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MINES AND BOOBY TRAPS
MILITARY TRAINING PAMPHLET
No. 40

Part I (All Arms)—How to deal with individual mechanisms

1943

(This Pamphlet in conjunction with Part II supersedes Military Training Pamphlet No. 40, 1942)

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*Prepared under the direction of
The Chief of the Imperial General Staff*

THE WAR OFFICE,
May, 1943

PREFATORY NOTE

1. Military Training Pamphlet No. 40, Mines and Booby Traps, will consist of the following parts:—

Part I (All Arms)—How to deal with individual mechanisms.

Part II (All Arms)—Laying and recording of British mines.

Part III (All Arms)—The breaching of minefields.

Part IV.—(In preparation).

2. The above-mentioned pamphlets should be studied by all commanders, i.e. battalion and upwards.

3. Blank pages are included in Part I for pasting in amendments which will be issued when new devices are taken into use.

DISTRIBUTION (Part I)

All arms D
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MINES AND BOOBY TRAPS

MILITARY TRAINING PAMPHLET No. 40

GENERAL RULES

THESE SAVE LIVES. LEARN THEM LIKE YOUR ABC

1. If you keep your eyes open and suspect everything unusual, you will rapidly become merely a nuisance. It is only when you become careless that you are asking for trouble.
2. Look carefully all round a mine or booby trap before starting to work on it.
3. Handle all mines, fuses, igniters and switches with care at all times.
4. Never use force. If a thing will not come undone gently by hand, leave it.
5. It generally takes **one man** to work on a mine—others keep on and lie down.
6. Look out for booby traps (see next page).
7. Never pull a slack wire and never cut a taut one. Look at both ends of any wire before you touch it.
8. Safety-pin anti-personnel mines before you lift them.
9. If you have to leave a mine or trap unlifted **mark it obviously**.
10. If you find any mine or mechanism not described in this booklet, or anything you are not confident you understand, **leave it alone, mark it obviously** and inform the sappers.
11. Don't be fooled by the name "anti-tank" mine. It blows up anything on wheels just as well as it does a tank.

BOOBY TRAPS ON MINES

Mines laid by the enemy will normally be found buried, or with tops flush with the ground surface. They will frequently be booby-trapped to catch the clumsy and incautious lifter.

Traps will normally be in the form of another charge underneath the mine, set off by a pull igniter attached to the mine by a wire.

The Teller mine is designed for booby-trapping, but all mines can be booby-trapped.

Therefore always suspect a booby trap.

Feel carefully all round and underneath the mine for wires and igniters.

2. Neutralize each igniter as you come to it.

3. Examine both ends of the wire for igniters.

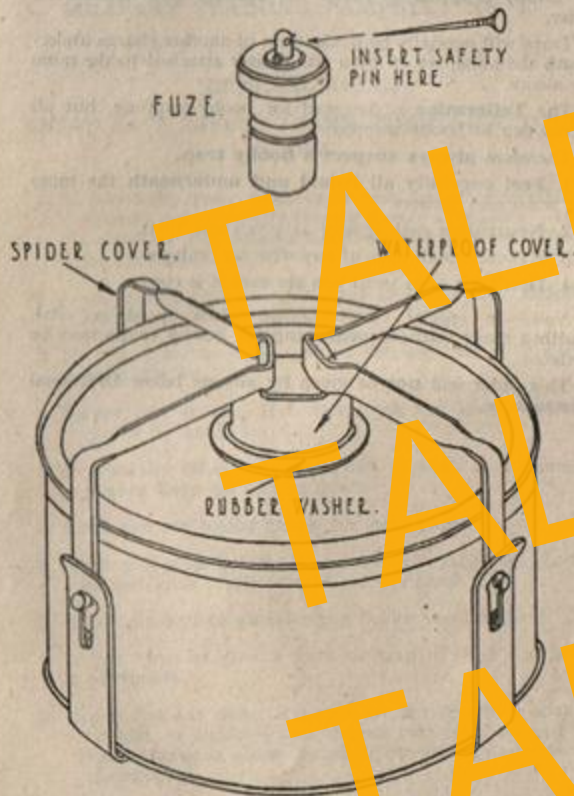
4. Don't lift mine until you are sure it is clear.

