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Appendix 2

to Departmental Report of 28-2-18.

Bb. No. 2505/18. A.P.K. 10.

DESCRIPTION, METHOD OF USE, EMPLOYMENT, HANDLING AND PACKING OF THE LONG-DELAY FUZE FOR MEDIUM AND HEAVY "MINENWERFER" BOMBS.

See attached sketch, Ia/393-21, Spandau Ammunition Laboratory.

NOTE.—This description must only be communicated to officers. It is forbidden to take it into the line. No copies must be made.

I. DESCRIPTION.

1. The long-delay fuze for medium and heavy *Minenwerfer* bombs is a *high-explosive fuze with safety arrangements for transport*. It is safe as packed for issue. When required for use, it must be specially prepared in accordance with instructions in Section II.

The fuze must not be fired from a trench mortar. Externally, the fuze looks exactly like the ordinary fuze for medium and heavy *Minenwerfer* bombs, and bears the same markings, in order that the enemy may be unable to distinguish it when screwed home. When it is not screwed in, it is distinguishable by means of the *gaine*, which is enamelled *blue* in the fuze for medium and heavy *Minenwerfer* bombs, and *red* in the long-delay fuze.

Each fuze is further provided with:—

- 1 bulb for 1 hour marked "1."
- 1 bulb for 2 hours, marked "2."
- 1 bulb for 24 hours, marked "24."
- 1 bulb for 72 hours, marked "72."
- 1 file for opening the bulbs.

Every two fuzes are also provided with:

- 1 gauge for testing the position of the striker and a spanner for the cap of the fuze and the percussion cap screw, with a screw-driver for the charging-hole screw.

2. The action of the fuze may be expected to be fairly accurate at a temperature of $+15^{\circ}\text{C}$ (59°F). At higher temperatures, the fuze will take effect earlier, and at lower temperatures, later. Bulbs calibrated for a temperature of $+15^{\circ}\text{C}$ are all marked with a black line, to indicate that they are intended for use at this temperature.

3. All the parts enumerated in para. 1 are packed together in a box. (See Section V).

II. METHOD OF USE.

1. When required for use, the *gaine* must be unscrewed before screwing the fuze home into the bomb, and the percussion cap screw removed together with the percussion cap. The safety device will then fall out.

2. In order to test whether the safety wire is still in order, the lower end of the fuze must be rested on a wooden support. The distance of the striker from the lower surface of the body of the fuze is then measured with the gauge. It should be possible to insert the narrow end of the gauge as far as the mounting of the broad end, into the body of the fuze. If this is not possible, the fuze is not serviceable. In the case of an unserviceable fuze, the safety device must be replaced, the percussion cap screw with percussion cap screwed in, and the *gaine* screwed on. The fuze should be marked as unserviceable and returned.

3. If the striker is in the correct position, the cap of the fuze must be screwed off and the screw taken out of the filling-hole. The bulb which is to be used must then be cautiously filed at a distance of about 12 mm. from each end. One end is then broken off and inserted into the filling-hole of the fuze held vertically; the other end is then also broken off. The fluid then flows into the body of the fuze. The flow is accelerated by blowing into the upper end of the bulb. When the cavity in the fuze is full, the bulb is removed, the filling-hole screw is screwed home and the cap of the fuze screwed on again. The distance of the striker from the lower surface of the body of the fuze is measured again. If it is correct, the percussion cap screw and *gaine* are screwed on. *The fuze is now ready.*

4. The fuze is next screwed into the bomb. The dimensions of the thread of the fuze are such that it can easily be screwed in by hand.

5. In cases of special importance, two or more fuzes and bombs should always be prepared.

III. EMPLOYMENT.

1. The fuze must not be used for firing, but only for producing *explosions*, when it is desired to blow up ammunition dumps, *Minenwerfer* positions, dug-outs, etc., which have to be abandoned to the enemy, by means of single bombs fitted with the long-delay fuze; by exploding at a time when they have already fallen into the hands of the enemy, the ammunition and *Minenwerfer* captured by him will be rendered unserviceable, and moreover, in particularly favourable cases, heavy losses in men and material will possibly be inflicted on him.

2. The fuze will only be employed by order of the Higher Command. Such orders will specify the commanders who will be personally responsible for the *correct* employment of the fuze and for the timely evacuation of the position in question by our troops, after the fuzes have been prepared and screwed in, so that the troops may not be endangered.

3. The fuzes must always be in the *custody of an officer* and must always be *prepared* for use in the *presence* of an officer.

IV. HANDLING AND PRECAUTIONARY MEASURES.

1. It is forbidden to pack in the box or to transport fuzes without safety devices.

2. The position of the striker must be repeatedly tested, in order that any change may be noticed.

3. The cavity in the body of the fuze must always be completely filled with fluid, in order that action may not take place before the prescribed time.

4. In selecting bulbs, the markings must be carefully checked.

5. The gains and their contents and the detonators must be carefully handled and must not be dropped. Boxes of fuzes must not be thrown about.

6. In frosty weather, the fuzes (*with their safety devices intact*) should be placed in the trouser pocket to warm them to a temperature of +15°C. (59°F.). The bombs in which the fuzes are placed should be covered with rags or horse-manure, as a protection against the cold.

