FIELD ENGINEERING
(ALL ARMS)

MILITARY TRAINING PAMPHLET
No. 30

PART VI: DEMOLITIONS

1945

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

THE WAR OFFICE,
March, 1945.

21579
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For the reason that the standard explosive equipment can be supplied,

SECTION 1—INTRODUCTION

The use of earth or sandbags around a charge to

FIELD ENGINEERING

Exposures. The use of earth or sandbags around a charge to

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(Alt. Army

PART IV

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CHAPTER 1

GENERAL

Page 3

Airborne

20. The process whereby an explosive charge is

Firing

When firing, the explosive charge is

Offensive

NOT a form of blasting. See Commission.
TABLE 1.—SCALE OF EXPLOSIVES CARRIED BY INFANTRY PIONEER PLATOON

<table>
<thead>
<tr>
<th>Detonation No.</th>
<th>ME 2</th>
<th>ME 4</th>
<th>ME 6</th>
<th>ME 8</th>
<th>ME 10</th>
<th>ME 12</th>
<th>ME 14</th>
<th>ME 16</th>
<th>ME 18</th>
<th>ME 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>250</td>
<td>125</td>
<td>100</td>
<td>75</td>
<td>62.5</td>
<td>50</td>
<td>40</td>
<td>33.3</td>
<td>25</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: This scale is correct at time of printing. Variations are made to the scale from time to time, but it is not proposed to amend the table.

CHAPTER 2

SECTION 3.—THEORY OF EXPLOSIVES

Low and High Explosives:—Low explosives are made of a mixture of substances which, when ignited, burn extremely rapidly, producing a volume of gas at high temperatures. Some of the products of the explosion may form an igniter agent, but the principal requirement is a propellant charge for shell, bomb, etc., which is thrown or expelled as it travels in the pipeline. The high explosive (HE) is composed of some chemically unburnable substance which, when ignited, produces a shock wave and pressure which causes destruction. The HE is known as an detonation fuse, and the effect produced is a very violent shattering force. The HE is not kept in its cartridge, but when ignited, it produces a high explosive charge of CO2 which is then carried in the shell. The HE is detonated by a time fuse which will detonate it at a predetermined distance from the target. The HE is therefore required for bombardment and clearing of an area. The HE is composed of some chemically stable substances which, when ignited, produce a shock wave and pressure which causes destruction. The HE is known as an HE charge.
Fig 1. 75 grenade Mark 1, sectional view

2. Demolition Shells CE/TNT
   (a) Description—This is a millboard container filled with a yellow high explosive.
   The total weight is 1 lb. It has two holes for the special detonator. If the main filling of the grenade is fired by a percussion firing pin, the detonator explodes with a shock wave which is transmitted through the plastic shell to the explosive filling, which is contained in the main filling chamber. The grenade is designed to be used as a demolition charge, and is not intended for use as a hand grenade.

(b) Firing—The grenade is not to be fired by any means other than the percussion firing pin. If it is fired by other means, it may not explode, and may be dangerous to the operator. The grenade should be used only when it is certain that it will not be misfired.

1. No. 75 Grenade (CE) 1
   (a) Description—This is a screw cap metal container filled with 1 lb of HE and a special primer inside the container. It is used to destroy the framework of a building or other structure. The grenade has no anti-tank特性.

2. No. 2 Grenade
   (a) Description—This is a 2 lb grenade, designed for demolition work. It is similar to the No. 1 grenade, but has a higher explosive content.

3. No. 9 Grenade
   (a) Description—This is a 9 lb grenade, designed for use as a hand grenade.

These grenades are not suitable for use as incendiaries, and are not to be used in temperatures above 75°F. The grenades should be stored in a cool place, and should not be exposed to direct sunlight.

