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REGULATIONS
FOR
ARMY ORDNANCE SERVICES
PART II
PAMPHLET No. 2

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1933

CARTRIDGES AND COMPLETE
ROUNDS M.L. MORTAR AMMUNITION
(except Aiming Rifle, Small Arm and Signal
Cartridges)

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PAMPHLET No. 2

CARTRIDGES AND COMPLETE ROUNDS M.L. MORTAR AMMUNITION

(except Aiming Rifle, Small Arm and Signal Cartridges)

SECTION I

B.L. CARTRIDGES

1.—(1) B.L. cartridges for service use are normally issued filled and ready for use.

(2) For blank and saluting cartridges *not already filled* the requisite empty bags are issued ready for filling. Should it be necessary, however, to make up such bags locally, a pattern and instructions which must be strictly adhered to will first be obtained (through R.A.O.C.) from the Chief Inspector of Armaments, Royal Arsenal, Woolwich.

2. The materials from which cartridge bags are made are :—

- (a) Silk cloth.
- (b) Cream serge.
- (c) Shalloon.
- (d) Cambric.
- (e) Japanese silk.

3. Silk cloth (and other textiles) may be tested for strength by cutting from the material in the direction of either warp or weft a test-piece 10 in. long by 1 in. wide ; when a length of 10 in. cannot be obtained a shorter piece must be used, and in any case the test-piece must be free from visual defects. The test-piece is then passed through the ring of a weight of the specified amount (*see under*) and must, when lifted by the two ends, support the weight.

4. To be considered serviceable at the above test silk cloth must lift the following minimum weights :—

No. 0	..	..	..	..	..	42 lb.
No. 1	..	..	..	..	..	56 lb.
No. 2	..	..	..	..	..	70 lb.
No. 3	..	..	..	..	..	84 lb.

5. The filling, breaking down and emptying of cartridges will be carried out as a laboratory operation (*see generally* R.A.O.S., Part II, Pamphlet No. 11), and under the supervision of an I.O.O., ammunition examiner, or such other person as the I.O.O. may certify to be duly qualified for the work.

Filling B.L. Cartridges with Cordite or N.C.T.

6.—(1) Cartridges with the above propellant charges are normally issued filled.

(2) Should it be necessary to make up cartridges locally, a sample cartridge or drawing and a detailed description of the method of manufacture must first be obtained (through R.A.O.C.) from the Chief Inspector of Armaments, Royal Arsenal, Woolwich.

7.—(1) Unnecessary exposure of propellants to direct sunlight should be avoided, and all packages containing cordite, etc., must be kept covered as much as possible.

(2) If cordite shows any signs of dampness or sweating it must not be cut up or used for cartridge filling until the nitroglycerine has been re-absorbed.

(3) Work upon cordite Mk. I and R.D.B. must not be carried out when the dry-bulb temperature is 45° F. or under, and upon cordite M.D. when the temperature is 32° F. or under.

(4) Cordite Mk. I in bulk should be kept at a temperature of 55° F. for a week prior to making up into cartridges.

(5) Materials such as silk cloth, shalloon, felt wads, etc., liable to absorb moisture must be thoroughly dried before use.

Filling B.L. Cartridges with Gunpowder

8. The correct gunpowder charge will be carefully weighed, inserted into the bag using a copper funnel, and the cartridge "choked" as follows (a pricker being used when necessary to make a hole for the needle):—

Using a "needle magazine" threaded with strands of "Silk, sewing, No. 1," draw the mouth of the cartridge together into several plaits. Take three turns round the plaits, so forming a "choke," and further secure the choke by passing the needle three times through it, alternately above and below the turns of sewing, thus stitching down the turns round the choke; finish off the sewing with a back stitch on to the seam of the bag.

9. The filled cartridge will then be made up to its design length and diameter by means of "hoops," which must be drawn tightly so as to ensure a firm cartridge.

Hooping will be carried out as follows :—

(a) *With braid hoops.*—Draw the braid through the silk cloth until the knot of the loop comes home to the cartridge; place the single end through the loop from underneath, pass it to one side of and under the loop, then draw the hoop tight and keep it so by placing the forefinger of the left hand firmly on the loop. Bring the running end between itself and the loop and draw tightly the single bend thus formed *with the bend biting on the loop and not on the single end*, as otherwise the knot will slip. The maintenance of the proper form of the cartridge is dependent upon the hooping being thus secured.

(b) *With silk sewing.*—After completion of the "choke," pass the needle downwards through the gunpowder and out at the seam in the line for the first hoop; carry the silk sewing tightly round the cartridge so as to form a hoop and stitch it to the cartridge at two or three points, equally spaced round the circumference, in the same way as the turns of the choke were secured. Form the remainder of the hoops in a similar manner.

If the density of the gunpowder is such that the formed cartridge is not of the correct length, it must be brought up to length by tightening the hoops.

10. After the cartridge has been "choked" and "hooped" the ends of the choke must be cut off to a convenient length, which must not in any case exceed half the diameter of the cartridge.

The superfluous ends of the hoops must also be cut off.

SECTION II

Q.F. CARTRIDGE CASES

A. FILLING

General Instructions

11.—(1) Fired cases are not to be rectified locally, but will, after return to Woolwich (para. 46), be subjected to repair and annealing provided that, in the first instance, their condition (para. 14) and "life" (para. 17) justify it.

(2) Fired cases which have been repaired and/or annealed will be used for the same purpose as new cases.

12.—(1) In the past, all repaired Q.F. cartridge cases which had been *annealed* bore the letter "A" in a circle, followed by a punch mark, stamped on the base, an additional punch mark being added for each subsequent annealing.

(2) All cases which have been *low temperature annealed* bear the letter "A" in a diamond stamped on the base, and any former annealing markings are barred out.

(3) Q.F. 4.5-in. howr., 3.7-in. howr., 18-pr. and 13-pr. cases for which, in the past, annealing was omitted during repair, bear the letter "U" in a circle stamped on the base.

(4) After a case has been repaired and low temperature annealed, the monogram and annealing series number are also stamped on the base of the case.

13.—(1) In the past, cases which had been "scleroscope" tested bore the letter "S," followed by a punch mark, stamped on the base, an additional punch mark being added for each subsequent "scleroscoping."

(2) The present approved marking for such cases is , the punch marks being omitted.

14. Cracks.

(a) Before filling, all cases must be carefully examined, both inside and outside, for cracks, especially at the inside of the case; any cases found with *cracks at the base* must not be filled.

- (b) Cases with *cracks at the mouth* must not be filled, with the following exceptions and provided that the length of split does not exceed the limits quoted:—

6-in.	..	..	..	..	25 in.
4.7-in. Mk. I to IV* Guns	..	..	..	..	25 in.
4-in. Mk. III and III* Guns	..	..	..	..	25 in.
12-pr. 12-cwt.	..	..	..	..	17 in.

- (c) Cases suitable for repair by brazing are stamped



This symbol is barred out after repair, the brazing contractors' initials or monogram being stamped below the symbol.

15. Lacquering.—All natures of empty Q.F. cartridge cases are, before filling, cleaned by means of successive washings in caustic soda, hot water and dilute sulphuric acid, and dried in sawdust. They are then lacquered *internally* with a lacquer consisting of methylated spirit, shellac and turmeric.

16. Stamping.

- (a) Before cartridge cases are filled with cordite the letter "C" is stamped on the base.
- (b) According to whether the charge is "full" or "reduced," the letter "F" or "R" is also stamped after the "C." Where the case has been previously filled, the appropriate letter is added for each subsequent re-filling (*see also para. 45*).
- (c) When cartridges are filled with gunpowder (*except in the case of "blank"*), the case is stamped with the letter "P" instead of "C."

17. Life of cases.—With the exception of 4.5-in. howr., 3.7-in. howr., 18-pr. and 13-pr. for which the thickness of cartridge case wall is the criterion, cartridge cases are not repaired and/or used again for filling (*except for "blank"*) after firing six full charges of cordite.

18. Primers.—Before insertion into cartridges, primers and adapters have the threads (and in primers, the underside of the flange also) coated with thick lead-free luting.

Separate Loading Q.F. (except Q.F. Howitzers)

19. After inserting the charge, and paper cylinder where required, the cartridge will be closed with a metal lid, a wad being used if necessary.

The primer or adapter will then be screwed in with a suitable key. **When cartridges are fitted with a percussion primer a safety clip must be put on immediately after the primer has been inserted.**

20. Before inserting an adapter in a Q.F. cartridge, great care is to be taken to ascertain that the charge is in its correct position (*i.e.* with the cordite cylinder or metal or shalloon igniter central with the primer hole), and also when inserting the primer or adapter, to keep the cartridge upright and steady. With cartridges fitted with metal igniters, only Mk. VI adapters (*i.e.* those that are screw-threaded at the forward end) may be used, care being taken before screwing home that the threads of the adapter are engaging those of the metal igniter. In recent designs the igniter is inserted into the cartridge case and the adapter screwed into it *prior to insertion of the charge*, the charge being suitably recessed so as to fit over the igniter.

21. The foregoing precautions must be strictly observed when re-inserting primers or adapters into cartridges from which they have been removed for any purpose, *e.g.* testing, missfires, etc.

22. Where a "cylinder, paper," is used for tracer shell, a hole is provided in the wads. To insert the cylinder a wood former is placed through the hole in the wad with paper cylinder attached and inserted into the end of the charge. The felt wad with glazedboard disc is placed into position with glazedboard disc next to the cordite, and it must be ascertained that no sticks of cordite enter the "cylinder, paper." To secure the lid, coat the edge with "cement, R.D. No. 1, lead-free," and insert it in the mouth of the cartridge so that the portions where the flange is cut away are opposite the tongues; place the "drift, inserting lid," on it and drive it home with a few light blows from a mallet until the flange of the lid is on the edge of the cartridge; turn down the tongues of metal over the edge of the lid and hammer them closely down with a metal hammer, care being taken in securing the lid not to deform it or the cartridge. Apply a small quantity of "cement, R.D. No. 1, lead-free," around the tongues to make the cartridge case waterproof at these points.

**6-in., 4.7-in., 4-in. Mks. III and III* Guns, and
12-pr. 12-cwt., Blank Cartridges**

23. The blank charge is first enclosed in a silk cloth bag, hooped and choked in the ordinary manner, but recessed in the centre of the base to allow space for the projecting

end of the primer or adapter when placed in the cartridge. In the recess is fitted a small dome of calico and white paper, pierced with holes and having a shalloon igniter filled with $8\frac{1}{2}$ drs. of fine grain powder secured in the top with "silk, sewing, No. 1."

24. The charge is inserted in the brass cartridge case, igniter end first. In the case of the 6-in., 4.7-in. and 4-in. Mk. III, a paper or asbestos cylinder is placed over the charge and a lid is secured as in para. 22.

25. In the case of the 12-pr. 12-cwt. cartridges, no lid is used, the charges being held in position as follows :—

A felt wad is first placed on the top of the charge, a gun-metal ring is next placed over the mouth of the case as a guide for the leatherboard cup, which is forced into the case by means of a wood drift supplied for the purpose.

26. The service 12-pr. 12-cwt. empty cartridge cases, or empty cases sentenced for blank, are used for 12-pr. blank cartridges.

Fixed Ammunition, Q.F. 13-pr. and above

27. A "primer, dummy, Q.F. cartridges" is inserted into the primer hole of the case and the charge inserted into the case (with cordite charges, the recessed or primed end first).

If the cartridge case is to receive a shell fitted for a night tracer, a "cylinder, paper, 1-in." is then inserted into the cordite charge at the mouth of the case by means of a wood former.

28. The shell, filled and plugged, is coated below the driving band with "cement, R.D., No. 1, lead-free" and the cannulure, if necessary, filled with "cement, R.D., No. 1, lead-free." The shell is then entered into the case (care being taken in the case of the night tracer shell that the tracer enters into the "cylinder, paper") and the cartridge thus prepared is placed in the coning or indenting machine, the shell being pressed home by turning the small hand-wheel at one end of the machine until the driving band meets the mouth of the case, after which the case is indented or coned on to the shell by turning the large hand-wheel at the side of the machine.

29. The cartridge is then removed from the indenting machine, the dummy primer unscrewed and a live primer inserted after ascertaining that the recess in the charge is

central with the primer hole. A clip is then fitted on the base.

30. The fixing screw and plug are then removed from the nose of the shell. After complying with the instructions as to fuzing issued for each nature of shell (*see* R.A.O.S., Part II, Pamphlet No. 1), the fuze is screwed well home, an indent drilled in the fuze threads through the hole for the fixing screw, a little "thick lead-free luting" inserted in the hole, the fixing screw screwed well home, and the recess above the screw head filled up with "cement, R.D., No. 1, lead-free."

Batching

31. **Fixed Ammunition.**—Fixed ammunition (of all natures) made up subsequent to December, 1929, is "batched" during assembly in order that records of the components of each batch may always be available.

A batch of fixed ammunition (all natures except A.A.) normally contains 2,000 rounds of one propellant lot only, and, as far as possible, each of the other components in a batch will be of one lot only.

A batch of A.A. ammunition normally contains 2,000 rounds of one fuze lot only, and, as far as possible, each of the other components in a batch will be of one lot only.

Particulars of all components of a batch are entered on a record sheet (A.F. G 836) and this record sheet will always accompany a batch when issued. In the event of part of a batch being issued to another I.O.O.'s area, the issuing I.O.O. must prepare on A.F. G 836 an extract from the original record sheet to cover the rounds so issued, and forward it to the consignee.

The distinguishing letters adopted to indicate each type of "batched" ammunition are as follows:—

FULL CHARGES

A	..	..	..	..	=	Shrapnel
B	..	..	.	..	=	H.E.
C	..	..	..	..	=	Smoke
E	..	..	.	..	=	A.P. and steel
F	..	..	..	..	=	Target
G	..	..	..	..	=	Case shot
H	..	..	.	..	=	H.E. streamline
J	..	..	..	.	=	Smoke, streamline

REDUCED CHARGES

L	..	..	..	..	=	Shrapnel
M	..	..	..	..	=	H.E.

PRACTICE, FULL CHARGES

N	..	..	..	..	=	H.E.
P	..	..	..	..	=	A.P.
Q	..	..	..	..	=	Common (base fuze)
R	..	..	..	..	=	C.N.F. (nose fuze)
S	..	..	..	..	=	Practice projectile (filled)
T	..	..	..	..	=	Practice (weighted) and practice shot, and sub-calibre

PRACTICE, REDUCED CHARGES

U	..	..	..	..	=	Practice projectile
---	----	----	----	----	---	---------------------

PRACTICE, BURST SHORT CHARGES

V	..	..	..	..	=	Shrapnel
W	..	..	..	..	=	Practice projectile

Consecutive numbers are allotted to batches which, together with the appropriate distinguishing letter, afford the means of identifying any particular batch (*e.g.* 18-pr. "Batch A.1" denotes the first batch of shrapnel full charge ammunition made up under this system).

If in a batch of Q.F. fixed ammunition (all natures except A.A.) it becomes necessary to use fuzes of more than one lot, the batch will be divided into sub-batches, as, for example :—

Batch B.1, containing rounds with fuzes of the 1st lot.

Batch B.1.A., containing rounds with fuzes of the 2nd lot.

Batch B.1.B., containing rounds with fuzes of the 3rd lot.

If in a batch A.A. ammunition it becomes necessary to use propellant of more than one lot, the batches will be divided into sub-batches by propellant lots on similar lines to those indicated in the preceding paragraph.

The letter X will be added to the batch or sub-batch number when components are taken for proof, or removed for any other purpose, by an I.O.O. and replaced by components of other lots (*see para. 102*).

For each batch A.A. ammunition approximately 5 per cent. additional fuzes are provided as a pool for replacement of fuzes taken from rounds and expended in proof. These fuzes will accompany their parent batch when issued to stations abroad, and in the event of part of a batch of ammunition being issued to another I.O.O.'s area its proportion of pool fuzes must accompany it. Pool fuzes for home stations will be held at central ordnance depots.

The letter and number (and sub-batch number, if any) will be quoted in reports and correspondence concerning a batch (see also para. 51, regarding the introduction of batch markings).

31A. M.L. 3-in. mortar ammunition.—M.L. 3-in. mortar ammunition, when issued as complete rounds, is batched. A batch normally consists of 2,000 rounds, the same batch letters as for fixed ammunition being used to denote the nature of the bomb, viz. :—

B	..	..	..	..	=	H.E.
C	..	..	..	..	=	Smoke
S	..	..	..	..	=	Practice

The batch number is governed by the fuze lot.

Where it is necessary to use propellant of more than one lot in the primary cartridges of a batch of mortar bombs, the bombs will be sub-batched by primary cartridge propellant lots on similar lines to those for fixed ammunition. In other respects the instructions relevant to fixed ammunition apply to "batched" 3-inch mortar ammunition.

Q.F. Howitzers

32. A primer, percussion, No. 1, prepared as indicated in para. 18, is screwed into the primer hole and any excess luting removed. The interior of the base of the case is then treated with shellac varnish so as to form an adhesive surface—in the 4·5-in., it is applied all round the shoulder of the boss of the primer hole, in the 3·7-in., the varnish is dabbed on four equidistant places.

33. The assembled charge is inserted into the case and pressed well down so as to secure adhesion to the case. A glazedboard or leatherboard cup is then inserted above the charge and pressed into position, in 4·5-in. howr. concave side inwards, in 3·7-in. howr. concave side outwards.

Q.F. Howitzers, Q.F. 3-in., 18-pr. and 13-pr., Blank Cartridges

34. Fired service cases, or cases sentenced for blank, and service primers are used. Instructions for filling should be obtained (through R.A.O.C.) from the Chief Inspector of Armaments, Royal Arsenal, Woolwich.

6-pr. and 3-pr. Q.F. Cartridges

35. In ammunition fitted with No. 2 Mks. III, IV or VII primers, or in capped cases, the charge is placed in the case

and the shell, filled and fuzed, is then inserted a short distance into the neck of the case, the shell body below the driving band having been previously coated with "Cement, R.D. No. 1, lead-free."

36. The cartridge is then placed in the indenting machine and the shell forced home by means of the hand-wheel till the driving band of the shell touches the mouth of the case. The neck of the case is then indented in three places into the cannellure round the shell by depressing the lever.

After withdrawing the cartridge from the indenting machine a clip is placed on the base.

37. When filling or refilling cartridges, the quantities of ammunition and explosives allowed in the room should not exceed the quantities laid down in para. 42.

6-pr. and 3-pr. Q.F. Blank Cartridges

38. The cases are similar to the service cases, but shorter, and are fitted with a special primer. Instructions for filling should be obtained (through R.A.O.C.) from the Chief Inspector of Armaments, Royal Arsenal, Woolwich.

B. BREAKING DOWN AND DISPOSAL

39. The operation of breaking down 6-pr. and 3-pr. Q.F. cartridges will be carried out as a laboratory operation (see R.A.O.S., Part II, Pamphlet No. 11) and under the supervision of the I.O.O. or such other person as he may certify to be duly qualified.

40.—(1) The various necessary operations, *i.e.* (a) extracting the shell from cartridge cases; (b) removing fuzes and emptying shell; (c) removing primers, and (d) remaking the cartridges must be carried out in separate rooms or, if in the same room, at different times; *no two of these operations may be carried out in the same room at the same time.*

(2) Instructions for defuzing and emptying shell are contained in R.A.O.S., Part II, Pamphlet No. 1; *it should be noted that only gunpowder filled shell may be emptied locally.*

41.—(1) The "machine, extracting shell" must invariably be covered at the side by a rope mantlet, and no person is to be allowed to stand in front of or behind the machine whilst it is being operated.

(2) Only one man should charge and work the machine, and not more than two men should be in the room during this operation.

42. The total quantity of ammunition in the room at any one time, whether "complete" or "broken down" rounds, must not exceed *two boxes*, and the necessary work on one box must be completed before the other is opened.

43. Breaking down.

- (a) Insert the cartridge carefully into the machine through the hole in the mantlet and place the cap over the end; the cartridge must not be *forced suddenly* into the machine.
- (b) Clamp the jaws of the extractor on to the shell by means of the "tommy" and turn the hand wheel until the shell is extracted, the operator remaining at the side protected by the mantlet.

44.—(1) Remove the shell, take the wads and charge from the case, and place the latter in a metal-lined case for future (refilling) use, if required.

(2) If the shell are to be defuzed and/or emptied, reference should be made to R.A.O.S., Part II, Pamphlet No. 1, for the necessary instructions.

(3) If the cartridges are to be refilled, proceed as in paras. 35 to 37.

45. Empty cartridge cases.—Whenever Q.F. cartridge cases are emptied, the letter "F" or "R" stamped on the base denoting the last filling should be obliterated by stamping a bar over it, *unless the cases have been condemned*.

46. Disposal of fired Q.F. cases.

- (a) All fired Q.F. cartridge cases, with the exception of 4.5-in., 3.7-in., 18-pr. and 13-pr. *required for blank*, are to be returned as soon as possible after firing to C.O.O., Royal Arsenal, Woolwich, for repair and annealing.
- (b) Unless special instructions to the contrary have been received (i) cases that have fired the prescribed number of rounds (*unless required for blank*), and (ii) cases of certain restricted makes, on which the sentence is "not to be refilled for any purpose," may be disposed of locally as "old metal," care being taken that before disposal they are so mutilated as to render them valueless for service use.

SECTION III

FILLED CARTRIDGES

A. MARKING

General

47.—(1) Cartridge bags are marked with ink, printers' black,* when empty, with the nature, etc., of the propellant they are intended to contain. If they are to be filled with a different nature or weight of propellant from that already marked on the bags, the marking is altered accordingly prior to filling.

A record of the propellant used in all cartridges, with maker's name, lot-number and date of filling will be kept in a book for reference (*see also* para. 31 as regards "batched" Q.F. ammunition).

The lot number and monogram of the propellant manufacturer will in addition be stencilled on cartridges containing cordite or N.C.T.

(2) Cartridges containing cordite that has been "re-worked" bear the letter "R" following the lot number.

48. (1) Charges and cartridges in a bag (including Q.F. blank charges) bear the initial or monogram of the station (*see* Magazine Regulations) at which they were filled, or, the initials or trade mark of the filling firm with the date of filling (month and year) immediately underneath, marked on the bottom or lower part of the side of the bag opposite to that which bears the nomenclature. Cartridges which are fitted with new bags are to have the original markings stencilled on them *in addition to the date and place of remaking*.

(2) With a few exceptions, B.L. and Q.F. cartridges will have had (a) the weight of propellant adjusted, or (b) a "grouped" propellant used in filling. When such is the case, *either* the letters "A.C." appended to the lot number of propellant *or* the grouped propellant letter and number, as may be applicable, will be marked as under:—

(a) *B.L. cartridges*.—Stencilled (or stamped with a rubber stamp) on the bag.

* Supply obtained from H.M.S.O. Indents will be submitted on A.F. L. 1836.

- (b) *Q.F. cartridges, separate loading* (except 4.5-in. and 3.7-in. howitzer cartridges).—Stencilled on side or base of case (and formerly, also written or stamped on the label affixed to the cup or lid of the cartridge case).
- (c) *Q.F. fixed ammunition and 4.5-in. and 3.7-in. howitzer cartridges*.—Stencilled on the side or base of the case.

