

THE LIGHT "MINENWERFER" ON FLAT-TRAJECTORY CARRIAGE.

(*Leichter Minenwerfer in Flachbahn-Lafette.*)

(From a captured German document.)

1. EMPLOYMENT.

General principles.—In both attack and defence, light *Minenwerfer* keep close behind the infantry and support the latter by close-range fire. Bodies of infantry, tanks and machine gun nests are typical targets for them to engage.

Mobility, speed in coming into action, the maintenance of ammunition supply and continuous progressive action are demanded from them.

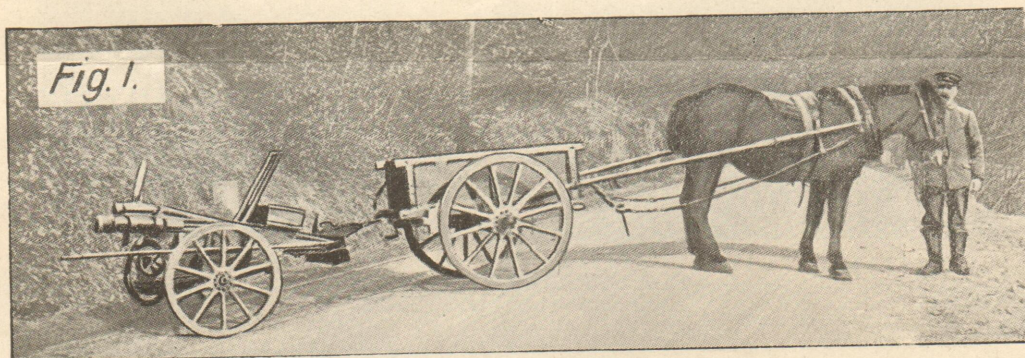
Minenwerfer commanders must possess initiative and be capable of making rapid decisions. They must keep in touch with the situation by personal observation and by maintaining close liaison with the infantry.

On the march.—When moving along roads, the light *Minenwerfer* are hooked on behind the light ammunition carts (Fig. 1), and the 1895 pattern ammunition wagons follow in column.

On the battlefield.—The *Minenwerfer* are unhooked when the enemy's fire renders horsed transport impossible and are manhandled into action (Fig. 2). The ammunition is carried by hand. The ammunition carts follow as best they can.

NOTE.—In the earlier offensives of 1918, light *Minenwerfer* were generally of little use to the advancing infantry, owing to the difficulties of transportation and of ammunition supply. These difficulties appear to have been surmounted, for accounts of the Aisne offensive agree that the effective support rendered by horse-drawn light *Minenwerfer*, particularly in the destruction of machine gun nests, was one of the features of the advance. In fact, light *Minenwerfer* appear to have maintained closer touch with the infantry and to have come into action more quickly than the field batteries detailed to accompany the infantry.

One German division suggested that the light *Minenwerfer* should be mounted on a sledge in order to facilitate transport across the crater zone, but there is no information of this method of mounting having been introduced.



ON THE MARCH.



GOING INTO ACTION.

2. DESCRIPTION.

(a) Design.

The German 7.6-cm. light *Minenwerfer* was designed for trench warfare and for high-angle fire only. By the addition of a few easily manufactured parts, it has been converted into a mobile infantry gun which can be used for either high-angle or flat-trajectory fire (Figs. 3-6).

(b) New Parts.

The *trail* is 4 ft. long and 14 in. wide, and weighs about 1 cwt.

