The Boobytrap Recognition Manual

Volume 3

The F1/F1A1 Combination Switch and its variants

D.W. Lynn

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Email dwlynn@shaw.ca

Introduction

These publications are a result of my frustration trying to find those little tidbits of information that are spread throughout many books manuals and papers. It is my attempt at putting it all in one place and making it easier to find. I hope you will also find it useful.

The publications will only detail officially manufactured mechanisms, I will not attempt to describe any improvised devices or methods.

It should be noted that the photos are certainly not all mine, I have been collecting photos from other collectors, museums and off the net for years and as a result of poor record keeping in many cases have no idea where I found them. If you find one of your photos in here and your name is not in the credits, please accept my apologies for using it without permission.

This book is not simply my effort, many people have contributed to its completion, have read it over, offered corrections and pointed out blatant errors. You know who you are and my thanks for your help. If you happen to find one of those errors, please let me know so I can correct it.

Enough said, on to the interesting bits……

The Australian F1/F1A1 combination switch was developed in the 1960's and adopted by Australia. It was offered to the ABCA (America, Britain, Canada, Australia) countries and was also adopted by them all. It was subsequently adopted by a number of other countries.

Known countries that have adopted the switch are:

Australia– F1A1, F2A1, F3A1
Britain– L4A1, L5A1
Canada– F1A1
Egypt– M338
South Korea– KM142, K471
New Zealand– F1A1, F2A1, F3A1
Norway– M142F1, M142N
Singapore– BTI-1
United States– M142

Australia

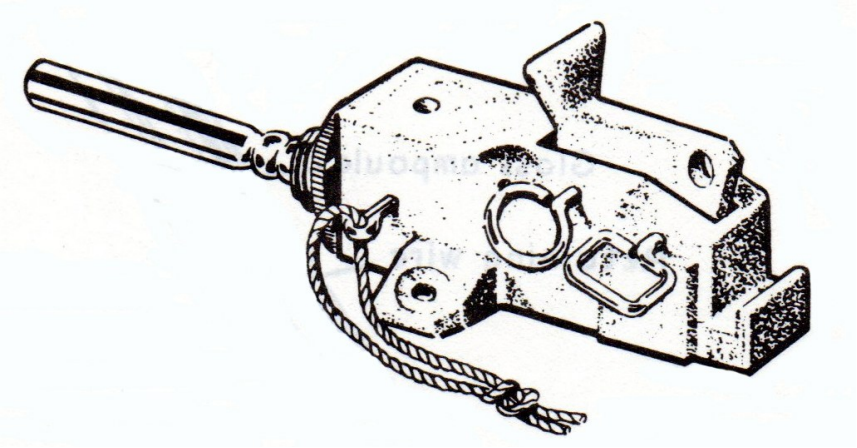
Canada

New Zealand

Firing Device, Combination, F1

Country– Australia
Type– Combination
Introduced 1966

This is the forerunner to the F1A1 firing device. This is the prototype sent to the ABCA (America, Britain, Canada, Australia) countries for evaluation in 1966. The only difference between the two devices is that the F1 is square instead of round in cross section. It was quickly replaced in service by the F1A1.

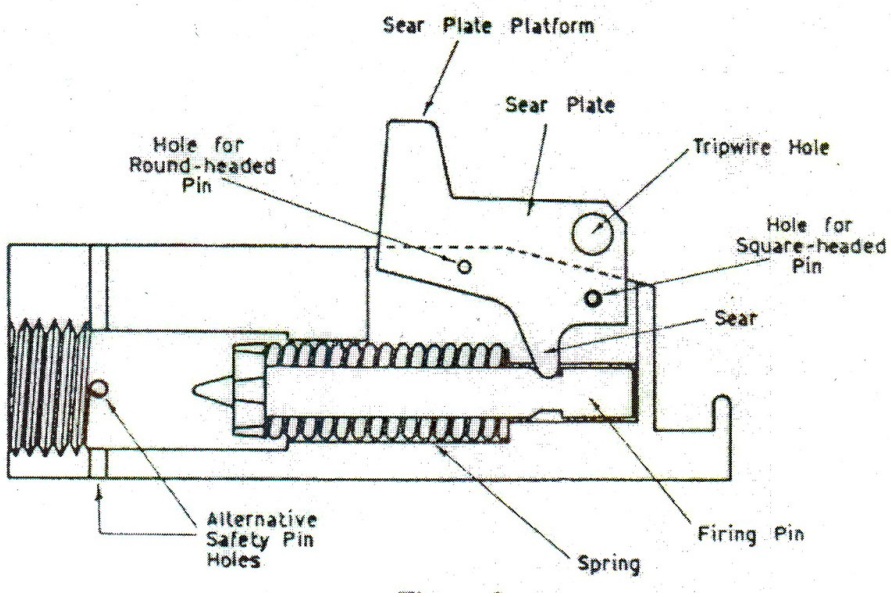


Firing Device, Combination, F1

It uses a coupling base assembly that has a percussion cap and live detonator that is protected by a plastic protective cover.

The device is coloured olive drab with yellow markings on the container and on the protective cover of the detonator.

The device is supplied in a tin containing the combination switch, a "Coupling Base, Firing Device, F1", tension release attachment, 50 feet of trip wire, fastening nails and screws and a sheet of setting instructions.



Side view of device showing sear engaged in detent of firing pin.

Firing Device, Combination, F2 Practice

Country– Australia
Type– Combination
Introduced 1966

It uses a coupling base assembly that has a percussion cap and practice detonator containing a small amount of powder. The practice detonator is protected by a plastic protective cover. When fired it makes a sharp report and splits open the practice detonator.

The container and device are coloured blue with yellow markings on the container and on the protective cover of the practice detonator.

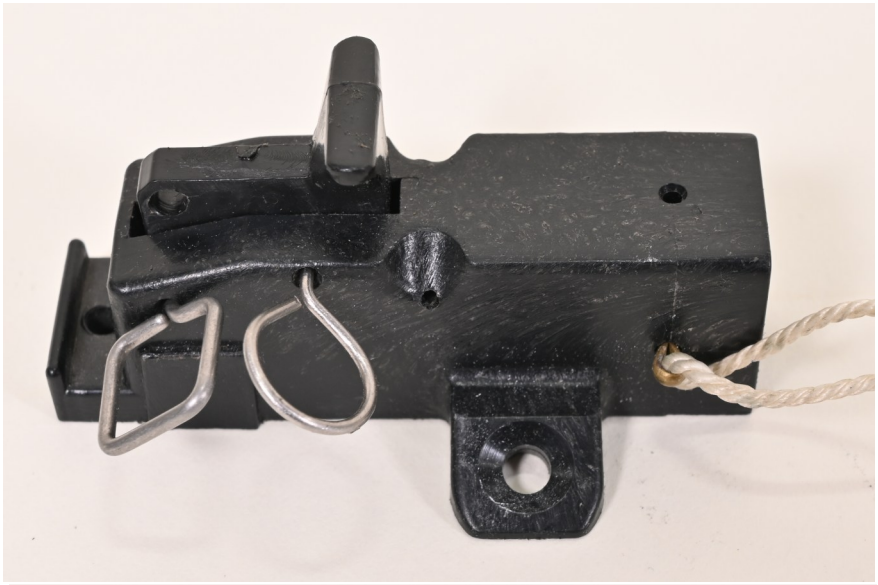
F2 Transport Tin

Firing Device, Combination, F3, Inert

Country– Australia
Type– Combination
Introduced 1966

This is an instructional unit used for classroom instruction. It uses a coupling base assembly that has an inert percussion cap and inert detonator with a hole drilled through it. The inert detonator is protected by a plastic protective cover.

The container and device are coloured dark blue with white markings on the container only.



Firing Device, Combination F3

AUSTRALIAN MILITARY FORCES

FIELD ENGINEERING AND MINE WARFARE

PAMPHLET No 11

FIRING DEVICE DEMOLITION F1 COMBINATION BOOBY TRAP

1967

AMENDMENTS

Amendment Number	Date of Amendment	Date of Insertion
1	APR 74	3 MAY 74

DISTRIBUTION

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Inf .... Scale E
Other Arms and Svcs (Less RAANC and WRAAC) Scale D

Army Headquarters,
Canberra, ACT
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Prepared and issued under the direction of the Chief of the General Staff.

PREFACE

1. The purpose of this pamphlet is to:

   a. Acquaint all arms with the Firing Device Demolition F1, Combination Booby Trap (See Figure 1).

   b. Provide instructions for the setting, neutralizing and disarming of the device.

   c. Specify the safety precautions to be observed when using the device.

2. This pamphlet should be read in conjunction with *"Field Engineering and Mine Warfare Pamphlet No 7, Booby Traps, 1952"*.

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Figures:

FIRING DEVICE DEMOLITION F1 COMBINATION BOOBY TRAP

SECTION 1 — INTRODUCTION

1. The device is a standard service mechanism designed to facilitate the laying and initiation of explosive-filled booby traps.

2. It incorporates a *"coupling base assembly"* (cap and detonator) which may be screwed into the US Demolition Block, M26 Grenade and M34 Smoke Grenade. Alternatively, the detonator may be inserted into a service CE primer or used to initiate a length of detonating cord leading to a main charge.

SECTION 2 — DESCRIPTION

Components

3. The complete device is packed in a tin which contains th following items (See Figure 1):

a. Combination Switch.
b. Coupling Base, Firing Device F1.
c. Tension Release Attachment.
d. Reel Tripwire, with 50 ft of wire.
e. Fastening Nails and Screws.
f. Setting Instructions.

Operational and Training Versions

4. The following versions are available:

a. *Firing Device Demolition F1, Combination Booby Trap.* This has a live detonator in the coupling base assembly and is supplied for operational use ONLY. Both container and device are coloured olive drab with yellow markings on the container and the protective cover of the detonator. The detonator is its natural aluminium colour and is unmarked.

b. *Firing Device Demolition F2, PRACTICE, Combination Booby Trap.* This is supplied to provide realistic training without risk of injury. The coupling base assembly has a live cap and a practice detonator containing a small amount of powder. When fired, it makes a sharp report and the detonator splits open. The

FIRING DEVICE DEMOLITION F1
COMBINATION BOOBY TRAP

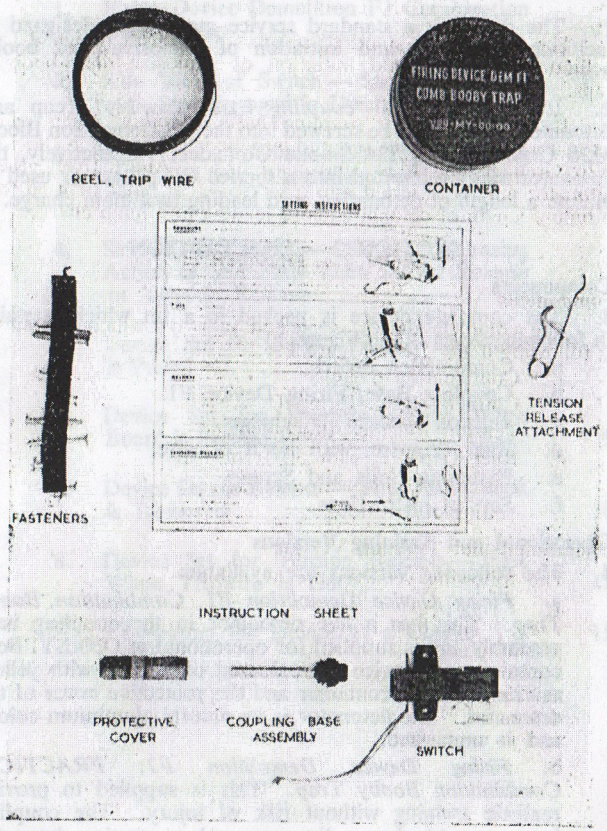


Figure 1

practice detonator is NOT suitable for initiating CE primers, detonating cord or high explosives. Both container and device are coloured blue with yellow markings on the container and coupling base assembly.

c. *Firing Device Demolition F3, INERT, Combination Booby Trap.* This is supplied for instructional purposes and use in classrooms. The coupling base assembly has an inert cap and detonator with a hole drilled through the latter. Both container and device are coloured blue with white markings on the container only.

Packaging

5. All versions of the device use similar packaging — 14 units in a Box Ammunition M19A1 with four of these in a wire-bound outer box. The filled box with 56 devices weighs 42 lbs.

6. Both inner and outer boxes are coloured olive drab with yellow markings.

Functions

7. The device may be set to function in any ONE of four ways at one time:

a. By PULL applied to a tripwire.
b. By PRESSURE applied to the sear platform.
c. By RELEASE OF PRESSURE on the sear platform.
d. By RELEASE OF TENSION on a tripwire.

8. The switch portion of the device is designed to function under water without sealing or other preparation. The coupling base assembly itself is waterproofed.

General Operation

9. The switch portion incorporates a sear plate fitted with two removable pivot pins. When both are in position, the sear plate is locked. The sear is engaged in the firing pin, which is held back against its compressed spring (See Figure 2).

10. When the SQUARE head pin is removed, a pressure of 25 lb on the sear platform or a pull of seven lb at the other end will make the sear plate pivot on the ROUND head pin. This disengages the sear, allowing the firing pin to fly forward and fire the cap in the coupling base assembly. The SQUARE head pin is always removed when the device is set for PULL or PRESSURE (See Figure 3).

SIDE VIEW OF SWITCH — SHOWING INTERIOR WITH SEAR ENGAGED IN DETENT OF FIRING PIN

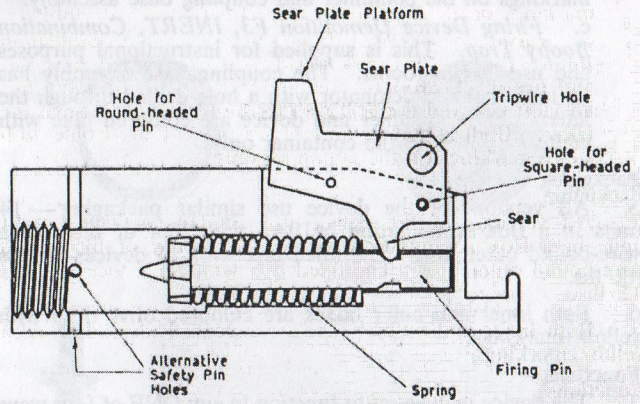


Figure 2

SIDE VIEW OF SWITCH — SHOWING RELEASING ACTION OF SEAR PLATE WHEN SET FOR PULL OR PRESSURE

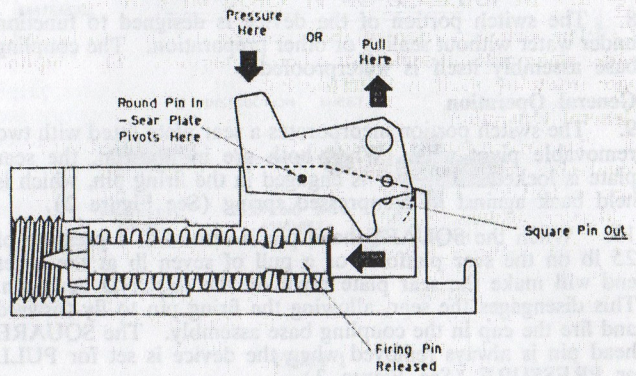


Figure 3

Note: The SQUARE head pin has a larger diameter than the ROUND head pin and their positions are not interchangeable.

11. When the ROUND head pin is removed, the sear plate is free to pivot on the SQUARE head pin. Unless the sear platform is held down by a weight of more than 2 lb, the compressed spring will push the firing pin forward, lifting the sear and automatically releasing the firing pin. The ROUND head pin is always removed when the device is set for RELEASE or TENSION RELEASE (See Figure 4).

SIDE VIEW OF SWITCH — SHOWING RELEASING ACTION OF SEAR PLATE WHEN SET FOR RELEASE OR TENSION RELEASE

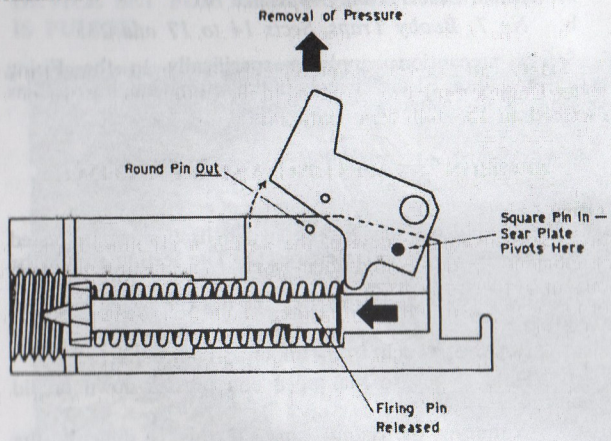


Figure 4

12. In each operating position, the firing cap is fully protected by the safety pin which can be recognized by the white nylon loop attached. If the firing pin is accidentally released during setting and the click is not heard or the changed position of the sear plate is not observed, the stiffness of extraction of the safety pin will indicate the fault. The safety pin can be inserted in the switch from either side or from top or bottom through the alternative holes provided.

SECTION 3 — GENERAL SAFETY PRECAUTIONS

13. The Firing Device Demolition F1 Combination Booby Trap has a number of safety features in its design. Provided the user follows the setting instructions, there is no risk of premature firing. Nevertheless, booby traps **of any type** can never be completely foolproof because they are designed specifically to catch the careless and unwary and must be more sensitive than more conventional mechanisms.

14. It is therefore essential that persons using any booby trap device observe the general safety precautions and procedures described in Field Engineering and Mine Warfare Pamphlets:

a. *No 5 Pt 1, Laying, Recording and Marking of Minefields, Sect 17 and Appendix H.*

b. *No 7, Booby Traps, Sects 14 to 17 and 21.*

15. Safety precautions applying specifically to the Firing Device Demolition F1 are covered in the setting, etc, instructions described in the following paragraphs.

SECTION 4 — TESTING AND RESETTING

Testing

16. Before using the device, the switch itself must be tested for efficient operation and then reset. The testing should be done in a rear area to ensure that an unserviceable device is not taken forward to the laying site. To test the switch, proceed as follows:

a. Remove switch from tin and replace lid.

b. Hold switch so that open end presses down on lid of tin.

c. Withdraw the safety pin. If this is difficult, the switch has probably been activated and the striker has moved forward bending the safety pin. (In this event the switch must be reset as explained below.)

d. Remove the pin with SQUARE head.

e. Press on the sear platform and activate the switch. If it does not function, set it to one side and report the defect. DO NOT LOOK INTO THE OPEN END OF THE SWITCH. The striker can fly out and cause permanent damage to the eye.

Resetting

17. a. Push back the striker with a pencil or round of SA ammunition until the sear can be re-engaged in the striker by pressing down on the sear plate.

b. Re-insert pin with SQUARE head.

c. Re-insert safety pin (straighten if bent).

d. Check switch for cleanliness and repack in container.