In special circumstances, when speed is vital, pulling clear without searching for booby traps may be ordered.

This order will not be given for anyone below Divisional Command.



BRITISH MINE MK V.



CHAPTER I

SECTION I.—ANTI-TANK MINE

BRITISH MK V

Size.—Circular/8 ins diameter, 4 ins high.

Weight.—About 12 lb (containing about 8 lb explosive).

Safety device.—Safety pin in the top of the fuze.

Description.—The fuze sits in a pocket in the centre of the top of the mine; over it sits a tin cap on a rubber-washer to keep moisture out of the fuze pocket. The fuze is operated by a spider frame which fits over the top of the mine and is held in place by studs which fit into slotted straps on the side of the mine.

To arm

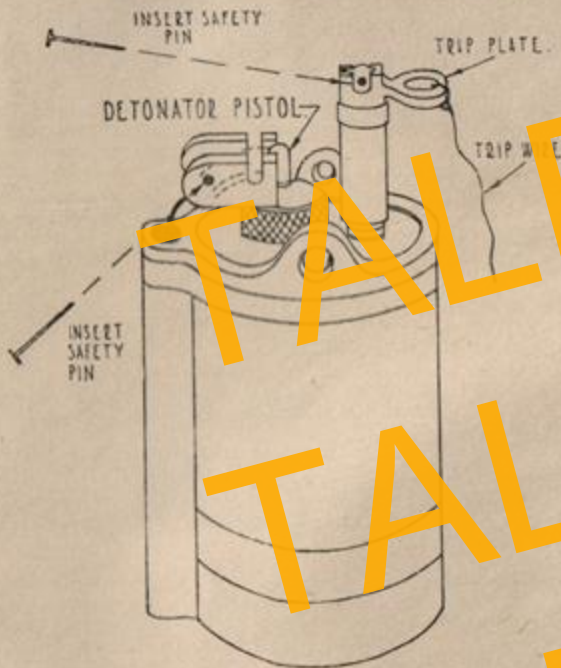
- i. Check that the shear wire of fuze is not damaged (if it is—discard the fuze).
- ii. Put the fuze in the mine and remove the safety pin with a horizontal pulling pliers.
- iii. Place the rubber washer and tin cap over it and replace spider cover.

To disarm

- i. Remove cover without putting undue pressure on it.
- ii. Insert safety pin or a strong piece of wire in the safety pin hole.
- iii. Remove fuze.

Note.—You may meet British Mine IV mines. They are similar to the MK V but have an overall solid cover in place of the spider frame, and no waterproof cap.

BRITISH SHRAPNEL MINE MKII



SECTION 2.—ANTI-PERSONNEL MINE

BRITISH SHRAPNEL MINE, MK I

Size.—Cylindrical, about 4 ins high and 3 ins diameter.
 Weight.—About 10 lbs (containing about 1 lb of explosive).
 Safety device.—Two safety pins.

Description.—The mine is designed to jump a few feet in the air before bursting. Fragmentation of the thick casing produces the anti-personnel effect. It is set off by a trip wire. The mine has two projections on the top. The taller one is the "cartridge pistol" for projecting the mine into the air. The other one is the "detonator pistol" for exploding the mine in the air, and consists of a release mechanism similar to that on a Mills bomb (Grenade 36 m).

The lever arm slides in a slot in the outer casing in which the mine sits.

To arm

- i. Ensure that BOTH pistols have SAFETY PINS IN PLACE.
- ii. Remove cartridge pistol (the larger projection) and inspect hole to see that it is clear.
- iii. Insert a cartridge and replace pistol, screwing up tight with tool provided.
- iv. Remove detonator pistol by turning knurled ring "clockwise" and inspect hole to see that it is clear.
- v. Insert a detonator, small end downwards. Shake gently to ensure the cap head rests on shoulder in the hole.
- vi. Replace detonator pistol with lever down the slot in the outer casing and screw up knurled ring *anti-clockwise*.
- vii. Check both safety pins.
- viii. Lay trip wire and attach trip wire to the trip plate on the top of the cartridge pistol. Too much tension will cause the safety pin to jump.
- ix. Remove safety pin of cartridge pistol.
- x. Remove safety pin of detonator pistol, being careful not to disturb the mine.

