	.125"
Twist	Uniform right hand.
Recoil ( as shown on Recoil indicator)	700 mm to 920 mm.
Trail	Split Type (max. angle of spread 49 degrees)
Elevation	+793 mils to -193 mils
Traverse	360 mils right or left
Ammunition (only type recovered at present)	High Explosive



75 FIELD GUN, TYPE 90 (1930)



75 MM FIELD GUN, TYPE 90 (1930) Shown in position for firing



## 75 FIELD GUN, TYPE 90 (1930)



The Japanese surrounded this gun with a great deal of mystery and foreign military observers were unable to view it except at a distance during annual military review and maneuvers. It was supposed to have been in process of issue to organizations in 1936 but has not been observed in any theater of war to date. It is possible that its issue was confined to Japanese units serving in Manchuria and some parts of China, or that its production has been discontinued in favor of the heavier 105 mm. Type 91 Howitzer for divisional artillery. An earlier design of 75 mm Field Gun (the Type 38) is still in use. It is described in TM 30-480 on page 111. Either the Type 38 or the Type 90 or both were in use on Guadalcanal.

**75 MM ANTI-AIRCRAFT GUN, TYPE 88 (1928)**



**75 MM ANTI-AIRCRAFT GUN, TYPE 88 (1928)**  
In position for firing at a high elevation.



## 75 MM ANTI-AIRCRAFT GUN, TYPE 88 (1928)



### 1. GENERAL

Although this gun was designed primarily for an Anti-Aircraft Role, the weapon also has been used as a field gun. It is semi-automatic in operation and the rate of fire is estimated to be 15 or 20 rounds per minute. The weapon has a high degree of mobility and can be put into action with great rapidity.

### 2. CHARACTERISTICS

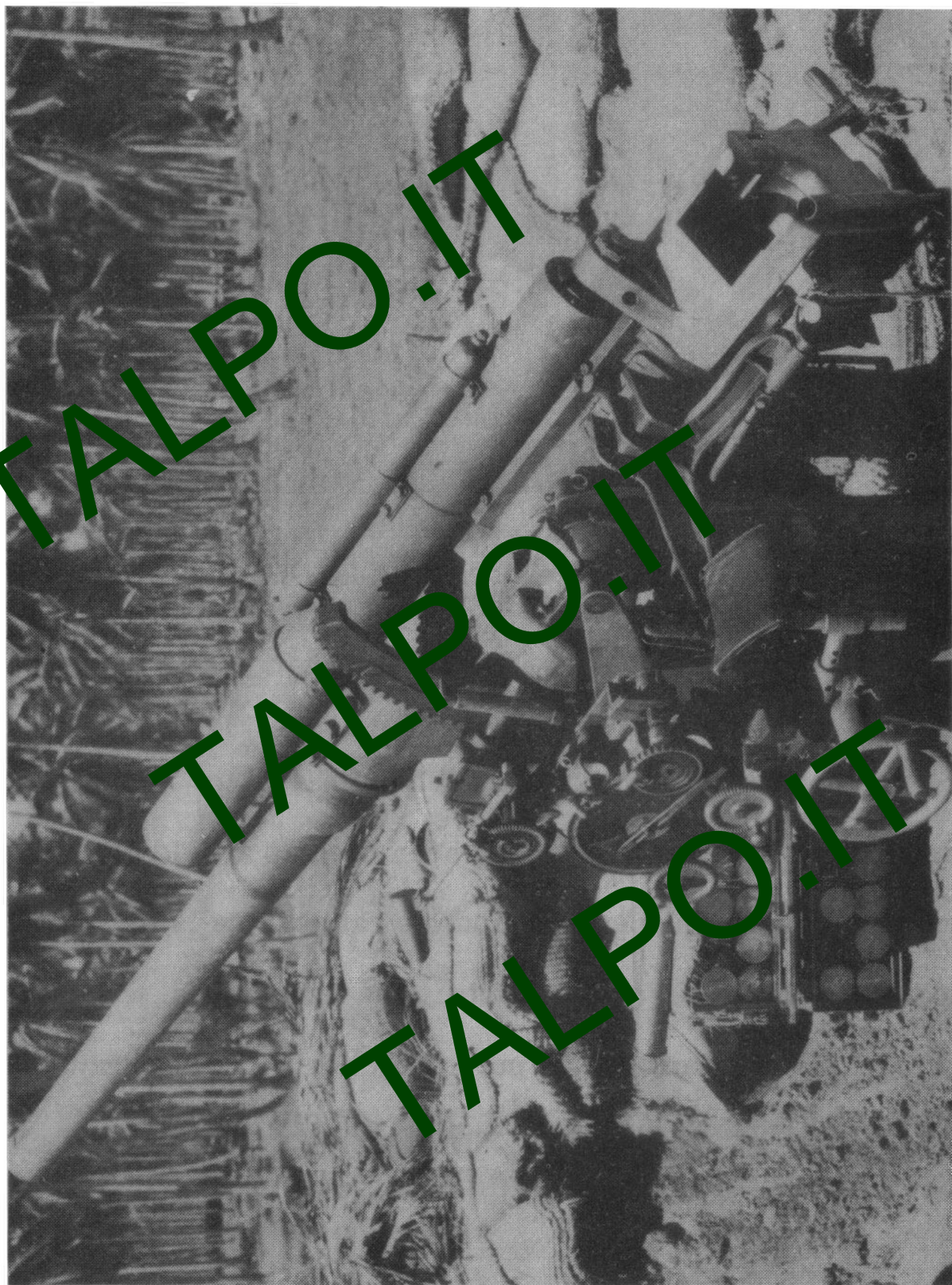
Muzzle Velocity\_\_\_\_\_2360 feet/second

Weight\_\_\_\_\_5830 lbs.

Reported Horizontal Range\_\_\_\_\_15080 yards

Reported Vertical Range\_\_\_\_\_29848 feet

3'' ANTI-AIRCRAFT GUN , TYPE 10 (1921)



3'' ANTI-AIRCRAFT GUN, TYPE 10 (1921) 3/4 Rear View.



### 3" ANTI-AIRCRAFT GUN, TYPE 10 (1921)



This gun is classified by the Japanese as the 8 cm. 40 Caliber High Angle Gun. As is frequently done by the Japanese, the classification of a gun is based on the nearest whole centimeter size of the bore rather than the exact size, which would be 3" or 76.2 mm.

40 Calibers indicates the length of the barrel from muzzle to Breech Face. The gun was recovered on Guadalcanal among anti-aircraft defenses. Fire control equipment indicates it has a muzzle velocity of 680 meters/sec. and a range of 7800 meters. Elevation is -5 to +80 degrees.

105 MM HOWITZER, TYPE 91 (1931)



105 MM HOWITZER, TYPE 91 (1931) Side view with trails closed.



105 MM HOWITZER, TYPE 91 (1931)



105 MM HOWITZER, TYPE 91 (1931)  
3/4 Rear view, with Breech Block open.

It has been reported that the maximum range of this Howitzer is 11,500 yards. The range drum on one of these is calibrated to 10800 (presumed to be meters).