*Note: The diagram shows the sectional view of the 75 grenade Mark 1, with components labeled as follows: Filler Cap, Pressure Plate, Detonator Pocket, Main Filling, Priming Charge.*
3. Description—This slab is composed of 6 lbs. of 3 in. by 3 in. by 11 in. remote detonating (not 808) explosive as shown in Fig. 4. It is used to form a 4 in. slab. 3 of the 4 cartridges are placed in the wooden box, approximately the same size as the 303rs. The 4th cartridge is placed in the center of the charge, 

4. Control.—The slab has a tapered hole to take the normal 1.4 primers. The slab is made of a material which is not plastic, but rubbery in content and very hard. The slab is packed in a wooden box, approximately the same size as the 303rs, in order to prevent accidental initiation of the charge. In some tests, the slab was placed in a wooden box, approximately the same size as the 303rs, and the slab was placed in the center of the charge, with the primers placed in the corners of the charge. In other tests, the slab was placed in a wooden box, approximately the same size as the 303rs, and the slab was placed in the center of the charge, with the primers placed in the corners of the charge.

5. General.—The slab is satisfactory when inserted with a 1.4 primer. They are perfectly safe to handle as long as normal care is exercised as with ammunition. The slab is used to place 75 g. of explosive in the equivalent of an 808. It is used to form a 4 in. slab. The slab is made of a material which is not plastic, but rubbery in content and very hard. The slab is packed in a wooden box, approximately the same size as the 303rs, in order to prevent accidental initiation of the charge. In some tests, the slab was placed in a wooden box, approximately the same size as the 303rs, and the slab was placed in the center of the charge, with the primers placed in the corners of the charge. In other tests, the slab was placed in a wooden box, approximately the same size as the 303rs, and the slab was placed in the center of the charge, with the primers placed in the corners of the charge.

6. FIRING ACCESSORIES

1. Primers. Owing to the sensitivity of all British service explosives to detonation, all primers require a small charge of a very sensitive and volatile primer to detonate them. This charge is inside the detonator. In certain detonators, the primer is provided with a special primer which is incorporated, and such charges do not require a general primer. Council of C.I.N.T. recommend that the primer be supplied as a separate metal charge, and this will be the prime at the point of delivery. 

2. Types of primer. There are generally used,—
(a) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(b) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(c) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(d) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(e) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(f) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(g) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(h) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(i) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.

(j) Type C.P.D. This is supplied in a waxed paper coating, which is put into the capsule of the charge, and the primer is ignited by a primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge. The primer is ignited by the primer which is put into the capsule of the charge.
Detonators are divided into two classes, commercial and special. Commercial are to be handled with care. Occasionally, detonators are dropped on hard ground. They should be treated in the same way as commercial, but they should be handled with more care. In particular, never apply pressure to the end of the detonator, even if dropped on hard ground. They may cause detonation and possibly ignite a wire or other explosive material.

1. Commercial Detonators: These are used in all service primers. They are picked in a square tin. They are placed in a primer box. The detonator is inserted into the primer box through the closed end, and the primer is pushed into the detonator. The end is then cut and the primer pulled out of the detonator. The primer should be in a primer box and the detonator in a primer box. A wire is sufficient to blow out several fingers of the detonator.

2. Detonators: The standard service primer is No. 27, commercial detonators are picked in a square tin. The detonator is inserted into the primer box through the closed end, and the primer is pushed into the detonator. The end is then cut and the primer pulled out of the detonator. The primer should be in a primer box and the detonator in a primer box. A wire is sufficient to blow out several fingers of the detonator.

3. Safety fuse: The standard British service safety fuse is No. 11. It has a black primer in a black safety fuse. The fuse is placed in a sealed circular tin. The primer is then placed in the safety fuse. The fuse is then inserted into the primer box. The primer is then pulled out of the safety fuse. The primer should be in a primer box and the safety fuse in a primer box. A wire is sufficient to blow out several fingers of the safety fuse.

Fig. 1. Diagram showing exposed end of safety fuse for lighting. Fig. 2. Safety fuse: No. 27 detonator and primer. Fig. 3. Headed end of safety fuse. Fig. 4. CETN1T slub with primer, detonator, and safety fuse.
(a) "Never forget your time."—This is a small copper.

The time when you last in use
and of the part of the chain is in use.

Keep it in the notebook. If you cannot
and the speed of the chain is in use.

The chains are inserted in each link.

These links are inserted in each link.

Care and friction reduce the wear.

The links in the necklace are
in each link.

There is the necklace on the chain.

(f) "Never forget your time."—This is a small copper.

The time when you last in use
and of the part of the chain is in use.

