

**LIGHT TRENCH MORTAR**

**DRILL REGULATIONS**

**(L. T. M. D. R.)**

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The following pamphlet, entitled "Light Trench Mortar Drill Regulations," is published for the information and guidance of all concerned.

(062.1 A.G.O.)

BY ORDER OF THE SECRETARY OF WAR:

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# LIGHT TRENCH MORTAR

## DRILL REGULATIONS

(L. T. M. D. R.)

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NOTE.—Materiel described and range tables shown are for mortars and ammunition used by A. E. F. prior to December, 1917. See Ordnance Pamphlet No. 1744 for U. S. Mortars and ammunition and range tables for same.

### CHAPTER I.

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1. School of the Soldier as prescribed in Infantry Drill Regulations.

#### SCHOOL OF THE SQUAD

2. The squad consists of one corporal and four or five privates, the corporal being the squad leader. A substitute squad leader is designated in each squad, who takes the place of the corporal when the corporal is absent. When both the corporal and the substitute are absent, the private senior in length of service acts as squad leader.

3. The formation of one squad in line is in single rank, numbers 1, 2, 3, 4, from right to left, the corporal three paces in front of the center of his squad; extra men, if any, in the line of file closers.

4. When in line in platoon the formation is the same, except that the corporal is in line on the right of his squad.

5. When in column of squads the post of the corporal is 40 inches in front of the center of his squad.

6. The squad executes the *halt, rests, facings, steps, and marchings* as explained in the School of the Soldier, Infantry Drill Regulations.

7. School of the Squad as prescribed in Infantry Drill Regulations, with the following substitutions.

#### To Follow the Corporal

8. Being assembled or deployed, to march the squad without unnecessary commands, the corporal places himself in front of it and commands: FOLLOW ME.

The corporal moves in any direction.

The men of the squad oblique toward and follow the corporal in order, 1, 2, 3, 4, in single file, at easy marching distance.

*Fuze.*—Bickford's Slow Burning,  $12\frac{1}{2}$  and 14 sec. lengths. Marked with dots and lines. Dots= $\frac{1}{2}$  second. Lines = — seconds. On one end is an Eley 410 percussion cap, in the side of which are four small gas escape holes, through which the gas escapes through the hole in pistol head.

The 146 or "Always," consists of a hollow steel cylinder closed at the top by a screw fuze top, concave on the inside. Inside are two pellets. The bottom one, made of brass, contains a central fire percussion cap. Two creep springs are grooved on top of the pellet and a small powder magazine is underneath, with small gas escape holes on one side. The top pellet is made of aluminum and is concave on top. It contains the striker and also has a small gas escape hole on one side. Resting between the two concave surfaces is a steel ball. Fitting over the outside is a brass sleeve with an ejector spring. Fitting over the spring and close to the sleeve is a small brass platform. Wound around the outside is a waterproof tape with spring, on one end of which is a safety bolt which passes through the platform sleeve and body and rests between the two pellets. The tip is held secure by a retaining pin which engages in the frame of the platform. As further safety precaution, a small split pin passes through the retaining pin.

*Cartridge.*—Propelling charge: ballistite in Eley 12 bore cartridge.

Yellow cartridge contains 95 grains. Range 100 yds. to 220 yds.

Green cartridge contains 120 grains. Range 116 yds. to 290 yds.

Ring contains 100 grains.

Green and 1 ring: 230 yds to 497 yds.

Green and 2 rings: 287 yds. to 606 yds.

Green and 3 rings: 340 yds. to 753 yds.

The red cartridge, 175 grains, is no longer used.

Blue cartridge contains 95 grains ballistite, reinforced with 5 grains gun cotton yarn.

Blue rings contain 110 grains of 3 mm. flake cordite.

Blue cartridge: 102 yds. to 240 yds.

Blue and 1 ring: 197 yds to 420 yds.

Blue and 2 rings: 259 yds. to 550 yds.

Blue and 3 rings: 320 yds. to 660 yds.

Blue and 4 rings: 364 yds. to 800 yds.

## CHAPTER III.

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### RANGE TABLE FOR 3-INCH STOKES MORTAR WITH YELLOW CARTRIDGE

50. PROJECTILE, WEIGHT, 10 lbs. 11 oz.

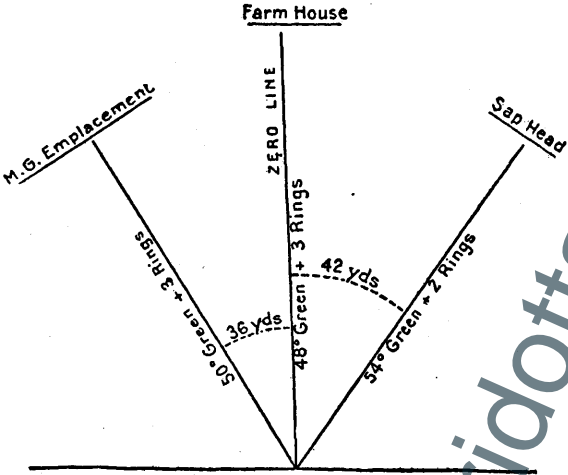
CHARGE, CARTRIDGE, YELLOW, SERVICE, 95 grs. Ballistite.