It comprises the following parts:—

2 Trunnion brackets.	Traversing pin.
2 Trunnion slots.	Detachable spade.
2 Clamps.	Pole or traversing lever.

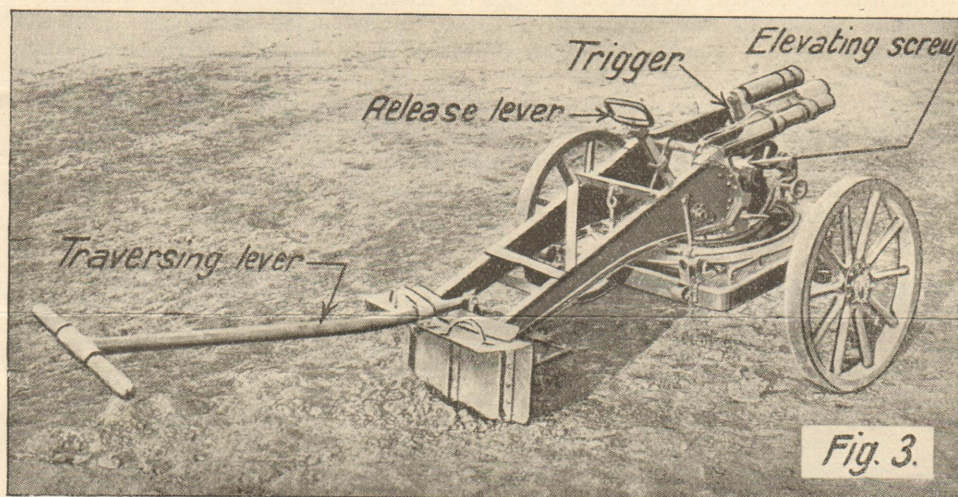
The trail is attached to the top-carriage by a pin passing through the trunnion brackets on the trail and the trunnion bearings on the top-carriage. It is connected to the cradle of the *Minenwerfer* by a second pin passing through the trunnion slots in front of the trail, the trunnion bearings in the rear projections of the cradle and through the short arm of the release lever.

On pressing down the release lever, this pin slides up the trunnion slots into the upper stops, thereby lifting the rear of the cradle and bringing the piece to the position for flat-trajectory fire.

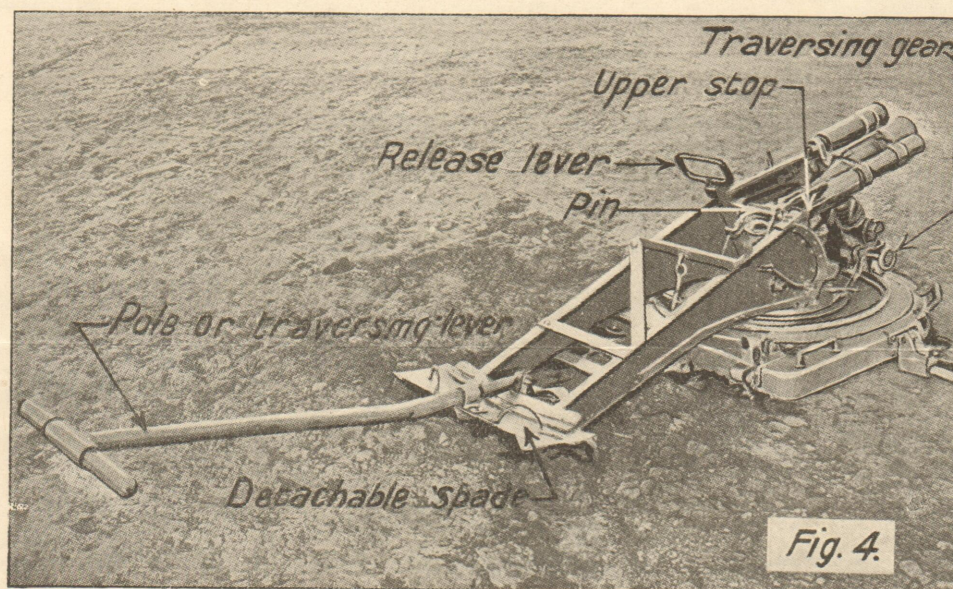
On raising the lever, the pin slides down the trunnion slots into the lower stops, elevating the piece for high-angle fire.

The *detachable road wheels* are about 2 ft. 6 ins. in diameter, and are mounted on axle-trees on the sides of the bed-plate.