Keep it in the notebook. If you cannot
and of the part of the chain is in use.

The chains are inserted in each link.

These links are inserted in each link.

Care and friction reduce the wear.

The links in the necklace are
in each link.

There is the necklace on the chain.

(f) "Never forget your time."—This is a small copper.

The time when you last in use
and of the part of the chain is in use.

Keep it in the notebook. If you cannot
and of the part of the chain is in use.

The chains are inserted in each link.

These links are inserted in each link.

Care and friction reduce the wear.

The links in the necklace are
in each link.

There is the necklace on the chain.

(f) "Never forget your time."—This is a small copper.

The time when you last in use
and of the part of the chain is in use.

Keep it in the notebook. If you cannot
and of the part of the chain is in use.

The chains are inserted in each link.

These links are inserted in each link.

Care and friction reduce the wear.

The links in the necklace are
in each link.

There is the necklace on the chain.

(f) "Never forget your time."—This is a small copper.

The time when you last in use
and of the part of the chain is in use.

Keep it in the notebook. If you cannot
and of the part of the chain is in use.

The chains are inserted in each link.

These links are inserted in each link.

Care and friction reduce the wear.

The links in the necklace are
in each link.

There is the necklace on the chain.
Figures 6 and 7. Detonator and safety fuse.

6. Safety fuse used in conjunction with a detonator system. The figure shows a typical setup with a safety fuse and detonator connected in series.

7. Detonator and safety fuse. The diagram illustrates the connection and layout of the detonator and safety fuse setup.

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Note: In addition to the safety fuse, the detonator system must also be used to ensure safety. Always check the safety fuse before use to ensure it is functioning correctly.

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Faillures at the detonator end of the safety fuse caused by:

1. Failure of the safety fuse. The failure of the safety fuse can cause a failure in the system, leading to a dangerous situation.

2. Failure of the safety fuse. This can happen due to a variety of reasons, including damage or improper installation.

3. Failure of the safety fuse. Proper maintenance and inspection can help prevent failures in the safety fuse.

4. Failure of the safety fuse. Proper training and understanding of the system can help prevent failures.

5. Failure of the safety fuse. Understanding the role of each component in the system is crucial for preventing failures.

6. Failure of the safety fuse. Proper documentation and record-keeping can help prevent failures.

---

The end of the fuse being damp, resulting in the failure of the detonator. The dampness can prevent the proper functioning of the fuse, leading to a failure in the system.

---

The end of the fuse being damp, resulting in the failure of the detonator. Proper maintenance and inspection can help prevent dampness from affecting the fuse.

---

Safety fuse. The safety fuse is a critical component of the system, and its proper functioning is essential for safety.

---

Safety fuse. The safety fuse must be properly installed and tested to ensure its effectiveness.

---

Safety fuse. The safety fuse is designed to fail before the main fuse, protecting the system from damage.

---

Safety fuse. The safety fuse is a critical component of the system, and its proper functioning is essential for safety.

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Safety fuse. The safety fuse is a critical component of the system, and its proper functioning is essential for safety.

---

Safety fuse. The safety fuse must be properly installed and tested to ensure its effectiveness.

---

Safety fuse. The safety fuse is designed to fail before the main fuse, protecting the system from damage.
5. Detonating fuse—Safety fuse is unsuitable for setting off charges.

6. Initiation of detonation is very important. The detonating wire must hang from one contact point and be attached with a close-knot (see Fig. 6). This must be made so that the two lengths concerned together so that they are in good contact for at least 4 in. (Fig. 6). The wire in the main lead should preferably be covered with an outer layer to prevent damage. A pair of insulated wires may be used for the main lead. Each length of insulation wire may be joined to the safety fuse by a pair of insulated wires. These should be jointed together to the safety fuse by a pair of insulated wires. The safety fuse is then jointed to the main lead by a pair of insulated wires. The safety fuse is then jointed to the main lead by a pair of insulated wires.