(3) In the case of Q.F. 18-pr. ammunition assembled prior to January, 1921, in which a grouped propellant was used, neither the letters "A.C." nor the propellant group letter and number were shown.

Q.F. Ammunition (All Natures)

49. In the past, Q.F. separate loading cartridges (except 4.5-in. and 3.7-in. howitzer cartridges) bore a paper label attached to the lid in the recess in the centre (or on the bevel edge if there was no recess) giving the Mark of filled cartridge, nature, weight and lot number of the charge (and lot number of cordite cylinder, if fitted).

This practice was discontinued in October, 1929.

50.—(1) **Descriptive marking**.—The undermentioned "descriptive" particulars were, in the past, stencilled on *all* natures of filled Q.F. ammunition.

Originally these markings were placed in *red* paint (*black* for blank and paper shot) on the base of cartridge cases; at a later date, however, this was superseded by stencilling the particulars by the "silver nitrate" process (*see* Appendix II) on the *side* of cases. This system is still current, except that for "batched" ammunition (*see* para. 51) the batch particulars only are stencilled.

The particulars referred to are :—

- (a) Nature, size, maker's initials and lot number of propellant. For cartridges 6-pr. and below, the size of the propellant is not shown, and, when cordite Mk. I is used, the nature of propellant is omitted.
- (b) Mark of filled cartridge, and (i) if the cartridge contains tinfoil for prevention of coppering the word "FOIL," (ii) the letters "DEC," if the cartridge is specially made up for decoppering.
- (c) Monogram of firm or station filling and date of filling (day, month and year).

- (d) The following additional particulars for the natures enumerated :—

Cartridge	Particulars
3-in. 20-cwt. ..	The weight of charge.
18-pr. } ..	The letters " RED," denoting reduced charge, when applicable.
13-pr. }	
6-pr. and below ..	The letters " G.C.," " SFG2," or " SPL SFG 2," according to nature of igniter used.
Separate loading cartridges (except Q.F. howitzers).	The weight of the charge.

(2) The size of the stencilling for the above particulars is $\frac{1}{4}$ -in., except that for natures above 6-pr. the particulars at (c) are $\frac{1}{2}$ -in. type.

(3) The particulars referred to in para. 48 were also originally stencilled on the base of the case *in paint*, the colour of the paint being as shown on *Plate IV* in the case of a grouped propellant.

At a later date, *i.e.* when the markings mentioned at (1) above were placed on the side of the case, the adjusted charge letters (A.C.) were also placed on the side, but the group letter and number continued to be stencilled (by the silver nitrate process) on the base. The latter is the current approved practice.

Q.F. Ammunition (Fixed)

51. Batching.

- Although approval of the " batching " system for Q.F. fixed ammunition (para. 31) was given in October, 1928, the first batch of ammunition to be assembled under the system was not made up until December, 1929.
- From the latter date until October, 1931, whilst the cartridge packages were marked in the batching code, the ammunition itself continued to be marked with " descriptive " markings by the silver nitrate process.
- Since October, 1931, " descriptive " markings on the side of the case have been replaced by the " batch " letter and number, but the propellant group letter and number are, however, stencilled on the base.

52. Distinctive markings.—In Q.F. fixed ammunition filled, converted or repaired prior to 1st December, 1929, the nature of the cartridge was indicated by *painting* the base of the cartridge case (*except cap at primer*) as in the following table:—

<i>Nature of Cartridge</i>		<i>Base of Cartridge</i>	
Armour piercing	..	Blue.	
High Explosive—			
Full charge	..	Yellow.	
Reduced charge ..	..	Yellow, with 1½-in. white band across base.	
Burst short practice ..	..	Yellow, with two white quadrants.	
Streamline	..	Yellow, with white ring ½ in. wide on outside of base.	
Streamline reduced ..	..	White ring ½ in. wide on outside of base, remainder half yellow, half black.	
Shrapnel—			
Full charge	..	Unpainted.	
Reduced charge ..	..	White.	
Burst short practice ..	..	White, two quadrants, remainder unpainted.	
Smoke	..	Green.	
Streamline	..	One green, three white quadrants.	
Target	..	Black.	
3-in. 20-cwt.—			
Practice projectile ..	..	Unpainted, with black ring ½ in. wide round outside of base.	
Burst short charge ..	..	White, two quadrants, remainder unpainted.	
6-pr. cartridges for 6-cwt. guns	..	Bronzed.	
3-pr. 2-cwt. case shot and practice projectile ..	..	Unpainted.	

53.—(1) In ammunition filled, repaired or converted subsequent to 1st December, 1929, “distinctive” markings are indicated by stencilling (silver nitrate process) on the base of cartridge cases according to the following system:—

<i>Nature of cartridge</i>		<i>Lettering</i>	
Armour piercing	..	..	AP
High explosive	..	..	HE
Reduced charge	..	..	R
Practice	..	..	PRAC
„ Special	..	..	PRAC SPL

<i>Nature of cartridge</i>	<i>Lettering</i>
Burst short practice	.. BS
Streamline	.. SL
Shrapnel	.. SHP
Smoke	.. SMK
Target	.. TGT
Tracer	.. $\overline{T}$
Tracer fuze	.. $\overline{TF}$

In addition, BX (in conjunction with SMK) denotes the presence of a smoke box, FL the presence of a flash producer.

(2) The size of stencilling appropriate to the various cartridges is: above 6-pr., $\frac{3}{4}$ -in.; 6-pr., $\frac{1}{2}$ -in.; 3 pr. and below, $\frac{1}{4}$ -in.

(3) Formerly an examiner's identity mark (a $\frac{1}{4}$ -in. letter and numeral in a circle) was also stamped on the base of the case with a rubber stamp and printers' ink. This marking is now stencilled by the silver nitrate process.

54. Silver nitrate stencilling.—Instructions and list of stores required for stencilling Q.F. cartridge cases by the silver nitrate process are given in Appendix II.

B. GAUGING

55. All finished B.L. cartridges are carefully examined and gauged with ring and length gauges before acceptance into the service.

Q.F. cartridges of all natures are gauged in chamber gauges, and Q.F. fixed ammunition is, in addition, gauged in "over-paint" gauges.

C. PACKING, LABELS AND TRANSPORT

56. Packing.—B.L. cartridges are normally packed in zinc, brass, tinned-plate or steel cylinders, and tinned-plate or copper lined cases or boxes.

If for any reason it is necessary to use temporary wooden cases without linings, the package should be lined with non-absorbent paper.

57. For cartridges which are included in Group I, Classification of Explosives (*see Magazine Regulations*), the use of packages in the construction of which iron or steel has been used is strictly forbidden. *Any departure from this rule requires special authority.*

58. In packing filled Q.F. cartridges, each package should normally contain cartridge cases as follows :—

- (a) when new cases are used—of one maker only ;
- (b) when repaired cases are used—of the same monogram or letter and annealing series number ;

where this does not involve the inclusion of more than one lot of propellant (*see* para. 31 regarding "batched" ammunition).

With fuzed ammunition the fuzes should normally be of the same lot number and maker.

58A. If it is necessary to re-pack fixed ammunition, cartridges of one batch or sub-batch only will be placed in any box and care must be taken to ensure that the correct batch or sub-batch numbers are marked on the outside of the boxes.

59. Labels.—Labels as enumerated below are placed on filled packages in the positions indicated :—

- (a) A packer's label (bearing the packer's name, and place and date of packing or repacking) affixed to underside of the lid.
- (b) In the case of "batched" ammunition, a label affixed to the underside of the lid of the box giving particulars of all components of the rounds contained therein.
- (c) A station label (a strip of muslin* or linen-backed material with initials or monogram of the station in black) over the junction of lid (or bung) and body to serve as a seal. Where, however, the lid is without hinges, two station labels are affixed over the junctions at diagonal corners.

In the case of boxes with lids secured by hasps the station label is placed over the hasps.

- (d) The Government Explosive and Classification Label (*see* Magazine Regulations) in any convenient position on the package.
- (e) In the case of boxes for Q.F. separate loading "Gun" and 6-pr. and 3-pr. cartridges, a descriptive label (giving the details stencilled on lid of cartridge) on the side of the box (and the inside of the lid).
- (f) In the case of boxes for 6-pr. and below containing cartridges which have been re-indented, a manuscript label as under :—

Re-indented

Station

Date

on the inside of the lid and on the front of the box.

Labels should be so attached as not to obscure any stencilling on the package. They are to be affixed with shellac adhesive and those on the exterior coated with varnish.

60. Transport.—In transporting cartridge cylinders, whether filled or empty, between laboratories, magazines, etc., great care must be taken in order to prevent any risk of damage by accidental blows or by loss of airtightness due to shaking loose of the lids.

61. When zinc, brass, tinned-plate or steel cylinders are issued containing filled cartridges they are protected by wooden "skeleton" cases. Skeleton cases are also used for a like purpose with serviceable empty cylinders.

62. Transfer of cordite.—Whenever at stations abroad transfer of a lot or "parcel" (i.e. portion) of a lot of cordite in cartridges is made to another command, thereby involving the compilation of a history sheet, action will be taken as laid down in R.A.O.S., Part II, Pamphlet No. 7.

63. Re-made cartridges.—Packages containing cordite cartridges, which have been re-made after heat test (para. 93) are to be stencilled "TESTED" with station monogram and date.

SECTION IV

PACKAGES

A. OIL DRESSING AND PAINTING

64. Oil dressing.—Wooden packages for issue to any of the undermentioned stations, are, unless made of teak, oil-dressed prior to despatch :—

Aden.	India.
Bermuda.	Jamaica.
Ceylon.	Singapore.
East Africa.	West Africa.
Hong Kong.	

65. Painting.—Packages containing filled cartridges are painted as follows :—

(a) Service colour	Cartridge cylinders, Cases Powder, B.L. cartridge boxes, Q.F. (gun, separate loading) cartridge boxes, Q.F. 6-pr. (<i>except tank gun</i>), and steel boxes for Q.F. fixed ammunition (<i>except for smoke or target cartridges</i>).
(b) Vandyke brown (stained)	Wood boxes for Q.F. fixed ammunition (<i>except as detailed below</i>), Q.F. howitzer cartridges and complete rounds.
(c) Red	Blank and paper shot.
(d) Green	Smoke and target ammunition.
(e) Lead colour ..	3-pr. ammunition (<i>except tank gun</i>).

B. MARKING (*Plates I to XXIX*)

General

66. Before "oil dressed" packages are stencilled or distinctively painted they are varnished with "soft copal Manilla varnish," prepared by dissolving 4 lb. of soft copal Manilla in 1 gallon of methylated spirit. They are then stencilled with the letters "O.D." (*see below*).

67.—(1) *In the past*, packages containing B.L. and all natures of blank cartridges (*Plates I and II*) had the particulars of their contents stencilled in *white*, except as otherwise specifically mentioned in the text. Similarly, packages containing other natures of cartridge (except batched Q.F. ammunition) had these particulars stencilled in *black*, save that, where oil dressing had rendered the surface so dark as to make black stencilling difficult to decipher, it was permissible to stencil in *white*.

(2) Present approved procedure is to stencil in *yellow* all those particulars which formerly were stencilled in *white*, and to use *black* stencilling on all yellow and/or unstained packages.

68.—(1) Designs of approved stencils, which must be strictly adhered to, can be obtained (through R.A.O.C.) from the Chief Inspector of Armaments, Royal Arsenal, Woolwich.

(2) As and when the markings on packages are becoming illegible they should be brought up to date in accordance with the latest approved methods.

69. **Repair markings.**—Formerly all packages containing Q.F. (separate loading) “gun” and 6-pr. and 3-pr. cartridges (*except paper shot*) had the following stencilled in black on the lid :—

- (a) “” when the cartridge cases had been repaired and annealed.
- (b) “” when the cartridge cases had been low temperature annealed.
- (c) “REPD” when the cartridge cases had been repaired but not annealed.

Such markings are not now placed on packages containing fixed ammunition, but “” is stencilled on packages of Q.F. separate loading ammunition which has been “low temperature annealed.”

B.L. Cartridges

70.—(1) Packages containing B.L. cartridges have the following general information (varying according to nature of contents) stencilled on them (*Plates III to VII*) :—

- (a) Monogram of station and date of filling.
- (b) Number of cartridges in the package.

- (c) Designation and Mark of cartridge. In the case of high velocity howitzer cartridges, designation includes the Mark of the howitzer.
- (d) $\frac{1}{4}$, $\frac{1}{3}$ or $\frac{1}{2}$ charges, if not full charges.
- (e) The words "REDUCED CHARGE," when applicable *formerly* on all four sides, *latterly* on two sides only.
- (f) The words "FOR PRACTICE ONLY," where service ammunition has been sentenced to be so used.
- (g) The symbol "SP" if the cartridges have S.F.G.2 gunpowder igniters.
- (h) Nature, size and lot number of propellant, with the letters "A.C." if the charge has been adjusted (para. 48). Where, however, a "grouped propellant" has been used, the letters "A.C." are omitted and replaced by the particulars as at (j) below.
- (j)—(i) Where a grouped propellant has been used, the group letter and number in 2-in. letters, enclosed in a hollow rectangle 5 in. by 4 in., on lid and two opposite sides. Cylinders containing cartridges of this nature are similarly stencilled on the lid and body.

The group letters and the appropriate distinctive colours are as follows (Plate IV) :—

Cordite M.D. or M.C.	letter "D" in blue	thus	D.9.
„ S.C.	„ "S" „		S.9.
„ W	„ "E" „		E.8.
„ R.D.B.	„ "C" „		C.9.
„ Flake	„ "F" in black	thus	F.12.
N.C.T.	„ "N" in red	thus	N.10.

- (ii) Packages containing cartridges *not* made up from a grouped propellant had, in the past, the letters "C" or "N.C.T.", denoting cordite or nitrocellulose, stencilled in 2-in. letters on all four sides of boxes, and on the lids and bodies of cylinders. At a later date this system was modified, viz.: "C" to denote cordite R.D.B., "D" to denote cordite M.D., and "N.C.T." nitrocellulose, in *blue* for gun, *red* for howitzer cartridges. Cylinders containing such cartridges had, in addition, the propellant lot number stencilled on the lid.

(k)—(i) In the past, symbols (*Plate IV*) denoting the gun or howitzer with which the cartridge is for use, 4-in. high (3-in. for 6-in. gun) on all four sides and lid, *blue* for gun and *red* for howitzer cartridges, except that for 8-in. Mk. VIII, 9.2-in. Mk. II and 12-in. Mk. III-V howitzers the symbols were in white. Cartridge cylinders had these symbols stencilled on the lid and body. Where no symbol was used, particulars of the gun were stencilled on all four sides of the package.

(ii) This system of symbols has, since November, 1928, been superseded by stencilling the nature of gun or howitzer and particulars of the propellant charge (*e.g.* B.L. 60-pr. —lb. —oz. —M.D.11) on one side and both ends of ordinary type packages (cases, powder, on lid and two opposite sides) and on the lid and body of cartridge cylinders.

(l) Cylinders containing three 16½-lb. charges for the 9.2-in. gun have a broad red band round the centre of the cylinder.

(m) Cylinders containing super-charge cartridges for 9.2-in. guns or howitzers have the word "SUPER-CHARGE" stencilled on the body.

(n) Cylinders containing short and long range cartridges for 12-in. howitzers have a 1-in. blue (for short range) and white (for long range) band across the lid and round the body.

(2) The stencilling detailed above should (except where otherwise specified) appear on packages in the positions shown below, and should in all cases allow sufficient room for the Government Explosive and Classification Label :—

(a) *B.L. cartridge boxes and cases powder* .. On the top.

(b) *Boxes, cartridge, Q.F.*—when used for packing B.L. cartridges On the lid.

When the zinc linings have been washed to free them from zinc chloride, they will be stamped on the side with a circle $\frac{3}{8}$ in. diameter, and a blue disc stencilled on the lid of the box.

(c) *Cylinders* On the lid.

When zinc cylinders have been washed to free them from zinc chloride, a blue disc is stencilled below the handle and a circle $\frac{3}{8}$ in. diameter stamped above the lug of the handle.

Cartridges, Q.F. 12-pr. and above "Separate Loading"
(except cartridges for paper shot and Q.F. howitzers)

71. Packages containing cartridges of the above nature have the following information stencilled on them (*Plate IX*):—

On the top.

- (a) Monogram of station and date of filling.
- (b) Number of cartridges in the package.
- (c) Designation and Mark of cartridge.
- (d) Nature, size and lot number of propellant, with the letters "A.C." if the charge has been adjusted. Where a grouped propellant has been used the letters "A.C." are replaced by the group letter and number (*Plate IV*).
- (e) "IGNITERS, METAL, MK. I," or "CYL. CORD.," and lot number of cordite cylinders, as applicable.
- (f) "ADAPTERS," with Mark and makers initials.
- (g) "CASES," with manufacturers initials and year of manufacture. Where cases have been repaired and/or annealed the year of manufacture is not stencilled.
- (h) In the case of annealed and/or repaired cases, the "repair" markings described in para. 69.
- (j)—(i) "T LIDS" when cartridges have lids suitable for shell fitted with night tracers.
- (ii) "S LIDS" when cartridges have strawboard lids. In addition, a disc ● ($\frac{1}{2}$ -in. diameter) when cartridges have a circular hole cut in underside of lid or in strawboard, or an arc ∪ when cartridges are fitted with "dished" lids, or an arc with a disc ⊙ when cartridges have lids which are dished and have several holes in strawboard.

Oil dressed packages have the letters "O.D." on *one side only*.

Q.F. Cartridges for Paper Shot

72. Packages containing paper shot cartridges have the following information stencilled on them (*Plate X*):—

On the top.

- (a) Monogram of station and date of filling.
- (b) Number of cartridges in package.
- (c) Designation and Mark of cartridge.
- (d) Particulars and lot number of propellant.
- (e) The words "FOR PAPER SHOT."

On both sides.

The nature of the gun with which the cartridges are for use.

On both ends.

"PAPER SHOT."

Oil dressed packages have the letter "O.D." on one side only.

Cartridges, Q.F., 4.5-in. and 3.7-in. Howitzers

73. Packages containing cartridges of the above nature have the following information stencilled on them (*Plate XI*):

On the lid.

- (a) Number of cartridges and the word "CARTRGES".
- (b) Number and particulars of cylinders or boxes, *i.e.* "CYLRS. No. 238 (or 239)" or "BOXES TINNED PLATE," and Mark (as applicable).

On both sides.

- (a) The calibre of howitzer (in more recent issues this is shown on one side only).
- (b) For grouped propellants, the group letter and number.

On one side only.

- (a) Lot number of propellant. (If the propellant used is not "grouped" the lot number should appear on both sides), followed by "A.C." denoting adjusted charge.
- (b) "O.D.," if applicable, for oil dressed packages.

On both ends.

Monogram of station and date of filling.

Tinned-plate cylinders containing 4.5-in. and 3.7-in. howitzer cartridges made up from a grouped propellant are stencilled on the lid with the group letter and number.

Q.F. 4.5-in. and 3.7-in. Howitzers, Complete Round Boxes

74. Boxes containing 4.5-in. and 3.7-in. howitzer complete rounds have the following information stencilled on them (*Plate XII*):—

On the top.

- (a) The numbers of shell, fuzes, cartridges and cylinders in the box.
- (b) The fuze symbol (*Plate IV*) as applicable.

On both sides.

- (a) *Shell*.—Calibre, nature and Mark, whether plugged or fuze, monogram of filling station and date of filling, filling design number, and, if amatol filled, fraction denoting composition. Two black stripes if shell are fitted with "economy" driving bands (4.5-in. howr. only).
- (b) *Cartridge*.—Size and lot number of propellant; group letter and number if a grouped propellant has been used or "A.C." if an adjusted charge.
- (c) *Fuze*.—Trade mark or initials of empty fuze maker (or "MIXED" if more than one maker of fuze), number, Mark, filler and filled lot number of fuze.

On one side only.

"O.D." when the box has been oil dressed.

On both ends.

- (a) Fuze symbol.
- (b) Monogram of station and date of packing.
- (c) "LYD" if shell is filled Lyddite.
"H.E." if shell is filled Amatol 80/20.*
"T.N.T." if shell is filled Trotyl.
- (d) Red criss-cross, when shell are similarly marked on nose.

Cartridges, Q.F. 18-pr. and 13-pr.

75. Prior to the introduction of the "batching" system for Q.F. fixed ammunition, boxes containing cartridges of the above nature had the following information stencilled on them (*Plates XIII and XIV*):—

Shrapnel.**On one side only.**

- (a) The group letter and number, if a grouped propellant was used (*Plate IV*).
- (b) The lot number of propellant, and Mark of complete round.
- (c) Trade mark or initials of empty fuze maker (or "MIXED" if more than one maker of fuze).
- (d) Number, Mark, filler and filled lot number of fuze.
- (e) Monogram of the station fuzing and date (*on side opposite to the above particulars*).
- (f) "O.D." if box has been oil dressed.

* In future, the appropriate fraction only will be shown for Amatol filling.

- (g) The letter "R" (in red) in top left hand corner on both sides (where applicable) denoting shrapnel shell which, at examination, have been found to have rust-affected central tubes (see R.A.O.S., Part II, Pamphlet No. 1).

Note.—Formerly certain of the above particulars were stencilled on both sides, and some boxes so marked may still be found.

On both ends.

- (a) The words "REDUCED CHARGE" when applicable.
 (b) For 13-pr. ammunition, the cleats painted black (or a black rectangle).

H.E.

On the top.

The fuze symbol (*Plate IV*).

On one side only. (*See "Note" under Shrapnel.*)

- (a)-(f) As for Shrapnel.
 (g) "SL" if streamline shell are fitted.

On both ends.

- (a), (b) As for Shrapnel.
 (c) The fuze symbol.
 (d) { "LYD" if shell are filled Lyddite.
 " H.E." if shell are filled Amatol.
 (e) Red criss-cross, if shell are similarly marked on nose.
 (f) Design number of method of filling of shell.

Smoke.

The stencilling, as applicable, is similar generally to that for H.E., but, in addition, the following information is stencilled :—

On both ends.

The word "PHOS" and "DECK CARGO."

Plugged ammunition.—Packages containing Q.F. 18-pr. and 13-pr. plugged ammunition of all natures have, instead of the fuze marking and Mark of complete round, the words "PLUGGED SERIES" with the series letter as applicable, and the date of assembly in place of the date of fuzing.

Note.—Wooden "boxes, ammunition, Q.F. 18-pr. C.52" are fitted to take particular natures of shell only. These are distinguished by a letter suffix to the box No. thus—

52 Y are suitable for H.E. or smoke,

52 Z are suitable for shrapnel only.

Steel boxes C.52 are suitable for shrapnel only.

76. Batched ammunition (see paras. 31 and 51).

- (a) The batch record sheet (A.F. G 836), which accompanies a batch of ammunition when issued, contains complete details of components in the batch, and many of the particulars formerly stencilled are now omitted from packages of "batched" ammunition.
- (b) In addition each package has a label affixed to the underside of the lid giving particulars of components of the cartridges therein; these particulars must be altered as necessary when any charge is made in the original components.
- (c) The system of marking particulars on packages containing batched ammunition of all natures (particularly the latest approved system, see paras. 78, 81, 84, 87, 87A, 87B, 87C), has been designed on a simple, and so far as possible, standard layout so as to facilitate the task of all those who may at any time have to handle the ammunition. *It is, therefore, most important that stencilled particulars should be in the actual positions shown on the relevant G.A. Stencils (and correctly placed relative to each other).*
- (d) All stencilling on packages containing batched ammunition is, except where otherwise indicated, in yellow lettering.