It has apparently been adopted for the 105 mm. Howitzer Battalion of the Divisional Artillery Regiment. It is a light weight, compact, modern type of weapon with split trails. The tube is approximately 25 calibers in length. It has a Hydro-Spring Recoil Mechanism.

105 MM GUN, TYPE 92 (1932)



105 MM GUN, TYPE 92 (1932) Side view, with trails spread in position for high angle fire.



105 MM GUN, TYPE 92 (1932)



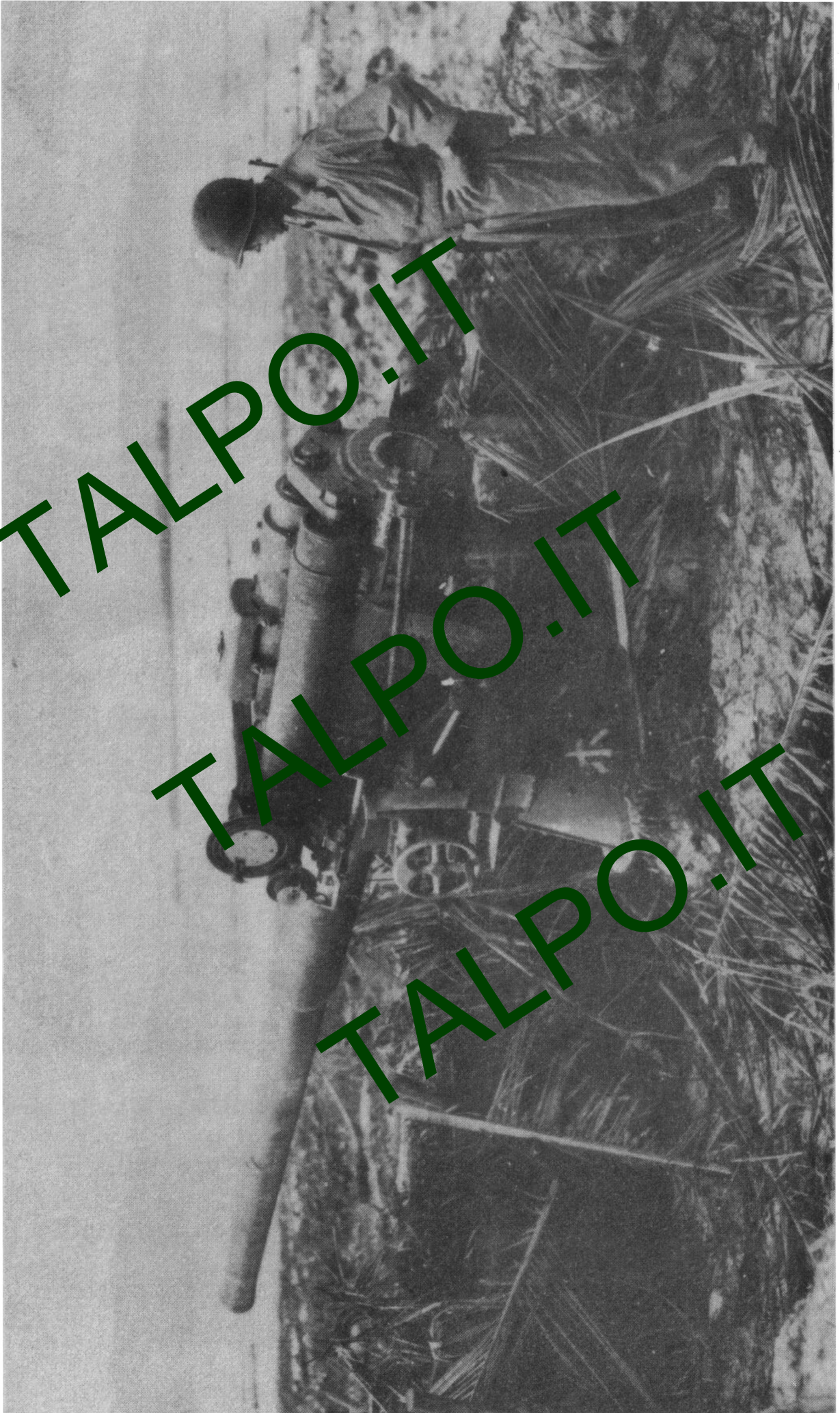
105 MM GUN, TYPE 92 (1932)

3/4 Rear view.

This gun has a maximum range of approximately 20,000 yards. It is provided with semi-fixed ammunition. The Breech Block is tapered. It is of the stepped-thread Type with the threaded sectors built in three steps. The recoil mechanism is Hydro-Pneumatic. The top carriage traverses on a pintle, about 15 degrees each way from the center.



## 12 CM GUN, COAST DEFENSE



12 CM GUN, COAST DEFENSE: Shown in its original position on BAANGA ISLAND



## 12 CM GUN, COAST DEFENSE



ABOVE, 12 CM GUN, COAST DEFENSE;  
At the left Ammunition for the above gun.



Guns similar to this type have been captured in coast defense position on Kolombangara and New Georgia. Captured fire control equipment, for the 12 cm. 45 caliber gun, 3rd year type, indicates that the maximum range is approximately 16,000 meters and the maximum muzzle velocity 825 meters per second.

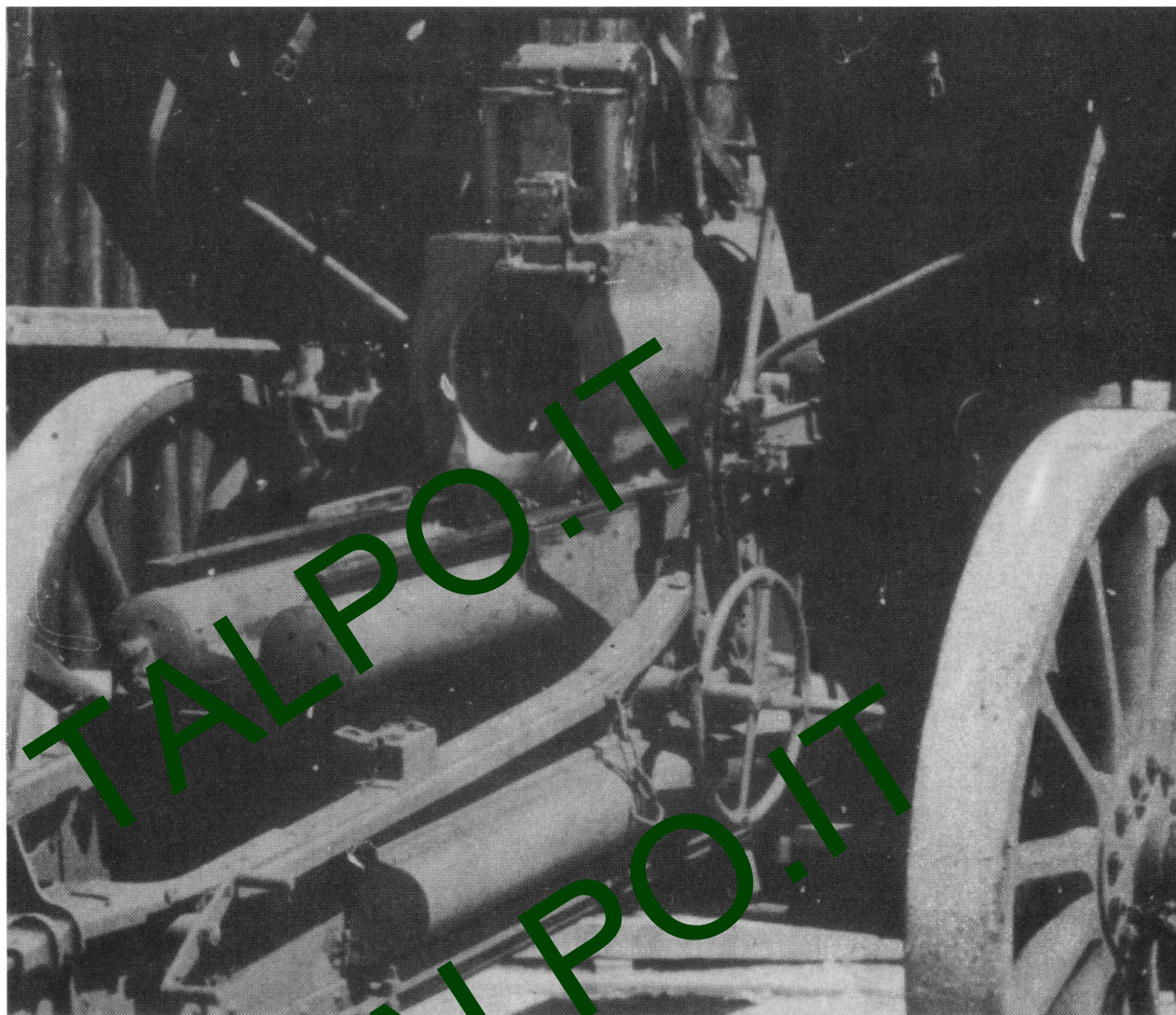
15 CM HOWITZER, 4TH YEAR TYPE (1915)