SECTION 5 — SETTING, NEUTRALIZING AND DISARMING

Pull Function

DEVICE SET FOR PULL — FIRES WHEN WIRE IS PULLED

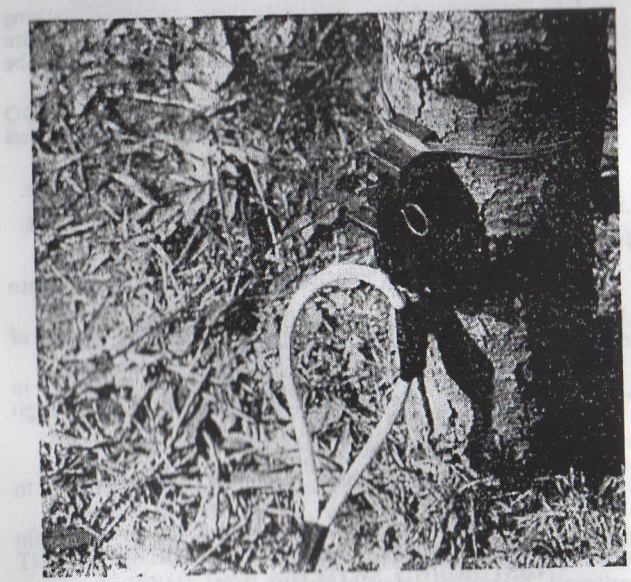


Figure 5

18. *Setting.* (See Figure 5.)

a. Check safety pin for ease of removal and re-insert.

b. Secure switch to a stake or fixed object using the nails, screws or wire provided. Ensure that the top of the sear plate faces the direction in which the tripwire will run.

c. Screw in coupling base assembly.

d. Fasten free end of tripwire to a stake or fixed object **facing** the switch and run the wire directly back to the switch. Remove any kinks.

e. Cut the wire to a suitable length, thread it through hole "P" in the sear plate and pull it fairly taut and twitch securely. Cut off any spare wire.
Note: A pull of about seven lb will activate the switch so the tripwire MUST NOT be pulled too tight.

f. Remove pin with SQUARE head without disturbing switch. (If a *"click"* is heard, it indicates that the tripwire is too tight and has activated the switch, which must be reset.)

g. Withdraw safety pin using attached string. (DO NOT ATTEMPT TO WITHDRAW THE PIN if it resists movement. Examine and reset.)

h. Move clear without disturbing switch or tripwire.

i. Remove container and other indications of laying.

19. *Neutralizing.*

a. When coupling base assembly is fitted directly into the main charge:

(1) Check along tripwire for alternative means of firing. Do NOT disturb tripwire.

(2) Insert safety pin (or suitable wire, nail, etc) in safety pin hole. Ensure that pin goes right through switch body.

(3) Cut tripwire.

b. When coupling base assembly is connected to detonating cord:

(1) Cut detonating cord between device and main charge IF THIS CAN BE DONE WITHOUT DISTURBING SWITCH.

(2) Proceed as in Sub-paragraph a. above.

Pressure Function

20. *Setting.* (See Figure 6.)

DEVICE SET FOR PRESSURE — FIRES WHEN BOARD IS PRESSED DOWN

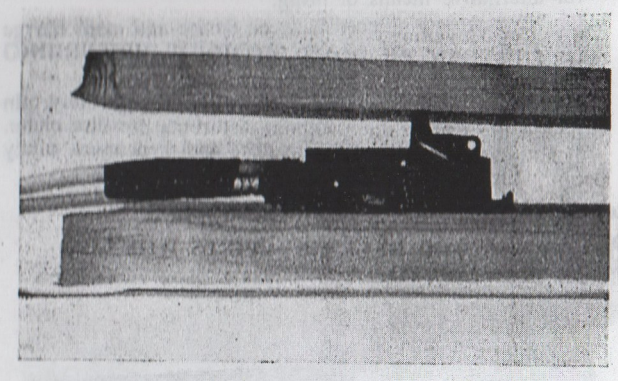


Figure 6

a. Check safety pin for ease of removal and re-insert.

b. Secure switch to firm level base (small board, etc) so that the sear platform is uppermost.

c. Screw in coupling base assembly.

d. Place a light-weight flat pressure plate (small board, etc) on the device so that it rests on the sear platform and can exert pressure on it when trodden on.

Note: A pressure of about 25 lb will activate the switch, so the pressure plate MUST NOT be too heavy.

e. Remove pin with SQUARE head using a short length of previously attached wire if necessary. (If a *"click"* is heard, it indicates that the pressure plate is too heavy and has activated the switch, which must be reset.)

f. Withdraw the safety pin using previously attached wire if necessary. (NO NOT ATTEMPT TO WITHDRAW THE PIN if it resists movement. Examine and reset.)

g. Move clear without disturbing device or pressure plate.

h. Remove container and other indications of laying.

21. *Neutralizing.*

a. Without disturbing the set-up, examine it and check for alternative means of firing.

b. Cut detonating cord between device and main charge IF THIS CAN BE DONE WITHOUT DISTURBING THE SWITCH.

c. Insert safety pin (or suitable wire, etc) in safety pin hole if this can be done without disturbing pressure plate. If not, carefully raise pressure plate and then insert safety pin. Ensure that pin goes through switch body.

Release Function

DEVICE SET FOR RELEASE — FIRES WHEN BOOK IS REMOVED

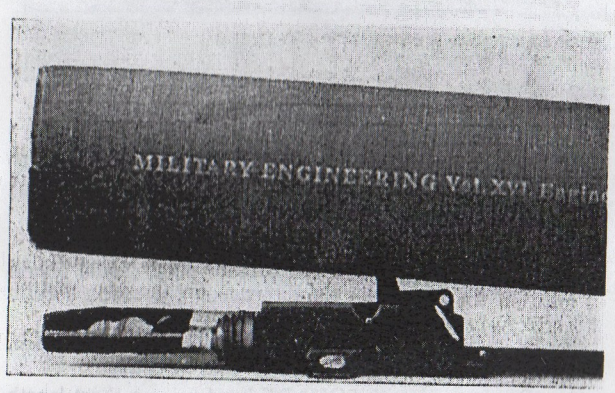


Figure 7

22. *Setting* (See Figure 7.)

a. Check safety pin for ease of removal and re-insert.

b. Secure switch to firm level base so that the sear platform is uppermost and switch cannot move.

c. Screw in the coupling base assembly.

d. Place an object on the switch so that it exerts a downward pressure on the sear platform of not less than 1 kilogram and not more than 20 kilograms. (If this latter weight is exceeded it will make the round headed pin difficult to withdraw and an unduly heavy weight may crush the device itself.)

sear platform and release the mechanism. (Some packing may be required to keep the object stable.)

f. Remove pin with ROUND head using a previously attached wire if necessary. (A *"click"* indicates that the sear platform has risen, releasing the striker. Examine and reset using heavier object on the sear platform.)

g. Withdraw safety pin using a previously attached short length of wire if necessary. Pull the pin straight out, NOT at an angle. (DO NOT ATTEMPT TO WITHDRAW THE PIN if it resists movement. Examine and reset.)

Note: THE DEVICE IS IN ITS MOST SENSITIVE STATE WHEN SET FOR RELEASE. THE UTMOST CARE MUST BE TAKEN TO AVOID DISTURBING THE SET-UP WHEN WITHDRAWING THE SAFETY PIN.

h. Move clear without disturbing the set-up.

i. Remove container and other indications of laying.

23. *Neutralizing.*

a. Without disturbing the set-up, examine it and check for alternative means of firing.

b. If possible, cut detonating cord between device and main charge.

c. Insert safety pin (or suitable wire, etc) in safety pin hole and ensure pin goes through switch body. (It may be necessary to hold the weight down on the sear platform while doing this.)

Note: IF THERE IS THE SLIGHTEST RISK OF ACTIVATING THE DEVICE WHILE MAKING IT SAFE, IT MUST BE DESTROYED IN SITU BY:

(1) Pulling it with a cable and grapnel from a safe distance.

(2) Firing a small charge next to it.

Tension Release Function

DEVICE SET FOR TENSION RELEASE — FIRES WHEN THE TRIPWIRE IS CUT

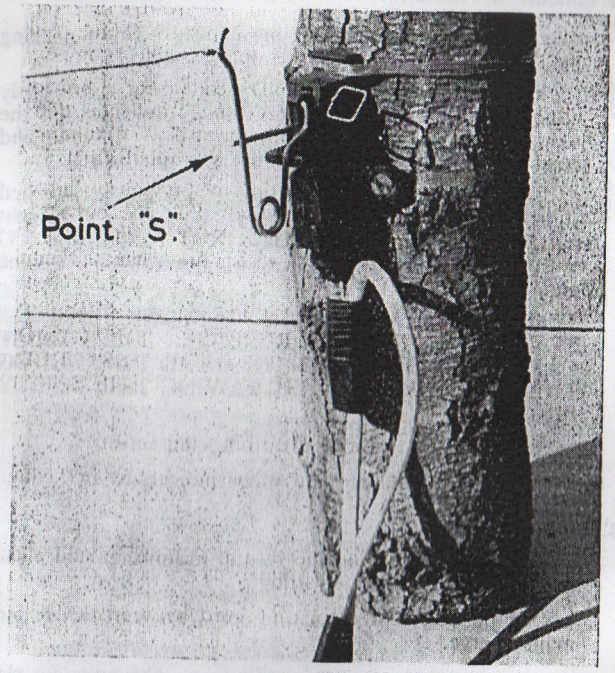


Figure 8

24. *Setting.* (See Figure 8.)

a. Check safety pin for ease of removal and re-insert.

b. Secure switch to a stake or fixed object so that it cannot move. Ensure that:

(1) The top of the sear platform faces in the direction of the tripwire.

(2) The switch is vertical, preferably with open end pointing down.

c. Screw in the coupling base assembly.

d. Fit the tension release attachment.

e. Fasten free end of tripwire to stake or fixed object facing the switch and run the wire directly back to the switch, removing any kinks:

Note: The tripwire must be horizontal in relation to the switch.

f. Cut the tripwire to a suitable length and take a complete turn around the curved neck on the tension release attachment. Adjust tension on wire until arm of attachment lines up with point "S" (Figure 8). Twitch wire securely and cut off spare end.

g. Remove pin with ROUND head without disturbing switch. (A *"click"* indicates that the switch has activated itself, probably because of insufficient tension on the tripwire. Examine and reset.)

Note: A tension of at least five lb is needed to prevent self-activation of the switch.

h. Withdraw safety pin by attached string. (DO NOT ATTEMPT TO WITHDRAW THE PIN if it resists movement, Examine and reset.)

i. Move clear without disturbing switch or tripwire.

j. Remove container and other indications of laying.

25. *Neutralizing.*

a. When coupling base assembly is fitted directly into main charge:

(1) Check along tripwire for alternative means of firing. Do NOT disturb tripwire.

(2) Insert safety pin (or suitable wire, etc) in safety pin hole. Ensure that pin goes right through switch body.

(3) Cut tripwire.

b. When coupling base assembly is connected to detonating cord:

(1) Cut detonating cord between device and main charge IF THIS CAN BE DONE WITHOUT DISTURBING SWITCH.

(2) Proceed as in Sub-paragraph a. above.

Disarming the Device

26. This action must be taken ONLY AFTER the device has been neutralized:

a. Detach switch from coupling base assembly.

b. Detach main charge, or detonating cord, from coupling base assembly.

c. Remove the device to a safe place.

SECTION 6 — CONNECTING TO A CHARGE

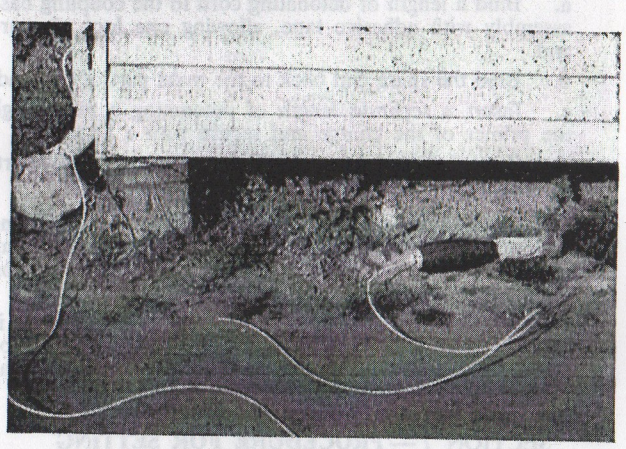
Connecting to US Demolition Block, etc

27. The coupling base assembly may be screwed directly into the detonator well of the US Demolition Block, M26 Grenade or M34 Smoke Grenade.

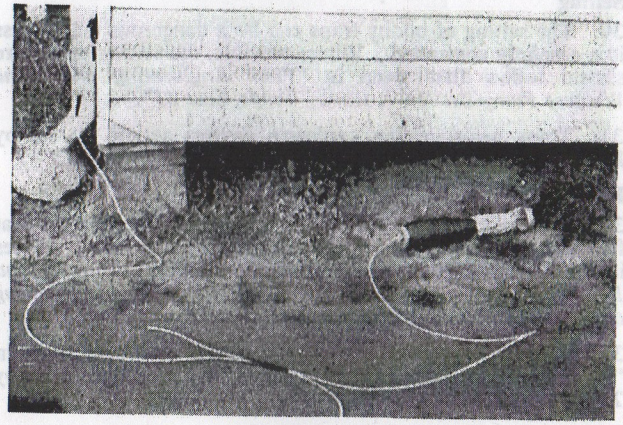
Connecting to a Separate Charge

28. When the device is required to initiate an HE charge, shell, bomb, etc, the charge will normally be concealed and may be some distance from the device. A detonating cord lead will be required to connect the device to the charge, etc.

CONNECTING THE DEVICE TO A CHARGE



Stage 1 — Before withdrawal of safety pin



Stage 2 — After withdrawal of safety pin

Figure 9

29. The connecting procedure is as follows (See Figure 9):

a. Bind a length of detonating cord to the coupling base assembly with adhesive tape, allowing one foot of spare end.

b. Bind the spare end back to the main part of the lead.

c. Insert a separate length of detonating cord through the primer of the charge and secure with a knot.

d. Keep the two loose ends of detonating cord well apart.

e. Set the device and remove the safety pin.

f. Connect the two lengths of detonating cord by binding with adhesive tape. There should be four inches overlap at the joint and one foot of spare end should be left on each length of the detonating cord.

Note: The charge is connected last so that, if the device is sprung when the safety pin is removed, there will be less harm done. Take care when connecting the detonating cord leads that the device is not disturbed.

SECTION 7 — PROCEDURE FOR SETTING AND RECORDING TRAPS

Setting

30. The setting of booby traps can be a dangerous task unless it is carefully controlled. Where possible, the setting procedure should follow that given in *"Field Engineering and Mine Warfare Pamphlet No 7, Booby Traps, Sect 21"*.

31. Traps incorporating explosive devices should be set by RAE and RA Inf Aslt Pnrs only.

Recording

32. The policy for recording booby traps is the same as that for mines. When laid as anti-personnel or anti-lifting devices in minefields, the procedure given in *"Field Engineering and Mine Warfare, Pamphlet No 5, Laying, Recording and Marking of Minefields"* will be followed.

33. When booby traps are laid alone, the procedure given in *"Field Engineering and Mine Warfare Pamphlet No 7, Booby Traps, Sect 22"*, will be followed.

SECTION 8 — RESERVED

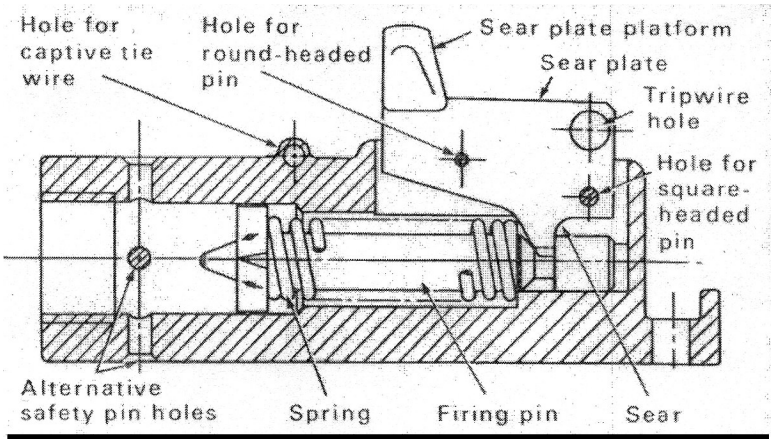
Firing Device, Combination, F1A1

Country– Australia/Canada/New Zealand
Type– Combination
Introduced 1969
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in.
Body Material- Plastic

Firing Device, Combination, F1A1

This device was introduced in 1969 and has since been adopted by a number of nations such as Canada, Britain, United States, Norway, New Zealand and South Korea.

The device is a compact unit capable of initiating a boobytrap via Pull, Pressure, Release, or Tension Release depending on how it is set. The device will operate under a pressure of 11.3 kg, a pull of 3.2 kg, or a release of pressure or tension of 1.1 kg.



Side view of device showing sear engaged in detent of firing pin.

The device is made of plastic in a basically cylindrical form. There are lugs and recesses molded onto the body that allows it to be screwed, nailed or wired in almost any position. A slot in the top of the body accepts the sear plate that is held in position by two pins, one with a round head and one with a square head. A positive safety pin fits through the barrel of the body preventing the striker from hitting the percussion cap. An alternative set of holes for the positive safety are located at 90 degrees from the normal holes. The striker is made of aluminum with a plastic four pronged guide and spring stop near the point. The rear portion of the striker has a groove that engages the sear. A striker spring fits over the striker. The striker and spring fit into the body compressing the spring until the sear on the bottom of the sear plate engages the groove in the striker.

The device is issued in a round tin or plastic case containing everything required to set the device in any mode. Contained within the case is the device, roll of steel trip wire containing 15 metres of wire, a strip of tape containing screws and nails, a tension release attachment, and an instruction sheet. The F4 coupling base is issued separately.

It was initially used with the "Coupling Base, Firing Device F1". It was fitted with a No. 2A primer and had a No. 27 detonator machine crimped on. It was protected in transit by a heavy walled plastic sheath. The firing device is now normally used with the F4 Coupling base. The "Coupling Base, Firing Device, F4" is more versatile than the F1 base as it can be used with Fuse Instantaneous, Safety Fuse, Detonators, the US style demolition block and grenades. It can also be used with the "Adapter fuze hole cavity 2 in, F5" for initiation of any projectile with a 2 inch fuze cavity. The F4 Coupling Base is fitted with the M42 primer but no detonator which reduces the hazards involved with transit and storage. The US M1 Base coupler can also be used with this device.

The device is made of olive green plastic, as are the F4 base couplers.

The mode of use determines which pins are taken out to set the device. For use as a release device, the round headed pin is removed. For use as a pressure device, the square headed pin is removed, for use as a pull device, the square headed pin is removed, and for use as tension release it must be fitted with the attachment and have the round headed pin removed. It should be noted that the two pins are not interchangeable as they are made from different gauges of wire with corresponding holes.

Australian grenades were specifically designed to enable the use of the F1A1 firing device. The F1 Fragmentation grenade was used by removing the striker assembly and screwing the firing device directly onto the detonator of the grenade. The F2 Smoke grenades could also be fitted with the firing device by screwing it directly onto the threaded stub on top of the grenade.

F1 Fragmentation Grenade and Grenade fitted with Firing Device, Combination, F1A1

F2 Smoke grenade, note the threaded stub on the top.

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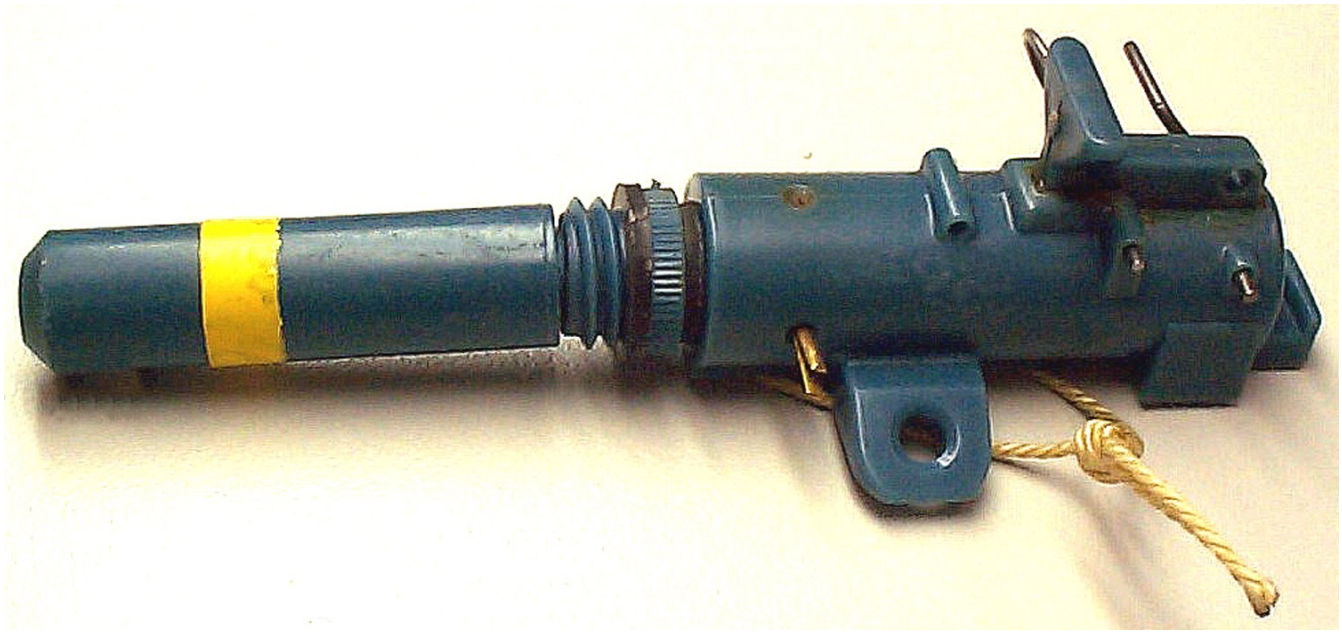
Examples of the packing tins from 1972, 1981, 1984 and 1992

Examples of the packing for coupling base F4

Firing Device, Combination, F2A1, Practice

Country– Australia/New Zealand
Type– Combination, Practice
Length- 2.25 in.
Diameter- 1.6 in.
Height- 1.1 in.
Body material- Plastic



Firing Device, Combination, F2A1, Practice

This is the practice version of the F1A1. It is exactly the same as the live version but is designed for practice. Live detonators or detonating cord are not to be used with the F2A1.