7. It is forbidden to unscrew long-delay fuzes from medium and heavy *Minenwerfer* bombs.

V. PACKING.

1. The fuzes are packed in pairs in special boxes. Each box contains:—

2 fuzes (*with safety devices intact*).

2 one-hour bulbs.

2 two-hour bulbs.

2 twenty-four-hour bulbs.

2 seventy-two-hour bulbs.

2 files for filing the ends of the bulbs.

1 gauge for testing the position of the striker.

1 spanner for the cap of the fuze, with a screw-driver for the screw in the filling-hole.

2. The fuze boxes are labelled in red letters:—“*Langzeitzünder für mittlere und schwere Wurfminen. Nicht verfeuern! Nur für besondere Zwecke!*” (Long-delay fuze for medium and heavy *Minenwerfer* bombs. Do not fire. Only for special purposes).

3. When the two fuzes in the box have been used, the box and contents should be returned to the Spandau Ammunition Laboratory.

GENERAL STAFF (INTELLIGENCE),

GENERAL HEADQUARTERS.

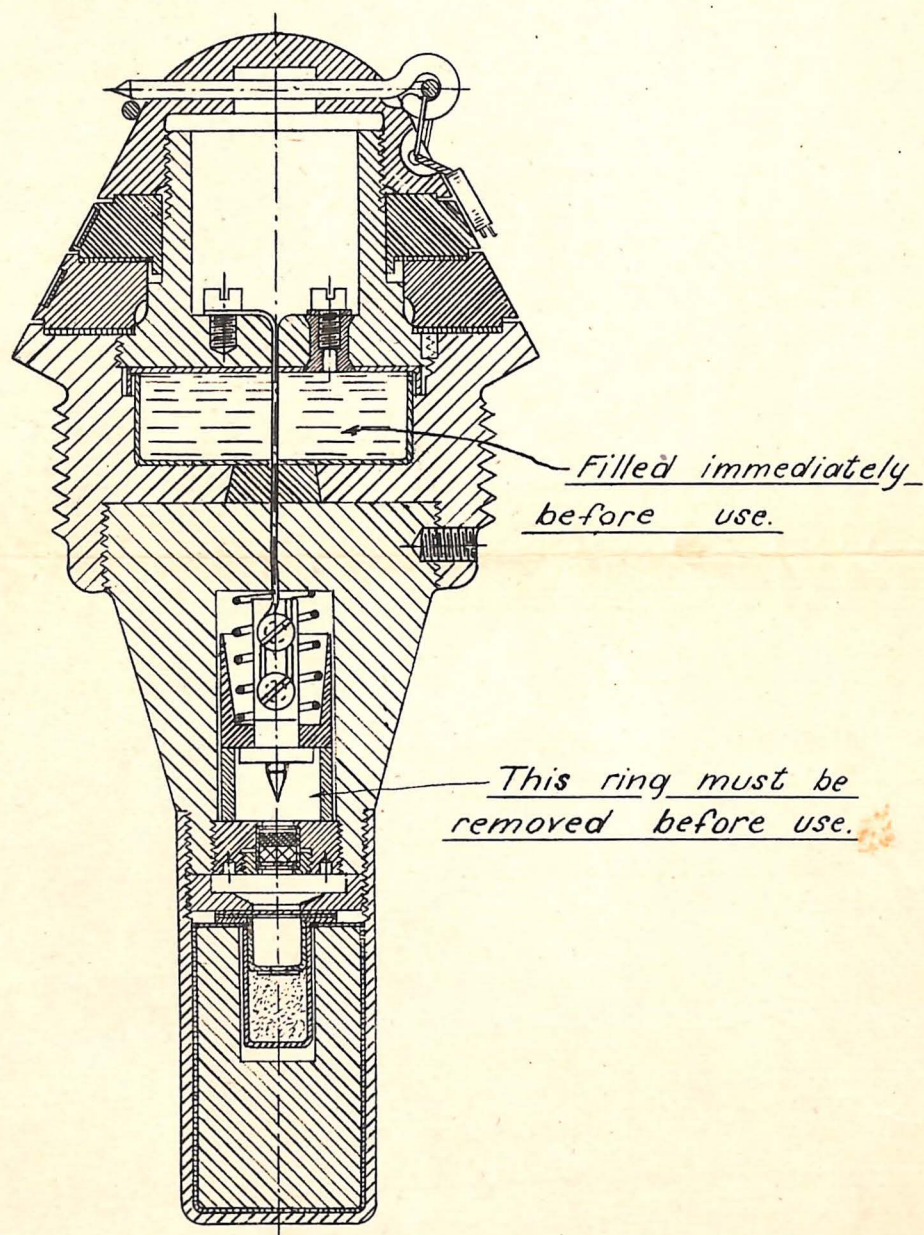
16th December, 1918.



LONG-DELAY FUZE.

FOR MEDIUM & HEAVY "MINENWERFER" BOMB.

Full Size.



The long-delay fuze is identical in appearance and dimensions with the Z.s.u.m. W.M. fuze, and rejected fuzes can be employed