RINGS, 100 grs. Ballistite.

YELLOW CARTRIDGE	TIME OF FLIGHT	DEGREES
Yards		
220	7.0	45
210	7.6	50
190	8.2	55
170	8.7	60
140	9.2	65
100	9.6	70

YELLOW cartridge one ring	TIME of flight	YELLOW cartridge two rings	TIME of flight	YELLOW cartridge three rings	TIME of flight	DE- GREES
245	13.5	340	15.8	480	18	69
258	12.5	374	15.4	520	17.5	67
290	12	406	15	555	17	65
318	11.5	440	14.5	590	16.5	63
340	11	480	13.8	625	16	61
365	10.5	515	13.3	660	15.5	58.5
390	10	540	12.9	695	15	54.5
410	9.5	574	12.4	730	14	48

Note.—See Ordnance Pamphlet No. 1744.



Point from which made out.....

Made by..... Date.....

Notes.....

## LAYING THE MORTAR IN DIRECTION BY COMPASS

54. 1. Locate on the map accurately the gun position of the mortar.

2. Locate on the map accurately the exact position of the target. If the target is a linear one, take the central point of the target as the objective.

3. Draw a line on the map from the gun position to the target.

4. Place the center of the protractor on the gun position on the map and read the numbers of degrees from the north to the target.

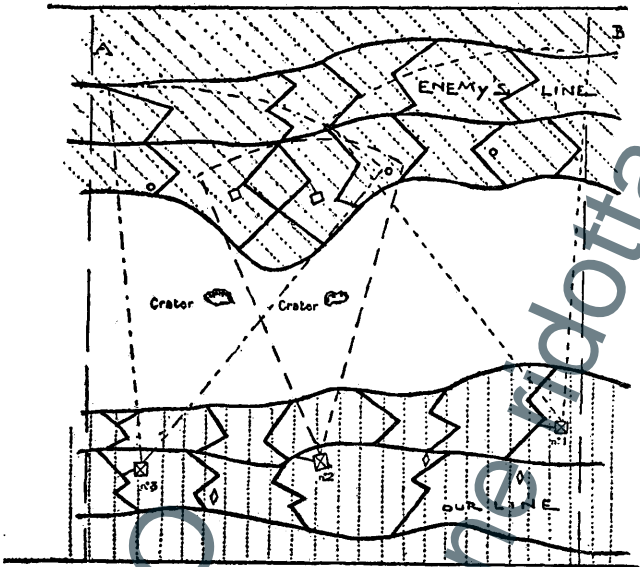
5. Correct for the local magnetic variation of the needle.

6. Drive in one of the aiming sticks at the gun position and place the compass on top of it. Rotate the compass till the card reads the required magnetic bearing and drive in the other stake on the wall of the parapet, it having the magnetic bearing of the target. The two aiming sticks then determine a line to the objective, from the mortar position. Align the mortar on the two aiming sticks by holding the plumb bob and line over the rear stake and bringing the white line on the mortar in line with the front stake and line of the plumb bob.

This method will be the only method available in the event of an advance where the mortars will be required to go into action within the enemy's former lines and to open fire without



## TYPE OF TRENCH MORTAR POSITION



LEGEND	}	☒ Mortar Section emplacements
		○ Enemy Machine Guns
		◇ Alternative emplacements

## NOTES:

The extent of front to be covered by the mortars is from A to B but concentrated fire is required on the salient and craters.

The mortars are so placed that each mortar section except No. 1 can cover the salient, and so that all mortars enfilade either portions of the enemy's front line or communicating trenches, while the fire of two sections can be crossed if necessary.

## CHAPTER VIII.

### TRENCH MORTARS IN ATTACK

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76. *The attack is divided into two parts: The work to be carried out before and during the launching of the assault, and the advance of the mortars.*

In the preparation of the attack, trench mortars are frequently grouped on a portion of the line to deal with an objective that the artillery cannot deal with effectively.

The three inch mortar is not an efficient wire cutter. It can be used for making gaps in the wire, but not for destroying long lengths of wire. *This must be left to the heavier trench mortars*, but the three inch mortar can be used to prevent the enemy, by an intermittent fire during the night, from repairing the wire which has been cut during the day time by the heavier mortars. In the final bombardment, preceding the assault, the light trench mortars should concentrate their fire on the enemy's front line, heads of communicating trenches and machine gun emplacements, and when the assault is launched they should lift to other targets in rear of the front line.