The device is supplied with an F5 Coupling base which contains a live M42 primer. The primers in the F5 base can be replaced by using a special Cap Replacement device. It can also use the earlier "Coupling base F1" with practice detonator.

The device is blue to indicate practice. The F5 Coupling base is also blue but has a yellow hazard band to indicate the live primer. The earlier Coupling base has a yellow band around the detonator protector to indicate a practice item.

Packing tins for Firing Device, Combination, F2A1, Practice dated 1971 and 1987

Packing for Practice coupling bases

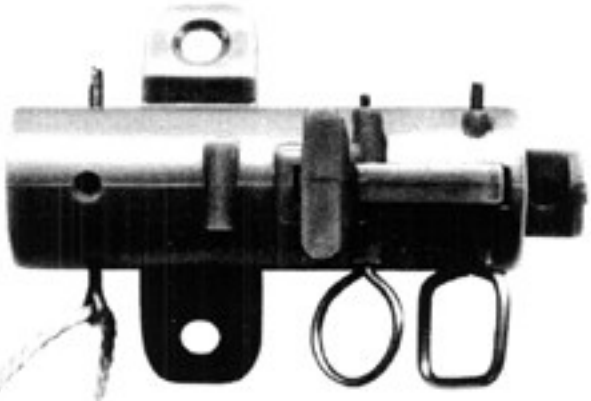
Firing Device, Combination F3A1, Inert

Country– Australia/New Zealand
Type– Combination, Training
Introduced 1969
Length- 2.25 in.
Diameter- 1.6 in.
Height- 1.1 in.
Body material- Plastic

This is the inert version of the F1A1. It is exactly the same as the live version but is designed for classroom instruction. It is supplied with an F6 Coupling base which contains an inert M42 primer.

Both the device and coupling base are coloured dark blue but the F6 base does not have the yellow hazard band.

FIRING DEVICE DEMOLITION F1A1 COMBINATION BOOBY TRAP



ENGINEERING DEVELOPMENT ESTABLISHMENT
MARIBYRNONG, VICTORIA. AUST

Introduction

To meet the need of the Australian Army for a firing device to replace the Switch Combination (Aust), Engineering Development Establishment developed the Firing Device, Demolition, F1A1, Combination Booby Trap. The Switch Combination (Aust) did not satisfy dimensional and operating load requirements, and had no provision for connection to the standard US demolition block.

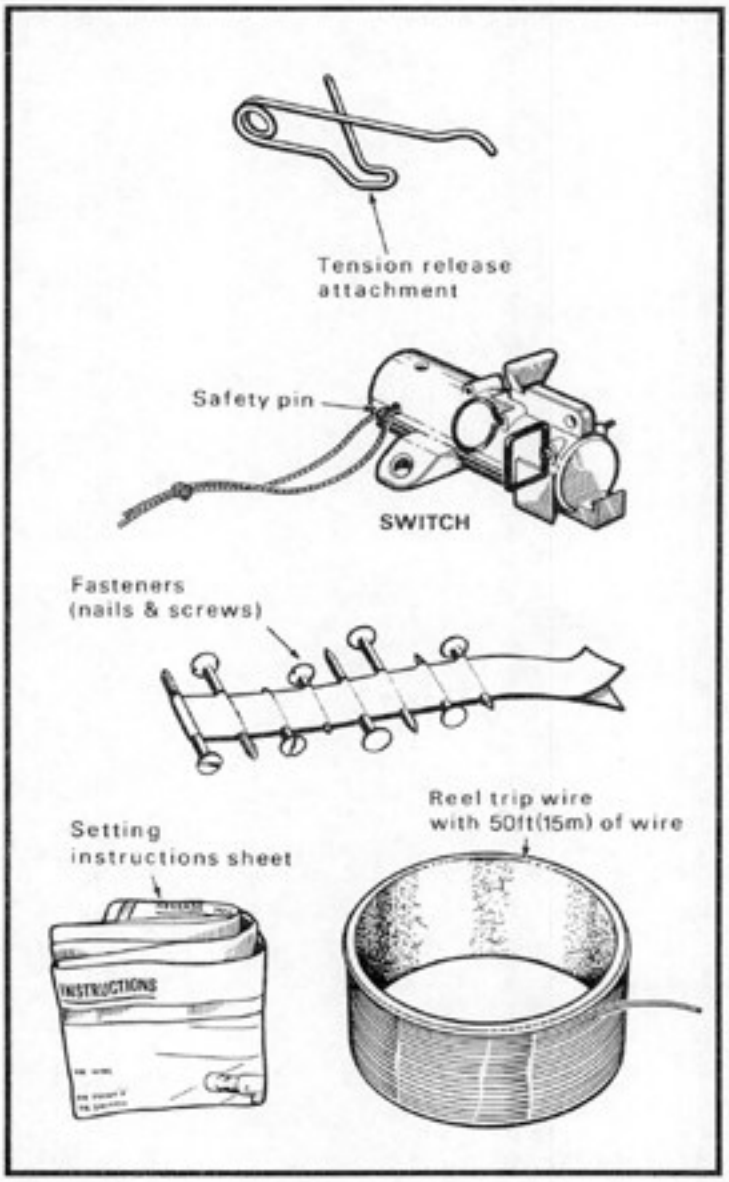
The firing device was developed in two stages. The first stage of development was the design of the Firing Device, Demolition, F1. This device presents hazards in storage and transit as its Coupling Base, Firing Device, F1, is fitted with a primer and detonator. Furthermore, the device is limited to use with detonating cord, or directly to an explosive train. The switch however, has successfully undergone engineering tests and User Trials within Australia and overseas and is satisfactory in its present form.

The second stage of development involved the modification and re-design of the Coupling Base, Firing Device, F1, which subsequently resulted in the Firing Device, Demolition, F1A1, Combination Booby Trap, fitted with the improved Coupling Base, Firing Device, F4.

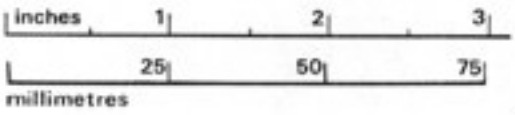
This coupling base presents none of the hazards involved with storage and transit, as it is not fitted with a detonator. It also has a far wider range of applications than the superseded Coupling Base, Firing Device, F1.

Firing Device, Demolition, F1A1, Combination Booby Trap, with Coupling Base, Firing Device, F4

The Firing Device . . . .



and its container



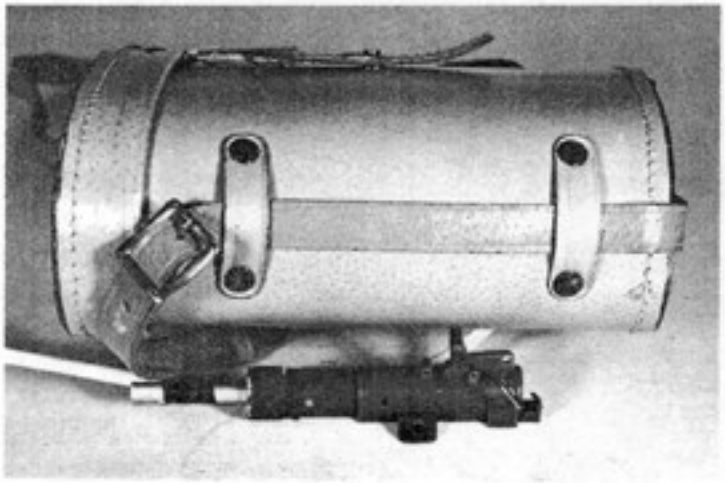
5

Applications

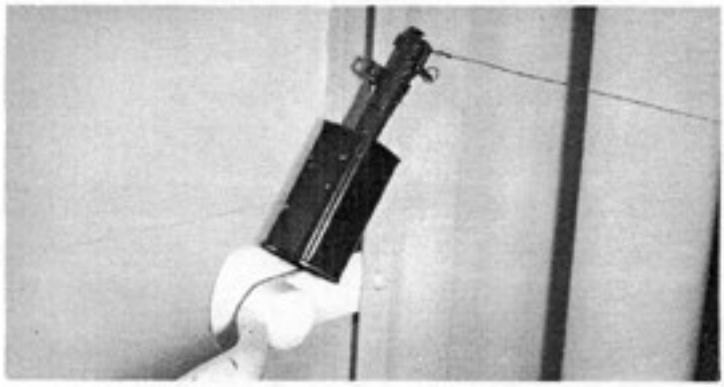
The Firing Device provides a simple means of mechanical initiation of a booby trap by PRESSURE, PRESSURE RELEASE, PULL or TENSION RELEASE.

The entire assembly will function under water and is also impervious to mud or dust; it was not therefore considered necessary to waterproof the container.

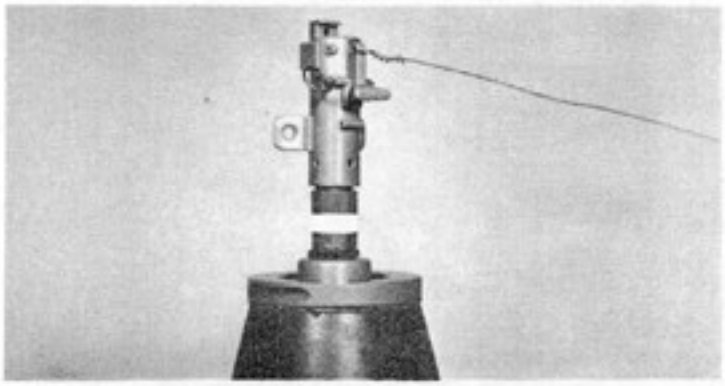
Firing Device, Demolition, F1A1, set for PRESSURE and using safety fuze initiation



Firing Device, Demolition, F1A1, set for PRESSURE RELEASE



Firing Device, Demolition, F1A1, used in US Demolition Block and set for PULL



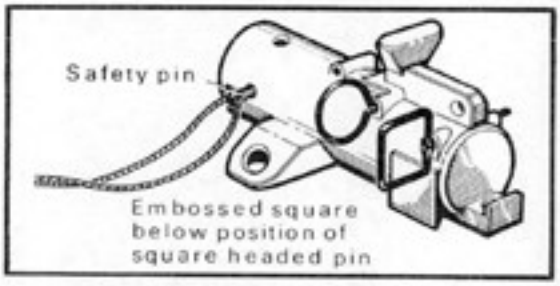
Firing Device, Demolition, F1A1, used in Adapter Fuze Hole Cavity, 2 inch F5, in projectile and set for PULL

Firing Device, Demolition, F1, used in M26 Grenade and set for TENSION RELEASE

Description of the device

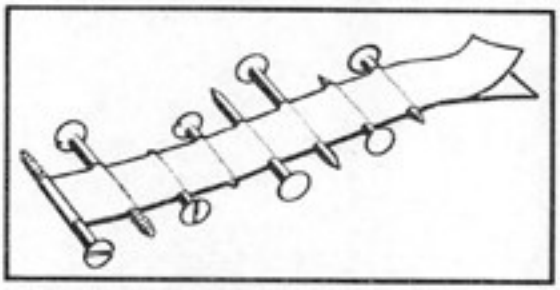
The Switch

The switch, the major component of the Firing Device is moulded from Acetal Resin and is coloured olive drab.



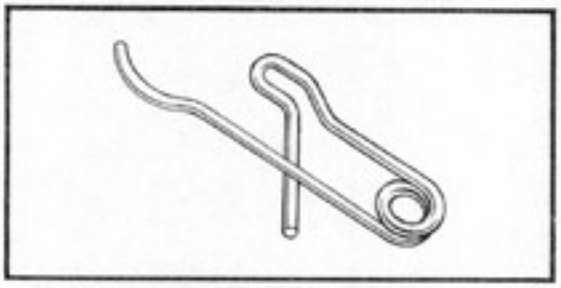
Fasteners

Screws and nails of varying size are provided for fastening the Switch to wooden surfaces. The angled holes in the lugs on the sides of the Switch provide a dovetailed housing for the screws or nails.



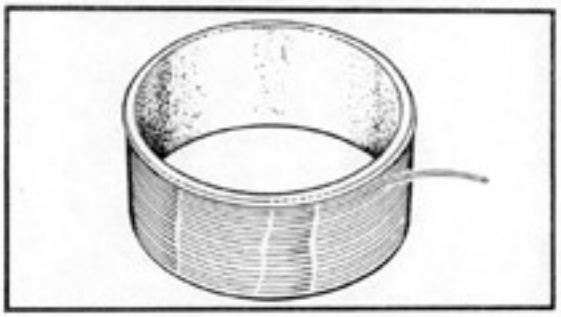
Tension release attachment

This attachment made from stainless steel wire, enables the device to be used for TENSION RELEASE operation. It retains the device in the armed position with a taut wire, which, when cut permits the sear to release the firing pin.



The Tripwire

The tripwire consists of 50ft(15m) of darkened copper wire wound on a cardboard spool. A coat of paint over the wire prevents it from unwinding when the spool is placed on the ground or accidentally dropped.



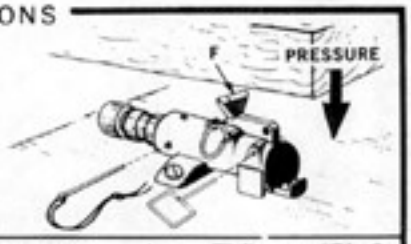
Instruction sheet A crinkle-proof and waterproof illustrated Instruction Sheet, printed on ·008in (·2mm) PVC film is provided with each firing device.

The sheet is printed on both sides, one side (shown below) details setting instructions for operation of the device, and the other side carries an illustration showing the components.

SETTING INSTRUCTIONS

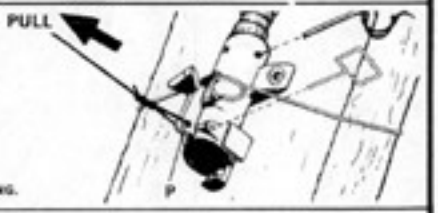
PRESSURE 25 LB OR MORE TO FUNCTION.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH IN POSITION WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) PLACE A SUITABLE PRESSURE PLATE IN POSITION TO REST ON POINT 'F'. **ENSURE PLATE IS NOT HEAVY ENOUGH TO ACTIVATE THE SWITCH.**
(5) REMOVE PIN WITH **SQUARE** HEAD, USING WIRE IF NECESSARY.
(6) WITHDRAW SAFETY PIN, USING WIRE IF NECESSARY.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



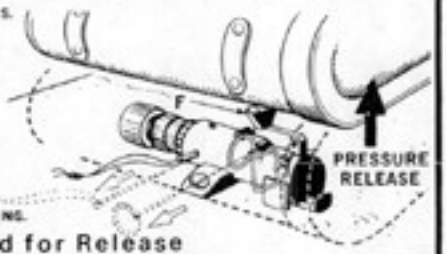
PULL 7 LB OR MORE TO FUNCTION.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) ATTACH TRIP WIRE TO HOLE 'P', SO THAT PULL IS IN DIRECTION SHOWN.
(5) REMOVE PIN WITH **SQUARE** HEAD.
(6) WITHDRAW SAFETY PIN.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



PRESSURE RELEASE 2 LB OR MORE TO SET BUT NOT MORE THAN 150 LBS.

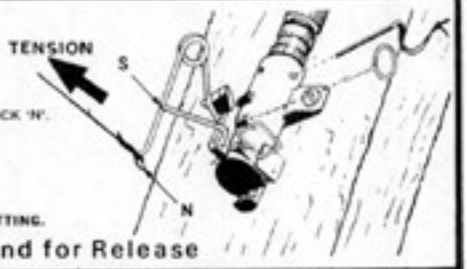
(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) PLACE SWITCH IN POSITION AND SECURE WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) PLACE AN OBJECT SO THAT **AT LEAST** 2 LBS FORCE PRESSES DOWN ON POINT 'F'.
(5) REMOVE PIN WITH **ROUND** HEAD USING A WIRE IF NECESSARY.
(6) WITHDRAW SAFETY PIN, USING A WIRE IF NECESSARY.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



Remember—Remove Round for Release

TENSION RELEASE

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) FIT TENSION RELEASE DEVICE AND LOOP END OF WIRE OVER CURVED NECK 'N'. ADJUST TENSION IN TRIP WIRE UNTIL 'N' LINES UP WITH SET POINT 'S'. MAKE SURE PULL IS IN THE DIRECTION SHOWN ON THE DIAGRAM.
(5) REMOVE PIN WITH **ROUND** HEAD.
(6) WITHDRAW SAFETY PIN.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.

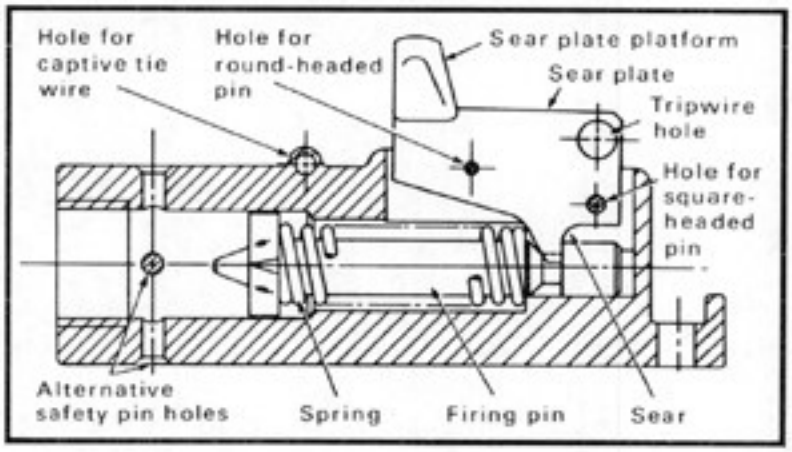


Remember—Remove Round for Release

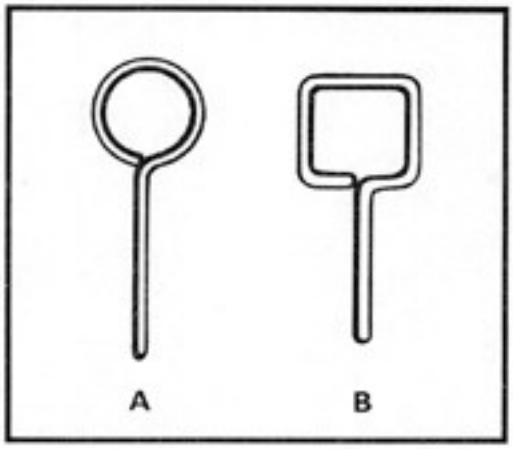
9

Switch operation

Switch before setting

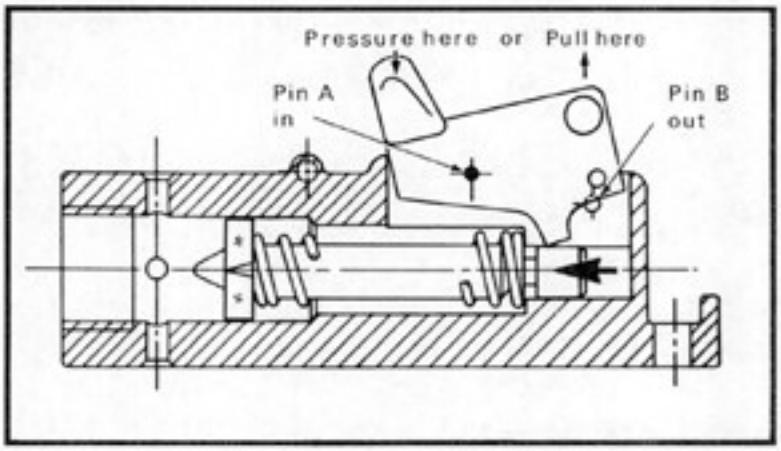


With the round headed pin A and the square headed pin B in position, the sear plate is locked and the sear is engaged in the firing pin which is held back against its compressed spring.