77. Ammunition made up between 1st December, 1929, and February, 1933.—Q.F. 18-pr. and 13-pr. ammunition batched between the dates quoted has the following information stencilled on packages (*Plate XV*) :—

(1) Wood boxes.

On one side only.

- (a) Calibre of gun.
- (b) The word "BATCH," with the batch letter and number (and sub-batch letter, if any).
- (c) Nature of projectile, and "SL" if streamline shell are fitted.
- (d) Propellant group letter and number.
- (e) "PLUGGED," when applicable.
- (f) "O.D." when box has been oil dressed.
- (g) "R" (in red on two opposite sides) for shrapnel with rust-affected central tubes (see para. 75).

On both ends.

- (a) Batch letter and number (and sub-batch letter, if any).
- (b) The words "REDUCED CHARGE," if applicable.

- (c) For 13-pr. ammunition, cleat painted black.
- (d) The words "SHRAP" or "SMOKE," if applicable.
- (c) For H.E. shell :—
 - (i) "LYD" if shell are filled Lyddite.
 - "H.E." (with fraction denoting composition) if shell are filled Amatol.
 - (ii) Red criss-cross, if shell are similarly marked on nose.
- (f) For H.E. or Smoke shell—designation of fuze.
- (g) For Smoke shell only, "DECK CARGO" and "PHOS".

(2) **Steel boxes.** (All stencilling *in the flutes.*)

On one side.

- (a) Calibre of gun.
- (b) The word "BATCH," with batch letter and number (and sub-batch letter, if any).
- (c) Nature of projectile, and "80/20" if shell are filled Amatol.

On an adjacent side.

- (a) Propellant group letter and number.
- (b) "PLUGGED," when applicable.

On lid and bottom.

- (a) Batch letter and number (and sub-batch letter, if any).
- (b) The words "REDUCED CHARGE," if applicable.
- (c) "H.E. 80/20," if shell are filled Amatol.
- (d) The words "USE 106 FUZE," if applicable (shell fitted with No. 13 Fuze-hole plug).

78. Ammunition subsequent to February, 1933.—The latest approved system of stencils for batched 13-pr. and 18-pr. ammunition is a simplified and modified form of the previous method.

Packages have the following information stencilled on them (*Plate XVI*) :—

(1) **Markings common to all natures :—**

Two opposite sides	Two ends (lid and bottom, steel boxes)
(a) Calibre of gun and nature of projectile.	(a) Batch particulars.
(b) "RED. CHARGE," if applicable.	(b) Nature of projectile.
(c) The word "BATCH," with batch letter and number (and sub-batch letter, if any).	(c) "RED. CHARGE," if applicable.
(d) Propellant group letter and number.	(d) "PLUGGED," if applicable.

(2) Markings peculiar to the nature enumerated :—

Nature	Two opposite sides	Two ends
H.E.	(a) "S.L." if streamline shell fitted. (b) Fuze symbol, if applicable.	(a) Fuze symbol, if applicable (<i>Plate IV</i>). (b)—(i) Red criss-cross, if shell similarly marked on nose. (ii) Nature of filling.
Smoke.	(a) "S.L." if streamline shell. (b) Fuze symbol, if applicable. (c) "PHOS." and "DECK CARGO" (on lid of wood boxes, on sides not otherwise marked of steel boxes).	(a) Fuze symbol, if applicable. (b) "PHOS." in lieu of "nature of projectile."

Oil dressed packages have the letters "O.D." stencilled on the lid.

Q.F. Anti-Aircraft Ammunition

79. Prior to the introduction of the "batching" system.—Packages containing 3-in. 20-cwt. cartridges had the following information stencilled on them (*Plates XVII to XIX*) :—

Shrapnel.

On the top.

- (a) "A.A. ONLY."
- (b) Monogram of station and date of fuzeing.
- (c) Nature and Mark of the complete round.
- (d) "SHRAP.," and the words "16-LB. SHELL" (in red).
- (e) Number, Mark, filler and filled lot number of fuze.
- (f) Nature, size and lot number of propellant, with the letters "A.C." if the charge had been adjusted.
- (g) The symbol $\hat{T}$, denoting shell fitted with a slight tracer, if applicable.
- (h) The symbol $\frown$, denoting shell designed for, but without a night tracer, if applicable.
- (j) The letter "T" (in blue), denoting time fuze.
- (k) Series number of proof.
- (l) A yellow band across middle (continued all round box), for cartridges fitted with practice charges.

On both sides.

- (a)—(i) The letter " C " denoting Cordite R.D.B., or "D" denoting Cordite M.D., in the case of adjusted charges.
- (ii) Where a group propellant was used, the foregoing letter was replaced by the propellant group letter and number (and the letters) " A.C." omitted from the top of the box).
- (b) " BURST SHORT PRACTICE " (in red), when applicable.
- (c) The yellow band when on top is continued down the sides.
- (d) " R " (in red) on top left hand corner, for shrapnel with rust-affected central tubes.

On both ends.

- (a) The letters " A.A." (in red).
- (b) The words " 16-LB. SHELL " (in red).

H.E.**On the top.**

- (a), (b) and (c) As for Shrapnel.
- (d) " H.E.," the words " 16-LB. SHELL " (in red), and, fraction denoting composition of Amatol, or " T.N.T.," as applicable.
- (e)—(i) Number, Mark, filler and filled lot number of fuze.
- (ii) Number, Mark, filler and filled lot number of gaine or 44/80 fuze.
- (f) to (l) As for Shrapnel.
- (n) Design number of method of filling of shell.
- (n) Two green discs, denoting presence of smoke box in shell filling, if applicable.

On both sides.

- (a), (b) and (c) As for Shrapnel.
- (d) Two green discs, denoting presence of smoke box, if applicable.

On both ends.

- (a) and (b) As for Shrapnel.
- (c) Red criss-cross, if shell are similarly marked on nose.
- (d) " H.E." and fraction denoting composition of Amatol, or " T.N.T.," as applicable (on the cleat).

Target.**On the top.**

- (a) "A.A. PRACTICE" (in red).
- (b) and (c) As for Shrapnel.
- (d) "TARGET" and "16-LB. SHELL" (in red).
- (e)—(i) Number, Mark, filler and filled lot number of fuze.
- (ii) Number, Mark, filler and filled lot number of gaine.
- (f) As for Shrapnel.
- (g) A yellow band across middle (all round box).
- (h) Design number of method of filling of shell.
- (j) and (k) As for Shrapnel.

On both sides.

- (a) As for Shrapnel.

On both ends.

- (a) and (b) As for Shrapnel.
- (c) "TARGET" (in red) (on cleat).
- (d) "PHOS." and "DECK CARGO".

Practice Projectiles.**On the top.**

- (a) "A.A. PRACTICE" or "A.A. PRAC." (in red).
- (b) and (c) As for Shrapnel.
- (d) "PRAC. PROJ." and "16-LB. SHELL" (in red).
- (e) and (f) As for Shrapnel.
- (g) A yellow band across middle (all round box).
- (h) Two aluminium discs, denoting presence of flash producer, if applicable.
- (j) and (k) As for Shrapnel.

On both sides.

- (a), (b) and (c) As for Shrapnel.
- (d) Two aluminium discs, denoting flash producer, if applicable.

On both ends.

- (a) and (b) As for Shrapnel.
- (c) "PRAC. PROJ." (on cleat).

Plugged ammunition.—Plugged ammunition of all natures has, instead of the fuze particulars and Mark of complete round, the words "PLUGGED SERIES," with series letter as applicable, and the date of assembly in place of the date of fuzing.

Oil-dressed packages have the letters "O.D." on one side only.

80. Ammunition made up between 1st December, 1929, and February, 1933.—Q.F. A.A. "batched" ammunition assembled between the dates quoted has the following information stencilled on packages (*Plates XX and XXI*):—

(1) Wood boxes.

On the top.

- (a) "A.A."
- (b) Calibre of gun and nature of projectile.
- (c) The word "BATCH," with batch letter and number (and sub-batch letter, if any).
- (d) "PLUGGED," if applicable.
- (e) Two green discs, denoting presence of smoke box, if applicable.
- (f) Two aluminium discs, denoting presence of flash producer, if applicable.
- (g) Yellow band across middle (all round box) denoting practice charges, when applicable.
- (h) For H.E. fillings, fraction denoting composition of Amatol, or "T.N.T."
- (j) T denoting projectiles fitted with tracers, if applicable.

On two opposite sides.

- (a) Propellant group letter and number.
- (b) Two green discs, denoting smoke box, when applicable.
- (c) Two aluminium discs, denoting flash producer, when applicable.
- (d) "BURST SHORT PRACTICE," if applicable.
- (e) "R" denoting Shrapnel with rust-affected central tubes.

On both ends.

- (a) "A.A."
- (b) Nature of projectile.
- (c) Batch particulars.
- (d) Number, Mark, filler and filled log number of fuze.
- (e) For H.E. filled shell, fraction denoting composition of Amatol, or "T.N.T."
- (f) Red criss-cross, if shell are similarly marked on nose.
- (g) "DECK CARGO" and "PHOS" for Target shell.

Oil-dressed packages have the letters "O.D." on one side only.

(2) Steel boxes.

On one side.

- (a) "A.A."
- (b) Calibre of gun and nature of projectile.

- (c) "BATCH," with batch letter and number (and sub-batch letter, if any).
- (d) Nature of H.E. filling, if applicable.
- (e) Two green discs, denoting presence of smoke box, when applicable.
- (f) Two aluminium discs, denoting flash producer, when applicable.
- (g) The words "BURST SHORT PRACTICE," when applicable.
- (h) Yellow band across middle (all round box) denoting practice charges, when applicable.
- (k) $\hat{T}$ denoting projectiles fitted with tracers, if applicable.

On one adjacent side.

- (a) Propellant group letter and number.
- (b) "PLUGGED," when applicable.
- (c) Two green discs, denoting smoke box, when applicable.
- (d) Two aluminium discs, denoting flash producer, when applicable.

On the lid and bottom.

- (a) "A.A."
- (b) Batch letter and number (and sub-batch letter, if any).
- (c) Nature of projectile.
- (d) Number, Mark, filler and filled lot number of fuze.
- (e) For H.E. cartridges only :—
 - (i) Red criss-cross, if shell are similarly marked on nose.
 - (ii) Nature of filling.

Note.—The first issues of packages containing batched A.A. ammunition did not have the "fuze particulars" stencilled on them.

81. Ammunition subsequent to February, 1933.—Packages have the following information stencilled on them (*Plates XXII and XXIII*) :—

(1) Markings common to all natures—

Two opposite sides	Two ends (lid and bottom, steel boxes)
(a) "A.A."	(a) "A.A."
(b) Number, Mark, filler and filled lot number of fuze.	(b) Fuze particulars.
(c) Calibre of gun and nature of projectile.	(c) Batch letter and number (and sub-batch letter, if any).
(d) Propellant group letter and number.	(d) Nature of shell filling.

(2) Markings peculiar to the natures enumerated—

Nature	Two opposite sides	Two ends (lid and bottom steel boxes)
H.E.	(a) One green disc, denoting presence of smoke box, if applicable. (b) "BURST SHORT," if applicable.	(a) One green disc, denoting smoke box, if applicable. (b) Red criss-cross, if shell are similarly marked on nose.
Practice projectiles.	(a) One aluminium disc, denoting presence of flash producer, if applicable. (b) "BURST SHORT," if applicable. (c)—(i) Two yellow bands, all round middle of box, for cartridges fitted with "projectiles practice special." (ii) One yellow band similarly placed, for all other types of practice ammunition.	(a) One aluminium disc denoting flash producer, if applicable. (b) "SPL" for "special" practice ammunition.
Shrapnel.	(a) $\overline{T}$ denoting projectile fitted with tracer.	(a) $\overline{T}$ denoting projectile fitted with tracer.
Target.	(a) "PHOS" or "DECK CARGO" (on lid of wood boxes, on sides not otherwise marked of steel boxes).	(a) "PHOS" in lieu of "nature of filling."

Oil-dressed packages have the letters "O.D." stencilled on the top. When applicable the "fuze-particulars" are replaced by "PLUGGED."

81A. Pool fuzes.—Packages containing pool fuzes are marked to indicate the batch of A.A. ammunition to which they are appropriated, *e.g.* "Proof pool for 3-in. 20-cwt. Batch B. . . ."

6-pr. and 3-pr. Ammunition for Fixed Armaments

82. Prior to the introduction of "batching," packages containing 6-pr., and 3-pr. practice and sub-calibre cartridges had the following information stencilled on them (Plate XXIV):—

On the lid (lid painted yellow).

- (a) Number, designation and Mark of cartridge.
- (b) "FUZED," or "PLUGGED," if applicable.

- (c) Weight of charge, nature, size and lot number of propellant, and the letters "A.C." if an adjusted propellant was used.
- (d) "CASES" with manufacturer's initials and year of manufacture, or, where cases have been repaired and/or annealed, the repair markings, as described in para. 69, in lieu of the "year of manufacture."
- (e) "PRIMERS No. 2," with Mark, maker's initials and date, or "CAPS MARK II."
- (f) "FUZES HOTCHKISS," with Mark, maker's initials and lot number of fuze.
- (g) "SHELLS A," or "SHOT," with Mark, as applicable.
- (h) Station monogram, date of filling and series number.
- (j) Mark of igniter and "SP" if cartridges have S.F.G.2 igniters.

Oil-dressed packages have the letters "O.D." stencilled on front of box.

83. Ammunition of the above nature, assembled between 1st December, 1929, and February, 1933, has the following information stencilled on packages (Plate XXV) :—

On the lid (lid painted yellow).

- (a) Number of cartridges.
- (b) Calibre of gun and nature of cartridge.
- (c) "BATCH," with batch letter and number.
- (d) Nature of projectile.

On the front and back.

- (a) Nature of cartridge.
- (b) Batch particulars.
- (c) Nature of projectile.

Oil-dressed packages have the letters "O.D." stencilled on one face only.

84. Packages containing ammunition batched since February, 1933, have the following information stencilled on them (Plate XXV) :—

On the lid (lid painted yellow).

- (a) Batch letter and number.
- (b) Number of cartridges and nature of projectile.

On the front and back.

- (a) "BATCH," and batch particulars.
- (b) Calibre of gun and nature of ammunition.
- (c) Yellow band all round middle of box.

Tank Gun Ammunition

85. Prior to 1st December, 1929, packages containing cartridges for tank guns had the following information stencilled on them (*Plate XXVI*):—

On the lid (lid painted grey).

- (a) Number of cartridges and calibre of gun.
- (b) Nature and Mark of shell, and "FUZED," if applicable.
- (c) Weight of charge and nature of propellant.
- (d) Lot number of propellant, and "A.C." if an adjusted charge was used.
- (e) "SHELL A.P." with Mark, and word "FILLED" with nature of filling (*not* applicable to 6-pr. ammunition).
- (f) "CASES" with manufacturer's initials and year of manufacture, or, where cases have been repaired and/or annealed, the "repair" markings, as described in para. 69, in lieu of the "year of manufacture."
- (g) "PRIMERS No. 2," with Mark, maker's initials and date, or "CAPS, MARK II."
- (h) "FUZES HOTCHKISS," or "FUZES HKS.," with Mark, maker's initials and lot number of fuze.
- (j) Station monogram, date of filling and series number.
- (k) For 6-pr. ammunition, "TANK GUN" (in red).
- (l) For practice ammunition, a yellow band across middle (all round box).

On the sides.

- (a) For 3-pr. 2-cwt. ammunition, the words "TANK GUN."
- (b) "O.D." for oil-dressed packages, when applicable on one side only.

Note.—On steel boxes for 3-pr. 2-cwt. ammunition, the markings detailed above appear on the sides.

86. Steel boxes containing 3-pr. 2-cwt. ammunition batched between 1st December, 1929, and February, 1933, have the following information stencilled on them (*Plate XXVII*):—

On one side.

- (a) Number of cartridges.
- (b) Calibre of gun.
- (c) "BATCH," with batch letter and number (and sub-batch letter, if any).

- (d) Nature of projectile.
- (e) "REDUCED" if applicable.
- (f) "TF," for cartridges fitted with No. 280 fuze.
- (g) Yellow band, across middle (all round box), for practice ammunition.

On the adjacent sides.

- (a) The words "TANK GUN."

On the lid.

- (a) Nature of projectile.
- (b) "REDUCED," if applicable.
- (c) Batch letter and number (and sub-batch letter, if any).
- (d) Number of fuze.

87. Steel boxes containing tank gun ammunition batched since February, 1933, have the following information stencilled on them (Plate XXVII) :—

On the sides with one flute only.

- (a) Calibre of gun and nature of projectile.
- (b) Batch letter and number (and sub-batch letter, if any).
- (c) "T" or "TF" denoting tracer or tracer fuze (No. 280), when applicable.
- (d) Yellow band across middle (all round box), for practice ammunition.

On the sides with two flutes.

- (a) The words "TANK GUN."
- (b) "RED. CHARGE," if applicable.

On the lid and bottom.

- (a) Batch letter and number (and sub-batch letter, if any).
- (b) Number of cartridges and nature of projectile.
- (c) "T" or "TF," when applicable.
- (d) "RED. CHARGE," if applicable.

M.L. 3-in. Mortar Ammunition

87A. Complete rounds of batched M.L. 3-in. mortar ammunition are packed in "carriers" and Boxes B.162.

Six rounds, in two carriers, are packed in each box. The boxes are marked as follows (*Plate XXIX*):—

CARRIERS—

- (a) A 2-in. coloured band indicating the nature of the bomb, viz.—

H.E.	..	..	..	..	Yellow
Smoke	..	..	..	..	Green
Practice	..	..	..	..	Black

- (b) Batch letter and number.

BOXES—

On the sides—

- (a) "3-in. MOR" and nature of bomb.
 (b) Batch letter and number.
 (c) Fuze number
 or
 (d) "PLUGGED FOR....FUZE" (number as applicable).
 (e) "6 BOMBS IN 2 CARRIERS."

On the ends.

- (a) Batch letter and number.
 (b) Fuze number
 or
 (c) "PLUGGED FOR....FUZE" (number as applicable).
 (d) Nature of filling of bomb.

On the lid.

- (a) "O.D." for oil-dressed packages, where applicable.
 (b) "PHOS" }
 "DECK CARGO" } When smoke bombs are packed.

87B. Complete rounds of batched M.L. 3-in. mortar ammunition have been issued in Cylinders No. 278 and Boxes B.160 (6 cylinders in each box), the boxes being marked as follows (*Plate XXVIII*):—

Cylinders.

- (a) Painted to indicate the nature of bomb, viz.—

H.E.	..	..	..	Yellow
Smoke	..	..	..	Green
Practice	..	..	..	Black with 1-in. yellow band

- (b) Batch letter and number.

Boxes.**On the sides.**

- (a) " 3-in. MOR " and nature of bomb.
- (b) Batch letter and number.
- (c) Fuze number or " PLGD " as applicable.

• On the ends.

- (a) Batch letter and number.
- (b) Fuze number or " PLGD " as applicable.
- (c) Nature of filling of bomb.

On the lid.

- (a) " O.D. " for oil-dressed packages, where applicable.
- (b) " 6 CYLS No. 278. "
- (c) " PHOS " } When smoke bombs are
" DECK CARGO " } packed.

87C. M.L. 3-in. mortar ammunition may also be issued unbatched. In this case the components are packed separately as follows :—

Bombs in Box B.161.

Primary cartridges in " Case, powder,
metal lined ".

Augmenting cartridges and retain- } in " Case, powder,
ing springs } metal lined."

These packages are marked as follows :—

Box B.161.**On the sides.**

- (a) Design number of method of filling of bomb.
- (b) " 6 BOMBS, M.L. 3-in. MOR. . . . " (nature of bomb).

On the sides.

- (c) " FUZED " (number of fuze).
- or
- (d) " PLUGGED " (when smoke bombs are packed).

On the ends.

- (a) Fuze number and mark, filler's initials and lot number of fuzes.
- or
- (b) " PLGD " (when smoke bombs are packed).
- (c) Nature of filling of bomb.
- (d) " 6 BOMBS. "

On the lid.

- (a) "O.D." for oil-dressed packages, where applicable.
- (b) "PHOS" } When smoke bombs are packed.
- "DECK CARGO" }

Case, powder, metal lined—

(For primary cartridges)

On the sides without cleats—

- (a) Initials or trade mark of cartridge manufacturer.

On the sides without cleats—

- (b) "3-in. MOR."
- (c) "210 CARTGES, 95 GRNS BAL MK" (mark of cartridge).

On the lid.

- (a) "3-in. MOR CARTGES BAL"
 - (b) "O.D." for oil-dressed packages, where applicable.
- (For augmenting cartridges and springs retaining.)

On the sides without cleats—

- (a) Initials or trade mark of cartridge manufacturer, lot number and date of manufacture (month and year) of cartridges.
- (b) "3 in. MOR"
- (c) "420 CARTGES, AUGMENTING . . . GRNS N.C. (Y) MK . . ." (93 or 100 grains and Mark as applicable).
- (d) "70 SPRINGS RETAINING."

On the lid.

- (a) "3-in. MOR CARTGES N.C.(Y)."
- (b) "SPRINGS"
- (c) "O.D." for oil-dressed packages, where applicable.

SECTION V

• EXAMINATION

A. B.L. CARTRIDGES

88.—(1) At annual inspection five per cent. of the packages in each magazine or explosive store are to be selected for opening and at least 50 per cent. of the contents of each opened package visually examined in detail ; if any defects are found to have developed all the cartridges in the package concerned must be examined.

(2) In the event of charges being found in an unserviceable condition, particulars of the lot number, number of cartridges held and number found unserviceable will be reported at once, *by telegram*, to the Chief Inspector of Armaments, Woolwich, S.E.18, and the lot concerned will be isolated pending instructions.

(3) The packages selected for opening are to be taken indiscriminately from each propellant lot, no lot being left unexamined for a longer period than two years.

(4) Where, however, the cartridges are of recent manufacture, or have been recently re-packed, it is permissible for the I.O.O., at his discretion, to open up a percentage of packages less than that prescribed above, but if so the reason for his action must be stated in the report of inspection.

89.—(1) All packages opened up are to be examined as regards serviceability and immunity of the interior from moisture and the attack of worm and beetle.

(2) As and when necessary the paint and stencilled markings on packages should be brought up to date.

90.—(1) The material of cartridge bags taken from opened packages is to be closely examined to ascertain that its general condition and that of the sewing and hooping is correct. If the material appears to have deteriorated to such an extent as to render the cartridges unsuitable for service use, the cartridges should be sentenced for re-fitting with new bags, provided always that the remaining life of the cordite, as indicated by heat test (*see* R.A.O.S., Part II, Pamphlet No. 7), justifies the expenditure. (*N.B.*—Yellow staining of cartridge bags (exudation) is generally a sign of deterioration.)

(2) Where there is any appearance of mould or mildew on a cartridge bag, particularly underneath the folds of the choke or the hoops, the defect, provided it has not progressed too far, may generally be remedied by careful brushing and drying in a warm dry place.