7. The detonating fuse is a white explosive cord about 1 in. in diameter. It is supplied on wooden rolls carrying 50 ft.

8. The explosive core is a white powder. The powder is carried in the fuse and is protected by a thin, white, protective covering. The protective covering is removed by pulling the detonating fuse through the tube. This causes the explosive core to be exposed to the fusing action. The explosive core is then ignited by the safety fuse, and this ignites the main lead. The main lead is then ignited by the safety fuse, and the explosion is initiated. The explosion is then propagated through the main lead and the safety fuse, and the explosion is then propagated through the main lead and the safety fuse.
Fig 12. Simple cordtex or primacord ring main.

6. Instantaneous fuse. This is a thick, orange-colored fuse with a black primer core which burns at approximately one mile per minute. It is neither a detonating fuse nor a safety fuse. Like safety fuse, it is very hard to burn.

3. Detonators (See Fig 11)

12. C - Charge.
Section 6.—PRECAUTIONS AGAINST DAMP

1. When charges are to be fired some time after being made up, either as the result of a delay in loading, or of being stored by the unit until required, or when they are to be placed in isolated stores which are not to be used or may become so, all sub- or main-line primsers should be taken —

- Seal all sub-lines or cartridges or parts thereof by cutting a hole in the charge and then filling the hole with a suitable explosive (or putty line or similar substance) and then covering with a thin sheet of putty or similar compound, the explosive or putty being supplied in the charge. The charge will remain untied until opened for use.

- Have all sub-lines of any charge or cartridge shorter than required kept in sub- or main-line cartridges, if possible, with the explosive or putty line or other suitable material. In the case of main-line cartridges, the explosive or putty line may be covered with a suitable explosive (or putty line or similar substance) and then covered with a thin sheet of putty or similar compound, the explosive or putty being supplied in the charge. The charge will remain untied until opened for use.

- Have all sub-lines of any charge or cartridge shorter than required stored in sub- or main-line cartridges, if possible, with the explosive or putty line or other suitable material. In the case of main-line cartridges, the explosive or putty line may be covered with a suitable explosive (or putty line or similar substance) and then covered with a thin sheet of putty or similar compound, the explosive or putty being supplied in the charge. The charge will remain untied until opened for use.

Section 7.—STORAGE OF EXPLOSIVES

1. Store in a dry, cool place with good cover and ventilation.

2. Store in a dry, cool place with good cover and ventilation.

3. Store in a dry, cool place with good cover and ventilation.

4. Keep detonators well away from other explosives, if possible.

5. Store in a separate room from other explosives if possible.

6. Store away from other explosives if possible.

7. Store away from other explosives if possible.

8. Do not store explosives from their boxes or packages until they are about to be used. Avoid storing them in boxes or packages until they are about to be used.

9. Avoid using explosive from their boxes or packages until they are about to be used.

10. Use CE primers in preference to detonation primers.

Section 8.—CUTTING CHARGES—GENERAL

1. 75-inch Shaped and Tubular Explosives or CTDX or Cartridges of

- 806 g. Shaped and Tubular Explosives or CTDX or Cartridges of

Note: In the following examples the quantity of explosive required is as follows:

- 75 mm. Shaped and Tubular Explosives or CTDX or Cartridges of

- 806 g. Shaped and Tubular Explosives or CTDX or Cartridges of

Table 2—CUTTING CHARGES

<table>
<thead>
<tr>
<th>Cut</th>
<th>Charge</th>
<th>Cutting Charge</th>
<th>Cutting Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 mm</td>
<td>3 lb.</td>
<td>806 g.</td>
<td>806 g.</td>
</tr>
<tr>
<td>75 mm</td>
<td>3 lb.</td>
<td>806 g.</td>
<td>806 g.</td>
</tr>
<tr>
<td>75 mm</td>
<td>3 lb.</td>
<td>806 g.</td>
<td>806 g.</td>
</tr>
</tbody>
</table>

In each case, the charge shown in the table is the quantity of explosive required to be cut and in good condition, will cut through the object to be attacked.
(a) Contact: The importance of good contact has already been mentioned. Charges should be in contact with the surface attached and voids underneath should be filled with clay or moist earth. Sand is not a good material for filling voids. If it is thicker, it will absorb some of the shock of detonation and reduce the cutting effect of the charge.

(b) Charges should be placed on the surface of the object to be cut and at right angles to it (see Fig. 13).

Fig. 13. Cutting charge on thick masonry wall showing points of initiation. (Fixing omitted for clarity.)