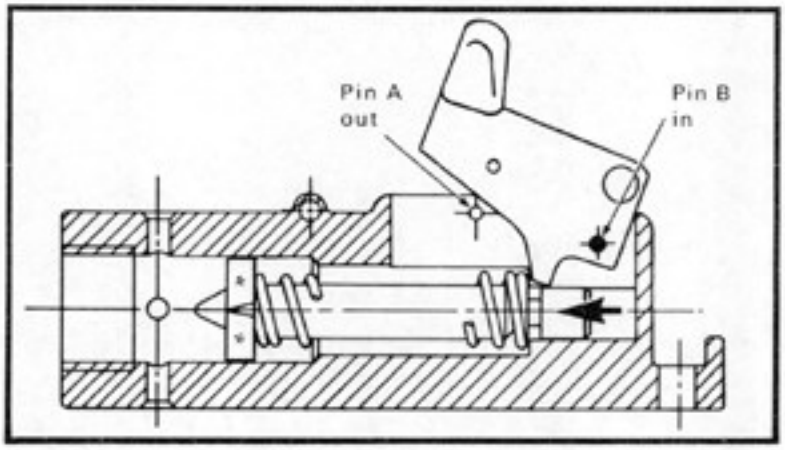
PIN A having a smaller diameter stem is NOT interchangeable with PIN B.

Switch set for pull or pressure action



In this condition a PRESSURE of 25 lb (11.3 kg) on the sear platform or PULL of 7 lb (3.2 kg) at the tripwire hole will make the sear plate pivot on PIN A and disengage the sear, allowing the firing pin to move forward and fire the cap in the Base Coupling.

Switch set for release or tension release action



With PIN A removed, the sear plate is free to pivot on PIN B. Unless the platform is held down by a weight of more than 2 lb (0.9 kg), the compressed spring will push the firing pin forward, lifting the sear and automatically releasing the firing pin.

Engineering tests

Environmental

The Firing Device is protected from contamination by a seal of Grease XG279 between the sear plate and the body. Firing devices without this seal were subjected to individual and sequential Environmental Tests to determine the effects of various environments on their operation. They successfully withstood the following tests except for four instances of retarded switch operation:*

a. Tropical Life
b. Mould Growth
c. Salt Corrosion
d. Acid Corrosion
e. Alkaline Corrosion
f. Vibration Resonance
g. Dry Heat
h. Damp Heat
j. Low Temperature
k. Dust
l. Long Term Storage

Contamination

A further quantity of Firing Devices, also without the seal of Grease XG279, were exposed to the following contaminants with no apparent damage or deterioration:

a. Tea with milk and sugar
b. Tea without milk and sugar
c. Coca-Cola
d. Beer
e. Urine
f. Coffee with milk and sugar

The devices contaminated by sugared liquids failed to function at firing tests due to gumming up of the sear plate and body.*

* These isolated instances of failure were not viewed seriously as the tests without sealing were overtests and the User Trials (page 19 refers), where the devices were sealed, confirmed the efficiency of the sealing arrangements.

In training, where the repeated use of the device will break the seal, re-application of the grease may be necessary.

Safety

Representative samples of the Firing Devices were subjected to the following tests:

a. Drop

b. Sequential Rough Usage

c. Safety Malfunctioning

d. Maximum Load

e. Wire Stretching

UK Evaluation Summary

A quantity of the devices was subjected to rough usage and environmental tests at RARDE (UK). An extract from RARDE Project Status Report 1/70 is reproduced in the following paragraph:

'The Australian Firing Device, Demolition, Combination Booby Trap performed successfully as designed when activated by pull, pressure, pressure release or tension release mechanisms; it also operated under water. It survived rough usage and environmental tests and functioned correctly afterwards. The device is simple to use and meets the design standards which would be required of a store for British Service use.

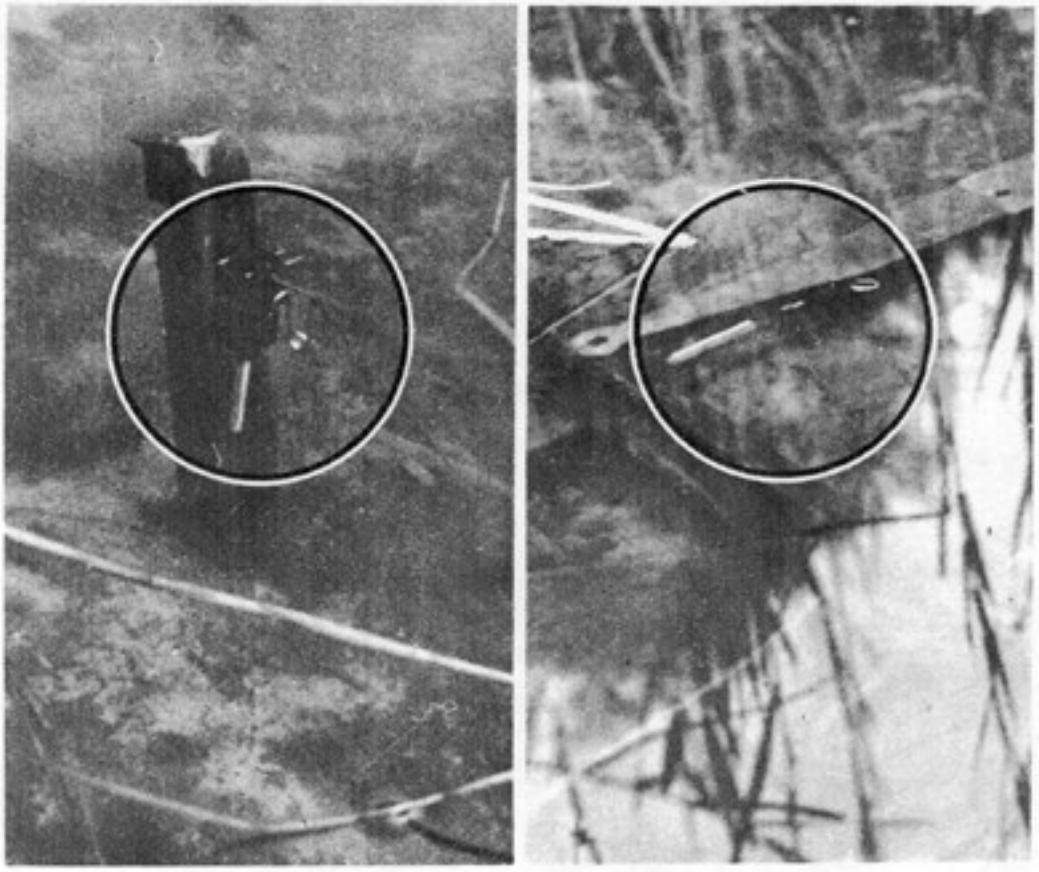
The following table shows the performance of the F1 Firing Device compared with the Military Characteristics, and the performance of similar stores of British and Canadian origin.

Characteristic	Canadian Switch	British Switch	Australian MCs	Performance of F1
Push	18-25lb (8·2-11·3kg)	15-25lb (6·8-11·3kg)	Not less than 5½lb (2·5kg)	22-24lb (10-10·9kg)
Pull	7-10lb (3·2-4·5kg)	5-7lb (2·3-3·2kg)	5-8lb (2·3-3·6kg)	6-8lb (2·7-3·6kg)
Release	—	Less than 4lb (1·8kg)	Not more than 4lb (1·8kg)	1·3-1·5lb (0·6-0·7kg)
Tension Release	—	—	—	Tension in wire below 2lb (0·9kg)

User trials

User Trials of the Firing Device, Demolition, F1 and F2, were carried out during the period 1964-66 by:

School of Military Engineering, Liverpool, NSW
Infantry Centre, Ingleburn, NSW
3 Battalion, Royal Australian Regiment, Malaya
Pacific Islands Regiment, New Guinea
22 Construction Squadron, RAE, New Guinea



The devices were successfully tested in all types of conditions and terrain, including jungle. A very small percentage of failures occurred due to mud entering the gap between the sear plate and body.

Further trials were carried out with switches protected by a film of Grease XG279. The switches were set UNDER WATER in a flooded tank scrape with about 1ft(300mm) of muddy clay on the bottom. All fired except one which had a faulty cap.

Flooded tank scrape

These trials were carried out with the Firing Device, Demolition, F2, and the above arrow shows the effect of a reduced charge in the practice Coupling Base, Firing Device, F2.

Accessories

Coupling Base Firing Device

The Coupling Base, Firing Device, F4, as used with the Firing Device, Demolition, F1A1, is more versatile in that it has a wider range of applications than those afforded by the Coupling Base, Firing Device, F1. The Coupling Base, F4, can be used with:

Fuze Instantaneous and Safety Fuze

Detonators and Detonating Cord

The US Demolition Block

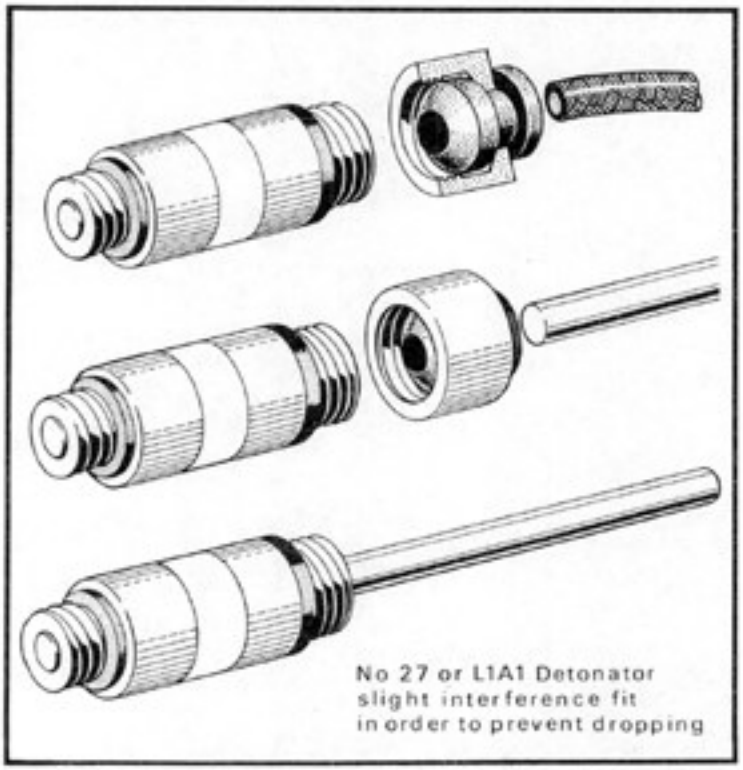
The M34 Smoke Grenade, and the M26 Grenade

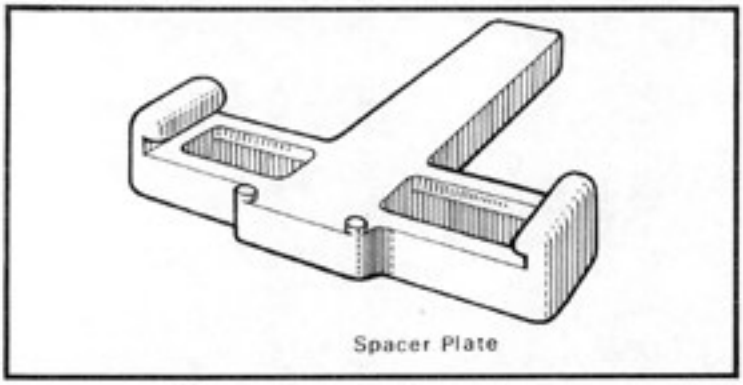
Adapter Fuze Hole Cavity 2 in , F5, for initiation of any projectile with a 2 in fuze hole cavity.

The devices are waterproofed by means of a rubber packing piece and packing nut which will allow submersion in water up to a depth of six feet. The Coupling Base, Firing Device, F4, is fitted with a M42 Primer but no detonator. This reduces the hazards involved in transit and storage of the devices.

Spacer Plate

This plate is intended for use when the Firing Device is used in conjunction with the UK, Flash Initiator, L3. As the Flash Initiator is of a larger diameter than the Coupling Base, Firing Device F4, this 'clip on' Spacer Plate lifts the Firing Device the necessary height to clear the Flash Initiator, when the device is fixed to a flat surface.


No 27 or L1A1 Detonator
slight interference fit
in order to prevent dropping

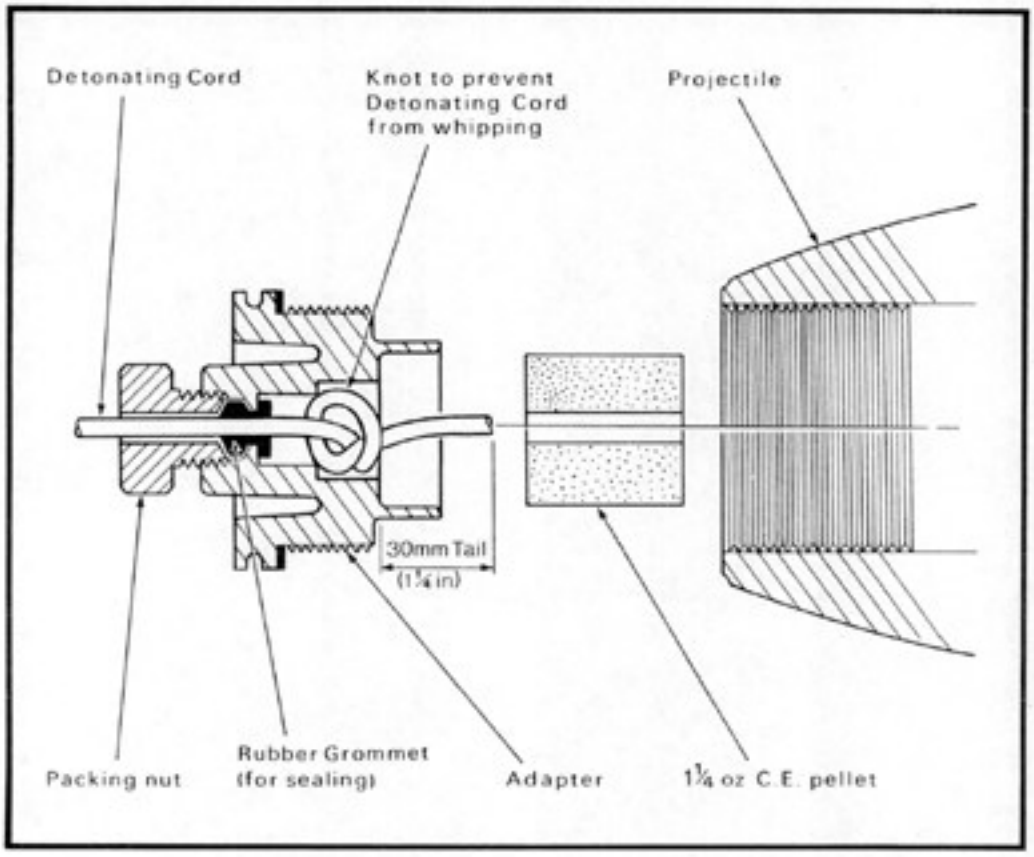

Spacer Plate

17

Adapter Fuze Hole Cavity 2 inch F5

The adapter is used to convert standard 2 inch fuze hole cavity projectiles for either booby trap or demolition roles.

It can be used with Safety Fuze or Fuze Instantaneous in initiating a No. 27 or L2A1 Detonator, Detonating Cord (as illustrated), an Electric Detonator or, directly with the Firing Device Demolition.

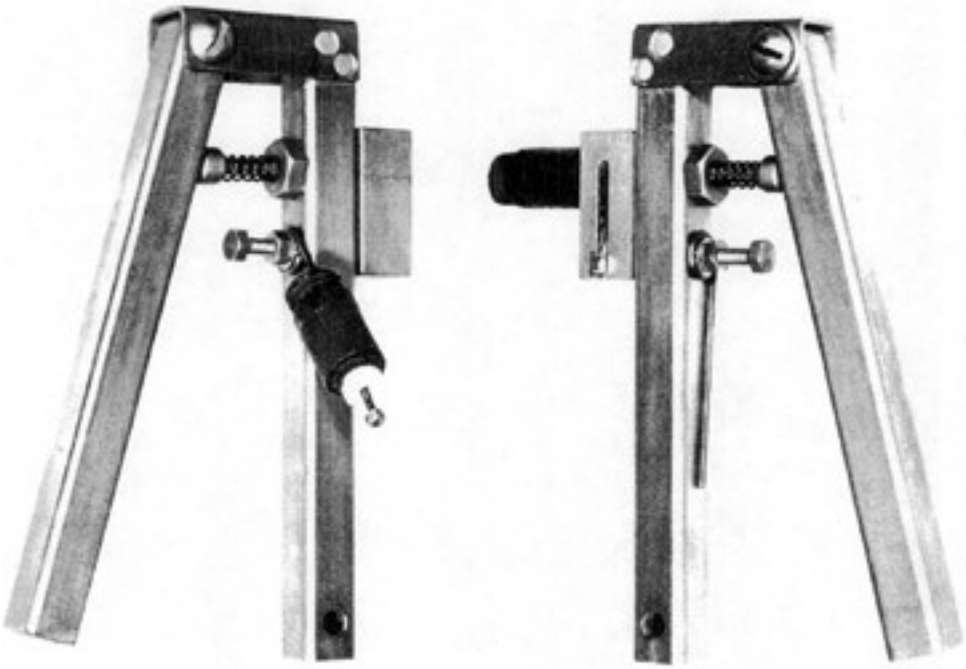


When used with the Firing Device, the packing nut is removed from the adapter and the outer end of the coupling base firing device is screwed into the adapter.

Installing, Tool, Primer, Coupling Base, F5

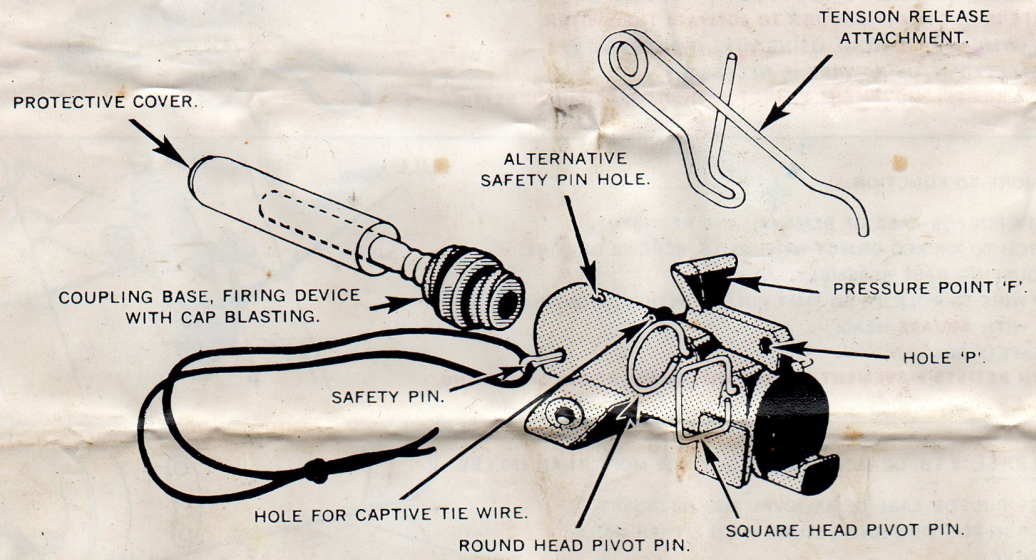
To enable the practice Firing Device, Demolition, F2A1 with Coupling Base, Firing Device, F5 to be re-used during training, an Installing Tool Primer has been designed.