91.—(1) Igniters will be closely examined as regards correct filling. Should any be found in which the powder has escaped into the cordite charge, *all* cartridges of the same lot in the store are to be examined and all cartridges found defective in this respect will be dealt with in accordance with the "Instructions for dealing with sulphur infected cordite" (*see* R.A.O.S., Part II, Pamphlet No. 7).

(2) Cartridges which are found to have damp igniters will be similarly treated.

92. Igniters held on separate charge (*Plate VIII*) are to be examined visually at the annual inspection and one per cent. of them weighed (*see* Appendix I). Any found damp or otherwise defective are to be sentenced unserviceable and disposed of as "wetted gunpowder" (*see* R.A.O.S., Part II, Pamphlet No. 10).

93. The propellant in a cartridge due for heat testing on previous sentence will be visually examined for general appearance, colour, smell and sweating (*see* R.A.O.S., Part II, Pamphlet No. 7), and the results of visual examination recorded on the report of inspection.

When the results of the heat test are known, the cartridges which have been opened will be re-made or otherwise disposed of.

94.—(1) Packages containing cartridges which have been examined at annual inspection will be stencilled "EXD" with Station monogram and date, such particulars replacing those of any previous examination.

(2) Full particulars of any abnormal feature and/or defects found at annual inspection of cartridges will be entered in the report of inspection (A.F. G 898).

B. Q.F. CARTRIDGES

General Instructions

95.—(1) At annual inspection five per cent. of packages in each magazine or explosives store are to be opened and at least 50 per cent. of the contents of each opened package selected for visual examination; if any defects are found to have developed in the cartridges so examined, *all* cartridges in the package concerned must be examined.

(2) In the event of charges being found in an unserviceable condition, particulars of the lot number, number of cartridges held and number found unserviceable will be reported at once, *by telegram*, to the Chief Inspector of Armaments, Woolwich, S.E.18, and the cartridges concerned will be isolated pending instructions.

(3) The packages selected for opening are to be taken indiscriminately from each propellant lot, no lot being left unexamined for a longer period than two years.

(4) Where, however, the cartridges are of recent manufacture or have been recently repacked, it is permissible for the I.O.O., at his discretion, to open up a percentage of packages less than that prescribed above, but, if so, the reason for such action must be stated in the report of inspection.

(5) All cartridges which have been returned from field service are to be examined.

96.—(1) All opened packages are to be examined as regards serviceability and immunity of the interior from moisture or the attack of worm or beetle.

(2) The paint and/or stencilled markings are to be brought up to date, as and when necessary.

97.—(1) All cartridges selected for examination are to be visually examined for general condition and about half the number gauged in the appropriate gauge (para. 55), the safety clip, where used, being first removed (*and replaced at the first opportunity*).

(2) A like proportion of the cartridges is to be gauged for the depth of cap below surface of base of case, using a steel rule and feeler gauge. This distance must not exceed the following :—

Cartridges fitted with Primer No. 1	..	..	.015-in.
" " " "	"	No. 2, Mk. III	.023-in.
" " " "	"	No. 2, Mk. IV or	
		VII	.018-in.
" with capped cases	..	..	.016-in.

98.—(1) If the percussion caps are found black or corroded they are to be wiped with a clean dry cloth to ascertain whether this abnormality is serious or only slight. As a result of this examination, it will be left to the discretion of the I.O.O. as to whether the primers (or caps) should be subjected to "special proof" or not.

(2) Instructions for the proof (including special proof) and sentencing of fuzes, primers, and caps are laid down in R.A.O.S., Part II, Pamphlet No. 5.

99.—(1) Cartridge cases are to be carefully examined externally for any signs of cracks, especially at the base, and the report of inspection should state that this has been done. Those from which the charges have been withdrawn are to be examined on the inside as well as the outside.

(2) Cases which have split or cracked spontaneously *at the base* are to be returned to C.O.O., Royal Arsenal, Woolwich, "for special examination," unless instructions to the contrary have been issued. "At the base" includes not only splits or cracks which extend from the base up the body of the case, but also those which, although not beginning at the base, are within 2-in. of it.

(3) If five per cent. or more of any particular maker's cases are found to be cracked at the base, all ammunition of the same nature and date of filling in the magazine or explosive store is to be returned to Woolwich for special examination.

(4) Cases which have split or cracked *other than at the base* will be disposed of as for fired cases (*see para. 45*), except that 6-pr. and 3-pr. with cracks at the mouth less than $\frac{3}{4}$ -in. in length may be used for practice purposes.

(5) Whenever a report is made concerning cracked cases, the initials or trade mark of the manufacturer and the year of manufacture (stamped on the base) should be quoted; where a lot number exists, this also should be quoted.

(6) Packages containing cartridges which have been examined at annual inspection will be stencilled "EXD.," with station monogram and date, such particulars replacing those of any previous examination.

(7) Full particulars of any abnormal features and/or defects found at annual inspection will be entered in the report of inspection.

Q.F. Separate Loading Ammunition

100.—(1) To examine a cartridge from which a sample of the propellant is due to be taken for heat test (*vide* R.A.O.S., Part II, Pamphlet No. 7) the primer (when applicable) will be removed by means of the authorized key, the lid removed, and the charge withdrawn. The gunpowder igniter (if present) will be examined and dealt with as in para. 91.

(2) After extraction of the sample for heat test, the remaining portion of the charge is to be visually examined for general appearance, colour, smell and sweating.

(3) Unless signs of deterioration are present, other cartridges will not be opened up; should it be necessary to do so, each cartridge is to be examined in detail as to the serviceability of its charge and case.

(4) When the results of heat test are known, the broken down cartridges will be re-made or disposed of according to the sentence. (*Note.*—Q.F. howitzer cartridges are *not* to be re-made locally.) When re-inserting primers the precautions laid down in paras. 18 and 20 must be strictly observed.

(5) Rubber covers if found fitted to 4.5-in. howitzer cartridges are to be discarded if perished or split and replaced by leatherboard cups (para. 33).

(6) Cartridges which are closed by means of a glazedboard (or similar board) lid, are to be examined near the mouth for signs of corrosion or verdigris.

Q.F. Fixed Ammunition and M.L. 3-in. Mortar

101.—(1) Instructions for the examination and proof of fuzes, primers and caps are given in R.A.O.S., Part II, Pamphlet No. 5.

(2) Instructions for the examination and repainting of shell are given in R.A.O.S., Part II, Pamphlet No. 1.

102. Whenever components of batched ammunition are taken for proof, or removed for any other purpose, by an I.O.O. and replaced by components of *other lots*, the particulars on the label inside the lid of the box will be altered accordingly and the letter X added to the batch or sub-batch number on the box. Except for A.A. ammunition, this letter will also be added to the batch or sub-batch number stencilled on the rounds when the fuze is changed. The letter X on a box denotes that the components of the ammunition in the box are not as originally detailed on the record sheet and reference must be made to the label inside the lid if it is necessary, to ascertain details of the components of the contents of the box.

Any exchange of components of batched ammunition made by I.O.Os. will be recorded on the relative A.F. G 836 and notified to the C.I.A. on A.F. G 837.

103.—(1) All fuze covers of the selected cartridges are to be examined, and any found with rubber covers are to be replaced by fuzes of the appropriate nature fitted with metal covers. Fuzes with loose or damaged metal covers are to be sentenced repairable and replaced by serviceable fuzes.

(2) If there is any appearance of slight rust on the shell or verdigris on the cartridge case, it can generally be removed by rubbing with a clean rag moistened with turpentine and drying off with a clean dry rag. Should the rust be considerable, the shell should be sentenced for scraping and re-painting.

(3) If the paint on the shell is found to be soft, all the boxes in the magazine or store containing cartridges of the same lot or place and date of filling are to be opened in a dry atmosphere and allowed to remain open until the paint dries and hardens.

104. The shell will be tested for looseness in the cartridge case as follows :—

Place the round on a bench or table and, holding the case with the left hand and the shell with the right, attempt to turn the shell in the case, without, however, using undue force. No movement of the shell in the case should occur.

Rounds with loose shell are to be set aside and, if a " machine coning and indenting " is available, the cartridge cases are to be re-coned and re-indented. Where no machine is available, the cartridges are to be sentenced repairable and set aside to await disposal instructions.

105. Breaking down.—To break down a cartridge for selection of a sample of the propellant for heat test (when required), as also 6-pr. and 3-pr. cartridges for proof of the base fuze, proceed as follows :—

Note.—Before beginning any work on cartridges fitted with the No. 106 type fuze, first ascertain that the sealing wire of the safety cap is intact. If it is not, the round must be set aside and dealt with as laid down in R.A.O.S., Part II, Pamphlet No. 4.

(a) *At stations where a breaking down machine is available.*

- (i) Remove the safety clip from the base of the cartridge case, extract the primer and replace it by a dummy primer.
- (ii) If the shell in the cartridge has a nose fuze, place the round in the machine, secure it by means of the clamp and remove the set screw securing fuze, if present. Remove the fuze by means of the appropriate key and replace it by a suitable plug.

Turn the handwheel of the machine until the shell has been extracted from the case.

- (iii) If the shell has a base fuze, place the round in the machine, clamp it and turn the handwheel until the shell has been extracted (*see paras. 37 et seq.*).

(b) *At stations where no breaking-down machine is available. (Not applicable to 6-pr. and 3-pr. cartridges with capped cases or to cartridges with base fuze shell.)*

- (i) Remove the primer, replacing it by a dummy primer, and the fuze, replacing it by a suitable plug.
- (ii) Grasp the round firmly in both hands, one near the base of the case, the other at the shoulder of the shell.
- (iii) Holding the round in a horizontal position, bring it down smartly on a wooden block so that impact occurs where the mouth of the case surrounds the base of the shell, care being taken, however, that the driving band is not damaged.
- (iv) Repeat this operation as necessary, rotating the round in the meanwhile, until the round is loose in the case.

Rounds fitted with smoke or target shell will not be broken down locally unless special instructions have been issued and a machine is available.

106. The propellant charge from each broken-down round will be examined for appearance, etc., as laid down in para. **100**, and the gunpowder igniter, if any, will be examined and dealt with as laid down in para. **91**.

107. Cartridges which have been broken down, will, if the propellant lot represented has been sentenced serviceable at test, be reassembled (*see* paras. **27 et seq.**) where facilities exist, and repacked. Otherwise the remainder of the propellant charge will be destroyed (*see* R.A.O.S., Part II, Pamphlet No. 7), and the remaining components retained in R.A.O.C. charge for use again if required.

C. DISPOSAL OF TEXTILE AND OTHER COMPONENTS

108.—(1) All bags, braid, wads and cylinders removed from B.L. or Q.F. cartridges :—

- (a) of which the propellant is to be destroyed ;
- (b) which are unserviceable ;

will be destroyed.

(2) Spare sections of B.L. and/or Q.F. separate loading cartridges of war time manufactured cordite returned from annual practice will be destroyed in accordance with the instructions contained in R.A.O.S., Part II, Pamphlet No. 7.

APPENDIX I

B.L. Igniters

Igniter	Weight of powder (minimum)	Igniter	Weight of powder (minimum)
18-in. C.	16 oz.	8-in. E.†	16 oz.
" D.	"	" F.†	"
" E.	2 oz.	" G.	"
" F.	"	" H.	3 oz.
" G.	"	" L.	"
14-in. D.†	16 oz.	6-in. A.†	2 oz.
" F.	"	" B.†	"
12-in. F.*†	10 oz.	" C.†	1 oz.
" F.**†	"	" D.†	12 drs.
" M.	"	" E.†	2 oz.
9-2-in. A.†	8 oz.	" F.†	1 oz.
" B.†	"	" G.†	2 oz.
" C.†	"	" H.	"
" D.†	6 oz.	" J.	"
" E.†	"	" K.	"
" F.†	8 oz.	" L.	1 oz.
" G.†	16 oz.	" M.	12 drs.
" J.†	8 oz.	60-pr. A.†	1 oz.
" K.	"	" B.†	10 drs.
" M.	"	" C.†	"
" O.	"	" D.	1 oz.
" P.	6 oz.	" E.	"
		" F.	"
		" G.	1½ oz.
		" H.	"

† Denotes obsolescent.

APPENDIX II

Instructions for Stencilling Q.F. Cartridge Cases by the Silver Nitrate Process, and List of Stores Required.**Cautions.**

- (a) The operation of marking by the silver nitrate process must not be carried out in the same part of any room as that in which cordite or other explosive is exposed. The part of the room allotted to stencilling must be marked off by tapes or barriers, beyond which no exposed explosive is allowed.
- (b) When paint or stencil markings are to be removed from the base of filled cartridges and replaced by silver nitrate stencilling, the percussion primer must first be removed and replaced by a dummy primer until the work has been completed.
- (c) As silver nitrate solution is corrosive, rubber gloves should be worn by the operator undertaking the stencilling and great care should be taken to avoid the solution coming into contact with bare skin.

Instructions for Stencilling

1. The supply of silver nitrate crystals as received from store must be kept securely sealed in a dark place and the bottle opened only when necessary, as silver nitrate decomposes under the action of daylight.
2. The solution for stencilling is made up by dissolving 30 parts by weight of silver nitrate crystals in 100 parts of distilled water and is to be retained in a glass-stoppered bottle until actually required.
3. The brush is prepared for use by cutting the bristles of a "brush, sash tool, No. 8" to a length of approximately $\frac{1}{2}$ in., and the portion of the cartridge case on which the stencilling is to appear is to be cleaned by rubbing it lightly with a piece of "No. 0 emery cloth," clean and free from grease.
4. After preparing the required stencils (shellacked), pour silver nitrate solution on to a clean, non-greasy piece of felt in an earthenware dish, using just sufficient to saturate the felt.

5. Draw the brush lightly over the felt pad so as to take up only the minimum amount of solution, place the stencil in position and stencil the case by drawing the brush over the stencil as if painting, *not* stabbing.

6. The solution must not be laid on heavily, and should dry off in air in approximately forty-five minutes.

7. Where it is necessary to remove existing silver nitrate markings on cases, they may in general be erased by the use of emery cloth; if this cannot be done, the old markings may be barred out by "painting" silver nitrate solution through a specially cut stencil.

Stores Required for Silver Nitrate Stencilling

Designation	Quantity	Purpose
<i>Section F.</i>		
Brush, sash tool, No. 8 ..	1	For stencilling.
<i>Section H.1</i>		
Cloth, emery, No. 0	As required.	For cleaning cases.
Silver, nitrate of	1-oz. per 1,000 cases.	For stencilling.
<i>Section. W.2</i>		
Gloves, rubber .. pairs	1	To protect operator's hands.
<i>N.I.V.</i>		
Bottles, glass, tinted with glass stoppers	2	{ 1 for crystals. 1 for solution.
Dish, earthenware, glazed (about 4 in. in diameter).	1	To hold pad and solution for immediate use.
Felt, $\frac{1}{4}$ in. thick	As required.	To form a pad in the earthenware dish.
Paper, rocket	As required.	For preparing stencils.
Water, distilled	As required, to be provided locally.	To make up solution.

LIST OF PLATES

Plate No.	Based on G.A. Stencil No.	Description
I	153A	Typical for cases containing blank cartridges or charges.
II	181	Typical for blank cartridges in cylinders.
III	82	Typical for cases, powder and boxes containing B.L. cartridges.
IV	—	Distinguishing markings for (a) B.L. cartridges, (b) Group letters, (c) Fuzes.
V	352	} Typical for cases, powder, and boxes containing B.L. cartridges.
VI	353	
VI	30	
VI	22	} Typical for gun and howitzer cartridges in cylinders.
VII	30A	
VII	30A	Typical for cylinder and skeleton case containing B.L. gun cartridges.
VIII	132A	Typical for case, powder, containing spare igniters for B.L. cartridges.
IX	95	Typical for boxes containing cartridges, Q.F., 12-pr. and above, separate loading, for land service (except 4.5-in. and 3.7-in. howitzers).
X	199	Typical for box containing cartridges for paper shot.
XI	56A	Typical for box containing cartridges, Q.F., 3.7-in. or 4.5-in. howitzer.
XII	259	Typical for box, ammunition, Q.F. howitzer, containing complete rounds.
XIII	126	} Typical for box, ammunition, Q.F., wood, containing 18-pr. and 13-pr. cartridges, fuzed or plugged.
XIII	155	
XIV	145	} Typical for box, ammunition, Q.F., steel, containing 18-pr. cartridges with shrapnel, fuzed or plugged.
XIV	159	
XV	310, 313, 314, 317, 321, 323, 324.	Typical for boxes, ammunition, containing cartridges, Q.F. 13-pr. and 18-pr., H.E., smoke or shrapnel, fuzed or plugged; wood box 13-pr. and 18-pr., steel box 18-pr. (<i>Batched ammunition, first system.</i>)
XVI	408, 409, 410, 411, 412, 413, 414, 415	Typical for boxes, ammunition, containing cartridges, Q.F., 13-pr. and 18-pr., H.E., smoke or shrapnel, fuzed or plugged; wood box, 13-pr. and 18-pr., steel box 18-pr. (<i>Batched ammunition, latest system.</i>)
XVII	229, 248, 250, 252,	Typical for box, ammunition, containing Q.F. cartridges with practice projectile or shrapnel, fuzed or plugged, for A.A.
XVIII	228	} Typical for box, ammunition, containing Q.F. cartridges with H.E. shell, fuzed or plugged, for A.A.
XVIII	249	

Plate No.	Based on G.A. Stencil No.	Description
XIX	240	{ Typical for box, ammunition, containing Q.F. cartridges with target shell, fuze or plugged, for A.A.
	251	
XX	304	{ Typical for box, ammunition, containing cartridges, Q.F., 3-in. 20-cwt., shrapnel, H.E., practice projectile, and target, fuze or plugged. (<i>Batched ammunition, first system.</i>)
	305	
	306	
	307	
XXI	338	{ Typical for box, ammunition, steel, containing cartridges, Q.F., 3-in. 20-cwt., H.E. or practice projectile. (<i>Batched ammunition, first system.</i>)
	341	
XXII	400	{ Typical for box, ammunition, wood, containing cartridges, Q.F., 3-in. 20-cwt., shrapnel, H.E., practice projectile, and target, fuze or plugged. (<i>Batched ammunition, latest system.</i>)
	402	
	404	
	406	
XXIII	401	{ Typical for box, ammunition, steel, containing cartridges, Q.F., 3-in. 20 cwt., shrapnel, H.E., practice projectile, and target, fuze or plugged. (<i>Batched ammunition, latest system.</i>)
	403	
	405	
	407	
XXIV	163	Typical for box, ammunition, containing cartridges, Q.F., 6-pr. and 3-pr., for fixed armaments.
XXV	416	Typical for box, ammunition, containing cartridges, Q.F., 6-pr. and 3-pr., for fixed armaments. (<i>Batched ammunition.</i>)
XXVI	163	{ Typical for box, ammunition, containing cartridges, Q.F., 6-pr. 6-cwt., and 3-pr. 2-cwt., for tank gun.
	215	
XXVII	419	{ Typical for box, ammunition, containing cartridges, Q.F., 3-pr. 2-cwt., for tank gun. (<i>Batched ammunition.</i>)
	420	
XXVIII	383	{ Typical for box, bomb, B. 160, containing 3-in. mortar H.E. and smoke. (<i>Batched ammunition.</i>)
	384	
XXIX	450	{ Typical for box, bomb, B. 162, containing 3-in. mortar H.E., smoke and practice. (<i>Batched ammunition.</i>)
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PLATE I

NOTES.

CASES PAINTED RED. MARKINGS ON LID ONLY.
STENCILLING IN WHITE.

NOTE :- WHEN THE CASE IS RE-STENCILLED
THE COLOUR OF LETTERING IS IN YELLOW.

ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING.
2. NUMBER OF CARTRIDGES.
3. CALIBRE AND MARK OF GUN, AS APPLICABLE.
4. MARK OF CARTRIDGE, AS APPLICABLE.
5. WEIGHT AND PARTICULARS OF POWDER
"L.C.", "G12" OR "R.F.C²", AS APPLICABLE.
6. LOT NUMBER, AS APPLICABLE.
7. "CHARGES" STENCILLED WHEN ONLY
CHARGES ARE PACKED.
8. "ADAPTERS" OR "PRIMERS PERC⁴ N°1
AS APPLICABLE.
9. "O.D." WHEN CASE IS OIL DRESSED,
STENCILLED ON ONE SIDE ONLY.

LABELS.

- A. PACKERS LABEL N° L.566A AFFIXED
TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER
JUNCTION OF LID AND BODY ON
OPPOSITE SIDES.
- C. GOVERNMENT EXPLOSIVE AND
CLASSIFICATION LABEL N° L.1601
(GROUP I) OR N° L.1606 (GROUP VI),
AS APPLICABLE.

LABELS ARE AFFIXED TO CASE WITH
SHELLAC, AND THOSE ON EXTERIOR ARE
COATED WITH SHELLAC AFTERWARDS.

**TYPICAL FOR CASES
CONTAINING BLANK CARTRIDGES OR CHARGES.**

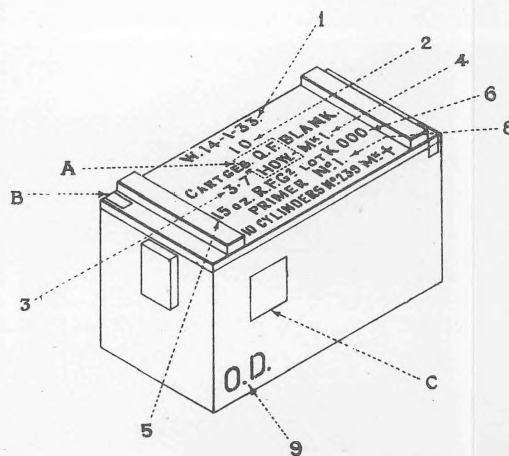
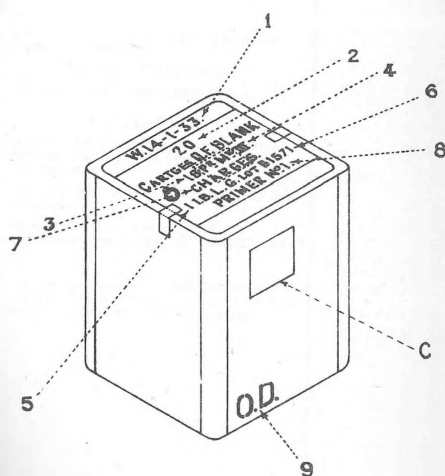


PLATE I

NOTES.

CASES PAINTED RED. MARKINGS ON LID ONLY. STENCILLING IN WHITE.

NOTE:- WHEN THE CASE IS RE-STENCILLED THE COLOUR OF LETTERING IS IN YELLOW.

ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING.
2. NUMBER OF CARTRIDGES.
3. CALIBRE AND MARK OF GUN, AS APPLICABLE.
4. MARK OF CARTRIDGE, AS APPLICABLE.
5. WEIGHT AND PARTICULARS OF POWDER "L.C.", "G12" OR "R.F.C.", AS APPLICABLE.
6. LOT NUMBER, AS APPLICABLE.
7. "CHARGES" STENCILLED WHEN ONLY CHARGES ARE PACKED.
8. "ADAPTERS" OR "PRIMERS PERC" N°1 AS APPLICABLE.
9. "O.D." WHEN CASE IS OIL DRESSED. STENCILLED ON ONE SIDE ONLY.

LABELS.