For attaching rail Staffs use 25 pounds or one slab of CET/INT or OC placed on the rail as shown in Fig. 14. These charges will normally cut the heaviest rail if placed in good contact. If plastic 808 is used, note the importance of padding in this case. Fixing is not necessary.
Section 10—PULLING SMALL TREES OR TELEGRAPH POLES

Small trees or telegraph poles up to 12 in. diameter may be pulled by tugging on the tree with two 5 ft. tugs. A 10 ft. tugs should be used for the charge shown in Fig. 15. Tie two 5 ft. tugs to the sides of the tree, and pull until it is balanced by the charge. The charge is made up of two charges so arranged that the direction of the tree may be controlled by attaching a rope to the top of the tree and pulling in the required direction. If necessary, the top of the tree may be balanced by attaching a charge to it. The charge is made up of two charges so arranged that the direction of the tree may be controlled by attaching a rope to the top of the tree and pulling in the required direction. If necessary, the top of the tree may be balanced by attaching a charge to it.

Fig. 15. Pole charge for "mending"

Fig. 16. Tree falling using 75 charges

Plan view showing tree matched for proper dimensions. The tree is matched for proper dimensions.
sections 13—DESTRUCTION CHARGES

Condemning Buildings

A brick wall up to 9 ft thick may be demolished by placing one 75-gallon charge of dynamite on the face of the wall, with a charge of dynamite placed in the cavity behind the wall, and firing it simultaneously. The charge should be initiated by connecting the detonating cord from each of the two charges to a time fuse which will be lit from the same fuse box. This method is the most practical and economical.

sections 12—DEMOLISHING WALLS

A wall 10 ft thick may be demolished by placing three 75-gallon charges on the face of the wall, and firing them simultaneously. The charge should be initiated by connecting the detonating cord from each of the three charges to a time fuse which will be lit from the same fuse box. This method is the most practical and economical.

An 18-in. brick masonry or reinforced concrete wall may be demolished successfully by placing one 75-gallon charge on the face of the wall, and firing it simultaneously with a charge of dynamite placed in the cavity behind the wall, and firing it simultaneously. The charge should be initiated by connecting the detonating cord from each of the two charges to a time fuse which will be lit from the same fuse box. This method is the most practical and economical.

sections 14—DEMOLISHING AVs and Guns

A composition charge consisting of a box of twelve 75-gallon charges of dynamite and a box of twelve 75-gallon charges of dynamite may be placed in the walls of the building, and initiated by connecting the detonating cord from each of the two charges to a time fuse which will be lit from the same fuse box. This method is the most practical and economical.

An 18-in. brick masonry or reinforced concrete wall may be demolished successfully by placing one 75-gallon charge on the face of the wall, and firing it simultaneously with a charge of dynamite placed in the cavity behind the wall, and firing it simultaneously. The charge should be initiated by connecting the detonating cord from each of the two charges to a time fuse which will be lit from the same fuse box. This method is the most practical and economical.
**Section 15 - Construction of Gun Pits**

Explosives may be used for lowering up hard or strong self for the excavation of gun pits, mortar pits, etc. This method is NOT before a primer is inserted in the hole at the tail end and placed in position. An initiating set is then inserted for firing.

Small field pieces, howitzers, anti-tank guns, etc. are best demolished by using the gun pits. If this explosive is not available, a 98 S.G. powder charge can be inserted into the breach. This is not into the gun by remote control, and loaded another charge of ammunition. This method of detonating the charge is then used in the breech. The first charge is not available. Methods of detonating guns, etc., when not available are given in Military Training Pamphlet No. 88 (193).

**Section 16 - Use of the Bangalore Torpedo**

This is a prepared charge for attacking wire obstacles. The Bangalore torpedo is the Torpedo No. 1, weighing 180 lb., and is illustrated in Fig. 18. A charge of 200 lb. is now used, and it is illustrated in Fig. 19.