The *sights* are open sights, consisting of a *backsight*, graduated up to 900 m. (984 yds.), which slides on to the rear projection of the cradle, and a *foresight*, mounted on the buffer cylinder. Sights of more recent pattern are graduated up to 1,100 m. (1,203 yds.).



FLAT-TRAJECTORY FIRE
(without removing road wheels).



FLAT-TRAJECTORY FIRE
(road wheels removed).

(c) **Action.**

(i.) *Rapid opening of flat-trajectory fire* (Fig. 3).—The *Minenwerfer* is brought into action without removing the wheels. The top-carriage remains clamped to the bed-plate. The layer adjusts the backsight and lays for line and elevation.

Elevation is given as formerly, using the elevating screw.

The pole serves as a traversing lever.

To load: The layer pulls up the release lever with his left hand, thereby bringing the piece to the position for high-angle fire. He loads with the right hand, and returns the piece to the position for flat-trajectory fire by pushing down the lever.

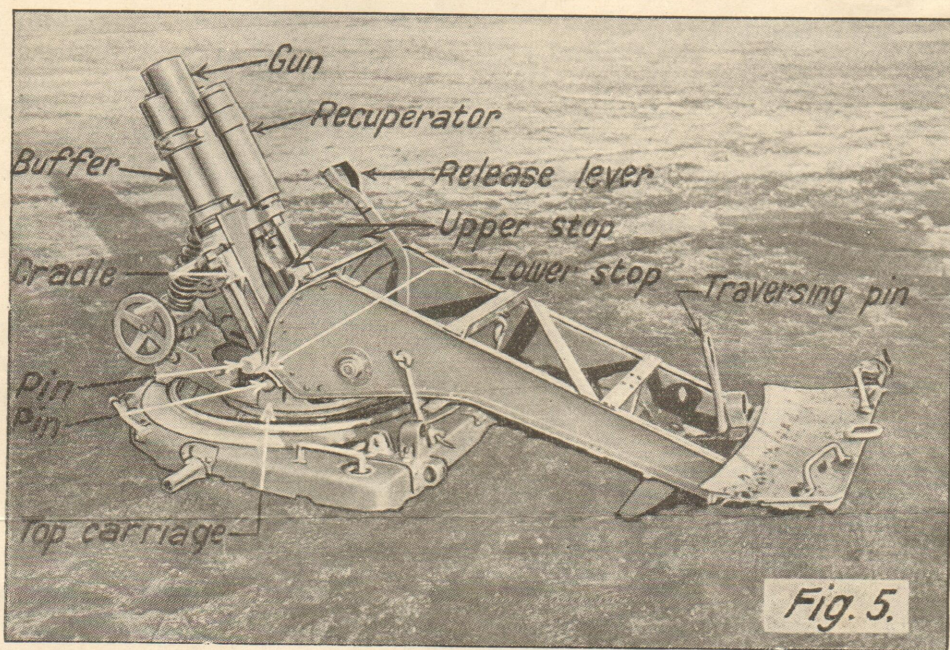
To fire: The *Minenwerfer* is fired by means of a lanyard hooked on to the trigger.

(ii.) *Accurate flat-trajectory fire* (Fig. 4).—As under (i.) above, but the wheels are removed and the trail is unclamped from the bed-plate.