- A. PACKERS LABEL N° L. 566A AFFIXED TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY ON OPPOSITE SIDES.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L. 1601 (GROUP I) OR N° L. 1606 (GROUP VI), AS APPLICABLE.

LABELS ARE AFFIXED TO CASE WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

TYPICAL FOR BLANK CARTRIDGES IN CYLINDER.

PLATE II.

NOTES.

CYLINDER AND CASE, WOOD, SKELETON, PAINTED RED.

STENCILLING IN WHITE.

NOTE:- WHEN CYLINDER OR SKELETON CASE IS RE-STENCILLED, THE COLOUR OF LETTERING IS IN YELLOW.

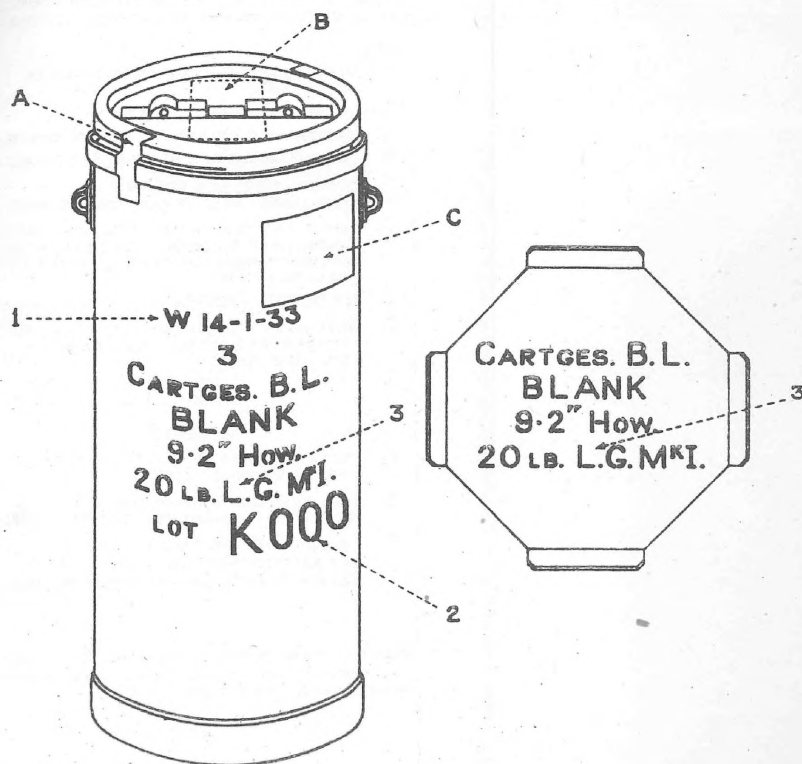
ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING CARTRIDGE.
2. LOT NUMBER, AS APPLICABLE.
3. "G 12" OR "R.F.C 2" AS APPLICABLE;

LABELS.

- A. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY ON OPPOSITE SIDES.
- B. PACKERS LABEL Nº 1.566A. AFFIXED TO UNDERSIDE OF LID.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL Nº 1601 (GROUP I).

LABELS TO BE AFFIXED TO CYLINDER WITH SHELLAC, AND THOSE ON EXTERIOR TO BE COATED WITH SHELLAC AFTERWARDS.



TYPICAL FOR CASES POWDER,
AND BOXES CONTAINING B.L. CARTRIDGES.

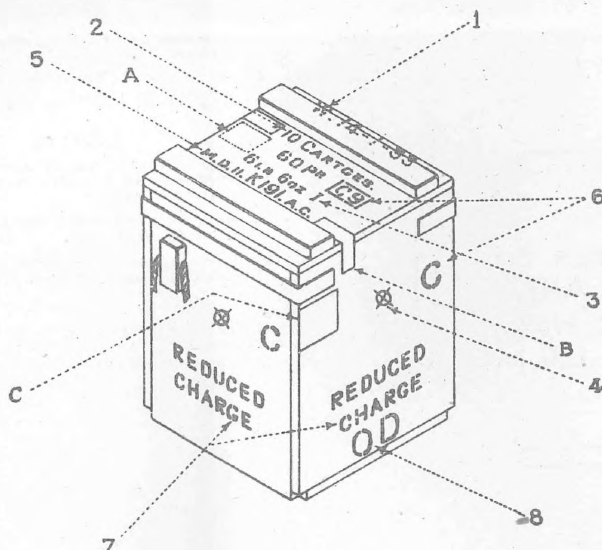


PLATE III

NOTES.

CASES AND BOXES PAINTED SERVICE COLOUR.
STENCILLING IN WHITE ON LID AND FOUR SIDES, EXCEPT WHERE OTHERWISE STATED.

ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING.
2. NUMBER OF CARTRIDGES.
3. DESIGNATION AND MARK OF CARTRIDGE.
4. GUN OR HOWITZER SYMBOL (SEE PLATE IV)
5. NATURE, SIZE, LOT NUMBER OF PROPELLANT 'A.C.' IF ADJUSTED CHARGE.
6. GROUP LETTER AND NUMBER, IF GROUPED PROPELLANT IS USED. ALTERNATIVELY, DISTINGUISHING LETTER OF PROPELLANT (SEE PLATE IV)
7. "REDUCED CHARGE" WHEN APPLICABLE.
8. "O.D." WHEN CASES AND BOXES ARE OIL DRESSED, STENCILLED IN BLACK ON ONE SIDE ONLY.

LABELS.

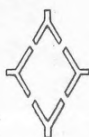
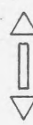
- A. PACKERS LABEL N^o L. 566.A. AFFIXED TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY, ON OPPOSITE SIDES.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N^o L. 1603 (GROUP III) AFFIXED ON ONE SIDE ONLY.

NOTE:- THIS PLATE IS TYPICAL OF THE OLD METHOD OF STENCILLING AND IS NOW SUPERSEDED. (SEE PLATE V).

DISTINGUISHING MARKINGS FOR :-

PLATE IV

(A) B.L. CARTRIDGES. (B) GROUP LETTERS. (C) FUZES.

A		B		C			
BLUE  14 INCH GUN	RED  12 INCH HOW.	YELLOW B.10. BALLISTITE	BLUE C.11. CORDITE RDB.	 FUZE, PERCUSSION N° 44.	 FUZE, PERCUSSION N° 101.B.	 FUZE, PERCUSSION N° 101.B. WITH DELAY	
RED  9.2 INCH HOW	BLUE  9.2 INCH GUN.	BLUE D.11. CORDITE M.D. OR M.C.	BLACK F.12. FLAKE CORDITE				
RED  8 INCH HOW	RED  6 INCH 26 CWT HOW.	RED N.8. NITROCELLULOSE. †		 FUZE, PERCUSSION N° 101.E.	 FUZE, PERCUSSION N° 101.E. WITH DELAY	 FUZE, PERCUSSION N° 106.	 FUZE, PERCUSSION N° 106.E.
BLUE  6 INCH GUN.		For BL AND 4.5 INCH AND 3.7 INCH HOWITZER CARTRIDGES, THE GROUP LETTER AND NUMBER, IS PLACED IN A RECTANGLE OF SAME COLOUR. WHEN A PROPELLANT IS NOT GROUPED AND THE PACKAGE BEARS THE PROPELLANT LETTER ONLY, THE LETTER WILL BE, RED FOR HOWITZER CARTRIDGES, AND BLUE FOR GUN CARTRIDGES. †		 FUZE, PERCUSSION N° 115.	 FUZE, PERCUSSION N° 115.E.	 FUZE, PERCUSSION N° 117.	 TRACER FUZE N° 280.
		BLUE E 10 CORDITE W	BLUE S 11 CORDITE S.C.				

TYPICAL FOR CASES, POWDER, AND BOXES CONTAINING B.L. CARTRIDGES.

PLATE V.

NOTES.

CASES AND BOXES PAINTED SERVICE COLOR STENCILLING IN YELLOW:-

- TYPE 1. ON LID AND TWO OPPOSITE SIDES.
" 2. ON ONE SIDE AND BOTH ENDS.
" 3. ON LID AND BOTH ENDS.
EXCEPT WHERE OTHERWISE STATED.

ITEM.

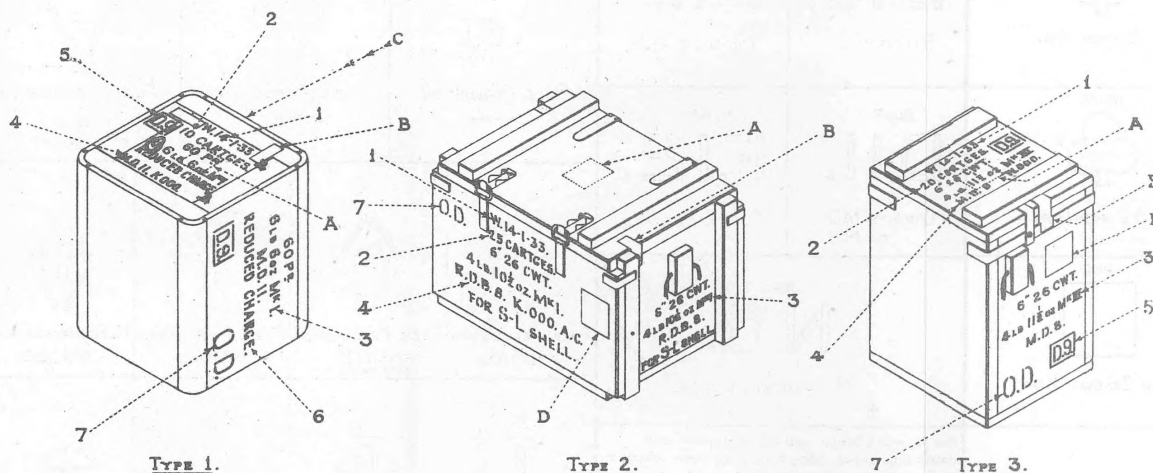
1. MONOGRAM OF STATION AND DATE OF FILLING.
2. NUMBER OF CARTRIDGES.
3. DESIGNATION AND MARK OF CARTRIDGE.
4. NATURE, SIZE, LOT NUMBER OF PROPELLANT, "A.C." IF ADJUSTED CHARGE.
5. GROUP LETTER AND NUMBER, IF GROUPED PROPELLANT IS USED.
6. REDUCED CHARGE WHEN APPLICABLE.
7. "O.D." WHEN CASES AND BOXES ARE OIL DRESSED, STENCILLED ON ONE SIDE ONLY.

LABELS.

- A. PACKERS' LABEL N° L 566 A AFFIXED TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L 1603 (GROUP III) PLACED BETWEEN HANDLE CLEATS ON SIDE OF CASES, AS SHOWN IN DIRECTION OF ARROW.
- D. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L 1603 (GROUP III).

LABELS ARE AFFIXED TO CASES AND BOXES WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

† SEE PLATE III, (N° 20).



**TYPICAL FOR GUN AND HOWITZER CARTRIDGES,
IN CYLINDERS.**

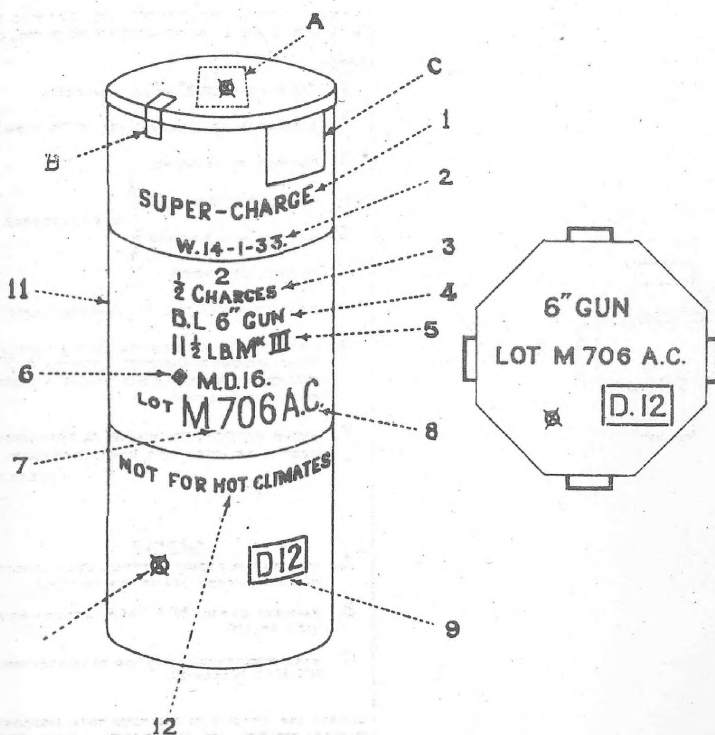


PLATE VI

NOTES.

CYLINDERS PAINTED SERVICE COLOUR.
SKELETON CASES STAINED VAN DYKE BROWN.
STENCILLING IN WHITE, EXCEPT WHERE
OTHERWISE STATED.

ITEM.

1. "SUPER CHARGE" WHEN APPLICABLE.
2. MONOGRAM OF STATION AND DATE OF FILLING.
3. OR "2. CARTGES"
4. OR "12" M³ III TO V HOW." (WITH WHITE OR BLUE BAND ACROSS TOP AND ROUND BODY) "9.2" M² II HOW. OR "8" M² VII HOW. AS APPLICABLE.
5. WEIGHT AND MARK OF CHARGE.
6. ♦ PARTICULARS OF PROPELLANT.
7. LOT NUMBER OF PROPELLANT.
8. A.C. IF ADJUSTED CHARGE. OMITTED WHEN GROUPED PROPELLANT IS USED.
9. GROUP LETTER AND NUMBER
10. ♦ SYMBOL ON LID AND BODY OF CYLINDER, AND TOP OF SKELETON CASE. } SEE PLATE IV
11. RED BAND DENOTING THREE 16¹ LB. CHARGES FOR 9.2" GUN.
12. WHEN CYLINDER CONTAINS 8" M² VII HOWITZER CARTRIDGES MADE UP WITH RE-WORKED CORNITE; LETTERING IN RED.

LABELS.

- A. PACKERS LABEL N^o L. 566 A AFFIXED ON UNDERSIDE OF LID.
- B. STATION LABEL OVER JUNCTION OF LID AND BODY.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N^o L. 1603.

LABELS ARE AFFIXED TO BOX WITH SHELLAC AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

TYPICAL FOR CYLINDER & SKELETON CASE
CONTAINING B.L. GUN CARTRIDGES.

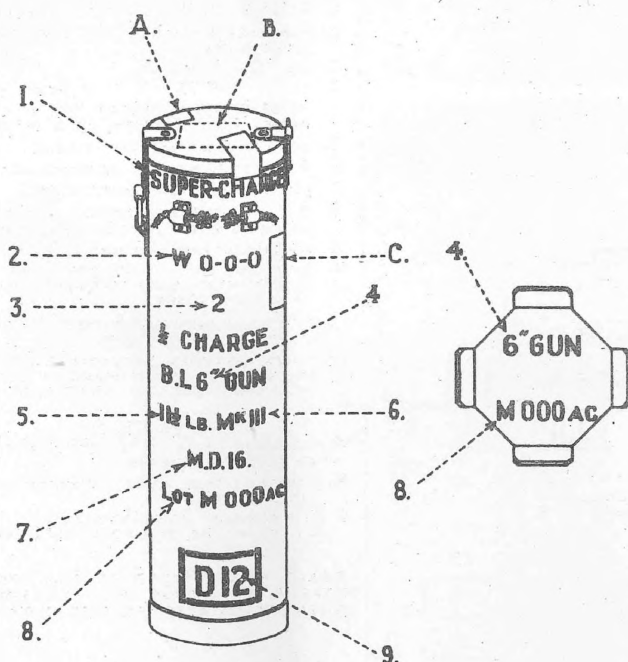


PLATE VII

NOTES.

CYLINDER PAINTED SERVICE COLOUR
CASES STAINED VANDYKE BROWN.

STENCILLING IN WHITE.

NOTE:- WHEN CYLINDER OR CASE IS RE-STENCILLED COLOUR OF LETTERING IS YELLOW.

ITEM.

1. "SUPER-CHARGE" WHEN APPLICABLE.
2. MONOGRAM OF STATION, AND DATE OF FILLING
3. NUMBER OF CHARGES. } AS APPLICABLE.
4. CALIBRE OF GUN. }
5. WEIGHT OF CARTRIDGE. }
6. MARK OF CARTRIDGE. }
7. NATURE AND SIZE OF PROPELLANT.
8. LOT NUMBER OF PROPELLANT AS APPLICABLE WHEN CHARGE IS ADJUSTED LETTERS "A.C." WILL FOLLOW LOT NUMBER, EXCEPT WHEN A GROUPED PROPELLANT IS USED.
9. GROUP LETTER AND NUMBER AS APPLICABLE, ON BODY OF CYLINDER, AND ONE END OF CASE. (SEE PLATE IV.)

LABELS.

- A. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY, ON OPPOSITE SIDES.
- B. PACKING LABEL N° L566A AFFIXED TO UNDER-SIDE OF LID.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L1602. (Group III).

LABELS ARE AFFIXED TO CYLINDER WITH SHELLAC AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS

TYPICAL FOR CASES POWDER,
CONTAINING SPARE IGNITERS FOR B.L. CARTRIDGES.

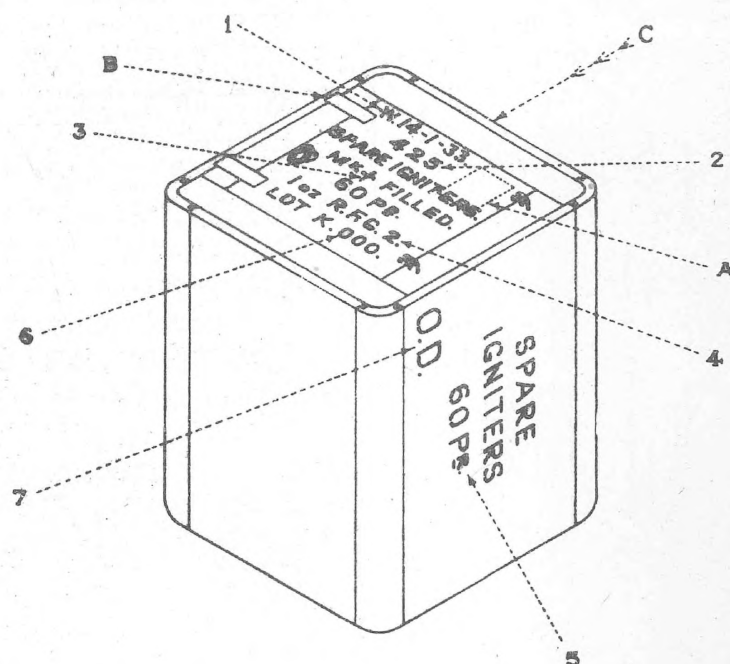


PLATE VIII

NOTES.

CASES PAINTED SERVICE COLOUR.

STENCILLING IN WHITE, ON LID AND TWO OPPOSITE SIDES, EXCEPT WHERE OTHERWISE STATED.

NOTE:- WHEN THE CASES ARE RE-STENCILLED THE COLOUR OF LETTERING IS IN YELLOW.

ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING.
2. NUMBER OF IGNITERS.
3. MARK, AS APPLICABLE.
4. 'R.E.G.2' or 'G12', AS APPLICABLE.
5. CALIBRE, AS APPLICABLE.
6. LOT NUMBER, AS APPLICABLE.
7. 'O.D.' WHEN CASES ARE OIL DRESSED, STENCILLED ON ONE SIDE ONLY.

LABELS.

- A. PACKERS LABEL N° L 566 A. AFFIXED TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L 1801 (GROUP I) PLACED BETWEEN HANDLE CLIPS AS SHOWN IN DIRECTION OF ARROW.

LABELS ARE AFFIXED TO CASES WITH SHELLAC AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

**TYPICAL FOR BOXES CONTAINING
CARTRIDGES, Q.F., 12 P⁺ AND ABOVE, SEPARATE LOADING, FOR LAND SERVICE.
(EXCEPT 4.5 INCH AND 3.7 INCH HOWITZER.)**

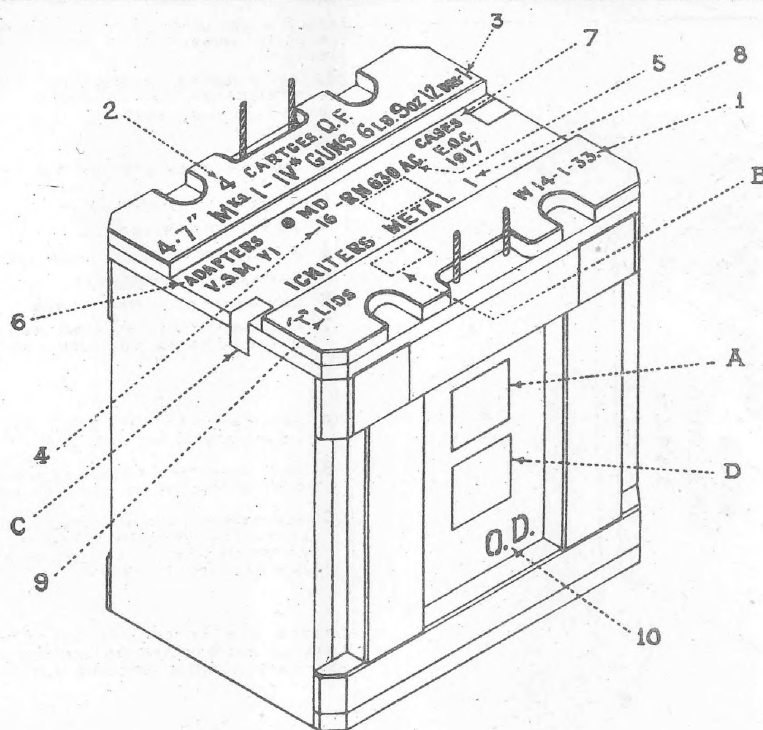


PLATE IX.

NOTES.

BOX STAINED VANDYKE BROWN.
STENCILLING IN BLACK ON LID.
NOTE: - WHEN BOX IS RE-STENCILLED, THE
COLOUR OF LETTERING IS IN YELLOW.

ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING.
2. NUMBER OF CARTRIDGES.
3. DESIGNATION AND MARK OF CARTRIDGE.
4. NATURE, SIZE AND LOT NUMBER OF PROPELLANT, AS APPLICABLE.
5. "A.C." IF ADJUSTED CHARGE, OMITTED WHEN GROUPED PROPELLANT IS USED, AND REPLACED WITH GROUP LETTER AND NUMBER.
6. "ADAPTERS" MAKERS INITIALS AND MARK.
7. "CASES" MAKERS INITIALS, AND DATE OR $\diamond$, $\odot$, OR REPS, AS APPLICABLE.
8. "IGNITERS METAL" AND MARK OR CYL. CORD, AS APPLICABLE.
9. "S LIDS" CARTRIDGES FITTED WITH STRAWBOARD LIDS.
"S LIDS" CARTRIDGES FITTED WITH LIDS HAVING A CIRCULAR HOLE IN UNDERSIDE OF LID.
"S LIDS" CARTRIDGES FITTED WITH DISHED LIDS.
"S LIDS" HAVING SEVERAL HOLES IN STRAWBOARD.
"T LIDS" CARTRIDGES FITTED WITH LIDS SUITABLE FOR SHELLED FITTED WITH TRACER.
10. "O.D." WHEN BOX IS OIL DRESSED, ONE SIDE ONLY.