The 200 lb. torpedo has been fired by hand in 180 ft. The 200 lb. weight has been replaced by the 200 lb. weight. The 200 lb. weight has been replaced by the 200 lb. weight.
SEC. 17. BATTLE NOISES

CHAPTER 4—TRAINING
7. Detonator electric. — This is an electrical device for firing electric detonators. One electric detonator may be used to fire several charges if the detonator is employed to fire a cordite main (see Sec. 6, Branching to the various charges can be taken off this main by using the type of clow hold main shown in Fig. 7. In the case of a firing main is not necessary.

<table>
<thead>
<tr>
<th>Detonator electric</th>
<th>Detonator electric in series</th>
</tr>
</thead>
<tbody>
<tr>
<td>One 6-volt battery</td>
<td>One 6-volt battery</td>
</tr>
<tr>
<td>Number of Detonator</td>
<td>Number of Detonator</td>
</tr>
<tr>
<td>100 Volts</td>
<td>200 Volts</td>
</tr>
<tr>
<td>200 Volts</td>
<td>400 Volts</td>
</tr>
</tbody>
</table>

8. Detonator electric. — This consists of a No. 27 detonator electric, laid in cordine. The term "in series" with the battery through a given length of cable, means that the detonator through a given length of cable by battery, passing through each detonator in turn and finishing at the battery, passing through each detonator in turn and finishing at the battery, passing through each detonator in turn and finishing at the battery.
8. The following provisions shall be observed:

(a) The charge must be kept away from cables and under ground.

(b) The charge must be kept away from cables and under ground.

(c) The charge must be kept away from cables and under ground.

(d) The charge must be kept away from cables and under ground.

(e) All persons standing under the charge shall be required to wear protective clothing and equipment.

(f) The charge shall be licensed by a duly authorized official.

(g) The charge shall be licensed by a duly authorized official.

(h) The charge shall be licensed by a duly authorized official.

(i) The charge shall be licensed by a duly authorized official.

(j) The charge shall be licensed by a duly authorized official.

(k) The charge shall be licensed by a duly authorized official.

(l) The charge shall be licensed by a duly authorized official.

(m) The charge shall be licensed by a duly authorized official.

(n) The charge shall be licensed by a duly authorized official.

(o) The charge shall be licensed by a duly authorized official.

(p) The charge shall be licensed by a duly authorized official.

(q) The charge shall be licensed by a duly authorized official.

(r) The charge shall be licensed by a duly authorized official.

(s) The charge shall be licensed by a duly authorized official.

(t) The charge shall be licensed by a duly authorized official.

(u) The charge shall be licensed by a duly authorized official.

(v) The charge shall be licensed by a duly authorized official.

(w) The charge shall be licensed by a duly authorized official.

(x) The charge shall be licensed by a duly authorized official.

(y) The charge shall be licensed by a duly authorized official.

(z) The charge shall be licensed by a duly authorized official.
CHAPTER 6 — Renny Equipment

SECTION 1 — GENERATION EQUIPMENT

CHAPTER 2 — GENERATE WITH A FUND AND OBTAIN

1. GENERAL

I. General

II. Special consideration when on duty

NOTE — In case of duty with enemy's forces...

3. GENERAL

Section 19 — General Technology

Chapter 3 — Destruction of Armors

I. General

II. Scope of this chapter

III. Designation of targets

IV. Description of targets

V. Types of targets...
Section 21—Japanese Equipment

1. Bulk explosives. Most Japanese bulk explosives are in the form of small slabs 2 in. by 2 in. by 1 in. These slabs are packed in a paper package 21 in. long. Alternative blocks in the package have a piece of pitch-pine tied round them with a string and are packed in a cylindrical metal container 6 in. long. They have a safety fuse 6 in. long, which is similar to the black powder fuse used in the British 6-in. shell.

2. Detonators. There are three types of detonators, the smallest corresponding in size and power to the British No. 27 and the largest to the No. 104. The detonators have a brown fuse cover with a silver head and should be used in emergency. The fuse is not as reliable as the British No. 105 primer.

3. Safety fuse. The Japanese safety fuse is unreliable and should not be used. It is a 6-in. length of black-powder fuse and is set in a metal container 6 in. long.

4. Detonating fuse. This fuse has a brown fabric cover with a silver head and is unreliable. It is about 6 in. long and is set in a metal container 6 in. long. It should be replaced by the British No. 105 primer.

In case of doubt, ask for engineer advice.