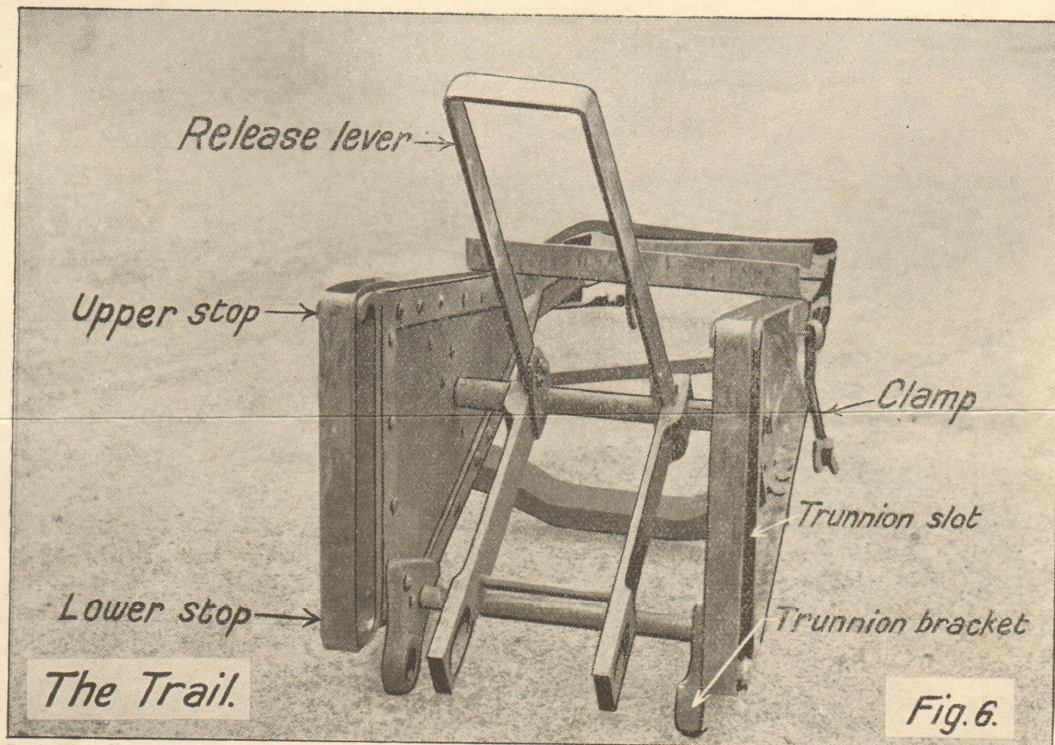
A small traverse is effected by sliding the point of the trail along the top of the spade and inserting the traversing pin, which is fixed to the trail, in one of a series of holes in the spade. The ordinary traversing gear in front of the top-carriage can also be used.

With the wheels removed, fire is more accurate and a smaller target is presented to the enemy.

(iii.) *High-angle fire* (Fig. 5).—As under (ii.) above, but the release lever does not come into play and the ordinary tangent sight is used.



HIGH-ANGLE FIRE.



3. ALLOTMENT.

A certain number of infantry regiments are issued with the following:—

- 6 light *Minenwerfer* on flat-trajectory carriages.
- 6 one-horsed ammunition carts to hold 44 rounds each.
- 3 two-horsed 1895 pattern wagons to hold 80 rounds each and the most necessary equipment.
- 12 horses.

It is recommended that in action, 2 light *Minenwerfer*, 2 one-horsed ammunition carts and 1 two-horsed ammunition wagon be allotted to each infantry battalion.

4. TABLE OF PARTICULARS.

Calibre	...	...	...	...	7.6 cm. (3").
Weight in action	...	...	...	...	4 cwt. approx.
Weight of H.E. shell	...	...	...	...	9.9 lbs.
Flat-trajectory fire.					
Elevation (on wheels)	...	...	...	...	12°—27°
Elevation (wheels removed)	...	...	...	...	0°—27°
Amount of traverse	...	...	...	...	14° approx.
Range	...	...	...	...	164—1203 yards.
High-angle fire.					
Elevation	...	...	...	...	45°—70°.
Range	...	...	...	...	328—1422 yards.
Fuzes	...	...	...	...	{<i>l.W.M.Zdr.2</i> (T. and P.). <i>Az. 16. f.l.W.M.</i> (P.).

The T. and P. fuze is graduated from 7—24 seconds and is usually set for time. Up to 400 yards range, it is set for 7 seconds and the shell bursts after a certain delay.

GENERAL STAFF (INTELLIGENCE),

GENERAL HEADQUARTERS.

25th June, 1918.