LABELS.

- A. DESCRIPTIVE LABELS, ONE AFFIXED TO UNDERSIDE OF LID, AND ONE ON SIDE.
- B. PACKERS LABEL N^o 1.566 A. AFFIXED TO UNDERSIDE OF LID.
- C. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY ON OPPOSITE SIDES.
- D. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N^o 1.1603 (GROUP III).

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.
*. SEE PLATE IV. (N^o 20).

**TYPICAL FOR BOX
CONTAINING CARTRIDGES FOR PAPER SHOT.**

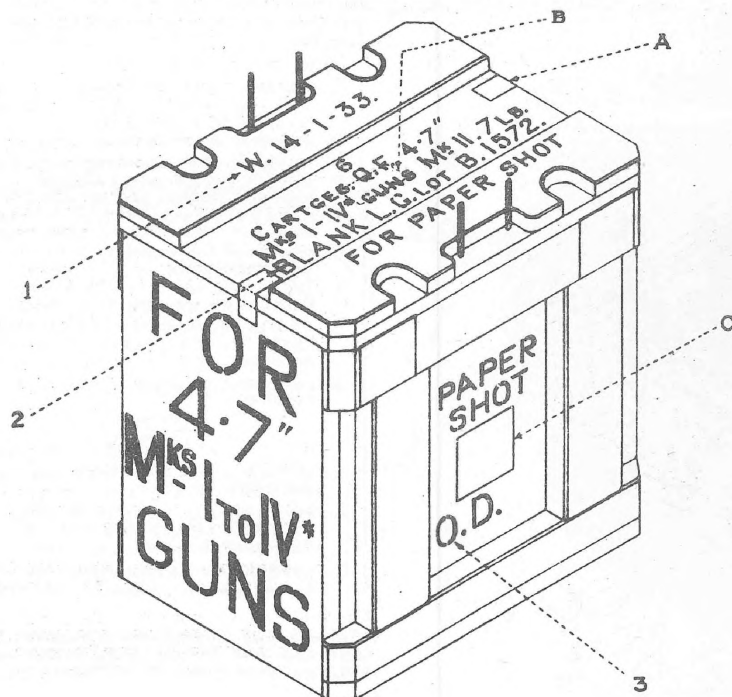


PLATE X.

TABLE OF COLOURS.

CARTRIDGE.	COLOUR OF BOX.
POWDER FILLED.	RED.
CORDITE "	SERVICE COLOUR.

NOTES.

WHEN BOX HAS CARTRIDGES FILLED POWDER,
STENCILLING IN WHITE.
WHEN BOX HAS CARTRIDGES FILLED CORDITE,
STENCILLING IN BLACK.

NOTE:- WHEN THE BOX IS RE-STENCILLED
THE COLOURING OF LETTERING IS TO BE YELLOW.

ITEM.

1. MONOGRAM OF STATION AND DATE OF FILLING.
2. 'C12' OR PARTICULARS OF CORDITE TO BE
SUBSTITUTED FOR 'BLANK L.G.'
AS APPLICABLE.
3. 'O.D.' STENCILLED WHEN BOX IS OIL
DRESSED; ON ONE SIDE.

LABELS.

- A. TWO STATION LABELS AFFIXED OVER
JUNCTION OF LID AND BODY ON
OPPOSITE SIDES.
- B. PACKERS LABEL N° L 566 A AFFIXED
TO UNDERSIDE OF LID.
- C. GOVERNMENT EXPLOSIVE AND
CLASSIFICATION LABEL.

N° L 1601 (GROUP I) FOR POWDER FILLED CARTRIDGE.

N° L 1603 (GROUP III) " CORDITE " "

LABELS TO BE AFFIXED TO BOX WITH SHELLAC,
AND THOSE ON EXTERIOR TO BE COATED WITH
SHELLAC AFTERWARDS.

TYPICAL FOR BOX CONTAINING
CARTRIDGES Q.F. 3.7 INCH OR 4.5 INCH HOWITZER.

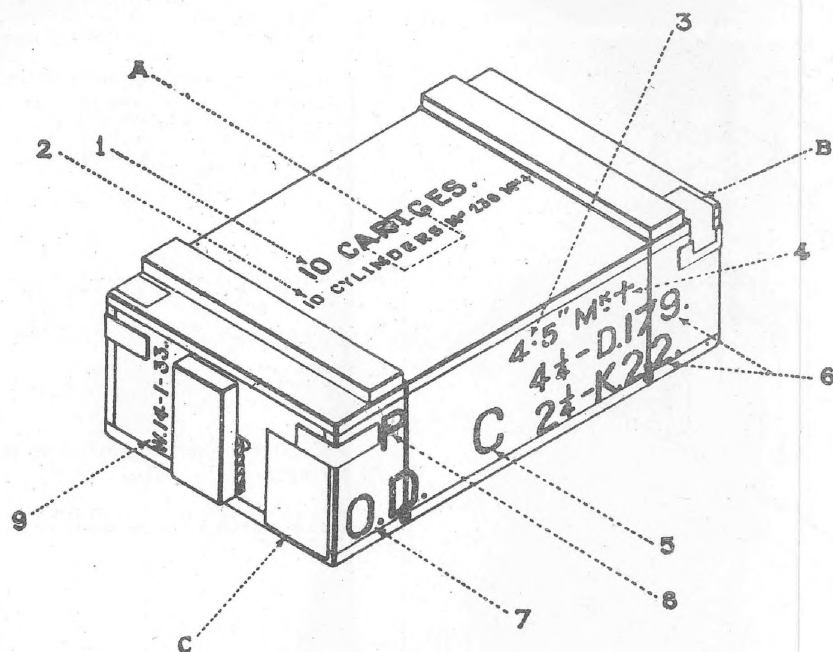


PLATE XI

NOTES.

BOX STAINED VAN DYKE BROWN.
STENCILLING IN BLACK ON LID, SIDES
AND BOTH ENDS, EXCEPT WHERE OTHERWISE
STATED.

NOTE:- WHEN BOX IS RE-STENCILLED THE
COLOUR OF LETTERING IS IN YELLOW.

ITEM.

1. NUMBER OF CARTRIDGES.
2. NUMBER AND PARTICULARS OF CYLINDERS
OR BOXES TIMMED-PLATE.
3. CALIBRE OF HOWITZER.
4. MARK OF CARTRIDGE, AS APPLICABLE.
5. GROUP LETTER AND NUMBER, IF
GROUPED PROPELLANT IS USED,
ALTERNATIVELY, DISTINGUISHING
LETTER OF PROPELLANT. (SEE PLATE IV).
6. SIZE AND LOT NUMBER OF PROPELLANT,
AS APPLICABLE.
7. "O.D." WHEN BOX IS OIL DRESSED,
STENCILLED ON ONE SIDE ONLY.
8. "P" IN RED LETTER WHEN CYLINDERS OR
BOXES TIMMED-PLATE, ARE AFFECTED
BY RUST.
9. MONOGRAM OF STATION AND DATE OF
FILLING.

LABELS.

- A. PACKERS LABEL N° L.566A. AFFIXED TO
UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER
JUNCTION OF LID AND BODY ON
OPPOSITE SIDES.
- C. GOVERNMENT EXPLOSIVE AND
CLASSIFICATION LABEL N° L.1606 (GROUP II)

LABELS ARE AFFIXED TO BOX WITH
SHELLAC, AND THOSE ON EXTERIOR ARE
COATED WITH SHELLAC AFTERWARDS.

CONTAINING COMPLETE ROUNDS

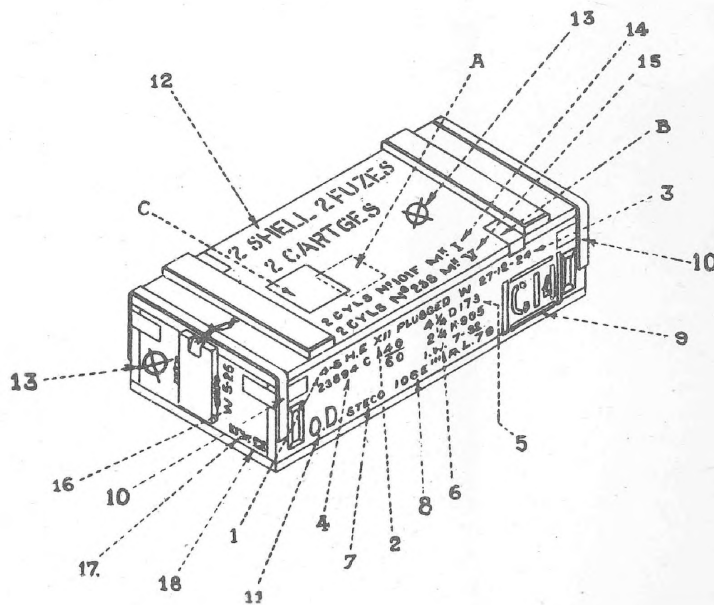


PLATE XII

NOTES.

BOX PAINTED VANDYKE BROWN.
STENCILLING IN BLACK ON BOTH SIDES, BOTH
ENDS AND L/D, EXCEPT WHERE OTHERWISE
STATED.

NOTE:- WHEN THE BOX IS RE-STENCILLED,
THE COLOUR OF LETTERING IS IN YELLOW.

ITEM.

- 1 CALIBRE OF HOWITZER.
- 2 NATURE, AND MARK OF SHELL
"FUZED" OR PLUGGED AS APPLICABLE
- 3 MONOGRAM OF STATION AND DATE OF
FILLING SHELL.
- 4 METHOD OF FILLING SHELL DESIGN NUMBER.
- 5 SIZE AND LOT NUMBER OF PROPELLANT.
- 6 MARK, FILLERS INITIALS, AND DATE OF
FILLING CARTRIDGE
- 7 INITIALS OF EMPTY FUZE MAKER (MIXED
WILL BE USED WHEN MORE THAN ONE MAKER)
- 8 NUMBER, MARK OF FUZE, AND LOT NUMBER
OF FILLED FUSES
- 9 GROUP LETTER AND NUMBER WHEN GROUPED
PROPELLANT IS USED. SEE PLATE IV.
- 10 BLACK STRIPES DENOTE ECONOMY DRIVING
BANDS (4-5 SHELL ONLY)
- 11 "O.D." WHEN BOX IS OIL DRESSED, ONE SIDE ONLY
- 12 NUMBER OF COMPLETE ROUNDS AS APPLICABLE.
- 13 FUZE SYMBOL. SEE PLATE IV.
- 14 NUMBER OF FUZE CYLINDER AND MARK.
- 15 "CYLS" OR "BOXES TINNED-PLATE," FOR
CARTRIDGES; NUMBER AND MARK.
- 16 MONOGRAM OF STATION AND DATE OF PACKING.
- 17 RED ORBS ORBS ON BOX CONTAINING SHELL
BEARING SIMILAR MARKING INDICATING
SUITABILITY FOR USE IN HOT CLIMATES
18. "80/20 OR OTHER FRACTION DENOTING SHELL
FILLED AMATOL.
"T.N.T. SHELL FILLED TROTYL.
"LYD" SHELL FILLED LYDDITE.
LABELS.

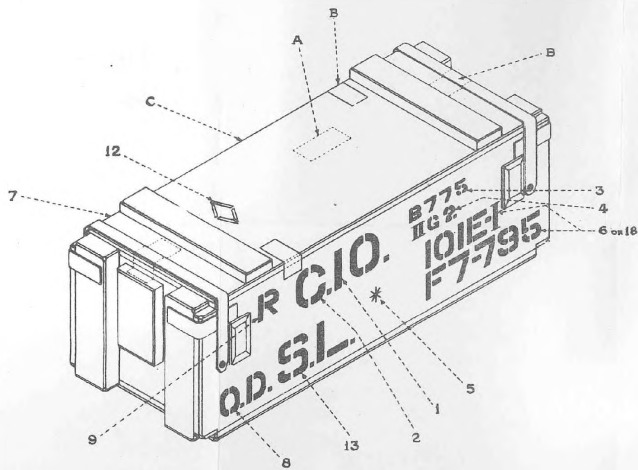
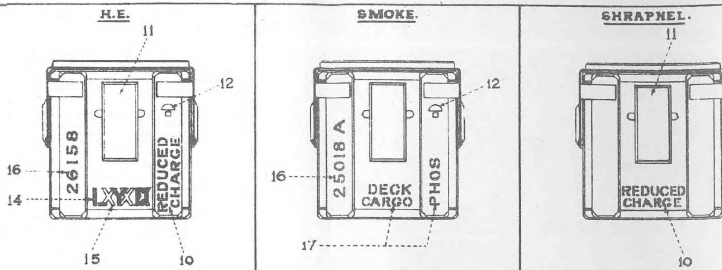
LABELS.

- A. PACKERS LABEL N° L 566 A. AFFIXED TO
UNDERSIDE OF LID.
B. TWO STATION LABELS AFFIXED OVER JUNCTION
OF LID AND BODY ON OPPOSITE SIDES.
C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION
LABEL N° L 1606 (GROUP VI).

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

WOOD, CONTAINING 18 PR. & 13 PR CARTRIDGES FUZED & PLUGGED.

SPECIAL MARKINGS ON BOTH ENDS.



MARKINGS ON SIDE.

PLATE XIII

TABLE OF COLOURS FOR BOXES.

SHELL.	COLOUR OF BOX.
H.E. & SHRAPNEL. SMOKE.	STAINED YANDYKE BROWN. GREEN.

NOTES.

STENCILLING IN BLACK ON ONE SIDE AND BOTH ENDS OF BOX EXCEPT WHERE OTHERWISE STATED.

NOTE:- WHEN THE BOX IS RE-STENCILED THE COLOURING OF LETTERING IS TO BE IN YELLOW.

- [illegible]

†. SEE PLATE IV.

LABELS.

- A. PACKERS LABEL № L 566A AFFIXED TO UNDERSIDE O. LID.
B. TWO STATION LABELS AFFIXED ON OPPOSITE SIDES OF BOX, OR
(AS SHOWN DOTTED) OVER SWING CLAMPS, IF SO FITTED.
C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL № L 1606
(GROUP VI) FOR BOXES CONTAINING SHRAPNEL OR H.E. SHELL, OR LABEL
№ L 1612 (GROUP XII) FOR BOXES CONTAINING SMOKE SHELL,
AFFIXED ON OPPOSITE SIDE TO STENCILLING.

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

SHRAPNEL.

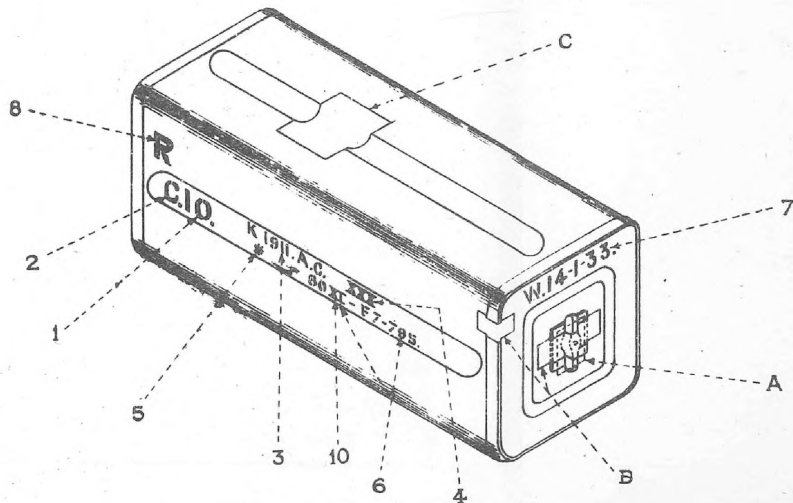


TABLE OF COLOURS.

SHELL.	COLOUR OF BOX.
SHRAPNEL.	SERVICE COLOUR.

NOTES.

STENCILING IN BLACK ON ONE SIDE AND BOTH ENDS
OF BOX, EXCEPT WHERE OTHERWISE STATED.

NOTE :- WHEN THE BOX IS RE-STENCILLED THE COLOUR OF LETTERING IS TO BE IN YELLOW.

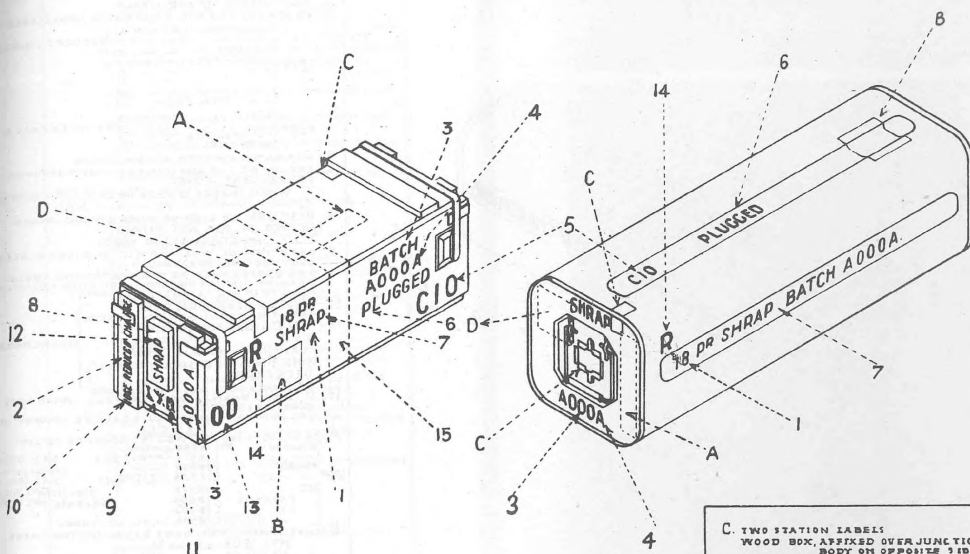
ITEM

1. WHEN AMMUNITION HAS THE GROUP NUMBER STENCILLED ON BASE OF CARTRIDGE, SUCH GROUP NUMBER IS STENCILLED ON BOTH SIDES OF BOX.
2. C WHEN CHARGE MADE UP OF R.D.D. CONDIT¹ STENCILLED ON D " " " " M.D. " BOTH SIDES OF BOX
3. LOT NUMBER OF PROPELLANT.
4. MARK OF COMPLETE ROUND.
5. RECOGNISED TRADE MARK OR INITIALS OF EMPTY FUZE MAKER WHEN MORE THAN ONE FUZE MAKER, THE WORD MIXED WILL BE USED. OMITTED WHEN ROUNDS IN BOX ARE FLUGGED (SEE ITEM II).
6. NUMBER, MARK, FILLER AND FILLED LOT NUMBER OF FUZE.
7. MONOGRAM OF STATION AND DATE OF FUZING WHEN BOX CONTAINS FUZED R/ I DIS OR MONOGRAM OF STATION AND DATE OF A-SEMBLY, WHEN BOX CONTAINS FLUGGED ROUNDS.
8. R STENCILLED IN RED ON BOTH SIDES OF BOX IN TOP LEFT HAND CORNER.
9. WHEN BOX CONTAINS REDUCED CHARGE ROUNDS.
10. "FLUGGED SERIES A" (AS APPLICABLE) STENCILLED IN LIEU OF FUZE PARTICULARS WHEN BOX CONTAINS FLUGGED ROUNDS (SEE ITEM 3).

LABELS.

- A. PACKERS LABEL N^oL 566 A AFFIXED TO
UNDERSIDE OF LID.
- B. TWO STATION LABELS, ONE AFFIXED OVER
JUNCTION OF LID AND BODY, AND ONE OVER
WING NUT SECURING LID OF BOX.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION
LABEL N^oL 806 (GROUP IX).
- ✚ SEE PLATE IV.

TYPICAL FOR BOXES AMMUNITION CONTAINING CARTRIDGES Q.F. 13PR. AND 18PR. H.E. SMOKE, OR SHRAPNEL, FUZED OR PLUGGED — WOOD BOX 13PR AND 18PR — STEEL BOX 18PR..



C. TWO STATION LABELS:
WOOD BOX, AFFIXED OVER JUNCTION OF LID AND
BODY OR OPPOSITE SIDE.
STEEL BOX, ONE WITH WING BUTT AND ONE OVER
JUNCTION OF LID AND BODY.

D. PACKERS LABEL No. 1566A AFFIXED TO UNDERSIDE OF
LID

LABELS AFFIXED TO BOX WITH SHELLAC
AND THOSE ON EXTERIOR COATED WITH
SHELLAC AFTERWARDS.

PLATE XV

NOTES

NOTES.
WOOD BOX STAINED VANDYKE BROWN.
STEEL BOX PAINTED SERVICE COLOUR.
BOXES PAINTED GREEN FOR SMOKE SHELL.
STENCILLING IN YELLOW ON ONE SIDE AND
BOTH ENDS OF WOOD BOX, AND ONE SIDE, 11D
AND BOTTOM OF STEEL BOX EXCEPT WHERE
OTHERWISE STATED.

1. CALIBRE OF GUN AND NATURE OF PROJECTILE.
2. "REDUCED CHARGE" IF APPLICABLE.
3. BATCH LETTER AND NUMBER AS APPLICABLE.

3. BATCH LETTER AND NUMBER, AS APPLICABLE.

18P	{	SHRAPNEL	A	{	L	REDUCED CHARGE
		SMOKE	C			
		S.L.	J			
		H.E.	B			
			M			
		PRACTICE	N			

13 PR { M.E. LETTER "B"
 --- PRACTICE --- N
 SHRAPNEL --- A
 --- REDUCED CHARGE ---

4 SUB-BATCH LETTER AS APPLICABLE.
5 GROUP LETTER AND NUMBER WHEN GROUPED
PROPELLANT IS USED. SEE PLATE IV
C WHEN CHARGE IS MADE UP OF R.D.B. CORDITE
D ————— M.D. ————

6. "PLUGGED" WHEN ROUNDS IN BOX ARE PLUGGED.