This tool is basically a small hand operated press which has facilities for the installation and removal of M42 primers to or from the coupling base.

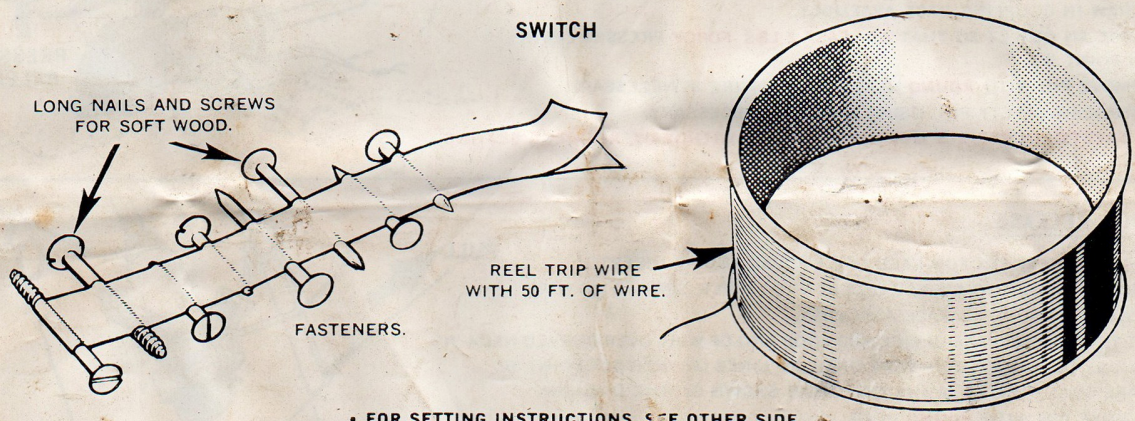


Prepared and printed at
ENGINEERING DEVELOPMENT ESTABLISHMENT
Maribyrnong, Victoria.

FIRING DEVICE, DEMOLITION F1,
Combination Booby Trap.



SWITCH



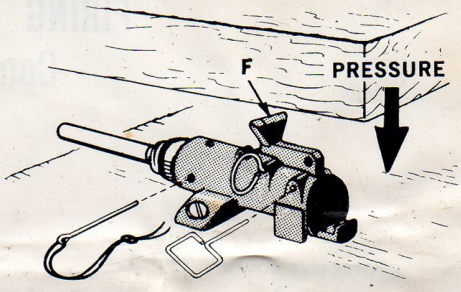
• **FOR SETTING INSTRUCTIONS, SEE OTHER SIDE.**

IF RESETTING, ENSURE THAT THE EYE IS NOT IN LINE WITH THE EJECTION OF THE STRIKER.

SETTING INSTRUCTIONS

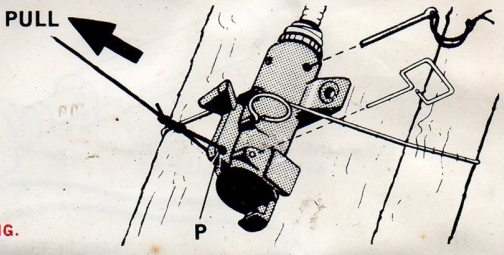
PRESSURE 25 LB OR MORE TO FUNCTION.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH IN POSITION WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE ASSEMBLY.
(4) PLACE A SUITABLE PRESSURE PLATE IN POSITION TO REST ON POINT 'F'.
ENSURE PLATE IS NOT HEAVY ENOUGH TO ACTIVATE THE SWITCH.
(5) REMOVE PIN WITH **SQUARE** HEAD, USING WIRE IF NECESSARY.
(6) WITHDRAW SAFETY PIN, USING WIRE IF NECESSARY.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING



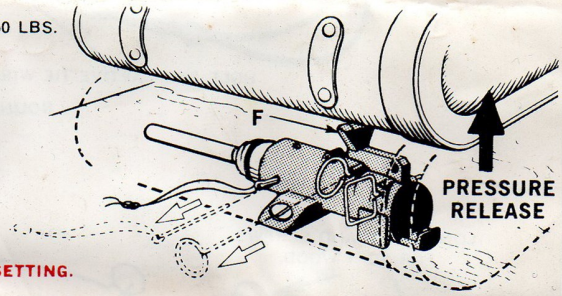
PULL 7 LB OR MORE TO FUNCTION.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE ASSEMBLY.
(4) ATTACH TRIP WIRE TO HOLE 'P', SO THAT PULL IS IN DIRECTION SHOWN.
(5) REMOVE PIN WITH **SQUARE** HEAD.
(6) WITHDRAW SAFETY PIN.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



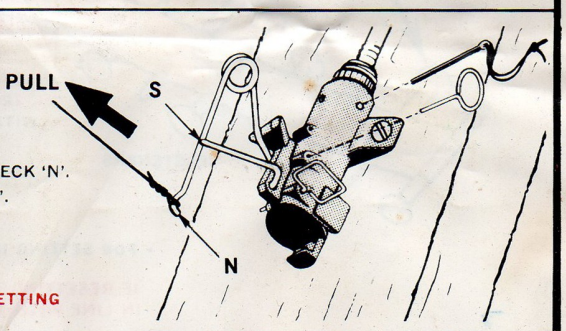
PRESSURE RELEASE 2 LB OR MORE TO SET BUT NOT MORE THAN 150 LBS.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) PLACE SWITCH IN POSITION AND SECURE WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE ASSEMBLY.
(4) PLACE AN OBJECT SO THAT **AT LEAST 2 LBS FORCE** PRESSES DOWN ON POINT 'F'.
(5) REMOVE PIN WITH **ROUND** HEAD USING A WIRE IF NECESSARY.
(6) WITHDRAW SAFETY PIN, USING A WIRE IF NECESSARY.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.

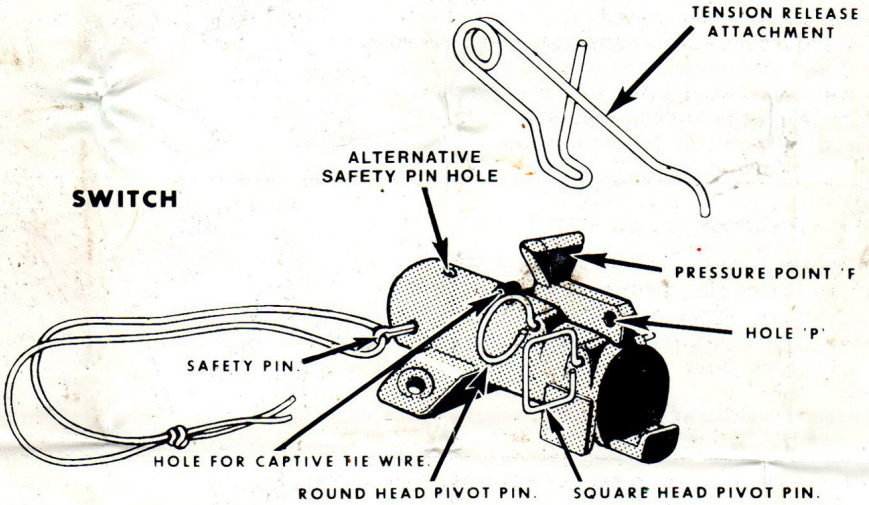


TENSION RELEASE

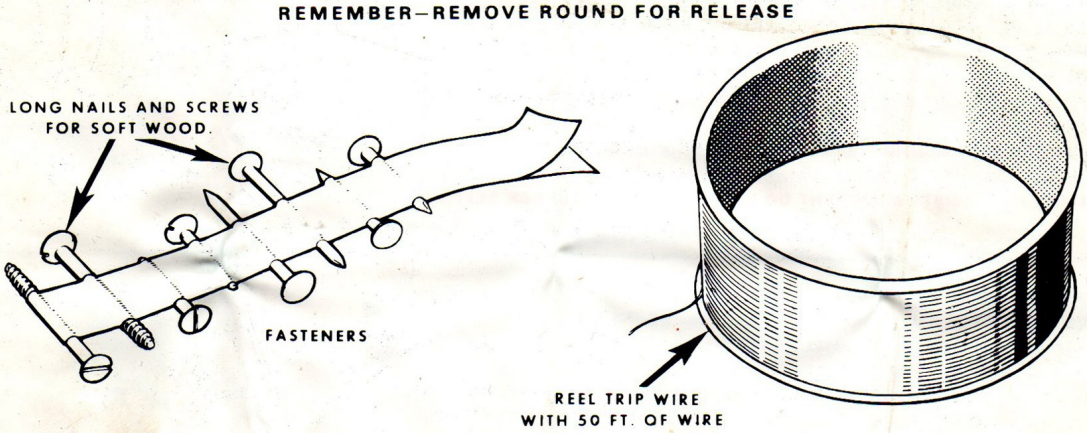
(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE ASSEMBLY.
(4) FIT TENSION RELEASE DEVICE AND LOOP END OF WIRE OVER CURVED NECK 'N'. ADJUST TENSION IN TRIP WIRE UNTIL 'N' LINES UP WITH SET POINT 'S'. MAKE SURE PULL IS IN THE DIRECTION SHOWN ON THE DIAGRAM.
(5) REMOVE PIN WITH **ROUND** HEAD.
(6) WITHDRAW SAFETY PIN.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING



FIRING DEVICE, DEMOLITION F1A1.
Combination Booby Trap



REMEMBER—REMOVE ROUND FOR RELEASE



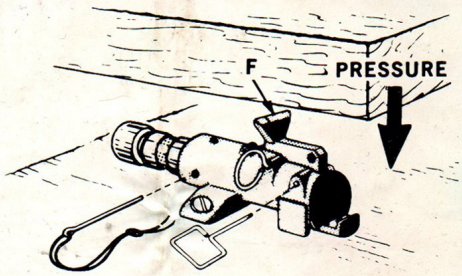
*FOR SETTING INSTRUCTIONS, SEE OTHER SIDE.

IF RESETTING, ENSURE THAT THE EYE IS NOT IN LINE WITH THE EJECTION OF THE STRIKER

SETTING INSTRUCTIONS

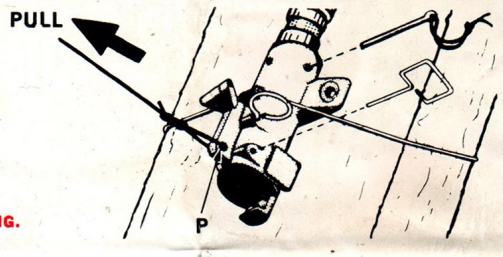
PRESSURE 25 LB OR MORE TO FUNCTION.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH IN POSITION WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) PLACE A SUITABLE PRESSURE PLATE IN POSITION TO REST ON POINT 'F'.
ENSURE PLATE IS NOT HEAVY ENOUGH TO ACTIVATE THE SWITCH.
(5) REMOVE PIN WITH **SQUARE** HEAD, USING WIRE IF NECESSARY.
(6) WITHDRAW SAFETY PIN, USING WIRE IF NECESSARY.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



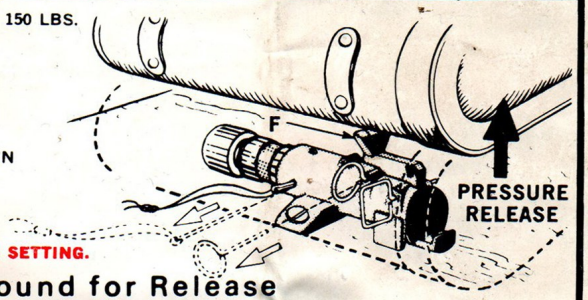
PULL 7 LB OR MORE TO FUNCTION.

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F 4 .
(4) ATTACH TRIP WIRE TO HOLE 'P', SO THAT PULL IS IN DIRECTION SHOWN.
(5) REMOVE PIN WITH **SQUARE** HEAD.
(6) WITHDRAW SAFETY PIN.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



PRESSURE RELEASE 2 LB. OR MORE TO SET BUT NOT MORE THAN 150 LBS.

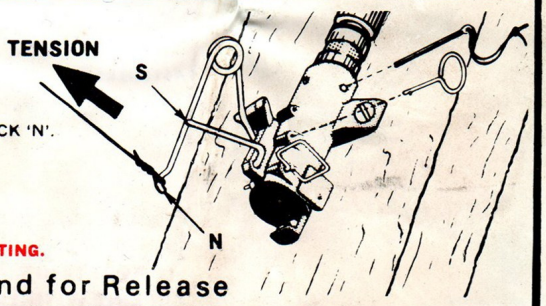
(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) PLACE SWITCH IN POSITION AND SECURE WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) PLACE AN OBJECT SO THAT **AT LEAST 2 LBS** FORCE PRESSES DOWN ON POINT 'F'.
(5) REMOVE PIN WITH **ROUND** HEAD USING A WIRE IF NECESSARY.
(6) WITHDRAW SAFETY PIN, USING A WIRE IF NECESSARY.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



Remember—Remove Round for Release

TENSION RELEASE

(1) CHECK SAFETY PIN FOR EASE OF REMOVAL AND RE-INSERT.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN COUPLING BASE FIRING DEVICE F4.
(4) FIT TENSION RELEASE DEVICE AND LOOP END OF WIRE OVER CURVED NECK 'N'. ADJUST TENSION IN TRIP WIRE UNTIL 'N' LINES UP WITH SET POINT 'S'. MAKE SURE PULL IS IN THE DIRECTION SHOWN ON THE DIAGRAM.
(5) REMOVE PIN WITH **ROUND** HEAD.
(6) WITHDRAW SAFETY PIN.
IF SAFETY PIN RESISTS MOVEMENT DO NOT WITHDRAW, RE-CHECK SETTING.



Remember—Remove Round for Release

British

Firing Device, Demolition, Combination, L4A1

Country– Britain
Type– Combination
Introduced
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in. without spacer
Body Material- Plastic

This is the Australian F1A1 firing device, known in British service as the L4A1. As it is normally used with a flash initiator it must be fitted with the spacer.

Firing Device, Demolition, Combination, L4A1

Firing Device, Demolition, Combination, L5A1

Country– Britain
Type– Combination
Introduced
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in. without spacer
Body Material- Plastic

This is a British modification of the Australian F1A1. The most obvious difference is in the positive safety pin. The British device has a much heavier pin that is held in place by a cotter pin through the positive safety pin preventing its removal.

The device is a compact unit capable of initiating a boobytrap via Pull, Pressure, Release, or Tension Release depending on how it is set. The device will operate under a pressure of 11.3 kg, a pull of 3.2 kg, or a release of pressure or tension of 1.1 kg.

The device is made of plastic in a basically cylindrical form. There are lugs and recesses molded onto the body that allows it to be screwed, nailed or wired in almost any position. A slot in the top of the body accepts the sear plate that is held in position by two pins, one with a round head, one with a square head. A positive

Firing Device, Demolition, Combination, L5A1

safety pin fits through the barrel of the body preventing the striker from hitting the percussion cap. An alternative set of holes for the positive safety are located at 90 degrees from the normal holes. The striker is made of aluminum with a plastic four pronged guide and spring stop near the point. The rear portion of the striker has a groove that engages the sear. A striker spring fits over the striker. The striker and spring fit into the body compressing the spring until the sear on the bottom of the sear plate engages the groove in the striker.

The device is issued in a round tin or plastic case containing everything required to set the device in any mode. Contained within the case is the device, roll of steel trip wire containing 15 metres of wire, a strip of tape containing screws and nails, a tension release attachment, spacer and an instruction sheet. The Flash Initiator is issued separately.

The firing device is normally used with the Flash Initiator with a 1C percussion cap but the US M1 Base coupler can also be used. When used with the Flash Initiator a spacer is added to the bottom of the device to allow enough room for the Initiator to screw in.

The device is made of olive green plastic.

The mode of use determines which pins are taken out to set the device. For use as a release device, the round headed pin is removed. For use as a pressure device, the square headed pin is removed, for use as a pull device, the square headed pin is removed, and for use as tension release it must be fitted with the attachment and have the round headed pin removed. It should be noted that the two pins are not interchangeable as they are made from different gauges of wire with corresponding holes.

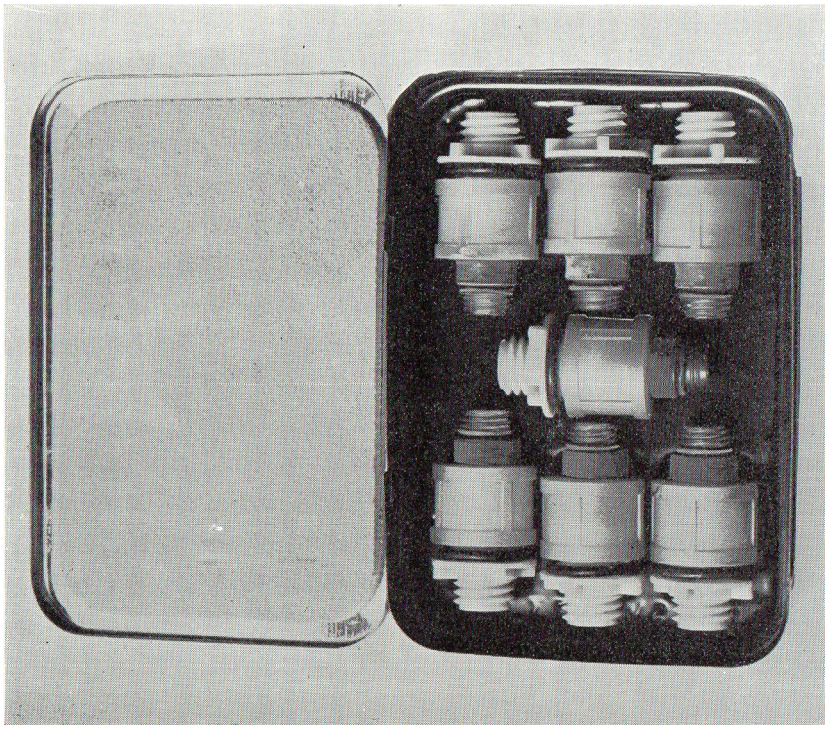
Firing Device Kit, Demolition, Combination, L26

These kits were introduced to provide a device with all necessary accessories in a kit form. The kits comprise of a Firing Device L5A1, flash initiator, and the accessories for the firing device. The L26A1 is issued with an L3A3 Flash Initiator, the L26A2 is issued with an L3A4 Flash Initiator, and the L26A3 is issued with an L3A5 Flash Initiator.