15 CM HOWITZER, 4 TH YEAR TYPE (1915) Side view, showing the trail extension in place for firing.



# 15 CM HOWITZER, 4TH YEAR TYPE (1915)



## BREECH MECHANISM FOR THE 15 CM HOWITZER

### 1. GENERAL:

This howitzer has been reported to have a practical range of approximately 7,000 meters. It is a modification of the 1905 type to secure greater mobility. In redesigning, the trail was lengthened about 4 1/2 feet and the load was split into two loads, each with its own limber. The breech has no obturator, the ammunition being provided with a shallow cartridge case.

### 2. CHARACTERISTICS:

Breech Block \_\_\_ Vertical Sliding  
Type with Spring Compensator

#### Rifling:

No. of Grooves \_\_\_\_\_ 36  
Depth of Grooves \_\_\_\_\_ .066"  
Width of Lands \_\_\_\_\_ .22"  
Length of Rifling \_\_\_\_\_ 5 feet

Diameter at Breech \_\_\_ 6 10/64"

Length \_\_\_\_\_ 16"

Recoil (as shown by recoil scale)

510 MM to 1340 MM

Trail \_\_\_\_\_ Box Type

Elevation \_\_\_\_\_ -3 to +55°

Traverse \_\_\_\_\_ Axle Type

Wheels \_\_\_\_\_ Wood with iron  
tires.

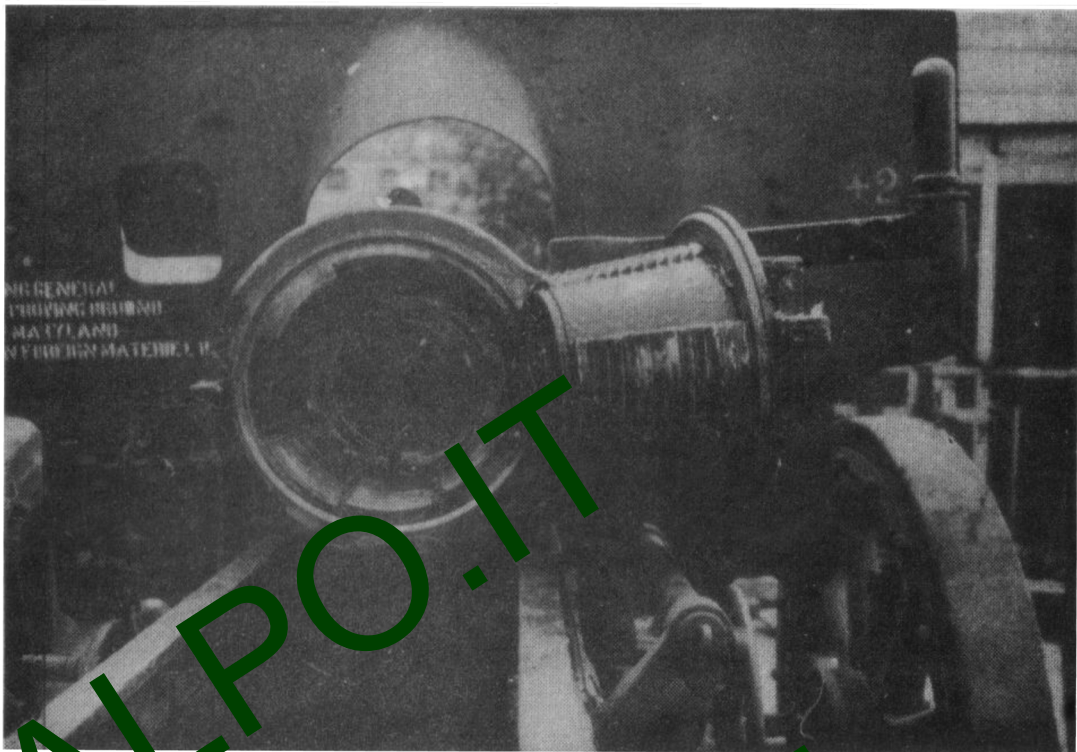
15 CM HOWITZER, TYPE 96 (1936)



15 CM HOWITZER, TYPE 96 (1936) Shown with trail spread and elevated for a high angle of fire.



## 15 CM HOWITZER: TYPE 96 (1936)



### BREECH BLOCK FOR 15 CM HOWITZER

#### 1. GENERAL:

This weapon is a modern split trail Howitzer, the maximum practical range of which is reported to be 10,000 meters. The carriage has solid rubber tired wheels and hand brakes. Equilibrators are fastened to the rear of cradle. The breech block is tapered. It is of the Stepped Thread type with the threaded sectors built in three steps. Ammunition is provided with a cartridge case.