8. CLEAT PAINTED BLACK, 13 PR. WOOD BOX

9 RED CROSS-CROSS ON BOX CONTAINING SHELL
BEARING SIMILAR MARKING, INDICATING SUITABILITY

10. FUZE NUMBER H.E. AND SMOKE.

11 H.E.80/20 OR OTHER FRACTION DENOTING COMPOSITION IF FILLED AMATOL.

T.N.T IF SHELL FILLED TROTYL
LYD

12 SHRAP ON HANDLE (LEATS FOR 18 PR WOODBO)

BELOW
SMOKE ON END BATTEN

DECK CARGO ON HANDLE CLEAT AND
PHOS BELOW

PHOS BELOW

13. "O.D." WHEN WOOD BOX IS OIL DRESSED.
14. "R" IN RED WHEN PACKED IN RAPNEL WHICH HAVE

15. YELLOW BAND DENOTING PRACTICE AMMUNITION

15. FIFTEEN DASH SERVING PRACTICE AMMUNITION

A CONTENTS LABEL AFFIXED TO UNDERSIDE OF I.D.
 SHRAPNEL NO 11858A REDUCED
 118511 CHARGE 6.25 NOT 105CS

100R SMOKE L1851A CHANGE M.T. N° L1865A
L1853A PRODUCED CMOB
L1857A 1700 100R 100R

18PR — — 51 L1857A 13PR (H.E..... N°L1864A
HE L1852A PRACTICE N°L1866A

PRACTICE L1860A
S.L. L1856A

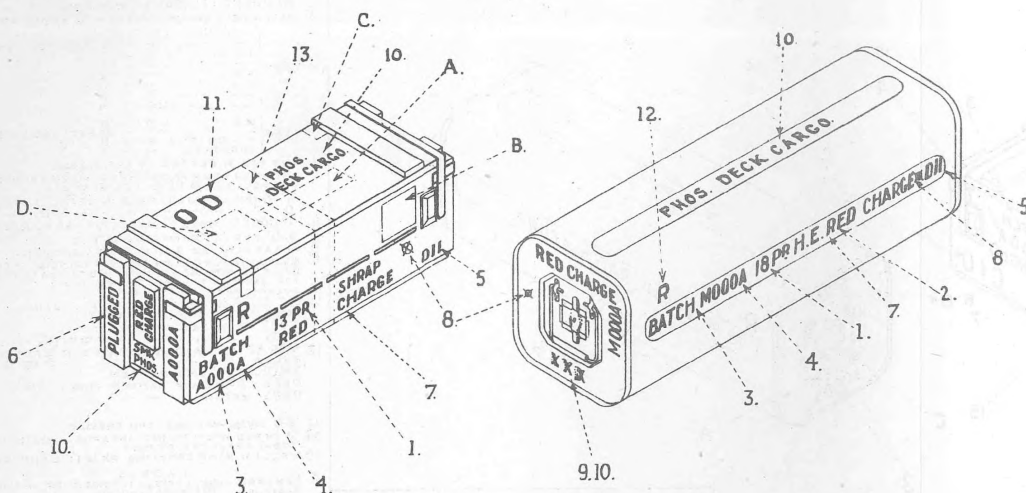
LIBRARY REDUCED CHARGE.
B. GOVERNMENT EXPLOSIVE & CLASSIFICATION LABEL.

N° 1606 GROUP VI
N° 1612 = = = VII

Nº 11612 - - XII FOR SMOKE

TYPICAL FOR BOXES AMMUNITION CONTAINING CARTRIDGES Q.F. 13PR., AND 18PR., H.E. SMOKE OR SHRAPNEL. FUZED OR PLUGGED. — WOOD BOX 13PR., AND 18PR.; STEEL BOX 18PR.

LATEST SYSTEM OF BATCHING.



LABELS AFFIXED TO BOX WITH SHELLAC AND THOSE ON EXTERIOR COATED WITH SHELLAC AFTERWARDS.

PLATE XVI

NOTES.

WOOD BOX STAINED VANDYKE BROWN. STEEL BOX PAINTED SERVICE COLOUR. STENCILLING IN YELLOW ON TWO OPPOSITE SIDES AND BOTH ENDS OF WOOD BOX, AND TWO OPPOSITE SIDES, LID AND BOTTOM OF STEEL BOX EXCEPT WHERE OTHERWISE STATED.

1. CALIBRE OF GUN AND NATURE OF PROJECTILE.
 2. RED CHARGE IF APPLICABLE.
 3. BATCH LETTER AND NUMBER, AS APPLICABLE:
 - SHRAPNEL. LETTER 'A'.
 - SMOKE ——— 'C' REDUCED CHARGE
 - 18PR ——— 'S.L.' ——— 'J'
 - HE ——— 'B'
 - 'M'
 - 'N'
 - PRACTICE ——— 'N'
 - HE ——— LETTER 'B'
 - 13PR ——— PRACTICE ——— 'M' REDUCED CHARGE
 - SHRAPNEL ——— 'A'
 4. SUB-BATCH LETTER AS APPLICABLE.
 5. GROUP LETTER AND NUMBER WHEN GROUPED PROPELLANT IS USED.
 6. WHEN CHARGE IS MADE UP OF R.D.B. CORDITE 'D' ——— M.D.
 7. PLUGGED IN LIEU OF FUZE SYMBOL, WHEN ROUNDS IN BOX ARE PLUGGED.
 8. 'S.L.' IF STREAM-LINE SHELL.
 9. FUZE SYMBOL WHEN APPLICABLE (SEE PLATE IV).
 10. RED CROSS ON BOX CONTAINING SHELL BEARING SIMILAR MARKING, INDICATING SUITABILITY FOR USE IN HOT CLIMATES (H.E. ONLY).
 11. '80/20' OR OTHER FRACTION DENOTING SHELL FILLED AMATOL.
 12. 'T.N.T.' SHELL FILLED TROTYL.
 13. 'LYD' LYDDITE.
 14. 'HE PRAC' 'H.E.S.I.' SHRAP.
 15. 'SMK PHOS' FOR SMOKE SHELL.
 16. 'DECK CARGO'.
 17. 'O.D.' WHEN WOOD BOX IS OIL DRESSED.
 18. 'R' IN RED WHEN PACKED SHRAPNEL WHICH HAVE TUBES AFFECTED BY RUST.
 19. YELLOW BAND DENOTING PRACTICE AMMUNITION.
- LABELS**
- A. CONTENTS LABEL AFFIXED TO UNDERSIDE OF LID
- | | | |
|----------|--------------------------|---------------------|
| SHRAPNEL | NVL 1855A REDUCED CHARGE | |
| SMOKE | L1851A CHARGE | H.E. NVL 1865A |
| 18PR | L1851A | REDUCED CHARGE |
| HE | L1852A | 13PR H.E. NVL 1864A |
| PRACTICE | L1860A | PRACTICE NVL 1866A |
| S.L. | L1855A | SHRAPNEL NVL 1857A |
- B. GOVERNMENT EXPLOSIVE & CLASSIFICATION LABEL.
- NVL 1612 ——— XII FOR SMOKE
- C. TWO STATION LABELS
- WOOD BOX AFFIXED OVER JUNCTION OF LID AND BODY ON OPPOSITE SIDES.
- STEEL BOX, ONE OVER WING NUT AND ONE OVER JUNCTION OF LID AND BODY.
- D. PACKERS LABEL NVL 1565A AFFIXED TO UNDERSIDE OF

This diagram illustrates the components of a 16LA Shell AA Burst Practice bullet. The main body of the bullet is labeled with 'AA BURST PRACTICE', '16LA SHELL', 'O.D.', '3.20 INCH', 'PRAC. P. 50', '60/44', '7 M.D.S.', 'W. 14-1-38', 'V.B. FOIL', 'W. 14-1-38', and 'W. 14-1-38'. The diagram includes 17 numbered callouts pointing to various parts: 1. Tip, 2. Tip, 3. Tip, 4. Tip, 5. Tip, 6. Tip, 7. Tip, 8. Tip, 9. Tip, 10. Tip, 11. Tip, 12. Tip, 13. Tip, 14. Tip, 15. Tip, 16. Tip, 17. Tip.

NOTES.

BOX STAINED VANDYKE BROWN.
STENCILLING IN BLACK ON LID, BOTH SIDES
AND BOTH ENDS, EXCEPT WHERE OTHERWISE
STATED.
NOTE :- WHEN BOX IS RE-STENCILLED THE
COLOUR OF LETTERING IS IN YELLOW.

ITEM

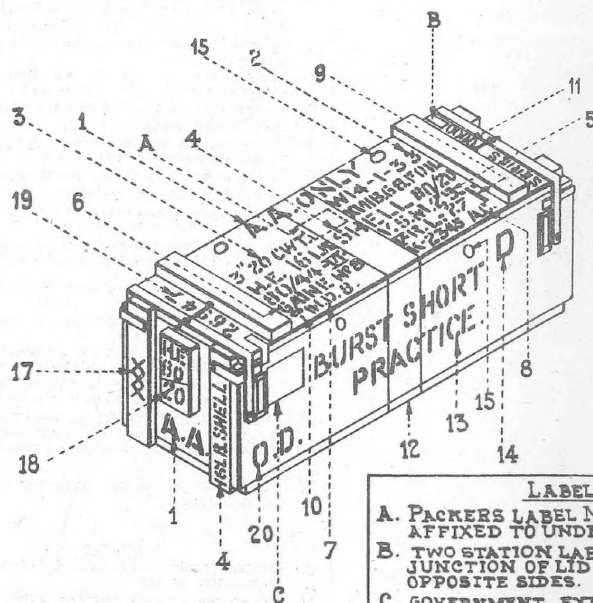
- ITEM.
1. "A.A.OONLY OR "A.A.PRAC." IN RED.
2. MONOGRAM OF STATION, AND DATE OF FUZING, WHEN BOX CONTAINS FUZZED ROUNDS, OR MONOGRAM OF STATION, AND DATE OF ASSEMBLY WHEN BOX CONTAINS FLUGGED ROUNDS.
3. NATURE AND MARK OF COMPLETE ROUND.
4. NATURE OF PROFECTILE, AND "16 LB. SHELL IN RED,
5. FUZE NUMBER, MARK, FILLERS INITIALS, AND LOT NUMBER (SEE ITEM 16).
6. NATURE, SIZE, AND LOT NUMBER OF PROPELLANT.
7. "A.C." IF ADJUSTED CHARGE.
8. "T" DENOTES PROJECTILES FITTED WITH TRACES, WHEN APPLICABLE.
9. "T" IN BLUE, DENOTING TIME FUZES.
10. SERIES NUMBER OF PROOF.
11. YELLOW BAND, DENOTING PRACTICE ROUNDS, WHEN APPLICABLE.
12. WHEN GROUPED PROPELLANT IS USED, THE GROUP LETTER AND NUMBER IS STENCILLED IN BLUE.
"D " " " " " " " M.D. "
13. "BURST SHORT PRACTICE" IN RED, WHEN APPLICABLE.
14. "R" IN RED, WHEN PACKAGED SHRAPNEL WHICH HAVE CENTRAL TUBES AFFECTED BY RUST.
15. TWO ALUMINIUM DISCS DENOTING PRACTICE PROTECTIVE WITH FLASH PRODUCER.
16. "PLUGGED SERIES A," AS APPLICABLE, STENCILLED IN LIEU OF FUZE PARTICULARS WHEN BOX CONTAINS PLUGGED ROUNDS, (SEE ITEM 5).
17. "O.D. WHEN BOX IS OIL DRESSED STENCILLED ON ONE SIDE.

LABELS.

- A. PACKERS LABEL N^oL 566.A. AFFIXED TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY, ON OPPOSITE SIDES.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N^oL 1606 (GROUP VI) AFFIXED ON ONE SIDE ONLY.

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

**TYPICAL FOR BOX, AMMUNITION, CONTAINING Q.F. CARTRIDGES
WITH H.E. SHELL, FUZED OR PLUGGED FOR A.A.**



LABELS.

- A. PACKERS LABEL No L.566.A. AFFIXED TO UNDERSIDE OF LID.
 - B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY, ON OPPOSITE SIDES.
 - C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL No L.1606. (GROUP VI).
- LABELS ARE AFFIXED TO BOX WITH SHELLAC AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

PLATE XVIII.

Notes.

- BOX STAINED VANDYKE BROWN. STENCILLING IN BLACK ON LID, BOTH SIDES AND BOTH ENDS, EXCEPT WHERE OTHERWISE STATED.
- NOTE:- WHEN BOX IS RE-STENCILLED THE COLOUR OF LETTERING IS IN YELLOW.
1. "A.A. AND A.A. ONLY" IN RED.
 2. MONOGRAM OF STATION AND DATE OF FUZING WHEN BOX CONTAINS FUZED ROUNDS OR MONOGRAM OF STATION AND DATE OF ASSEMBLY WHEN BOX CONTAINS PLUGGED ROUNDS.
 3. NATURE AND MARK OF COMPLETE ROUND.
 4. NATURE OF PROJECTILE, AND 16LB SHELL IN RED.
 5. FUZE NUMBER, MARK, FILLERS INITIALS AND LOT NUMBER (SEE ITEM 16).
 6. GAIN NUMBER, MARK, FILLERS INITIALS AND LOT NUMBER (SEE ITEM 16).
 7. NATURE, SIZE AND LOT NUMBER OF PROPELLANT.
 8. A.C. IF ADJUSTED CHARGE.
 9. T IN BLUE DENOTING TIME FUZE.
 10. T DENOTING PROJECTILE FITTED WITH TRACER WHEN APPLICABLE.
 11. SERIES NUMBER OF PROOF.
 12. YELLOW BAND DENOTING PRACTICE.
 13. BURST SHORT PRACTICE STENCILLED IN RED, WHEN APPLICABLE.
 14. WHEN A GROUPED PROPELLANT IS USED, THE GROUP LETTER AND NUMBER IS STENCILLED IN BLUE.
 15. C WHEN CHARGE IS MADE UP OF R.D.E. CORDITE. D " " " " " M.D. "
 16. GREEN DISCS DENOTING H.E. SHELL WITH SMOKE COMPOSITION IN BOX.
 17. PLUGGED SERIES A (AS APPLICABLE) STENCILLED IN LIEU OF FUZE AND GAIN PARTICULARS WHEN BOX CONTAINS PLUGGED ROUNDS (SEE ITEM 5 AND 6).
 18. RED CROSS ON BOX CONTAINING SHELL BEARING A SIMILAR MARKING INDICATING SUITABILITY FOR USE IN HOT CLIMATES.
 19. 80/20 OR OTHER FRACTION DENOTING SHELL FILLED AMATOL OR T.N.T. AS APPLICABLE.
 20. METHOD OF FILLING SHELL; DESIGN NUMBER.
 21. Q.D. WHEN BOX IS OIL DRESSED, ONE SIDE ONLY.

TYPICAL FOR BOX, AMMUNITION, CONTAINING Q.F.,
CARTRIDGES WITH TARGET SHELL, FUZED OR PLUGGED
FOR A.A.

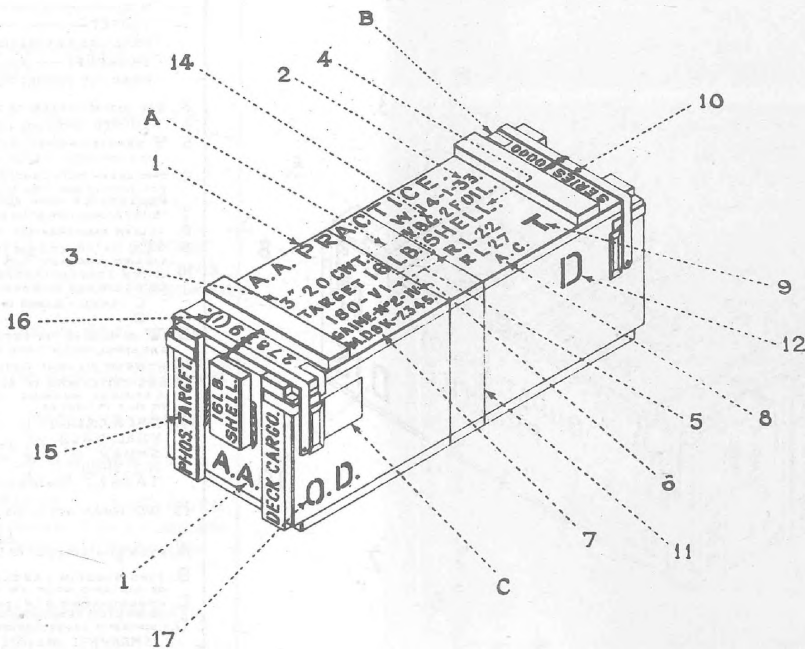


PLATE XIX

NOTES.

BOX PAINTED GREEN.

STENCILLING IN BLACK ON LID, BOTH SIDES
AND BOTH ENDS, EXCEPT WHERE OTHERWISE
STATED.

NOTE: WHEN THE BOX IS RE-STENCILLED,
THE COLOUR OF LETTERING IS IN YELLOW.

ITEM.

1. "A.A." AND "A.A. PRACTICE" IN RED.
2. MONOGRAM OF STATION, AND DATE OF FUZING. WHEN BOX CONTAINS FUZZED ROUNDS. OR
MONOGRAM OF STATION, AND DATE OF ASSEMBLY WHEN BOX CONTAINS PLUGGED ROUNDS.
3. NATURE OF COMPLETE ROUND.
4. NATURE OF PROJECTILE, AND "16 LB. SHELL" IN RED,
5. FUZE NUMBER, MARK, FILLERS INITIALS AND LOT NUMBER. } SEE ITEM
6. GAINIE NUMBER, MARK, FILLERS INITIALS AND LOT NUMBER. } 13.
7. NATURE, SIZE, AND LOT NUMBER OF PROPELLANT.
8. "A.C." IF ADJUSTED CHARGE.
9. "T" IN BLUE DENOTING TIME FUZE.
10. SERIES NUMBER OF PROOF.
11. YELLOW BAND, DENOTING PRACTICE AMMUNITION.
12. WHEN GROUPED PROPELLANT IS USED, THE GROUP LETTER AND NUMBER IS STENCILLED IN BLUE.
"C." WHEN CHARGE IS MADE UP OF R.D.B. CORDITE.
"D. " " " " " M.D. "
13. "PLUGGED SERIES A," AS APPLICABLE. STENCILLED IN LIEU OF FUZE PARTICULARS WHEN BOX CONTAINS PLUGGED ROUNDS. (SEE ITEMS 5 AND 6).
14. MARK OF COMPLETE ROUND.
15. "TARGET" IN RED, ON ENDS.
16. METHOD OF FILLING SHELL, DESIGN NUMBER.
17. "O.D." WHEN BOX IS OIL DRESSED, STENCILLED ON ONE SIDE ONLY.

LABELS.

- A. PACKERS LABEL N° L. 566. A. AFFIXED TO UNDERSIDE OF LID.
- B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY ON OPPOSITE SIDES.
- C. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L. 1612 (GROUP XII).

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

TYPICAL FOR BOX AMMUNITION CONTAINING CARTRIDGES Q.F., 3 INCH 20 CWT.,
SHRAPNEL; H.E. PRACTICE PROJECTILE; AND TARGET. FUZED OR PLUGGED

FIRST SYSTEM OF BATCHING

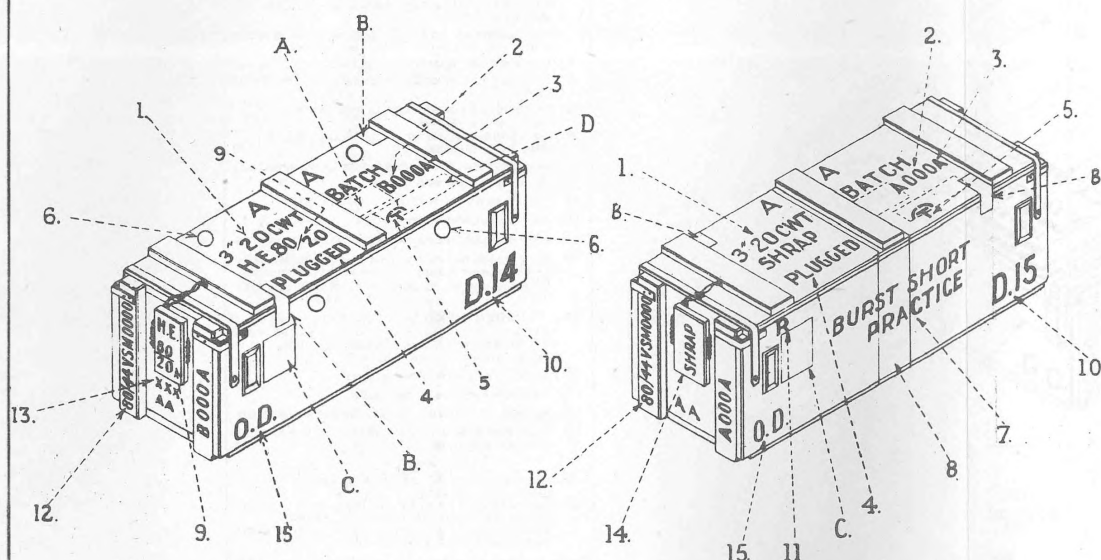


PLATE XX.

NOTES:
BOX STAINED VANDYKE BROWN.
BOX PAINTED GREEN FOR TARGET.
STENCILING IN YELLOW ON LID/STK SIDS AND BOTH ENDS
EXCEPT WHERE OTHERWISE STATED.

- ITEM
1. CALIBRE OF GUN AND NATURE OF PROJECTILE.
 2. BATCH LETTER AND NUMBER AS APPLICABLE.
"SHRAPNEL" LETTER A
"H.E." "B" FOR FULL CHARGE.
"TARGET" "F"
"PRACTICE PROJECTILE" "S"
"SHRAPNEL" "V" FOR SHORT
"PRACTICE PROJECTILE" "W" PRACTICE CHARGE.
 3. SUB BATCH LETTER AS APPLICABLE.
 4. "PLUGGED" WHEN BOX CONTAINS PLUGGED SHELL.
 5. "R" DENOTES PROJECTILES FITTED WITH TRACERS, WHEN APPLICABLE.
 6. TWO GREEN DISCS DENOTING H.E. SHELL WITH SMOKE COM. POSITION IN BOX TWO ALUMINIUM DISCS DENOTING PRACTICE PROJECTILE WITH FLASH PRODUCER IN BOX.
 7. "BURST SHORT PRACTICE" IN RED WHEN APPLICABLE.
 8. YELLOW BAND DENOTING PRACTICE.
 9. "80/20" OR OTHER FRACTION DENOTING COMPOSITION OF SMALL FILLED AMATEL; T.N.T. WHEN FILLED TROTYL.
 10. WHEN GROUPED PROPELLANT IS USED, THE GROUP LETTER AND NUMBER IS STENCILED IN SILVER.
"C" WHEN CHARGE IS MADE UP OF R.D.B. CORDITE
"D" "M.D."
 11. "R" IN RED, IN TOP LEFT HAND CORNER WHEN TRACKED SHRAPNEL WHICH HAVE CENTRAL TUBES AFFECTED BY RUST.
 12. NUMBER, FILLER'S INITIALS AND LOT NUMBER OF FILLED.
 13. RED CROSS CROSS ON BOX CONTAINING SHELL BEARING A SIMILAR MARKING INDICATING SUITABILITY FOR USE IN HOT CLIMATES.
 14. "DECK CARGO" AS APPLICABLE.
"PRAC. PROJ."
"SHRAP."
"H.E. 80/20"
"TARGET" IN RED, BELOW HANDLE CLEATS, WHEN APPLICABLE.
 15. "O.D." WHEN BOX IS OIL DRESSED, ONE SIDE ONLY.
- LABELS:**
- A. PACKERS LABEL NO 1566A AFFIXED TO UNDERSIDE OF LID.
 - B. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY ON OPPOSITE SIDES.
 - C. GOVERNMENT EXPLOSIVE LABEL NO 11806 (GROUP Y) OR NO 11812 (GROUP XU) AS APPLICABLE.
 - D. CONTENTS LABEL AFFIXED TO UNDERSIDE OF LID WHEN PACKED
SHRAPNEL NO 11822 FOR FULL CHARGE.
"H.E. 80/20" "BURST SHORT PRACTICE."
PRACTICE PROJECTILE NO 11824 FOR FULL CHARGE
H.E. NO 11618 NO 11825 BURST SHORT PRACTICE.
TARGET NO 11820.

LABELS AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR AFTERWARDS COATED WITH SHELLAC.

TYPICAL FOR:- BOX, AMMUNITION, STEEL,
CONTAINING CARTRIDGES, Q.F. 3 INCH 20CWT,
H.E. OR PRACTICE PROJECTILE.