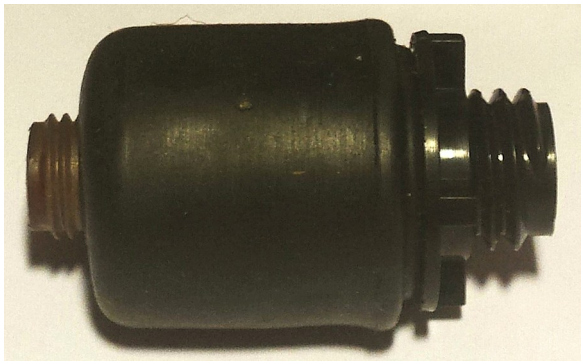
Flash Initiator, L3A1, L3A2, L3A3, L3A4

Introduced 1960's

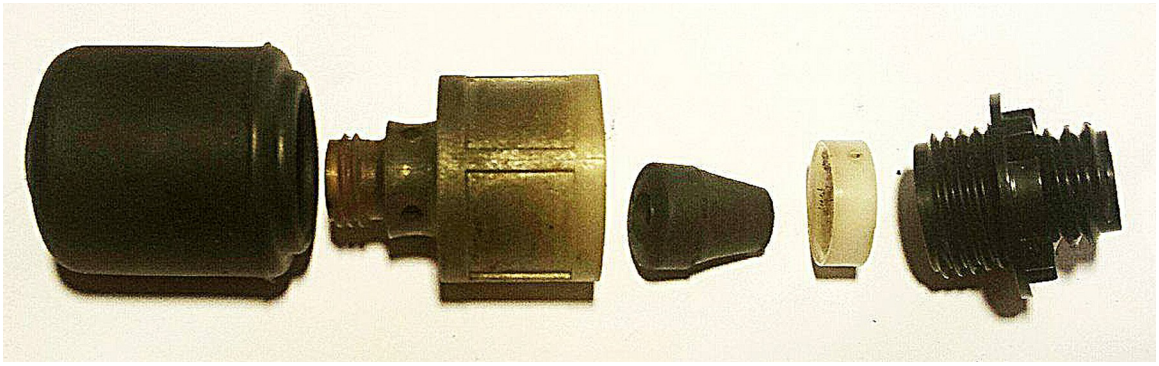
Flash Initiators are the link between the mechanism and fuse or detonator. The body is made of plastic and contains an explosive cap (percussion cap). Internally there is a conical rubber grommet and plastic collar that will grip the fuse and provide a watertight seal. One end of the initiator is threaded to fit the firing device, the other end has a cap that screws into the main body, the outer end of the cap is also threaded to fit demolition blocks. The fuse or detonator is inserted through the end of the cap and into the rubber grommet. When the cap is tightened down, it presses on the plastic collar which compresses the rubber grommet around the fuse.



Flash Initiator, L3A2 in packing box



Flash Initiator, L3A4

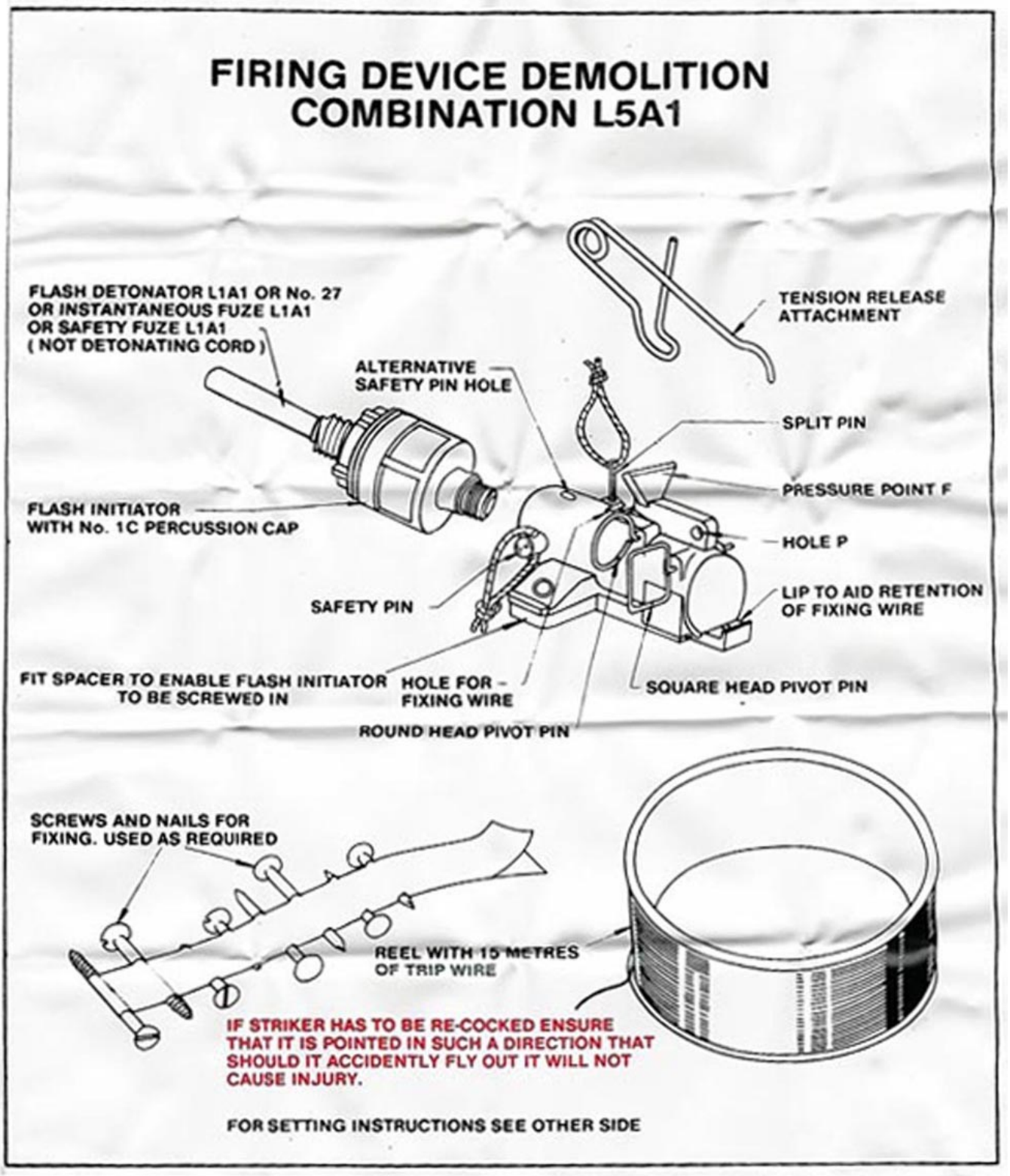


Above- Flash Initiator, L3A4 component parts

Below- Flash Initiator, L3A4 in packing box showing box marking, dated 1982

Examples of the packing tins from 1978 and 2000

FIRING DEVICE DEMOLITION COMBINATION L5A1

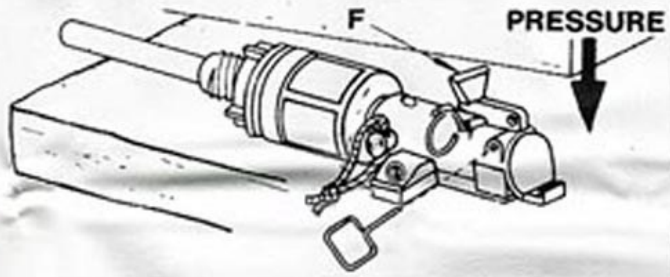


SETTING INSTRUCTIONS

PRESSURE 11kg LOAD OR MORE TO FUNCTION.

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE DEVICE IN POSITION WITH NAILS SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) PLACE A SUITABLE PRESSURE PLATE IN POSITION TO REST ON POINT 'F'. ENSURE WEIGHT OF PLATE WILL NOT ACTIVATE THE DEVICE.
(5) REMOVESQUARE HEAD PIVOT PIN, USING WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN. AFTER WITHDRAWING ITS SPLIT PIN, USING WIRE IF NECESSARY.

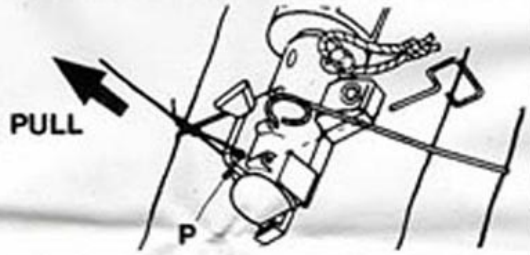
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ON TO IT.



PULL 3KG OR MORE TO FUNCTION.

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE DEVICE TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) ATTACH TRIP WIRE TO HOLE 'P', SO THAT PULL IS IN DIRECTION SHOWN.
(5) REMOVESQUARE HEAD PIVOT PIN, USING WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING WIRE IF NECESSARY.

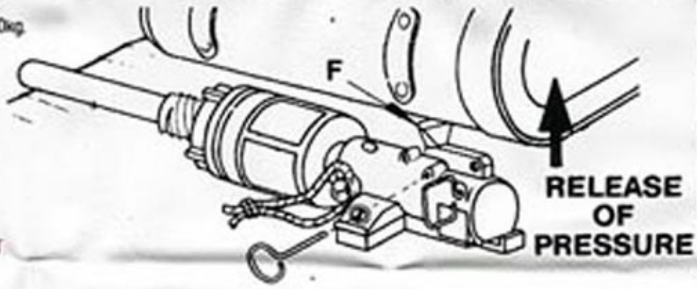
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ON TO IT.



RELEASE OF PRESSURE LOAD TO SET TO BE BETWEEN 1kg AND 20kg.

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) PLACE DEVICE IN POSITION AND SECURE WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) PLACE AN OBJECT SO THAT A LOAD OF BETWEEN 1kg AND 20kg PRESSES DOWN ON POINT 'F'.
(5) REMOVEROUND HEAD PIVOT PIN, USING WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING WIRE IF NECESSARY.

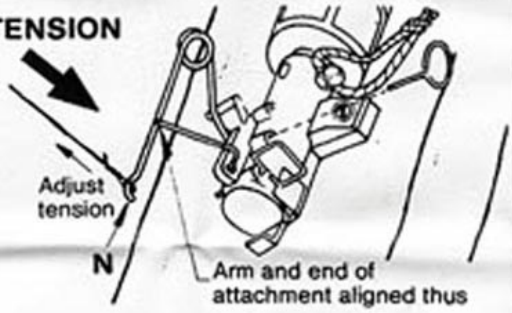
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ON TO IT.



RELEASE OF TENSION

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE DEVICE TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) FIX TENSION-RELEASE ATTACHMENT AND LOOP END OF TRIP WIRE OVER CURVED NECK END 'N'. ADJUST TENSION IN TRIP WIRE UNTIL ARM OF ATTACHMENT IS ALIGNED WITH ITS OTHER END AS SHOWN.
(5) REMOVEROUND HEAD PIVOT PIN.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING WIRE IF NECESSARY.

SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ON TO IT.

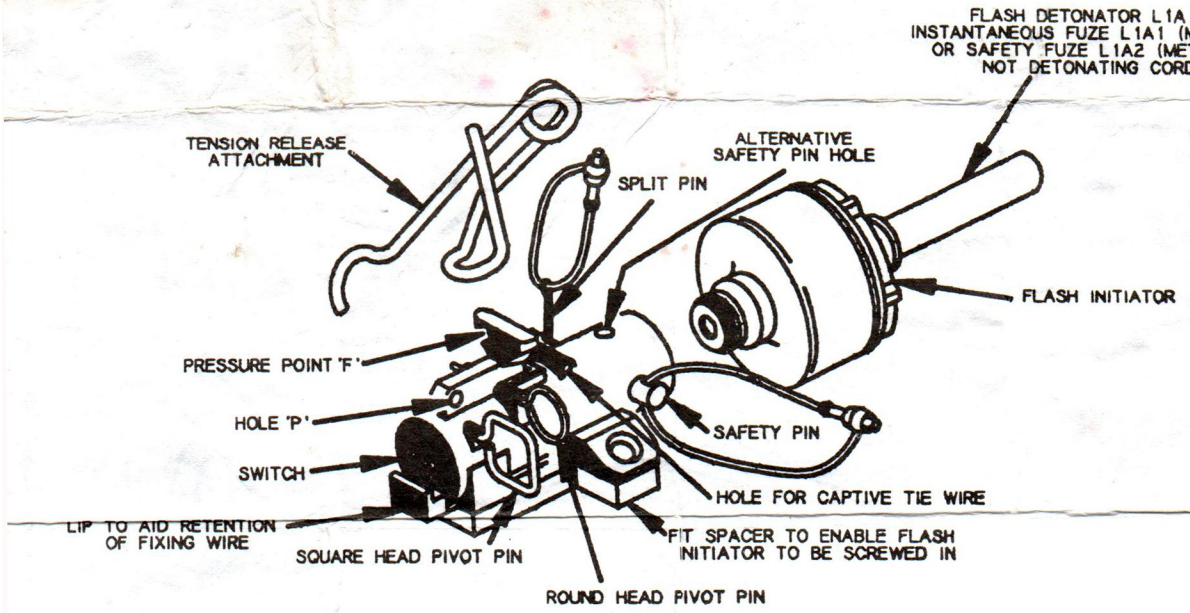


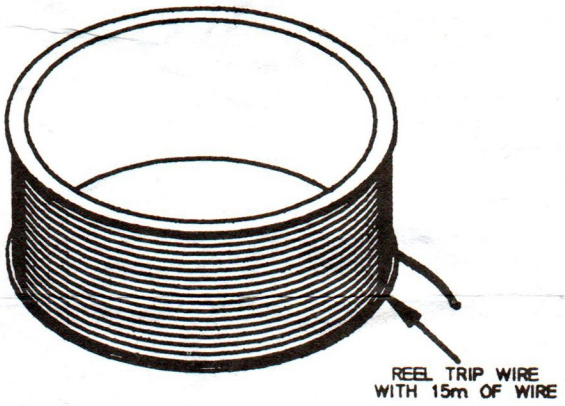
CHECK OF SAFETY PIN FOR ALL MODES OF OPERATION

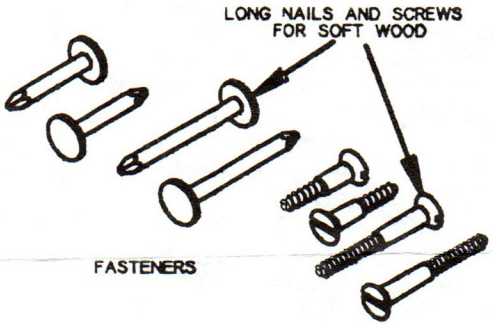
SPLIT PIN MUST FIRST BE REMOVED TO ALLOW WITHDRAWAL OF SAFETY PIN.

NOTE:- BEFORE PLACING SWITCH IN POSITION, CHECK SAFETY PIN FOR EASE OF REMOVAL, THEN REASSEMBLE IT WITH ITS SPLIT PIN. TO ENSURE EASE OF WITHDRAWAL AFTER THE SWITCH HAS BEEN PLACED AND SET, REASSEMBLE SAFETY PIN IN THE MOST CONVENIENT OF THE FOUR POSSIBLE WAYS.

FIRING DEVICE KIT, DEMOLITION, COMBINATION, L26A3







*FOR SETTING INSTRUCTIONS, SEE OTHER SIDE.

IF STRIKER HAS TO BE RE-COCKED ENSURE THAT IT IS POINTED IN SUCH A DIRECTION THAT SHOULD IT ACCIDENTALLY FLY OUT IT WILL NOT CAUSE INJURY

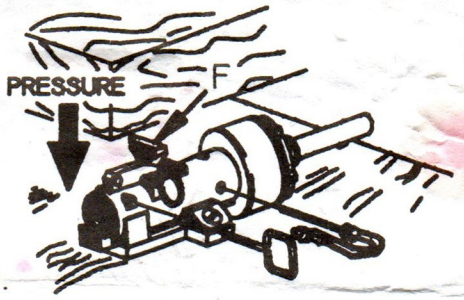
SETTING INSTRUCTIONS

(NB) PINS CAN BE INSERTED FROM EITHER DIRECTION WHEN SETTING DEVICE.

PRESSURE 12kg OR MORE TO FUNCTION.

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE SWITCH IN POSITION WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) PLACE A SUITABLE PRESSURE PLATE IN POSITION TO REST ON POINT 'F'. ENSURE PLATE IS NOT HEAVY ENOUGH TO ACTIVATE THE SWITCH.
(5) REMOVE PIN WITH SQUARE HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

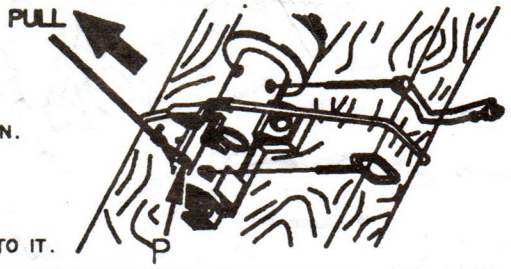
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



PULL 4kg OR MORE TO FUNCTION.

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) ATTACH TRIP WIRE TO HOLE 'P', SO THAT PULL IS IN DIRECTION SHOWN.
(5) REMOVE PIN WITH SQUARE HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN. AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

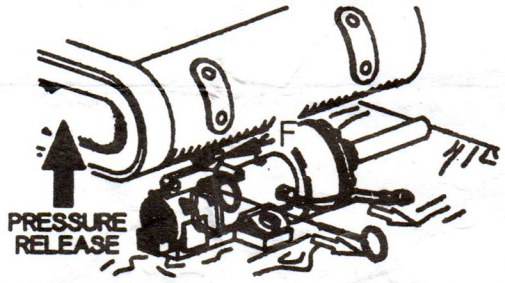
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



PRESSURE RELEASE 1kg OR MORE TO SET BUT NOT MORE THAN 70kg

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) PLACE SWITCH IN POSITION AND SECURE WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) PLACE AN OBJECT SO THAT AT LEAST 1kg FORCE PRESSES DOWN ON POINT 'F'.
(5) REMOVE PIN WITH ROUND HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

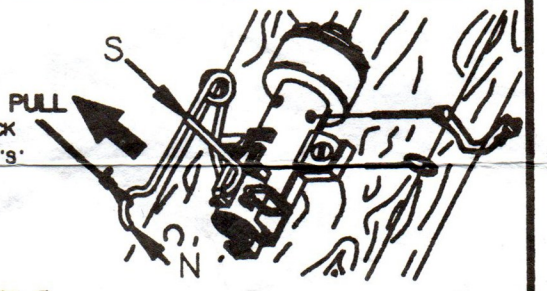
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



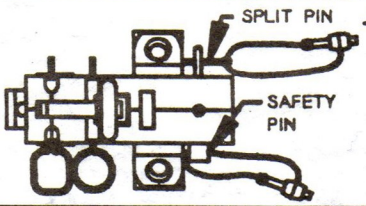
TENSION RELEASE

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) FIT TENSION RELEASE DEVICE AND LOOP END OF WIRE OVER CURVED NECK 'N' ADJUST TENSION IN TRIP WIRE UNTIL 'N' LINES UP WITH SET POINT 'S' MAKE SURE PULL IS IN THE DIRECTION SHOWN ON THE DIAGRAM.
(5) REMOVE PIN WITH ROUND HEAD. USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN. AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



SPLIT PIN MUST FIRST BE REMOVED TO ALLOW WITHDRAWAL OF SAFETY PIN



CHECK OF SAFETY PIN FOR ALL MODES OF OPERATION

NOTE: BEFORE PLACING SWITCH IN POSITION CHECK SAFETY PIN FOR EASE OF REMOVAL THEN REASSEMBLE IT WITH ITS SPLIT PIN. TO ENSURE EASE OF WITHDRAWAL AFTER THE SWITCH HAS BEEN PLACED AND SET, REASSEMBLE SAFETY PIN IN THE MOST CONVENIENT OF THE FOUR POSSIBLE WAYS.

FIRING DEVICE KIT, DEMOLITION, COMBINATION, L26A3

FOR SETTING INSTRUCTIONS, SEE OTHER SIDE.