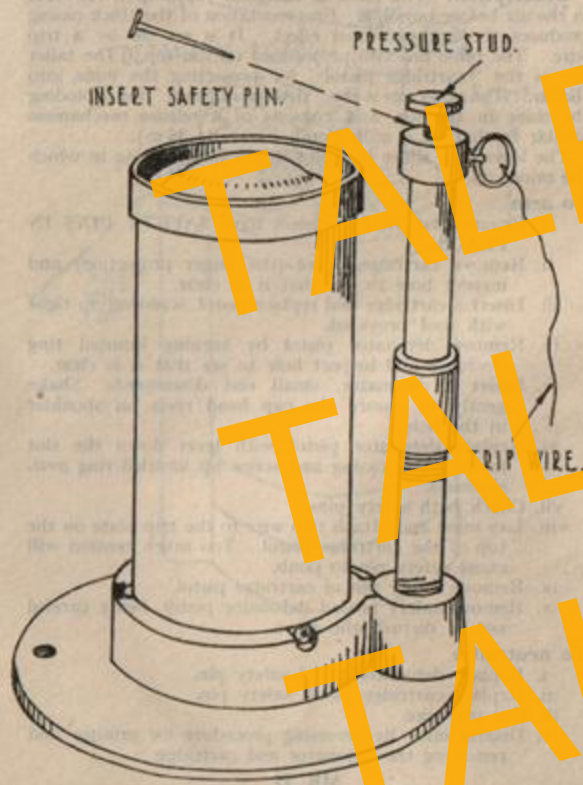
To disarm

- i. Replace detonator pistol safety pin.
- ii. Replace cartridge pistol safety pin.
- iii. Cut trip wire.
- iv. Disarm mine by reversing procedure for arming and removing the detonator and cartridge.

MK II

Almost exactly the same, but the lever arm of the detonator pistol is longer.

AMERICAN MINE M2



ANTI-PERSONNEL MINE

AMERICAN MK 2

Size.—About 7 1/2 by 4 ins.

Weight.—About 8 lb. (containing about 1 lb of explosive).

Safety device.—Safety pin in the igniter.

Description.—This mine is similar in action to the British Snapper mine.

The firing device can be operated either by pulling on a trip wire or by pressure on the knob.

To neutralize

- i. Place a nail or piece of long wire in the safety pin hole in the igniter.
- ii. Cut the trip wire or remove pressure knob (whichever applies).
- iii. Unscrew the igniter.

EXPERIMENTAL PHYSICS
LECTURE III

1. About 100 gms. of water
2. About 100 gms. of water
3. About 100 gms. of water
4. About 100 gms. of water
5. About 100 gms. of water
6. About 100 gms. of water
7. About 100 gms. of water
8. About 100 gms. of water
9. About 100 gms. of water
10. About 100 gms. of water