#### 2. CHARACTERISTICS:

##### Rifling:

Number of Grooves	36
Length of Rifling	9.4 feet
Depth of Grooves	.06"
Width of Grooves	.235"

##### Chamber:

Diameter at Breech	6 13/64"
Length	1.55 feet

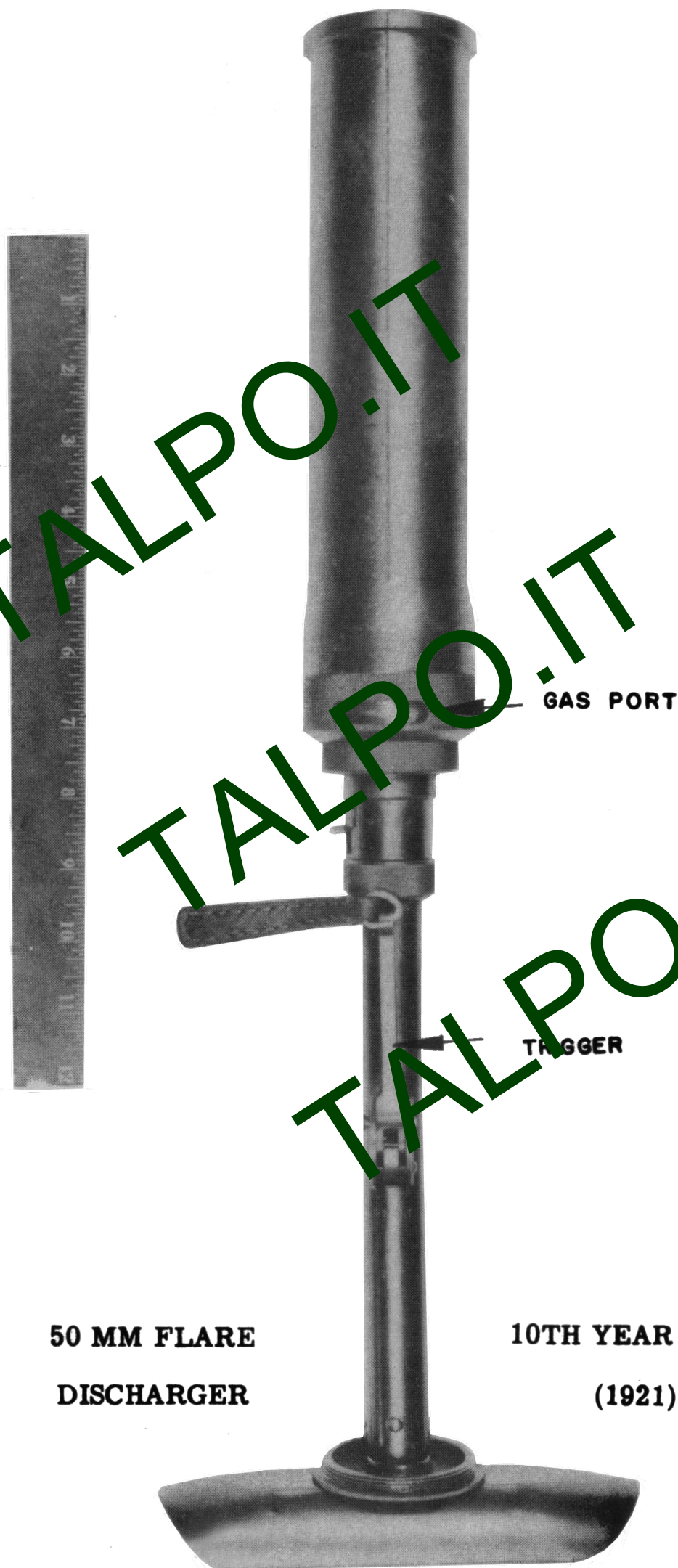
Recoil (as shown on Recoil  
Indicator)

600 mm to 1040 mm

Elevation \_\_\_\_\_ -3 to +75 degrees  
(approx)

Wheels \_\_\_\_\_ Wood, with solid Rubber  
tires and hand brakes.

50 MM FLARE DISCHARGER, 10TH YEAR TYPE (1921)



50 MM FLARE  
DISCHARGER

10TH YEAR TYPE  
(1921)



## 50 MM FLARE DISCHARGER, 10th YEAR TYPE (1921)

This weapon is a small, light, smooth bore mortar with a continuous pull firing mechanism. A unique feature is the manner in which it may be disassembled for carrying.

The stem, firing handle, and base plate fit into the barrel. A cover, seen just above the curved base plate in the illustration at the left, can be screwed into the muzzle to make a compact unit of very light weight (1 1/2 lbs).

Listed below are some of the Pyrotechnic signals which can be used in this weapon (as well as in the Type 89 Grenade Discharger).

### SIGNAL

### COLOR BANDS ON BODY

Black Smoke, Parachute	One wide black Band at top.
White Star, Parachute	One wide white band at top.
White Star	One narrow white band.
White Star, Double	Two narrow white bands.
White Star, Triple	Three narrow white bands.
Orange Smoke, Parachute	One wide yellow band at top.
Green Star, Parachute	One wide green band at top.
Green Star, Single	One narrow green band.
Green Star, Double	Two narrow green bands.
Red Star, Parachute	One wide red band at top.
Red Star Triple	Three narrow red bands.

It has been reported that the Type 97 Fragmentation Grenade, which has a propelling charge attached to its base, may be used in this Flare Discharger. The weapon is fired with the base plate on the ground. The piece is held in the left hand and loaded and fired with the right hand. Variations in range may be obtained by varying the size of the port at the base of the tube, thus controlling the volume of propelling gases escaping and thereby controlling ranges in a rough manner.

50 MM GRENADE DISCHARGER, TYPE 89 (1929)



50 MM GRENADE DISCHARGER, TYPE 89 (1929)

Above at the right is shown the standard high explosive round. The propelling charge is contained in the base of the shell and when ignited expands the rotating band against the rifling of the tube.



## 50 MM GRENADE DISCHARGER, TYPE 89 (1929)

### 1. GENERAL:

This weapon, improperly called the "Knee Mortar" must be fired only with the base plate firmly in the ground, and not from any part of the body.

### 2. CHARACTERISTICS:

Weight \_\_\_\_\_ 10.3 lbs.

Length (overall, approx) 23 3/4 "

Ammunition \_\_\_\_\_ Type 89 Shell

Type 97 Frag Grenade, Pyrotechnic Signal,  
Smoke Grenade, Practice Grenade.

Range \_\_\_\_\_ 120 to 650 meters (Type 89 shell)