IF STRIKER HAS TO BE RE-COCKED ENSURE THAT IT IS POINTED IN SUCH A DIRECTION THAT SHOULD IT ACCIDENTLY FLY OUT IT WILL NOT CAUSE INJURY

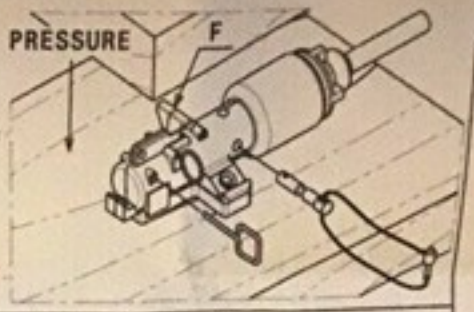
SETTING INSTRUCTIONS

(NB) PINS CAN BE INSERTED FROM EITHER DIRECTION WHEN SETTING DEVICE

PRESSURE 11Kg OR MORE TO FUNCTION

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE SWITCH IN POSITION WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) PLACE A SUITABLE PRESSURE PLATE IN POSITION TO REST ON POINT 'F'. ENSURE PLATE IS NOT HEAVY ENOUGH TO ACTIVATE THE SWITCH.
(5) REMOVE PIN WITH SQUARE HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

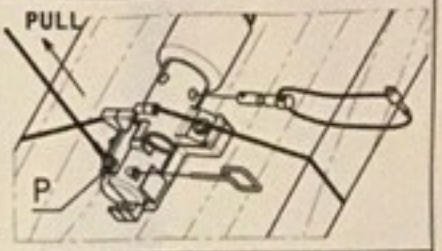
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



PULL 3Kg OR MORE TO FUNCTION

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) ATTACH TRIP WIRE TO HOLE 'P' SO THAT PULL IS IN DIRECTION SHOWN.
(5) REMOVE PIN WITH SQUARE HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

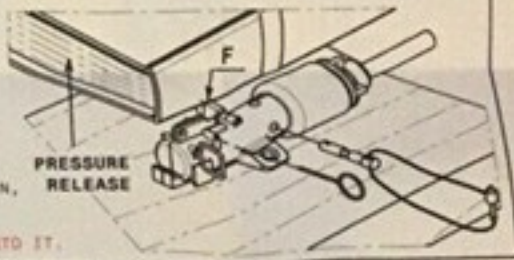
SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



PRESSURE RELEASE 1Kg OR MORE TO SET BUT NOT MORE THAN 20Kg

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) PLACE SWITCH IN POSITION AND SECURE WITH EITHER NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) PLACE AN OBJECT SO THAT AT LEAST 1Kg FORCE PRESSES DOWN ON POINT 'F'.
(5) REMOVE PIN WITH ROUND HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.



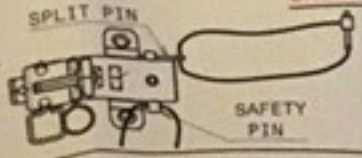
TENSION RELEASE

(1) CHECK AND REASSEMBLE SAFETY PIN AS DESCRIBED BELOW.
(2) SECURE SWITCH TO A FIXED OBJECT WITH NAILS, SCREWS OR WIRE.
(3) SCREW IN FLASH INITIATOR.
(4) FIT TENSION RELEASE DEVICE AND LOOP END OF WIRE OVER CURVED NECK 'N'. ADJUST TENSION IN TRIP WIRE UNITL 'N' LINES UP WITH SET POINT 'S'. MAKE SURE PULL IS IN THE DIRECTION SHOWN IN THE DIAGRAM.
(5) REMOVE PIN WITH ROUND HEAD, USING A WIRE IF NECESSARY.
(6) SLOWLY WITHDRAW SAFETY PIN, AFTER WITHDRAWING ITS SPLIT PIN, USING A WIRE IF NECESSARY.

SAFETY PIN CANNOT BE WITHDRAWN IF STRIKER HAS BEEN RELEASED ONTO IT.

CHECK OF SAFETY PIN FOR ALL MODES OF OPERATION

SPLIT PIN MUST FIRST BE REMOVED TO ALLOW WITHDRAWAL OF SAFETY PIN



NOTE: BEFORE PLACING SWITCH IN POSITION CHECK SAFETY PIN FOR EASE OF REMOVAL. THEN REASSEMBLE IT WITH ITS SPLIT PIN. TO ENSURE EASE OF WITHDRAWAL AFTER THE SWITCH HAS BEEN PLACED AND SET, REASSEMBLE SAFETY PIN IN THE MOST CONVENIENT OF THE FOUR POSSIBLE WAYS.

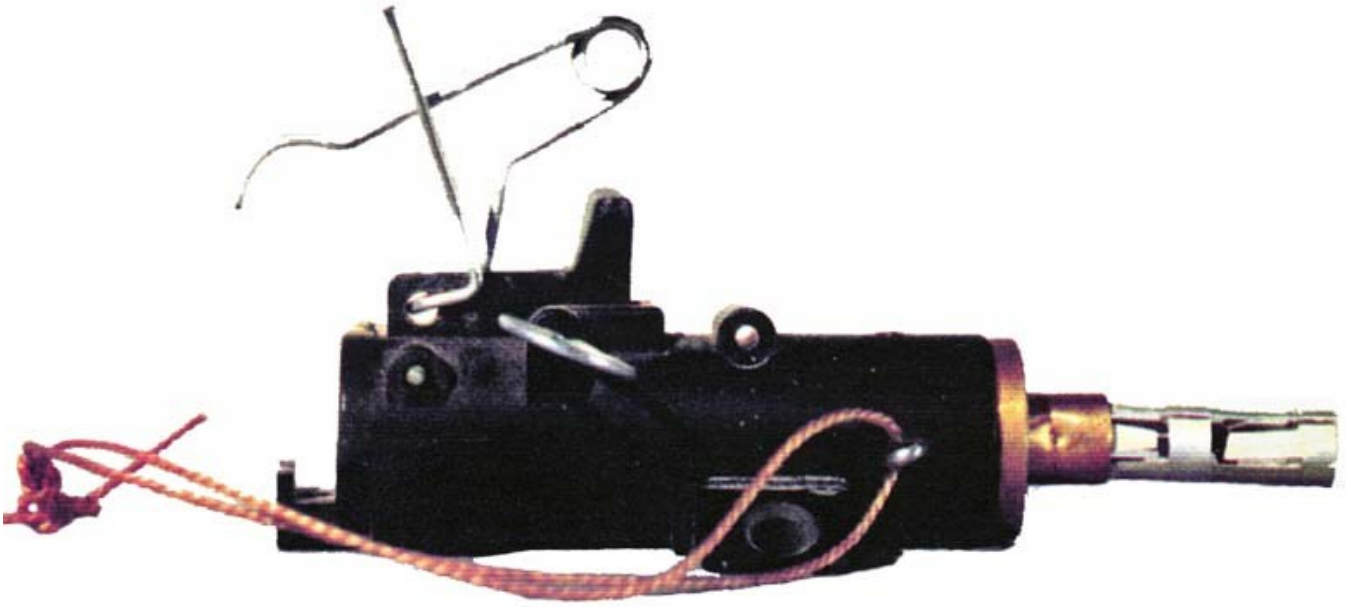
Egypt

Firing Device, M338

Country– Egypt

Appears to be identical to the Australian switch, but the tension release device appears to be smaller and of thinner material than normal. Also used with a fuze adapter with spring clip rather than the coupling base.

No other information available at this time.



Firing Device, M338

South Korea

Firing Device, Multipurpose, KM142

Country– South Korea
Type- Combination
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in.
Body Material- Plastic

This is a Korean version of the F1A1/M142 device. It is manufactured by the "Koryu Pyrotechnics Co. Ltd. It is identical to the Australian switch with the exception of a notch in the sear plate platform that is not present in Australian or US switches.

The device is a compact unit capable of initiating a boobytrap via Pull, Pressure, Release, or Tension Release depending on how it is set. The device will operate under a pressure of 11.3 kg, a pull of 3.2 kg, or a release of pressure or tension of 1.1 kg.

The device is made of plastic in a basically cylindrical form. There are lugs and recesses molded onto the body that allows it to be screwed, nailed or wired in almost any position. A slot in the top of the body accepts the sear plate that is held in position by two pins, one with a round head and one with a square head. A positive safety pin fits through the barrel of the body preventing the striker from hitting the percussion cap. An alternative set of holes for the positive safety are located at 90 degrees from the normal holes. The striker is made of aluminum with a plastic four pronged guide and spring stop near the point. The rear portion of the striker has a groove that engages the sear. A striker spring fits over the striker. The striker and spring fit into the body compressing the spring until the sear on the bottom

of the sear plate engages the groove in the striker.

The device is issued in a round tin or plastic case containing everything required to set the device in any mode. Contained within the case is the device, roll of steel trip wire containing 15 metres of wire, a strip of tape containing screws and nails, a tension release attachment, base coupler and an instruction sheet.

The coupling base can be used with Fuse Instantaneous, Safety Fuse, Detonators, US style demolition blocks and grenades.

The device is made of olive green plastic. The container is also olive green plastic and has markings in yellow.

The mode of use determines which pins are taken out to set the device. For use as a release device, the round headed pin is removed. For use as a pressure device, the square headed pin is removed, for use as a pull device, the square headed pin is removed, and for use as tension release it must be fitted with the attachment and have the round headed pin removed. It should be noted that the two pins are not interchangeable as they are made from different gauges of wire with corresponding holes.

Firing Device, Multipurpose, Practice, K471

Country– South Korea
Type- Combination
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in.
Body Material- Plastic

This is a Korean version of the F2A1 practice device. It is manufactured by the "Koryu Pyrotechnics Co. Ltd. It is identical to the Australian switch with the exception of a notch in the sear plate platform that is not present in Australian or US switches.

The device is a compact unit capable of initiating a boobytrap via Pull, Pressure, Release, or Tension Release depending on how it is set. The device will operate under a pressure of 11.3 kg, a pull of 3.2 kg, or a release of pressure or tension of 1.1 kg.

The device is made of plastic in a basically cylindrical form. There are lugs and recesses molded onto the body that allows it to be screwed, nailed or wired in almost any position. A slot in the top of the body accepts the sear plate that is held in position by two pins, one with a round head and one with a square head. A positive safety pin fits through the barrel of the body preventing the striker from hitting the percussion cap. An alternative set of holes for the positive safety are located at 90 degrees from the normal holes. The striker is made of aluminum with a plastic four pronged guide and spring stop near the point. The rear portion of the striker has a groove that engages the sear. A striker spring fits over the striker. The striker and spring fit into the body compressing the spring until the sear on the bottom of the sear plate engages the groove in the striker.

The device is issued in a round tin or plastic case containing everything required to set the device in any mode. Contained within the case is the device, roll of steel trip wire containing 15 metres of wire, a strip of tape containing screws and nails, a tension release attachment, base coupler and an instruction sheet.

The coupling base is a practice version but has a live primer for practice use.

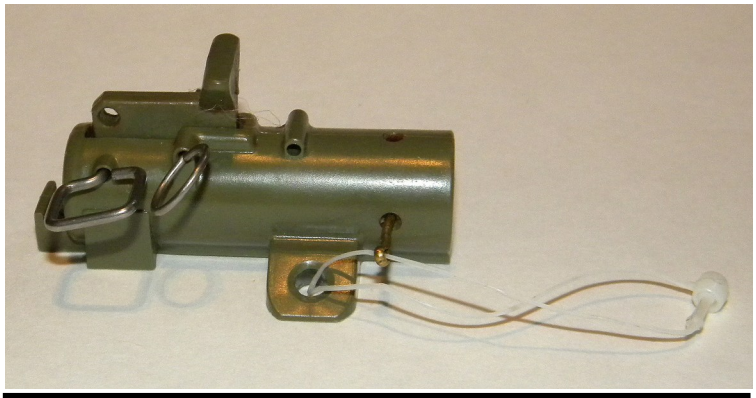
The device is made of blue plastic. The container is also blue plastic and has markings in white. The base coupler is also blue but has brown band to indicate a live primer.

The mode of use determines which pins are taken out to set the device. For use as a release device, the round headed pin is removed. For use as a pressure device, the square headed pin is removed, for use as a pull device, the square headed pin is removed, and for use as tension release it must be fitted with the attachment and have the round headed pin removed. It should be noted that the two pins are not interchangeable as they are made from different gauges of wire with corresponding holes.

Norway

Tennmekanisme Kombinasjon M142F1 M/Tennhette

Country– Norway
Type- Combination
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in.
Body Material- Plastic



Firing Device, M142F1

This is a Norwegian version of the Australian F1A1.

The device is a compact unit capable of initiating a boobytrap via Pull, Pressure, Release, or Tension Release depending on how it is set. The device will operate under a pressure of 11.3 kg, a pull of 3.2 kg, or a release of pressure or tension of 1.1 kg.

The device is made of plastic in a basically cylindrical form. There are lugs and recesses molded onto the body that allows it to be screwed, nailed or wired in almost any position. A slot in the top of the body accepts the sear plate that is held in position by two pins, one with a round head and one with a square head. A positive safety pin fits through the barrel of the body preventing the striker from hitting the percussion cap. An alternative set of holes for the positive safety are located at 90 degrees from the normal holes. The safety pin has a plastic cord attached to help in removing it. The striker is made of aluminum with a plastic four pronged guide and spring stop near the point. The rear portion of the striker has a groove that engages the sear. A striker spring fits over the striker. The striker and spring fit into the body compressing the spring until the sear on the bottom of the sear plate engages the groove in the striker.

Packing tin for the M142F1

The device is issued in a round tin or plastic case containing everything required to set the device in any mode. Contained within the case is the device, roll of steel trip wire containing 15 metres of wire, a strip of tape containing screws and nails, a tension release attachment, and an instruction sheet.

The firing device is used with the Coupling base. The coupling base can be used with Fuse Instantaneous, Safety Fuse, or Detonator and will fit the US style demolition block and grenades with the same threading. The coupling base is fitted with the M42 primer but no detonator which reduces the hazards involved with transit and storage. There are two types of coupling bases, one sized to fit normal sized fuse, the other sized to fit shock tube. They are identified by a white dot on the base indicating use with normal fuse, the other is marked “Nonel” indicating use with shock tube.

The device is made of olive green plastic, as are the base couplers. The container is

plastic with white markings.

The mode of use determines which pins are taken out to set the device. For use as a release device, the round headed pin is removed. For use as a pressure device, the square headed pin is removed, for use as a pull device, the square headed pin is removed, and for use as tension release it must be fitted with the attachment and have the round headed pin removed. It should be noted that the two pins are not interchangeable as they are made from different gauges of wire with corresponding holes.

Base couplers, white dot indicates fuse, "Nonel" denotes one used with shock tube.

Tennmekanisme Kombinasjon M142N Ekserser

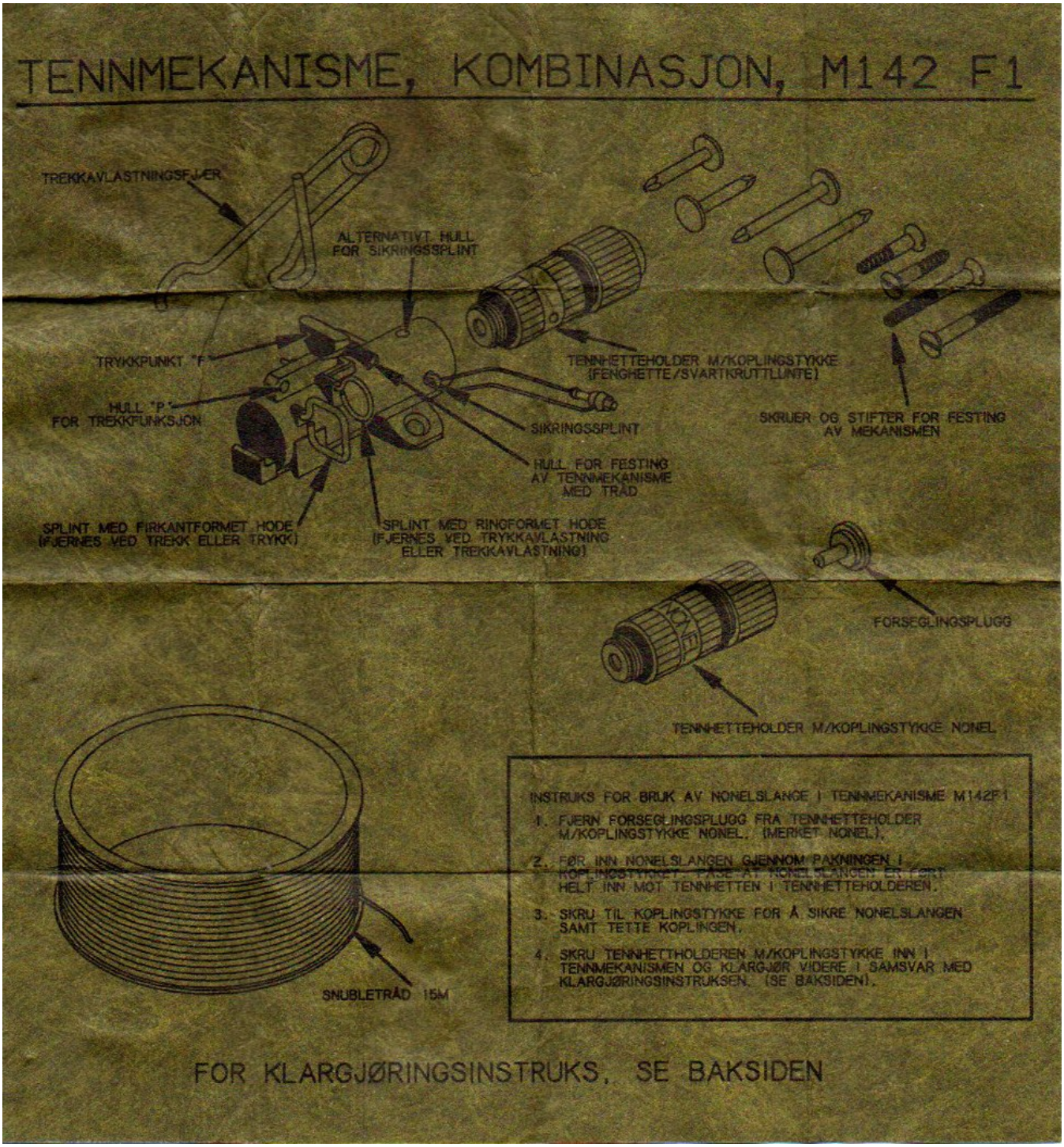
This is a Norwegian version of the F2A1 Practice. It is a training version made of very dark blue plastic which appears black. It is identical to the live version.

The container is also made of very dark blue plastic which appears black and has markings in white.

Firing Device, M142N

Packing tin for Firing Device, M142N

TENNMEKANISME, KOMBINASJON, M142 F1



INSTRUKS FOR BRUK AV NONELSLANGE I TENNMEKANISME M142F1

1. FJERN FORSEGLINGSPLUGG FRA TENNHETTEHOLDER M/KOPLINGSTYKKE NONEL. (MERKET NONEL).
2. FØR INN NONELSLANGEN GJENNOM PAKNINGEN I KOPLINGSTYKKET. PASS AT NONELSLANGEN ER FØRT HELT INN MOT TENNHETTEN I TENNHETTEHOLDEREN.
3. SKRU TIL KOPLINGSTYKKE FOR Å SIKRE NONELSLANGEN SAMT TETTE KOPLINGEN.
4. SKRU TENNHETTHOLDEREN M/KOPLINGSTYKKE INN I TENNMEKANISMEN OG KLARGJØR VIDERE I SAMSVAR MED KLARGJØRINGSINSTRUKSEN. (SE BAKSIDEN).

FOR KLARGJØRINGSINSTRUKS, SE BAKSIDEN

INSTRUKS FOR KLARGJØRING

TRYKK: FUNKSJONERER VED MINIMUM 12 KG TRYKK.

(1) KONTROLLER AT SIKRINGSSPLINTEN ER LETT Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE.
(4) PLASSER EN PASSENDE "TRYKKPLATE" PÅ TRYKKPUNKT "F".
KONTROLLER AT PLATEN IKKE ER SÅ TUNG AT DEN UTLØSER MEKANISMEN.
(5) FJERN SPLINTEN MED FIRKANTFORMET HODE. (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN. (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.

TREKK: FUNKSJONERER VED MINIMUM 4 KG TREKK.

(1) KONTROLLER AT SIKRINGSSPLINTEN ER LETT Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE.
(4) FEST TRÅDEN I HULL "P" MED TREKKRETNING SOM VIST PÅ SKISSEN.
(5) FJERN SPLINTEN MED FIRKANTFORMET HODE. (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN. (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.

TRYKK-AVLASTNING: FUNKSJONERER DERSOM TRYKKET REDUSERES TIL MINDRE ENN 1 KG. MAKS 70 KG TRYKK.