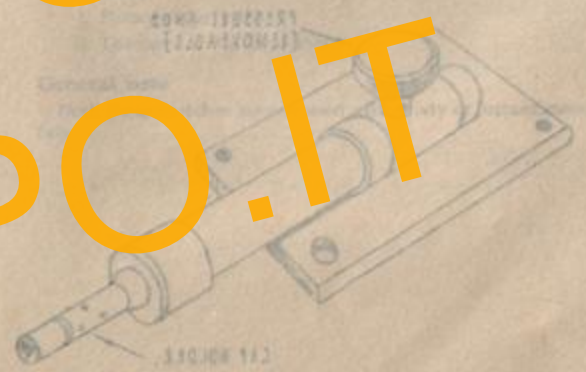


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BRITISH RELEASE SWITCH

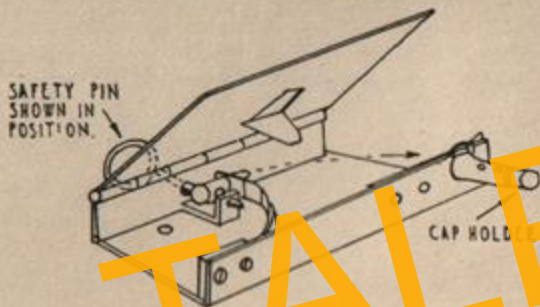


BRITISH PRESS SWITCH

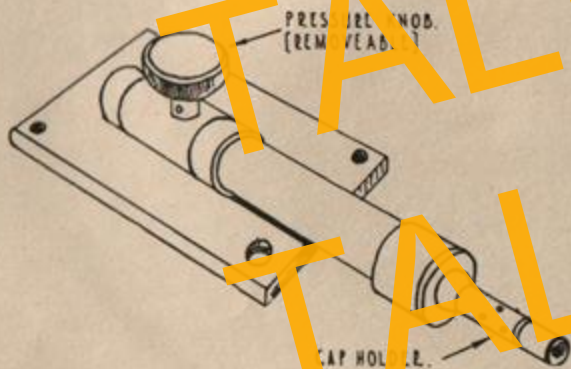


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BRITISH RELEASE SWITCH.



BRITISH PRESS SWITCH.



SECTION 3.—BOOBY TRAP SWITCHES

British RELEASE switch

This operates rather like book opening.

A tapered tongue projects inside the lid and bears against the spring when the switch is armed. The pressure of the spring tends to force the lid up. The lid is kept down by a weight—its removal will release the striker which fires a cap. Used under packing-cases and similar objects likely to be moved. Only slight movement is necessary to fire it.

To disarm

- i. Insert a safety pin or nail or piece of strong wire in the hole. The pin **MUST** go through both casing and striker head (as in sketch).
- ii. Disconnect the cap holder.

Note.—If you cannot get at the switch to insert a safety pin you may be able to cut the fuse coming from it.

British PRESS switch

This switch is operated by pressure on the knob which releases a spring-loaded striker. It may be used under boards, mats, etc., and is fired by a weight of about 30 lb.

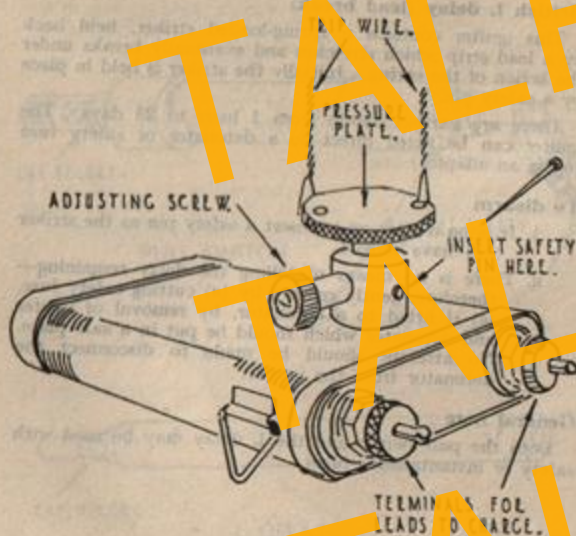
To disarm

- i. Remove the knob.
- ii. Disconnect the cap holder.

General note

Both these switches may be used with safety or instantaneous fuses.

BRITISH PRESSURE/PULL SWITCH.
ELECTRIC.



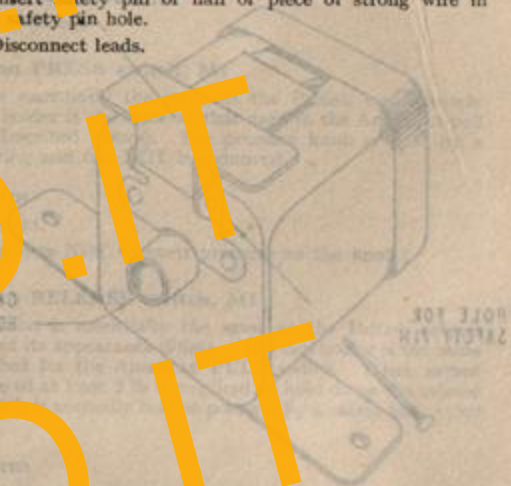
AMERICAN BOOBY TRAP SWITCHES

British PRESSURE/PULL Switch (Electric)