Aeroplane maps should be carefully studied and all targets that trench mortars are able to deal with should be noted. Anything that looks like a machine gun emplacement, trench mortar emplacement, head of a communication trench, strong points and dead ground should be carefully noted. Each gun squad should be given a definite objective so that in the event of control being lost the battery would be able to go on and carry out its mission.

Arrangements should be made for communication, which might be telephones, orderlies or prearranged signals.

Arrangements should be made for the establishment of ammunition dumps in the enemy's lines.

Carrying parties should be organized into squads and each squad should have a guide who would see that the ammunition was taken to the proper place. The best method of carrying the ammunition is to place 4 shells in two sand bags which can be tied together and slung over the shoulder. The guides should be taken up to the trenches and shown where the ammunition is stored and approximately where it is to be taken in the enemy's lines.

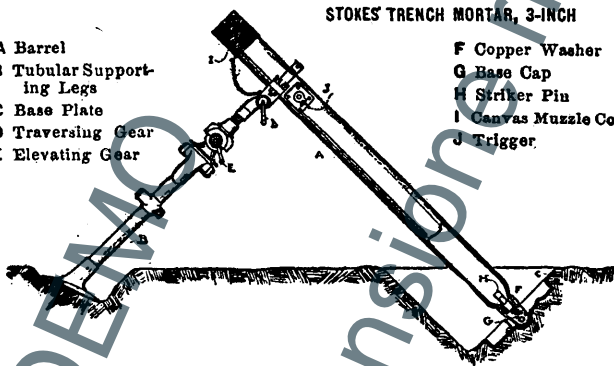
The line of advance across no man's land to the objective should be carefully studied. If possible select some object such as a ruined building, prominent bend in the enemy's lines or sap running out from his lines, anything that will aid the gun squad and ammunition squads to find their correct positions.

It is very difficult and practically impossible to lay down any hard and fast rule as to when to advance with the mortars, because the time will vary according to the nature of the objective and local conditions. But the trench mortar should not go forward until that portion of the enemy's line into which the trench mortars are coming into action is cleared of the enemy. Observers should be sent forward to give a signal when to move the mortars forward. Sometimes trench mortars are attached to battalions to support them in the advance. Having reached the objective, the trench mortars have to consolidate. This consolidation consists in the rapid construction of emplacements in suitable positions to cover the new front line. In selecting sites for the positions of the mortars, the same points are considered as when acting on the defensive. It is generally possible to find out, before the attack takes place, where the new communication trenches are going to be constructed. The mortars must be gotten rapidly into position to assist in repelling the inevitable counter attack. Then register and get the ammunition up and any spare time may be devoted to strengthening the position.

STOKES' TRENCH MORTAR, 3-INCH

- A Barrel
- B Tubular Supporting  
Legs
- C Base Plate
- D Traversing Gear
- E Elevating Gear

- F Copper Washer
- G Base Cap
- H Striker Pin
- I Canvas Muzzle Cover
- J Trigger



## CHAPTER IX.

### SAPPERS SECTION, SAPPERS AND BOMBERS PLATOON

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#### DUTIES

1. The "Sappers Section" of the Headquarters Company of an Infantry Regiment has the following duties:

First: The construction and repair of such intrenchments and such posts of command and observation posts as may be necessary for the "Sappers and Bombers Platoon" (Stokes 3 in. Trench Mortar), in which work they should have the assistance of members of the Bombers Section. This is their first duty.

Second: They should then be utilized for duties in connection with dumps as follows: One (1) corporal and two (2) privates for duty at the Regimental Dump, in which is included the regimental grenade depot. Two (2) privates for duty at each of the three battalion dumps, in which are included the battalion grenade depots. Should no dump be provided for one of the battalions, those men originally for duty with that battalion dump, should be assigned to the Regimental dump or to some other battalion dump.

Their duties at the dumps are, in general, those of storekeepers, but they should also have a thorough knowledge of the mechanism of grenades and bombs, their fuzes and detonators.

These men also have charge of the fireworks stored at their respective dumps.

They should be acquainted with the general character of the fireworks which may be stored at the dumps, such as Rockets, Illuminating Cartridges, Signal Cartridges, Flares, Mortar Signals, Grenade Signals, Smoke Candles or Cases, etc.

Incidental to their duties as storekeepers, they keep their supplies, including all trench stores at their respective dumps, up to the prescribed amount. They may be used in digging and preparing the Regimental Dump. They may be assigned by the Regimental Commander to any other specific duties during operations.

#### INSTRUCTION

2. The commander of the Pioneer Platoon is charged with the instruction of the Sappers Section of the Sappers and Bombers Platoon in engineering work only. The other technical instruction of this Sappers Section, as well as the actual performance of their duties, as indicated in par. 1 above, is under the Commander of the Sappers and Bombers Platoon, to which the Sappers Section belongs, and independent of the Pioneer Platoon.

## DETAILS OF STOKES MORTAR MOUNTING.