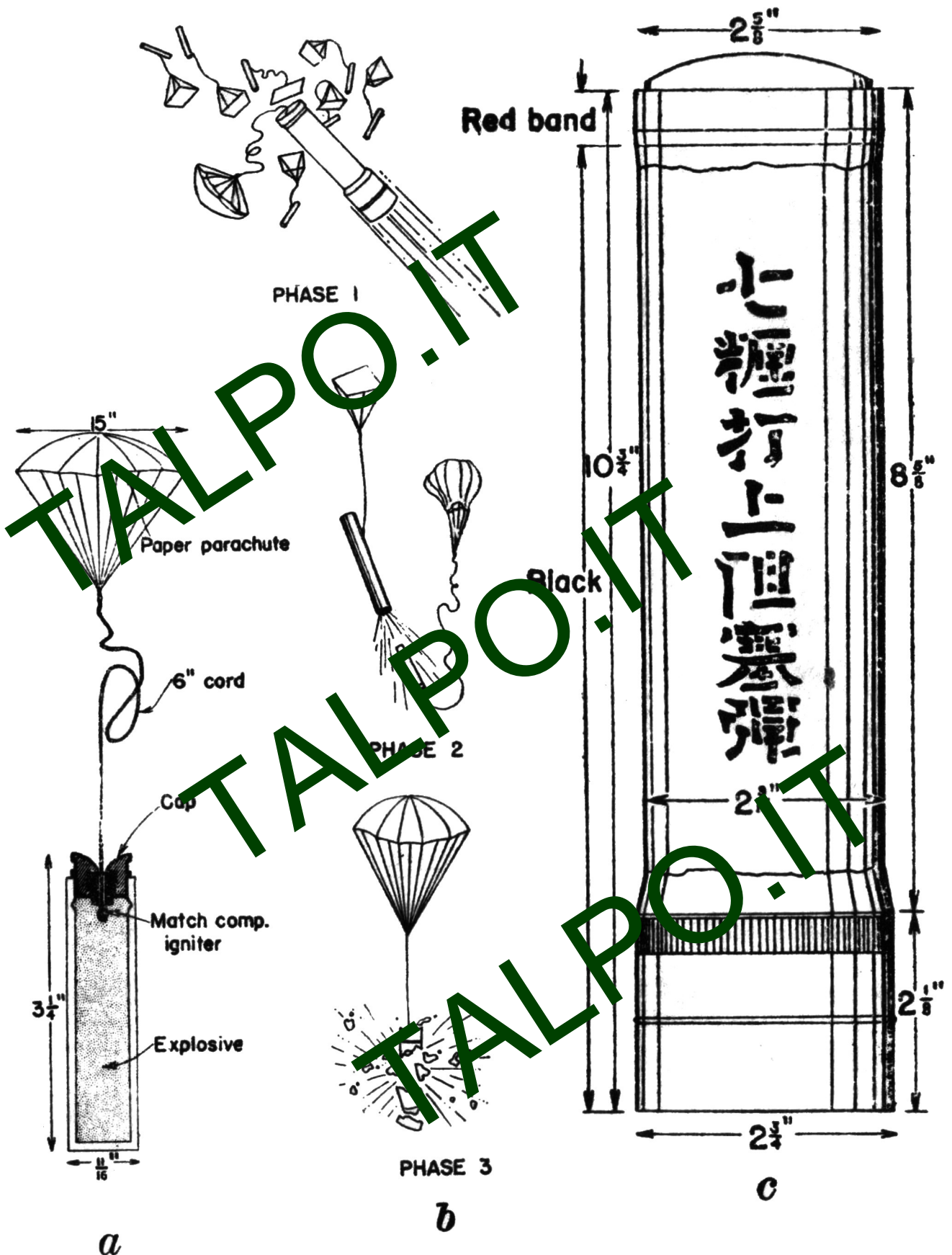
### 3. PREPARATION FOR FIRING:

To prepare the ammunition, unscrew plastic plug from the nose of projectile and screw fuze into its place. Take a prone position, holding the barrel in left hand with one edge of base stuck into the ground. Hold the weapon at an angle of approximately 45° and aim by sighting down the line on barrel. To load, pull safety wire from fuze and drop the round into muzzle of weapon.

### 4. FIRING:

After the round has come to rest, operate the aimed weapon by a steady hard pull on the Trigger, which will cock and fire the piece in one motion. Ranges are adjusted by rotating the Range Adjusting Knob located directly below the barrel on the right hand side. This moves firing pin and holder up and down in the barrel. Ranges are read in meters from the scale on the left side of the barrel extension, using the trigger housing as an index.

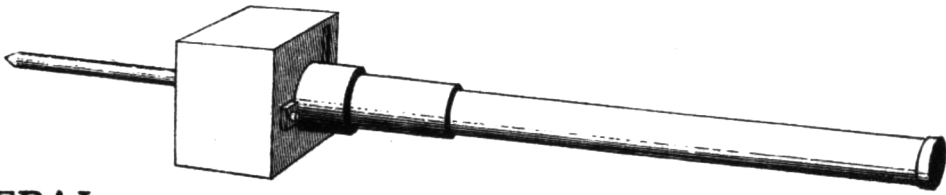
# JAPANESE "BARRAGE" MORTAR



Shell for Japanese "Barrage" Mortar: (a) shows the detail of the bomb. (b) Illustrates the three phases of action which occur in the air after the mortar is fired. (c) A view of the shell as a whole.



## JAPANESE "BARRAGE" MORTAR



### 1. GENERAL:

This mortar has been used as an anti-aircraft weapon.

The projectiles are reported to have a range of approximately 4,000 feet. The mortar consists of a smooth bore tube four feet long, a base plate, a rectangular wooden block, and an iron rod which holds the mortar in an upright position and controls the angle of elevation for firing.

### 2. OPERATION:

The projectile is fired by dropping it into the mortar tube in the same manner as the U.S. Mortars are fired. The propelling charge also ignites a delay powder train which ignites an expelling charge within the shell when the shell reaches the standard altitude. The charge expels 7 cannisters each attached to a parachute. Each of these cannisters is also provided with a delay train which is ignited upon expulsion. Each cannister finally expels a high explosive bomb attached to a parachute. The jerk caused by the opening of the parachute initiates the detonating fuze. Therefore, there are 16 units airborne from each of the original shells; causing 15 explosions, 7 of which are high explosive detonations. The blast effect is severe and the danger area might well be 10 or 20 yards. If the bomb with its parachute is found on the ground, it is extremely dangerous and must not be touched except by qualified personnel.

# 81 MM MORTAR, TYPE 99 (1939)



81 MM MORTAR (SHORT) TYPE 99 (1939).  
 Shown with a standard high explosive shell. Propelling  
 charges are inserted between the fins. Inset shows the  
 Firing Pin Cam Shaft which must be struck a blow to  
 fire the mortar.



## 81 MM MORTAR, TYPE 99 (1939)

### 1. GENERAL:

This mortar is very light, weighing only 52 lbs. complete, it breaks down into 3 loads of approx. 17 lbs. each. It may be fired with U. S. Army 81 mm. Mortar Shells, M43 (Light). Furthermore, the Japanese ammunition for this mortar may be used very satisfactorily in the U. S. 81 mm Mortar, M1. When so used the range will be approximately 10% less than that expected when using U. S. 81 mm M43 Mortar Shells.

### 2. FIRING:

The operation of the weapon can be readily determined by anyone familiar with U. S. Mortars. However, it does not have a fixed firing pin, but is fired by striking the end of the Firing Pin Cam Shaft at the base of the Mortar (See insert in the illustration on the opposite page). HQ USAFISPA, G-2 Information Bulletin #24 gives detailed instructions on firing this mortar with U. S. and Japanese 81 mm ammunition. Listed below is a tentative firing table (Extracted from Information Bulletin #24). This firing table was prepared by the firing of a very limited number of rounds, and any item may be in error by the full amount of dispersion for that range. Ranges are given in yards.