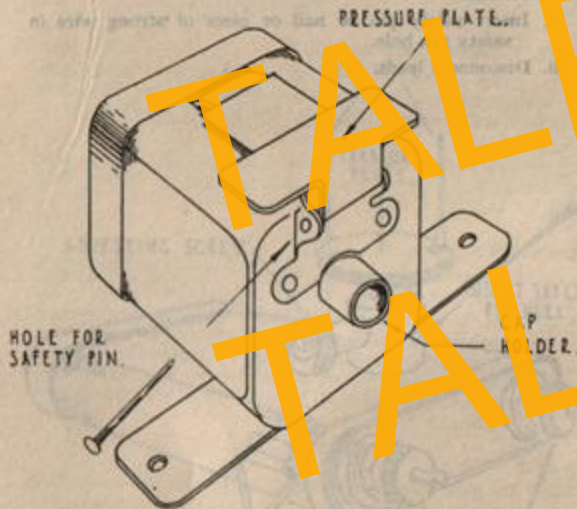
This switch contains a small battery and is designed to fire an electric detonator when either a trip wire is pulled or pressure is put on the plate. The pressure required to actuate the switch can be varied. The lightest pressure required is about 5 lb.

Neutralization

- i. Insert safety pin or nail or piece of strong wire in safety pin hole.
- ii. Disconnect leads.



AMERICAN RELEASE SWITCH M1.



BOOBY TRAP SWITCHES

American PULL switch, M1

This is essentially the same as the British pull switch, with one main modification: the cap holder is threaded to fit the American hand grenade and it can also be fitted to a detonator in addition to safety or instantaneous fuze.

To disarm

- i. Insert safety pin or nail or piece of strong wire in safety pin hole.
- ii. Disconnect.

American PRESS switch, M1

This is essentially the same as the British press switch. The cap holder is the same as that used in the American pull switch (described above). The pressure knob is held by a small spring and can NOT be removed.

To disarm

Disconnect.

(Taking care NOT to exert pressure on the knob.)

American RELEASE switch, M1

The action is essentially the same as the British release switch, but its appearance differs. The cap holder is the same as described for the American PULL switch. When armed a pressure of at least 2 lb is required to hold down the release plate, which is normally held in position by a safety pin. (See sketch.)

To disarm

Replace safety pin or nail and disconnect.

AMERICAN ELECTRICITY WORKS M.I.

AMERICAN ELECTRICITY WORKS M.I.
This is essentially the same as the British Bell switch with
one main modification - the cap holder is attached to the
switch frame and it can also be fitted to a standard
in addition to safety to insure correct use.

To disassemble
Loosen cap holder pin or hole or trace of spring wire to
release the cap holder.

Diagram
American Bell switch
This is essentially the same as the British Bell switch
with one main modification - the cap holder is attached to
the switch frame and it can also be fitted to a standard
in addition to safety to insure correct use.

To disassemble
Diagram
Taking up NOT to disassemble on the front.

American Bell switch
This is essentially the same as the British Bell switch
with one main modification - the cap holder is attached to
the switch frame and it can also be fitted to a standard
in addition to safety to insure correct use.

To disassemble
Loosen cap holder pin or hole and disconnect.

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GERMAN'S MINE

TALPO.IT
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GERMAN 'S' MINE



SECTION 5.—ANTI-PERSONNEL MINE

GERMAN 'S' MINE

This is a small cylindrical mine about 4 ins diameter and 5 ins high. On firing, the mine is projected about 3 ft into the air where it explodes, scattering steel balls in all directions. It is purely an anti-PERSONNEL mine. Up to date there are three normal methods of operation.

THE MOST COMMON method is using the *standard 3-prong pressure igniter* (see page 63).