(1) KONTROLLER AT SIKRINGSSPLINTEN ER ENKEL Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE.
(4) PLASSER ET OBJEKT MED MINIMUM 1 KG VEKT PÅ TRYKKPUNKT "F".
(5) FJERN SPLINT MED RINGFORMET HODE. (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN. (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.

TREKK-AVLASTNING:

(1) KONTROLLER AT SIKRINGSSPLINTEN ER LETT Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE.
(4) MONTER TREKKAVLASTNINGSFJÆR SOM ANVIST PÅ SKISSE. JUSTER SPENNINGEN I FJÆREN MED TRÅDEN INNTIL "N" ER PÅ LINJE MED PKT. "S". FEST TRÅDEN.
KONTROLLER AT TRÅDEN TREKKER I DEN RETNINGEN SOM ER VIST PÅ ILLUSTRASJONEN.
(5) FJERN SPLINTEN MED RINGFORMET HODE. (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN. (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.

NB! NÅR TENNMEKANISMEN SKAL FESTES TIL UJEVNE FLATER: PASS PÅ AT MEKANISMENS FESTEØRER IKKE BLIR BØYD. BØYNING KAN FØRE TIL FEILFUNKSJONERING.

TENNMEKANISME, KOMBINASJON, M142 N, EKSERSER

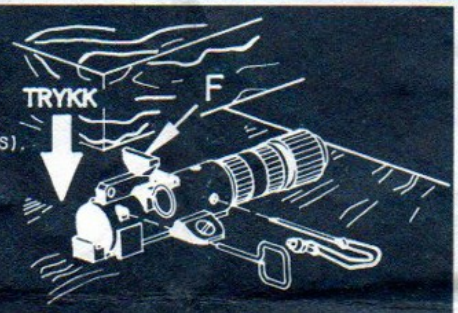
FOR KLARGJØRINGSINSTRUKS, SE BAKSIDEN

INSTRUKS FOR KLARGJØRING

TRYKK: FUNKSJONERER VED MINIMUM 12 KG TRYKK.

(1) KONTROLLER AT SIKRINGSSPLINTEN ER LETT Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE, (DERSOM DENNE SKAL BENYTTES).
(4) PLASSER EN PASSENDE "TRYKKPLATE" PÅ TRYKKPUNKT "F".
KONTROLLER AT PLATEN IKKE ER SÅ TUNG AT DEN UTLØSER MEKANISMEN.
(5) FJERN SPLINTEN MED FIRKANTFORMET HODE, (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN, (BRUK TRÅD OM NØDVENDIG).

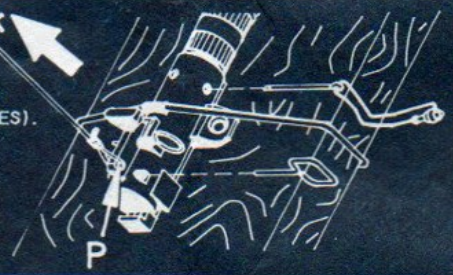
BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.



TREKK: FUNKSJONERER VED MINIMUM 4 KG TREKK.

(1) KONTROLLER AT SIKRINGSSPLINTEN ER LETT Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE, (DERSOM DENNE SKAL BENYTTES).
(4) FEST TRÅDEN I HULL "P" MED TREKKRETNING SOM VIST PÅ SKISSEN.
(5) FJERN SPLINTEN MED FIRKANTFORMET HODE, (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN, (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.



TRYKK-AVLASTNING: FUNKSJONERER DERSOM TRYKKET REDUSERES TIL MINDRE ENN 1 KG. MAKS 70 KG TRYKK.

(1) KONTROLLER AT SIKRINGSSPLINTEN ER ENKEL Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE, (DERSOM DENNE SKAL BENYTTES).
(4) PLASSER ET OBJEKT MED MINIMUM 1 KG VEKT PÅ TRYKKPUNKT "F".
(5) FJERN SPLINT MED RINGFORMET HODE, (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN, (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.

TREKK-AVLASTNING:

(1) KONTROLLER AT SIKRINGSSPLINTEN ER LETT Å FJERNE.
(2) FEST TENNMEKANISMEN I POSISJON VED BRUK AV SPIKER, SKRUER ELLER TRÅD.
(3) MONTER TENNHETTEHOLDER M/ KOPLINGSSTYKKE, (DERSOM DENNE SKAL BENYTTES).
(4) MONTER TREKKAVLASTNINGSFJÆR SOM ANVIST PÅ SKISSE. JUSTER SPENNINGEN I FJÆREN MED TRÅDEN INNTIL "N" ER PÅ LINJE MED PKT. "S". FEST TRÅDEN. KONTROLLER AT TRÅDEN TREKKER I DEN RETNINGEN SOM ER VIST PÅ ILLUSTRASJONEN.
(5) FJERN SPLINTEN MED RINGFORMET HODE, (BRUK TRÅD OM NØDVENDIG).
(6) TREKK UT SIKRINGSSPLINTEN, (BRUK TRÅD OM NØDVENDIG).

BRUK IKKE MAKT DERSOM SIKRINGSSPLINTEN ER VANSKELIG Å TREKKE UT! KONTROLLER AT MEKANISMEN IKKE ER UTLØST.

NB! NÅR TENNMEKANISMEN SKAL FESTES TIL UJEVNE FLATER: PASS PÅ AT MEKANISMENS FESTEØRER IKKE BLIR BØYD. BØYNING KAN FØRE TIL FEILFUNKSJONERING.

United States

Firing Device, Demolition, Multi Purpose, M142

Country– USA
Weight- 1.2 oz.
Length- 2.25 in.
Width- 1.6 in.
Height- 1.1 in.
Body Material- Plastic

Firing Device, Demolition, Multi Purpose, M142

The M142 was introduced into American service in about 1972. It is a direct copy of the Australian "Firing Device, Combination, F1A1". The devices were in fact manufactured in Australia for the American forces.

The device is a compact unit capable of initiating a boobytrap via Pull, Pressure, Release, or Tension Release depending on how it is set. The device will operate under a pressure of 11.3 kg, a pull of 3.2 kg, or a release of pressure or tension of 1.1 kg.

The device is made of plastic in a basically cylindrical form. There are lugs and recesses molded onto the body that allows it to be screwed, nailed or wired in almost any position. A slot in the top of the body accepts the sear plate that is held in position by two pins, one with a round head, one with a square head. A positive safety pin fits through the barrel of the body preventing the striker from hitting the percussion cap. An alternative set of holes for the positive safety are located at 90 degrees from the normal holes. The striker is made of aluminum with a plastic four pronged guide and spring stop near the point. The rear portion of the striker has a groove that engages the sear. A striker spring fits over the striker. The striker and spring fit into the body compressing the spring until the sear on the bottom of the sear plate engages the groove in the striker.

The device is issued in a round plastic case containing everything required to set the device in any mode. Contained within the case is the device, roll of steel trip wire containing 15 metres of wire, a strip of tape containing screws and nails, a tension release attachment, coupling body and an instruction sheet. The coupling base is also issued separately. Early issues of the device were packed in round tin boxes.

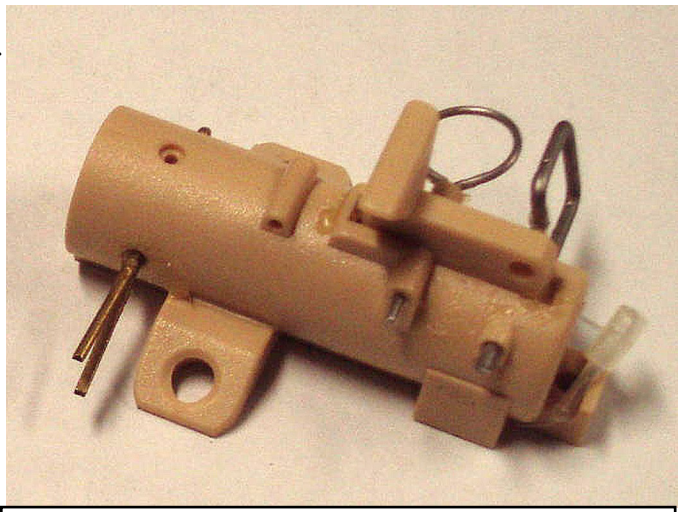
The firing device is normally used with the Coupling base but the US M1 Base coupler can also be used.

The device is made of olive green plastic, as is the coupling body. The coupling bodies have a yellow or brown band around the centre.

The mode of use determines which pins are taken out to set the device. For use as a release device, the round headed pin is removed. For use as a pressure device, the square headed pin is removed, for use as a pull device, the square headed pin is removed, and for use as tension release it must be fitted with the attachment and have the round headed pin removed. It should be noted that the two pins are not interchangeable as they are made from different gauges of wire with corresponding holes.

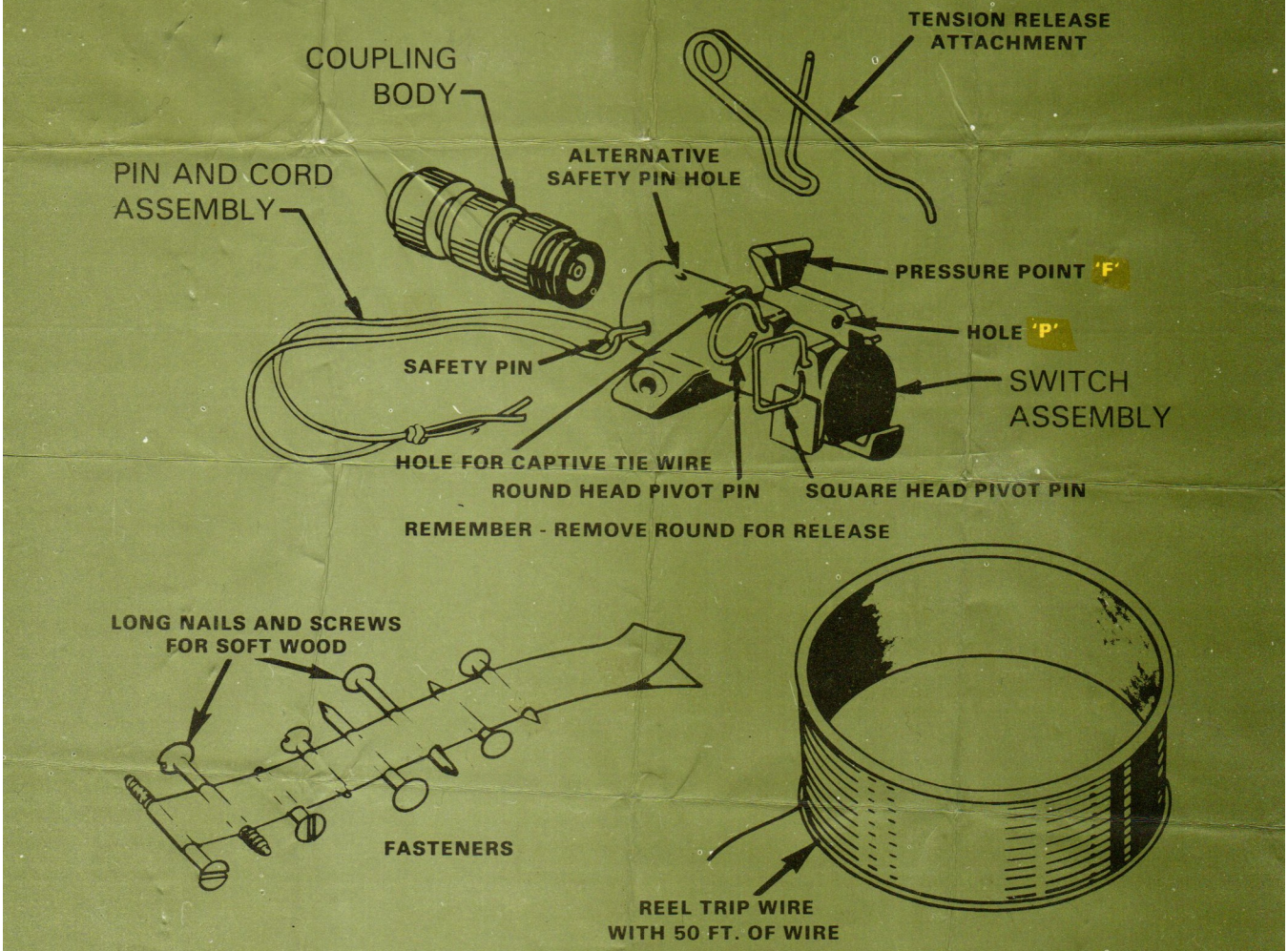
Examples of packing tins for Firing Device, Demolition, Multi Purpose, M142

At some point some examples of the M142 were made in tan plastic. Containers were also made of tan plastic with markings in black. The lot number indicates they were made in the UK by "Mondial Defence Systems Limited". It is unknown if these versions were ever used by the US or anyone else.



Firing Device, Demolition, Multi Purpose, M142 made in tan plastic

FIRING DEVICE, DEMOLITION MULTIPURPOSE MI42



FOR SETTING INSTRUCTIONS SEE OTHER SIDE.

IF RESETTING, ENSURE THAT THE USERS EYE IS NOT IN LINE WITH THE EJECTIONS OF THE STRIKER.

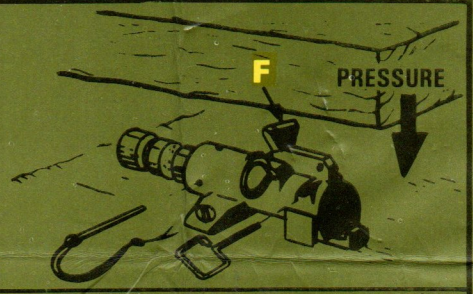
WHEN SECURING TO IRREGULAR SURFACE DO NOT BEND EARS OTHERWISE DISTORTION AND MALFUNCTION MAY OCCUR.

SETTING INSTRUCTIONS

PRESSURE

25 LB OR MORE TO FUNCTION

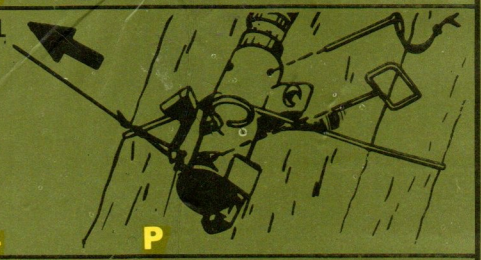
(1) Check safety pin for ease of removal and re-insert.
(2) Secure switch in position with either nails, screws or wire.
(3) Screw in coupling body assembly.
(4) Place a suitable pressure plate in position to rest on point 'F'
Ensure plate is not heavy enough to activate the switch.
(5) Remove pin with SQUARE head using wire if necessary.
(6) Withdraw safety pin from a safe distance using wire if necessary.
If safety pin resists movement do not withdraw. Re-check setting.



PULL

7 LB OR MORE TO FUNCTION

(1) Check safety pin for ease of removal and re-insert.
(2) Secure switch to a fixed object with nails, screws or wire.
(3) Screw in coupling body assembly.
(4) Attach trip wire to hole 'P' so that pull is in direction shown.
(5) Remove pin with SQUARE head.
(6) Withdraw safety pin from a safe distance using wire if necessary.
If safety pin resists movement do not withdraw. Re-check setting.

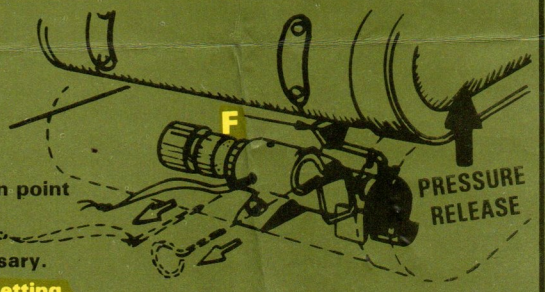


PRESSURE RELEASE

2 LB OR MORE TO SET BUT NOT MORE THAN 150 LBS

(1) Check safety pin for ease of removal and re-insert.
(2) Place switch in position and secure with either nails, screws, or wire.
(3) Screw in coupling body assembly.
(4) Place an object so that at least 2 lbs. force presses down on point 'F'
(5) Remove pin with ROUND head using wire if necessary.
(6) Withdraw safety pin from a safe distance using wire if necessary.
If safety pin resists movement do not withdraw. Re-check setting.

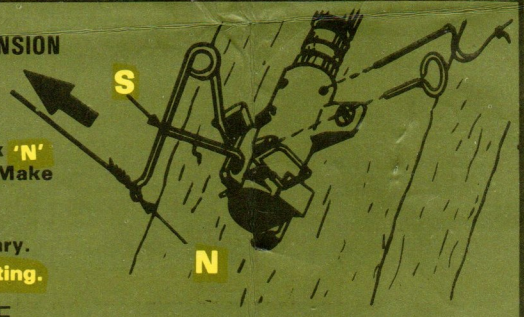
REMEMBER - REMOVE ROUND FOR RELEASE



TENSION RELEASE

(1) Check safety pin for ease of removal and re-insert.
(2) Secure switch to a fixed object with nails, screws or wire.
(3) Screw in coupling body assembly.
(4) Fit tension release device and loop end of wire over curved neck 'N' Adjust tension in trip wire until 'N' lines up with set point 'S' Make sure pull is in the direction shown on the diagram.
(5) Remove pin with ROUND head.
(6) Withdraw safety pin from a safe distance using wire if necessary.
If safety pin resists movement do not withdraw. Re-check setting.

REMEMBER - REMOVE ROUND FOR RELEASE



Manufacturers

	US	A. C. Gilbert Co.
	US	Automatic Temperature Control Co. Philadelphia, PA
ADI	AUS	Australian Defense Industries
B&P	UK	Boon & Porter Ltd.
BUL	US	
CMZ	US	Whittaker Corp, Columbus Milpar Div.
CRC	UK	Cravens Railway Carriage and Wagon Co. Ltd. Darnall, Sheffield
CY	UK	Chorley
D over B	UK	Blackwood Trading Co., Kingston-on-Thames
EA	UK	Electric Apparatus Co., Vauxhall Works, London
EMI	UK	Electric and Musical Industries
ESS	UK	ESS Signs Ltd., Edgeware Road, Hendon
FHH	UK	
GHG	UK	G. H. Garland & Co. Ltd, Nibthwaite Road, Harrow, Middlesex, England
	US	Geometric Stamping Co. Euclid, OH
	UK	Gladhills
	US	John W. Hobbs Corp.
KYC	US	Keystone Alloys Co. Ltd.
Kynoch		UK Kynoch Ltd.
LNO	US	
L over G	UK	Gledhill
LP	UK	Lang Pen Company Ltd., Aubrey House, Ely Place, Holborn Circus EC1
MAI	US	Maryland Assemblies Inc.
MD1	UK	Ministry of Defence 1
MDSL	UK	Mondial Defence Systems Limited.
ME	AUS	Maribyrmong Explosives
MMC	US	Marquette Corp.
MRP	NL	
MTL	US	Mast Technology Inc. Independence MO
NEC	UK	
NJD	US	Navajo Army Depot
OPI	US	Ordnance Prod Inc.
PA	US	Picatinny Arsenal
PTR	NL	
PXC	US	Ambac Ind Inc, Pace Co. Div.
RHN	US	United States Army Ammo Depot.
RM LTD	UK	
SGK	US	Security Signals Inc.
SND	US	Seneca Army Depot
SNL	US	
SPE	POR	Sociedede Portuguesa de Explosivos
	US	H.A. Sward Co. Inc.
S over J		UK J Lucas
TGCo	UK	The Gramophone Co.
TGSR	UK	The Gramophone Co. Springfield Road
T over T	UK	Tecalamit Ltd., Brentford
UDD	US	
WWE	US	
	UK	Wembley Electric Appliances
	US	Universal Match Corp. Ferguson Mo.
Y over B	UK`	Bryant and May

Credits

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References

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Secret Agents Handbook of Special Devices	Mark Seaman
The Plumber's Kitchen	Donald B. McLean
OSS Weapons II, Second Edition	Dr. John W. Brunner, Ph.D.
SOE, The Scientific Secrets	Frederick Boyce and Douglas Everett

Websites

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