#### FIRING TABLE

<u>RANGE WITH JAP AMMUNITION</u>	<u>RANGE WITH U. S. M43 AMMUNITION</u>	<u>ELEVATION</u>	<u>CHARGE</u>
2200	2530	45 °	6
2040	2340	56.2 °	6
1700	1900	45 °	4
1580	1715	56.2 °	4
1000	1275	45 °	2
900	1100	56.2 °	2
450	515	45 °	0

90 MM MORTAR, TYPE 94 (1934)



90 MM MORTAR, TYPE 94 (1934)  
Shown with a standard high explosive shell.



## 90 MM MORTAR, TYPE 94 (1934).

### 1. GENERAL:

This mortar is a smooth bore, muzzle loading weapon, with a fixed firing pin. It is fired in the same manner as the U.S. 81 mm. Mortar, M1. The Mortar itself differs from the U.S. Mortar, M1, mainly in the recoil mechanism. A very heavy recoil mechanism is provided and upon firing, the Barrel moves back several inches in recoil, sliding on the ways at the base of the Barrel and in the lining of the Clamping Collar and Saddle. The sight fits the bracket in the same manner as the U.S. M4, Mortar Sight. The U.S Mortar Sight may be used with this weapon.

### 2. FIRING:

The ammunition comes disassembled with two complete rounds in one box. The Igniting cartridge is held in place by a flat ring screwed into the Base of the Fin Assembly. The desired number of powder increment bags are inserted between the fins. The fuze is normally found inside a can in which is also found a washer and a delay element. The fuze will function instantaneously upon impact if simply screwed into the projectile, disregarding the delay elements. The available data on ranges with this weapon are given below:

Range (yards)	Elevation (mils)	Charge (no. Increments)
4050	800	6
3520	1000	6
2750	1000	4

When fired with 6 increments, this weapon gives a great deal of muzzle flash, extending beyond the muzzle about 6 feet in daylight.

## ARMOR PIERCING MINE (MAGNETIC)

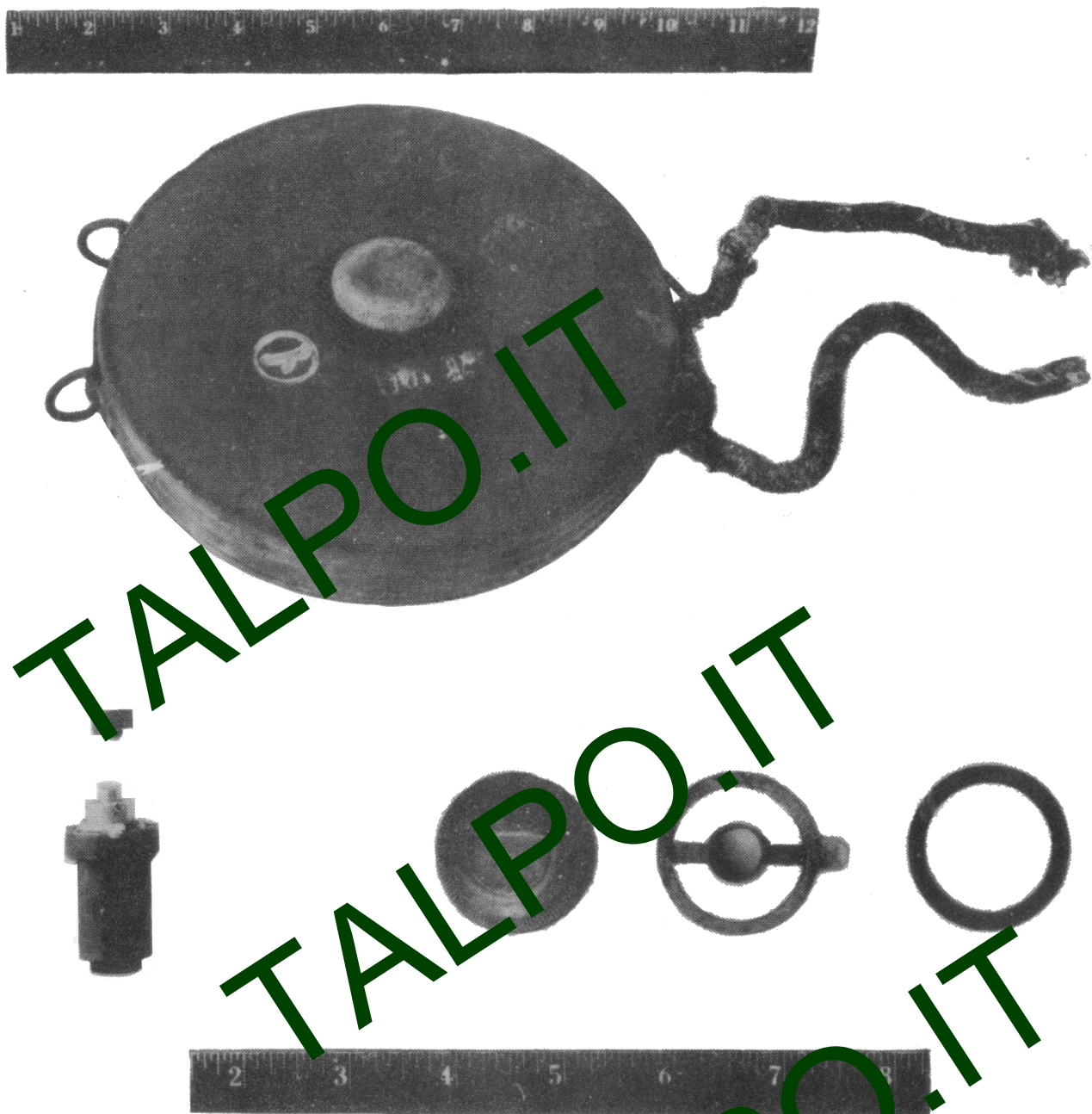


ARMOR PIERCING MINE (MAGNETIC)  
WITH FUZE SHOWN AT RIGHT

This type of mine is intended for direct use against armored vehicles. It 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 plunger is depressed, actuating the fuze and exploding the mine in approximately ten seconds.



## MINE, TYPE 93 (1933)

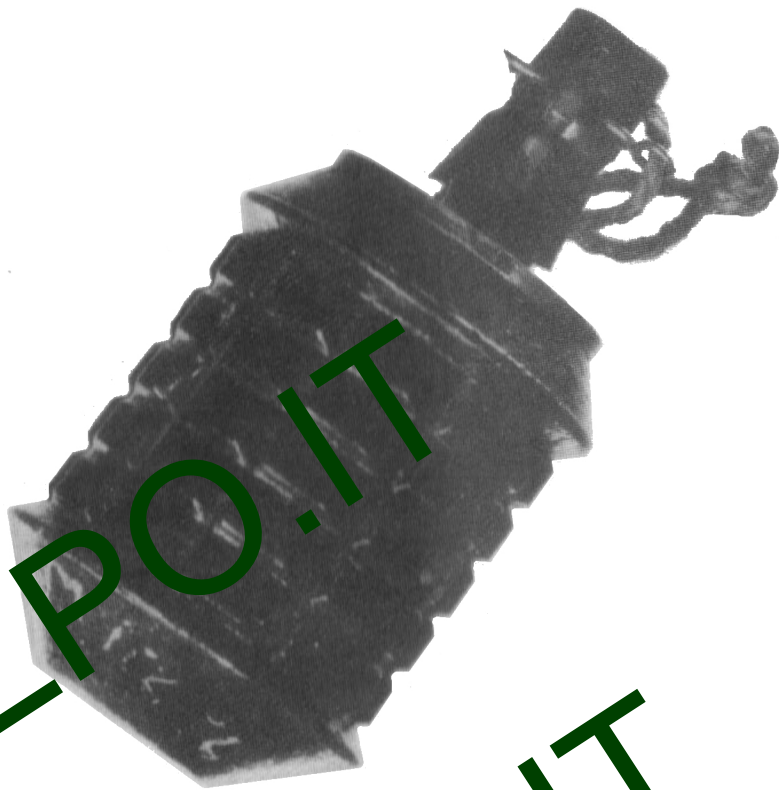


AT TOP: Mine as it appears when armed. At bottom - from left to right: Fuze with Safety Screw unscrewed, Fuze Well Cover, Safety Washer, and Gasket