To neutralize

Insert nail into safety pin hole and unscrew igniter.

2. ANOTHER METHOD is using *one or two standard pull igniters*. An adapter is used when pull igniters are fitted (see page 65).

To neutralize

- i. Insert nail, etc. in safety pin hole and cut trip wires.
- ii. Unscrew igniter.
- iii. Inspect other ends of all trip wires for other "S" mines or booby traps.

3. ANOTHER METHOD is using the *3-prong pressure igniters (electric)* (see page 67).

To neutralize

Carefully trace the leads to the mine and cut all leads coming from it.

ITALIAN MINE B.4.



ANTI-PERSONNEL MINE

ITALIAN B4

This is a shrapnel mine and on discharge scatters scrap metal. It is usually fixed above the ground to a tree or post as it has no "jack-in-the-box" effect like the British and German types, but has been used buried. It is fired by pulling a trip wire or by cutting a tension wire.

To neutralize:

- i. Withdraw cap holder.
- ii. Insert stout wire or nail in safety pin hole in striker.
- iii. Release cords, checking other ends for booby traps.

ANTI-PERSONNEL MINE

ITALIAN MINE B-4
ITALIAN MINE B-4

This is a standard mine and on discharge contains very
metal. It is usually found close to the ground to a foot or two
and is not too deep in the soil. It is the Italian and
German types but has been modified. It is found by pulling
a trip wire or by cutting a trench wire.

To the office

1. Italian mine B-4

These mines are usually found in a trench or hole in the
ground. They are usually found in a trench or hole in the
ground.

ITALIAN
MINE

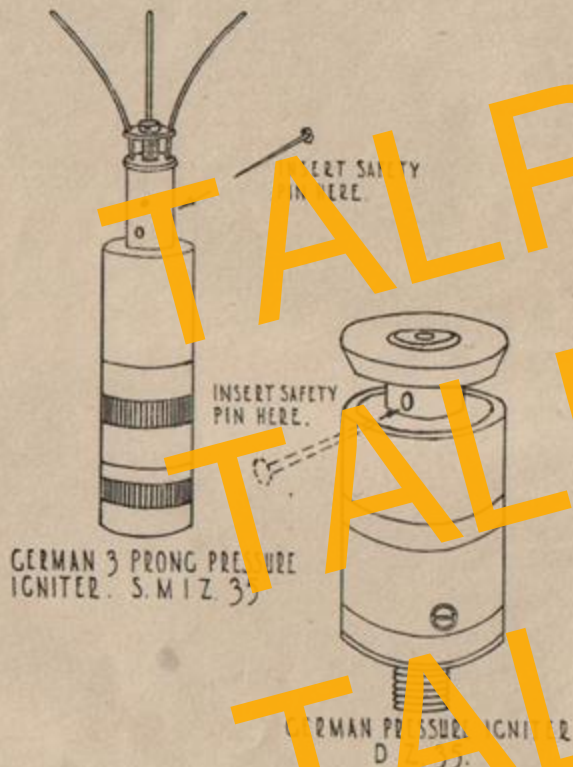
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GERMAN IGNITERS

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GERMAN IGNITERS



SECTION 6.—GERMAN IGNITERS

(FOR MINES OR BOOBY TRAPS)

General note

All German igniters are capable of being screwed into German made up charges and mines (in some cases by means of an adaptor). They can also be attached to safety fuze by means of an adaptor. In all cases the igniter fires a percussion cap.

German 3-prong pressure igniter SMIZ35

This is the 3-pronged pressure igniter most often used with the "S" mine (see page 55). Pressure required, about 15 lb.

To neutralize

- i. Place a nail or piece of strong wire in safety-pin hole.
- ii. Unscrew.

German pressure igniter DZ 5

This igniter is made in two sizes, the larger being made of aluminium and painted brown, the smaller being unpainted brass. The larger needs a greater pressure to fire. They are chiefly used in improvised mines and booby traps and in places to our own pressure switch.

To neutralize

- i. Place a nail or piece of strong wire in the safety-pin hole.
- ii. Unscrew.