1. GENERAL: This mine is exploded by pressure applied anywhere on its top. It is used either for anti-personnel or anti-tank purposes. Fuzes are provided with shear wires of various strengths, so the fuzes may function under pressures of from 20 lbs. to as much as 250 lbs. depending on the fuze selected. Additional explosive may be placed beneath the mine to give it greater force.

2. METHOD OF NEUTRALIZING: Mark the location and do not attempt to neutralize this mine yourself unless an emergency requires such action. If immediate action is required, after examining the area for "booby traps", unscrew the fuze well cover without exerting any pressure on the screw cover or the mine itself. If available, screw the safety screw into the striker head, and replace the safety washer. Otherwise, destroy in place.

## GRENADE, FRAGMENTATION, TYPE 91 (1931)



**GRENADE, FRAGMENTATION, TYPE 91 (1931)**  
Shown with safety pin in place.

This hand grenade is approximately 2 inches in diameter, 4 inches in height, and weighs slightly more than one pound. The bursting charge is 2 ounces of TNT.

The grenade is safe when the head of the striker is flush with the top of the fuze cover. To arm the grenade, with the safety pin in, screw down Striker to full extent. When the safety pin is withdrawn, the head of the ignition tube is given a sharp blow which drives the striking pin into the percussion cap. The fuze, with a delayed action of 4 to 5 seconds, is then ignited and the grenade is ready to be thrown. As there is a possibility that the fuze will burn less than 4 seconds before detonating the grenade, throw the grenade immediately after striking it. The grenade can be booby-trapped by removing the delay element.



## GRENADE, FRAGMENTATION, TYPE 97 (1937)



### GRENADE FRAGMENTATION, TYPE 97 (1937)

Shown with safety pin in place.

- Note similarity to the Type 91 Grenade except for the addition of a base containing a primer and propelling charge for use in the Grenade Discharger.

The Japanese Type 97 Fragmentation Grenade shown above is used as a mortar grenade and is fired from the Type 89 Grenade Discharger. The explosive train is initiated by set-back action and a delay pellet with a burning time of approximately 8 or 9 seconds is interposed between the primer and the detonator.

To fire as a mortar grenade, remove the safety pin and drop the grenade base downward into the Type 89 grenade discharger. When the mortar is properly aimed pull the trigger mechanism and the grenade will be discharged.

The type 97 Grenade may be used also as a Hand Grenade. First remove the Safety Pin. Before throwing strike the firing pin on some hard object.

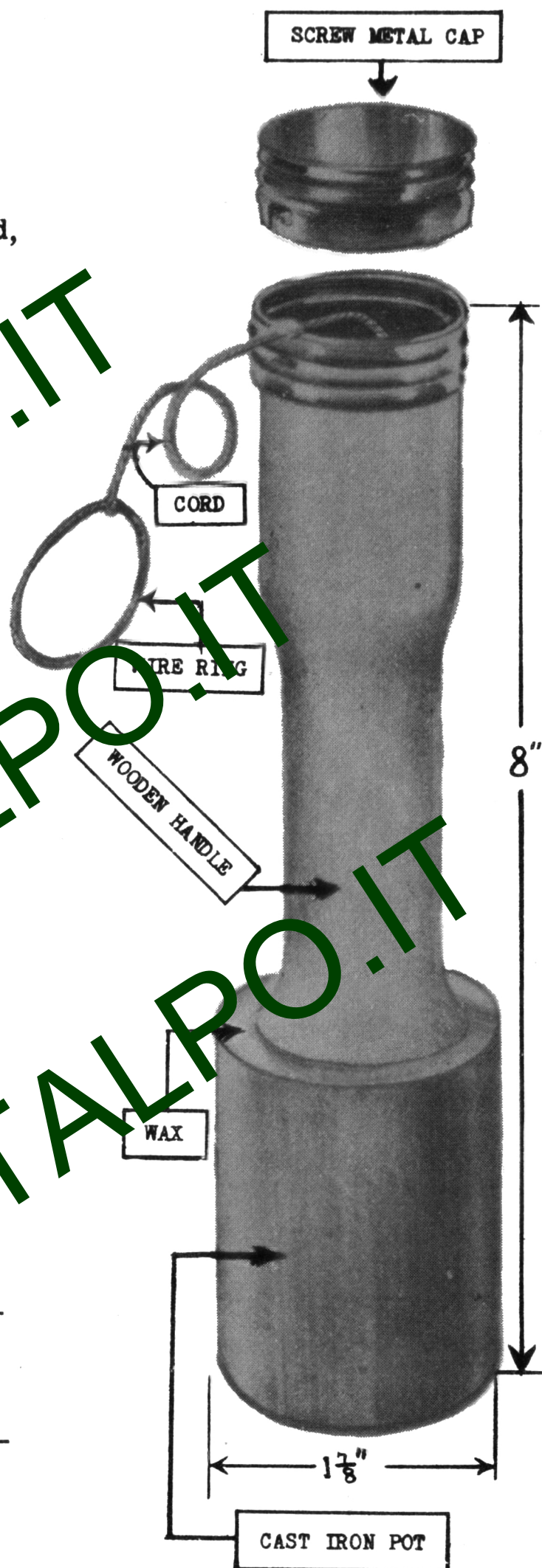
## GRENADE, POTATO MASHER TYPE;

### METHOD OF USE:

Remove screw metal cap on end of handle - take out wire ring but do not pull cord, place middle finger through wire ring, holding handle until it is desired to throw grenade - then throw, still retaining the cord by wire ring.

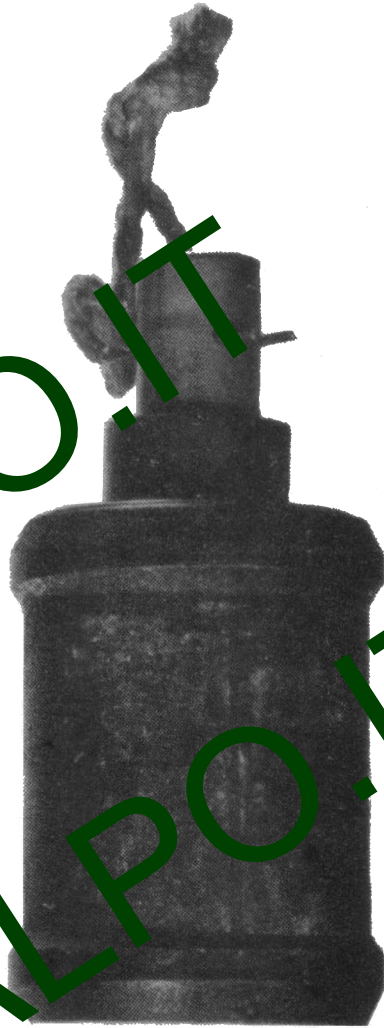
### ACTION:

When grenade is thrown, string is pulled out of composition in top of igniter, causing material to ignite and spit the fuze, which can be heard hissing (from approx. 25 yards) while in flight. The fuze burns for about 4 seconds before grenade bursts. No details are yet known as to the effectiveness of this weapon.





## GRENADE, HIGH EXPLOSIVE



GRENADE, HIGH EXPLOSIVE  
(Shown with safety pin in place)

Hand grenades of this type have been recovered on Guadalcanal, New Georgia and in the Aleutians. It has the length of 3.5 inches, a diameter of 1.75 inches and weighs approximately 10 ounces. The grenade is used by removing the safety pin, striking the head of the fuze cover on some hard object such as a helmet and throwing the grenade immediately.

## GRENADE, BOOBY TRAP, TYPE 23



**GRENADE, BOOBY TRAP, TYPE 23**  
Shown with protective cap at left and fuze at right.

A Grenade of this type has been found tied to a 75 mm projectile, fixed in such a manner that it could be detonated by a trip wire. A 2 lb. to 5 1/2 lb. pull is sufficient to operate the pull igniter. It has been reported to have a 5 1/2 second delay, enabling it to be used as a hand grenade.



## FLAME THROWER, TYPE 93 (1933)

### 1. PREPARATION FOR FIRING:

The flame thrower will operate on a mixture of half gasoline and half lubricating oil. Fill fuel tanks with this mixture. Fill the central pressure tank with nitrogen at 350 to 400 lbs. pressure. (Oxygen must not be used). Load the revolving cylinder located at nozzle end with igniting cartridges. These may be improvised from cut down .30 caliber cartridges loaded with black powder.

NITROGEN TANK VALVE

### FLAME THROWER, TYPE 93

It has a range of 15-20 yards and a total firing time of 10 to 12 seconds.

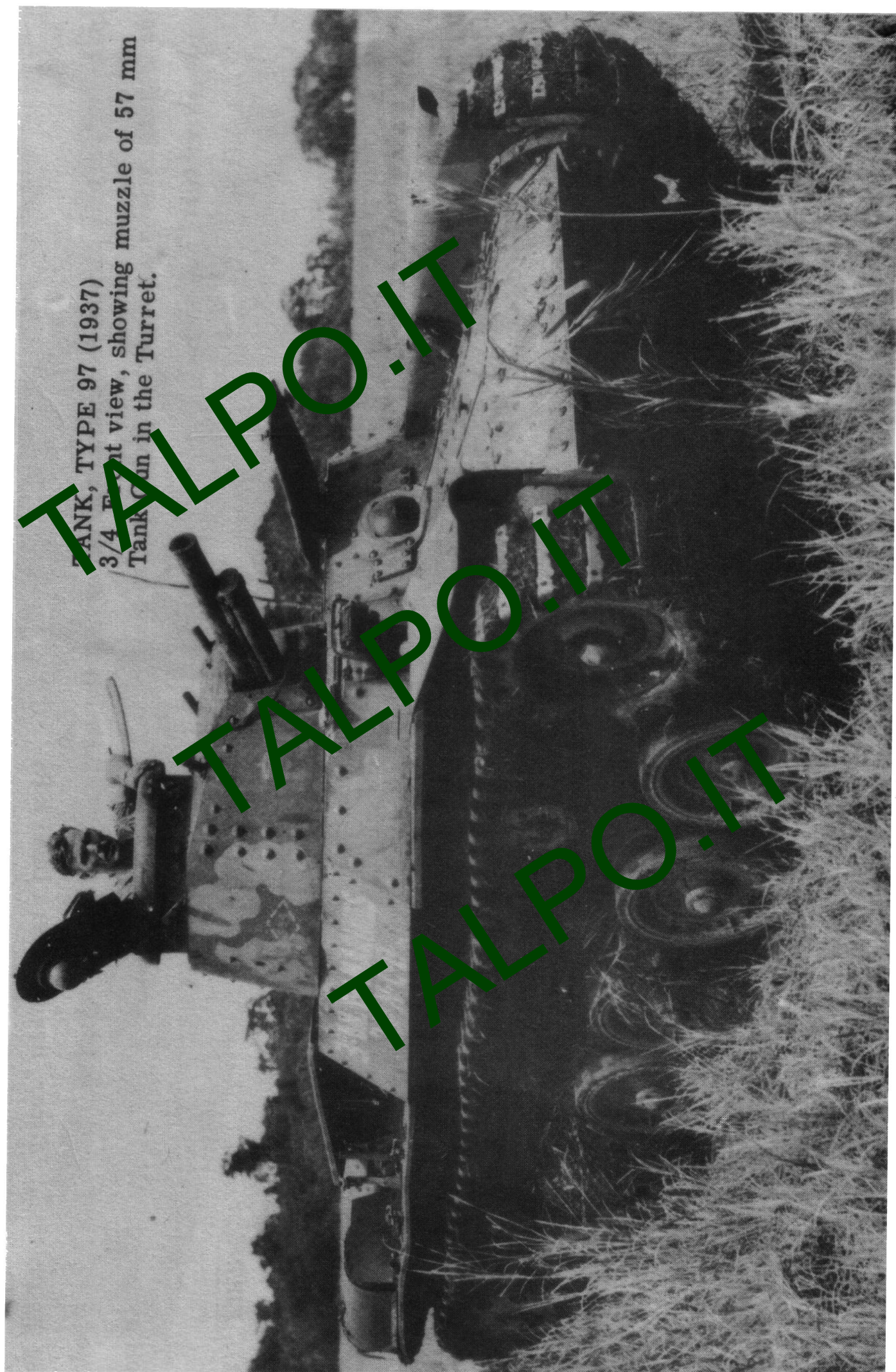


### 2. FIRING:

Open the fuel tank valve. With nozzle pointed at target, release safety catch and spray target with oil by opening operating valve three fourths of the way for one or two seconds. Fire the stream by opening operating valve all the way. For more complete instructions see the preliminary operators manual prepared by the Chemical Officer, Headquarters USA FISPA.



# TANK, TYPE 97 (1937)



TANK, TYPE 97 (1937)

3/4 Front view, showing muzzle of 57 mm  
Tank Gun in the Turret.



## TANK, TYPE 97 (1937)



TANK, TYPE 97 (1937) 3/4 Rear View.

This tank is the most formidable Japanese armored vehicle encountered in the South Pacific Area. It is armed with one short barreled 57 mm. gun and two 7.7 mm. machine guns. The armor thickness is nowhere in excess of 1 inch. The tank is normally equipped with a hand-ring around the turret. It is powered with a 12 cylinder, air-cooled Diesel engine and is reported to be able to travel at high speed.