FIRST SYSTEM OF BATCHING.

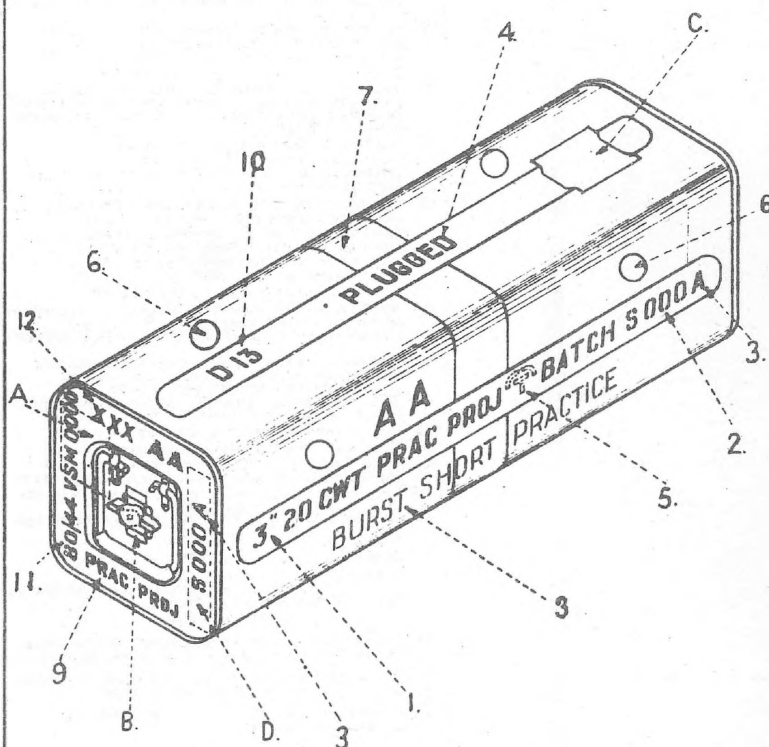


PLATE XXI.

NOTES

BOX PAINTED SERVICE COLOUR.

STENCILLING IN YELLOW, ON TWO ADJACENT SIDES,
LID & BOTTOM, EXCEPT WHERE OTHERWISE STATED.

ITEM

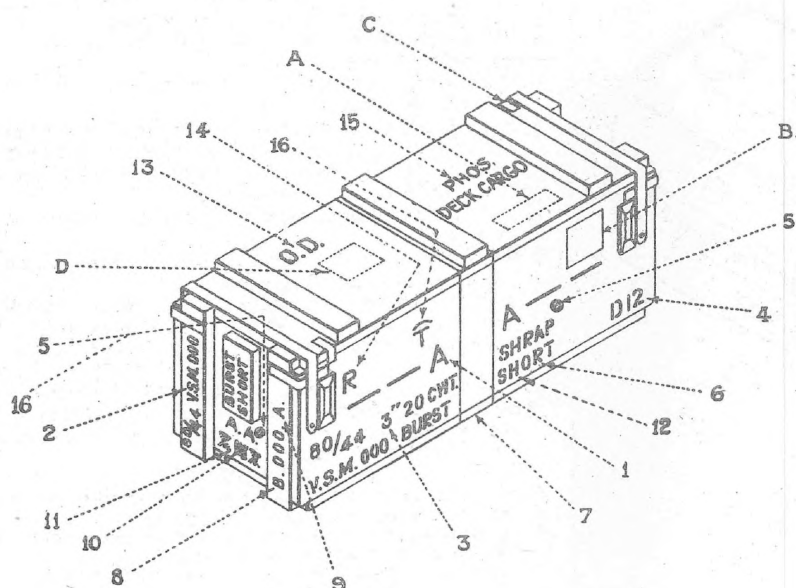
1. CALIBRE OF GUN & NATURE OF PROJECTILE, AS APPLICABLE.
2. BATCH LETTER & NUMBER, AS APPLICABLE.
"H.E." LETTER "B" FOR FULL CHARGE.
"PRAC PROJECTILE" "S" FOR FULL CHARGE.
"W" " BURST SHORT PRACTICE.
3. SUB-BATCH LETTER, AS APPLICABLE
4. "PLUGGED" WHEN BOX CONTAINS ROUNDS WITH PLUGGED SHELL.
5. "T" DENOTES PROJECTILES FITTED WITH TRACERS, WHEN APPLICABLE
6. GREEN DISCS DENOTING H.E. SHELL WITH SMOKE COMPOSITION IN BOX. ALUMINIUM DISCS DENOTING PRACTICE PROJECTILE FITTED WITH FLASH PRODUCER
7. YELLOW BAND FOR PRACTICE.
8. "BURST SHORT PRACTICE" STENCILLED IN RED, WHEN APPLICABLE.
9. "80/20" OR OTHER FRACTION DENOTING AMATOL; OR "T.N.T." AS APPLICABLE. (H.E. ONLY).
10. WHEN A GROUPED PROPELLANT IS USED, THE GROUP LETTER & NUMBER IS STENCILLED IN BLUE.
"C" WHEN CHARGE IS MADE UP OF R.D.B. COROITE,
"D" " " " " " M.D. " "
11. NUMBER FILLER & LOT NUMBER OF FILLED FUZE.
12. RED CROSS-CROSS ON BOX CONTAINING SHELL BEARING A SIMILAR MARKING; INDICATING SUITABILITY FOR USE IN HOT CLIMATES.

LABELS.

- A. PACKERS LABEL N° L566A, AFFIXED TO UNDERSIDE OF LID.
- B. STATION LABEL AFFIXED OVER WING NUT.
- C. GOVERNMENT EXPLOSIVE & CLASSIFICATION LABEL N° L1606 (GROUP VI) AFFIXED ON ONE SIDE.
- D. CONTENTS LABEL AFFIXED TO UNDERSIDE OF LID,
H.E. N° L1818 }
PRAC. PROJ. N° L1824 } FOR FULL CHARGE.
N° L1823 } FOR BURST SHORT CHARGE.

LABELS ARE AFFIXED TO BOX WITH SHELLAC & THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

LATEST SYSTEM OF BATCHING.



NOTES.

NOTES.
BOX STAINED VANDYKE BROWN, GREEN FOR TARGET.
STENCILLING IN YELLOW ON TWO OPPOSITE SIDES,
LID AND BOTH ENDS, EXCEPT WHERE OTHERWISE STATED.

ITEM

1. **A.A. BETWEEN TWO YELLOW BANDS, FOR PRACTICE SPECIAL AMMUNITION, AND ONE LETTER ON EITHER SIDE OF YELLOW BAND FOR PRACTICE AMMUNITION (SEE ITEM 7).**
2. **NUMBER, DENOTING INITIALS AND LOT NUMBER OF FUSED FUZE. "PLUGGED" STENCILED IN LIEU OF FUZE PARTICULARS WHEN BORDERS IN BOX ARE PLUGGED**
3. **CALIBRE OF GUN AND NATURE OF PROJECTILE, AS APPLICABLE.**
4. **GROUP LETTER AND NUMBER, AS APPLICABLE.**
5. **OMITTED FOR BURST SHORT PRACTICE.**
"D" WHEN CHARGE IS MADE UP OF R.D.B. CORNITE "SEE D" "N.D." "V"
6. **GREEN DISC DENOTING H.E. SHELL WITH SMOKE COMPOSITION, IN BOX. ALUMINUM DISC DENOTING PRACTICE PROJECTILE WITH FLASH PRODUCER, WHEN APPLICABLE.**
7. **BURST SHORT WHEN APPLICABLE.**
8. **YELLOW BAND DENOTING PRACTICE.**
CHARGES. TWO BANDS DENOTE PRACTICE SPECIAL, (SEE ITEM 1).
9. **BATCH LETTER AND NUMBER, AS APPLICABLE.**
10. **SHRAPNEL LETTER A., H.E. LETTER B., LIGHT LETTER C., PRACTICE PROJECTILE LETTER S., SHRAPNEL LETTER V., + PRACTICE PROJECTILE LETTER W., + WITH BURST SHORT CHARGE. -----**
11. **SUB-BATCH LETTER, AS APPLICABLE.**
12. **60/20 OR OTHER FRACTION DENOTING COMPOSITION IF SHELL FILLED AMTOL, "INT" IF SHELL FILLED TROTIL; OR SHRAP. PRAC. PROJ. OR TARGET**
13. **RED CROSS-CROSS OR BOX CONTAINING SHELL BEARING A SIMILAR MARKING; INDICATING SUITABILITY FOR USE IN HOT CLIMATES.**
14. **SPL DENOTING SPECIAL AMMUNITION, WHEN APPLICABLE. (SEE ITEM 7).**
15. **O.D. WHEN BOX IS OIL DRESSED.**
16. **R. IN RED, WHEN PACKED SHRAPNEL WHICH HAVE CENTRAL TUBES AFFECTED BY BURST.**
17. **PHOS. DECK CARGO FOR TARGET AMMUNITION.**
18. **T. DENOTING PROJECTILE FITTED WITH TRACER.**
19. **LEADS**
20. **A. CONTENTS LABEL AFFIXED TO UNDERSIDE OF LID.**

H.E.	"	N° 1218 A	"
TARGET	"	" 1220 A	"
SHRAPNEL	"	" 1222 A	"
"	"	" 1221 A	" " FOR BURST SHORT PRACTICE
PRACTICE PROJECTILE	"	" 1223 A	" " " "
	"	" 1224 A	"

B. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL
N° L 1606 (GROUP VI) or N° L 1612 (GROUP VII) TARGET ONE

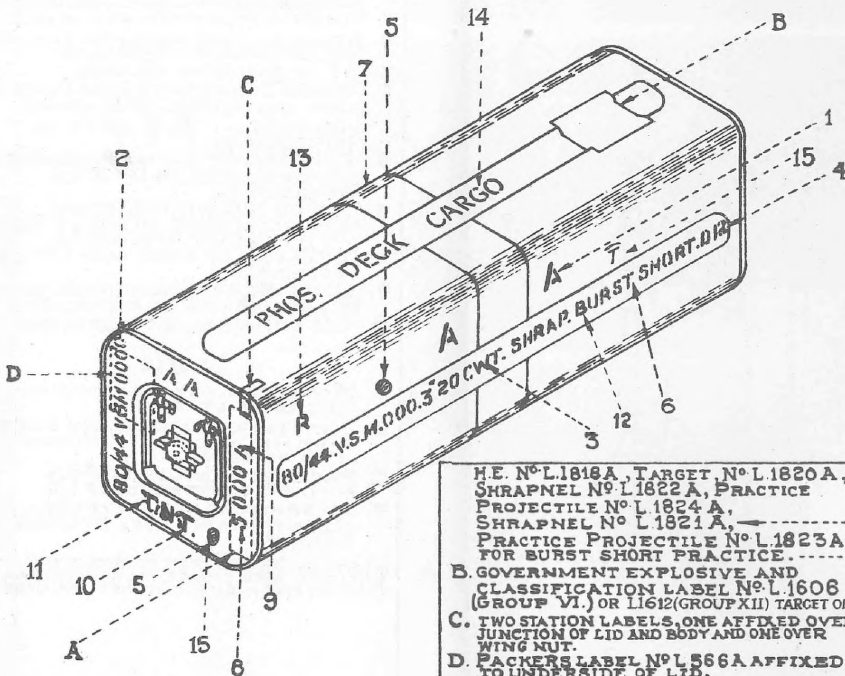
C. TWO STATION LABELS AFFIXED OVER JUNCTION
OF LID AND BODY ON OPPOSITE SIDES.

D. PACKERS LABEL N° L 566 A. AFFIXED TO
UNDERSIDE OF LID.

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

TYPICAL FOR BOX AMMUNITION STEEL, CONTAINING
CARTRIDGES Q.F. 3 INCH 20 CWT., HE., SHRAPNEL, TARGET
AND PRACTICE PROJECTILE, FUZED OR PLUGGED.

LATEST SYSTEM OF BATCHING.



HE. N° L1818A, TARGET N° L1820A,
SHRAPNEL N° L1822A, PRACTICE
PROJECTILE N° L1824A,
SHRAPNEL N° L1821A, —
PRACTICE PROJECTILE N° L1823A, —
FOR BURST SHORT PRACTICE. —

B. GOVERNMENT EXPLOSIVE AND
CLASSIFICATION LABEL N° L1608
(GROUP VI.) OR L1612 (GROUP XII) TARGET ONLY.

C. TWO STATION LABELS, ONE AFFIXED OVER
JUNCTION OF LID AND BODY AND ONE OVER
WING NUT.

D. PACKERS LABEL N° L566A AFFIXED
TO UNDERSIDE OF LTD.

LABELS ARE AFFIXED TO BOX WITH
SHELLAC AND THOSE ON EXTERIOR ARE
COATED WITH SHELLAC AFTERWARDS.

PLATE XXIII.

NOTES.

BOX PAINTED SERVICE COLOUR. GREEN FOR TARGET.
STENCILLING IN YELLOW. ON TWO OPPOSITE SIDES,
LID AND BOTTOM, EXCEPT WHERE OTHERWISE STATED.
ITEM.

1. "A" STENCILLED BETWEEN TWO YELLOW BANDS FOR PRACTICE SPECIAL AMMUNITION, AND ONE LETTER ON EITHER SIDE OF YELLOW BAND, FOR PRACTICE AMMUNITION (SEE ITEM 7).
 2. NUMBER, FILLERS INITIALS AND LOT NUMBER OF FILLED FUZE.
"PLUGGED" STENCILLED IN LIEU OF PRACTICE PROJECTILE WHEN ROUNDS IN BOX ARE PLUGGED.
 3. CALIBRE OF GUN AND NATURE OF PROJECTILE, AS APPLICABLE.
 4. GROUP LETTER AND NUMBER, AS APPLICABLE, OMITTED FOR BURST SHORT PRACTICE.
 5. WHEN CHARGE IS MADE UP OF R.D.B. CORDITE
D " " " " " M.D. "
(SEE PLATE IV).
 6. GREEN DISC DENOTING H.E. SHELL WITH SMOKE COMPOSITION, IN BOX. } WHEN ALUMINIUM DISC DENOTING PRACTICE PROJECTILE WITH FLASH PRODUCER. } APPLICABLE
 7. BURST SHORT WHEN APPLICABLE.
 8. YELLOW BAND DENOTING PRACTICE CHARGE. TWO BANDS DENOTE PRACTICE SPECIAL (SEE ITEM 1).
 9. BATCH LETTER AND NUMBER;
SHRAPNEL LETTER A., H.E. LETTER B., TARGET LETTER F., PRACTICE PROJECTILE LETTER S,
SHRAPNEL LETTER V.,
PRACTICE PROJECTILE LETTER W.—
WITH BURST SHORT CHARGE.
 10. SUB-BATCH LETTER, AS APPLICABLE.
 11. 80/20 OR OTHER FRACTION DENOTING COMPOSITION; IF SHELL FILLED AMATOL—
"T.N.T. IF SHELL FILLED TROTYL OR SHRAP," PRAC. PROJ. OR TARGET."
 12. RED CRISS-CROSS ON BOX CONTAINING SHELL BEARING A SIMILAR MARKING, INDICATING SUITABILITY FOR USE IN HOT CLIMATES.
 13. "S.P.L." DENOTING SPECIAL AMMUNITION, WHEN APPLICABLE (SEE ITEM 7).
 14. "R" STENCILLED IN RED, WHEN PACKED SHRAPNEL WHICH HAVE CENTRAL TUBES AFFECTED BY RUST.
 15. PHOS DECK CARGO FOR TARGET AMMUNITION
 16. † DENOTING PROJECTILE FITTED WITH TRACER.
- LABELS
- A. CONTENTS LABEL AFFIXED TO UNDERSIDE OF LID:—

TYPICAL FOR BOX AMMUNITION, CONTAINING
CARTRIDGES, Q.F., 6PR. AND 3PR., FOR FIXED
ARMAMENTS.

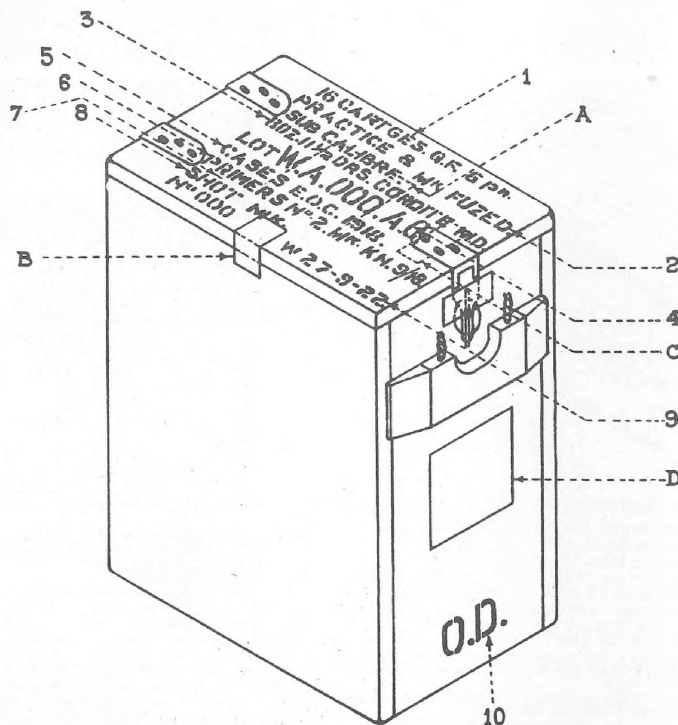


PLATE XXIV.

NOTES.

BOXES PAINTED SERVICE COLOUR FOR ALL NATURES EXCEPT H.E. WHICH IS YELLOW, ALSO LID PAINTED YELLOW FOR PRAC. AND SUB CAL.

STENCILLING IN BLACK ON LID.

NOTE:- WHEN BOX IS RE-STENCILLED THE COLOUR OF LETTERING IS IN YELLOW EXCEPT H.E. AND PRACTICE AMMUNITION, WHICH IS IN BLACK.

ITEM.

1. NUMBER, DESIGNATION, AND MARK OF CARTRIDGE, NATURE AND MARK OF SHELL.
2. FUZED OR PLUGGED IF APPLICABLE.
3. WEIGHT OF CHARGE, NATURE, SIZE AND LOT NUMBER OF PROPELLANT
4. A.C. IF ADJUSTED CHARGE.
5. "CASES", MANUFACTURERS INITIALS, DATE AND SYMBOL $\diamond$; OR REPAIR MARKINGS - APPLICABLE. (A), $\diamond$, REPR. AS APPLICABLE.
6. "PRIMERS N° 2, MARK, MONOGRAM AND DATE OR "CAPS MK. II" AS APPLICABLE.
7. "FUZES HOTCHKISS" MARK, MANUFACTURERS INITIALS AND LOT NUMBER, IF APPLICABLE.
8. "SHELL A" OR SHOT AND "MK" AS APPLICABLE.
9. MONOGRAM OF STATION AND DATE OF ASSEMBLING AS APPLICABLE.
10. "O.D." WHEN BOX IS OIL DRESSED.

LABELS

- A. DESCRIPTIVE LABEL AFFIXED ON UNDERSIDE OF LID.
- B. TWO STATION LABELS ONE OVER HASP AND ONE OVER JUNCTION OF LID AND BODY.
- C. PACKERS LABEL N° L. 566 A. AFFIXED TO UNDERSIDE OF LID.
- D. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L. 1606. GROUP VI.

LABELS ARE AFFIXED TO BOX WITH SHELLAC AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

TYPICAL FOR BOX AMMUNITION CONTAINING CARTRIDGES 3 PR. AND 6 PR. AND 3 PR. FOR FIXED ARMAMENTS; BATCHED AMMUNITION.

PLATE XXV.

NOTES.

BOXES PAINTED SERVICE COLOUR. LID PAINTED YELLOW, AND STENCILLING IN BLACK FOR SUB-CALIBRE, ALL STENCILLING ON SERVICE COLOUR IN YELLOW. STENCILLING ON BACK SAME AS ON FRONT AS SHOWN.

ITEM.

1. CALIBRE OF GUN.
2. NATURE OF PROJECTILE.
3. BATCH LETTER AND NUMBER, AS APPLICABLE.
6 PR. PRACTICE AND SUB-CALIBRE LETTER "T"
6 PR. STEEL SHELL "E"
3 PR. SUB-CALIBRE "T"
4. SUB-BATCH LETTER, AS APPLICABLE.
5. YELLOW BAND DENOTING PRACTICE AMMUNITION (LATEST BATCHED SYSTEM ONLY).
6. "O.D. WHEN BOX IS OIL DRESSED.
7. NUMBER OF CARTRIDGES.

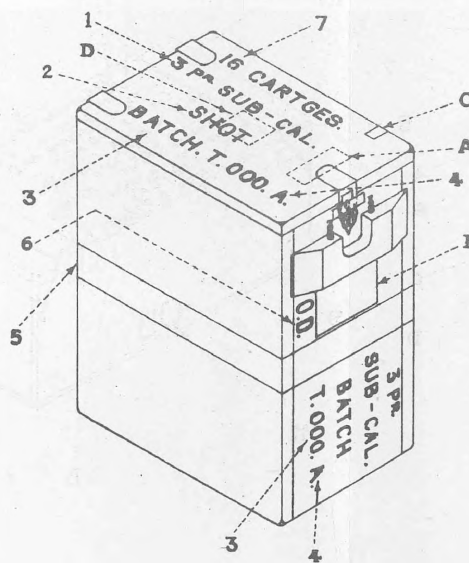
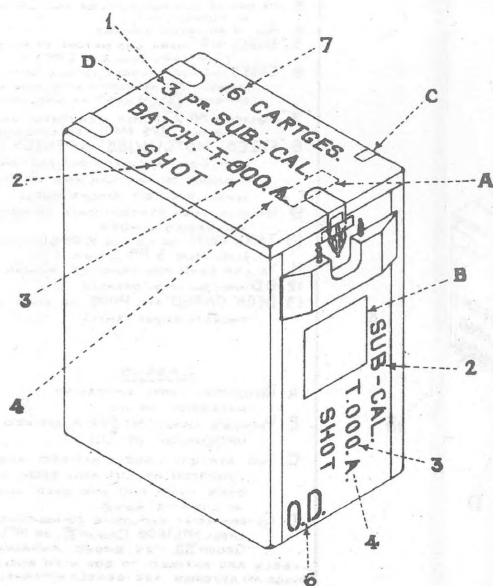
LABELS.

- A. BATCH LABEL, AFFIXED TO UNDERSIDE OF LID
STEEL SHELL N° L 1870A, N° L 1871A.
SUB-CALIBRE N° L 1845, N° L 1865A, N° L 1874A.
PRAC. AND SUB-CALIBRE N° L 1872, N° L 1873.
AS APPLICABLE.
- B. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L 1606. (GROUP VI).
- C. TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY; OR ONE OVER HARP AND ONE OVER JUNCTION OF LID AND BODY, AS APPLICABLE.
- D. PACKERS LABEL N° L 566A AFFIXED TO UNDERSIDE OF LID.

LABELS ARE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

FIRST BATCHING SYSTEM.

LATEST BATCHING SYSTEM.



**TYPICAL FOR BOX AMMUNITION CONTAINING CARTRIDGES.
Q.F. 6 PR 6 CWT. AND 3 PR 2 CWT. FOR TANK GUN.**

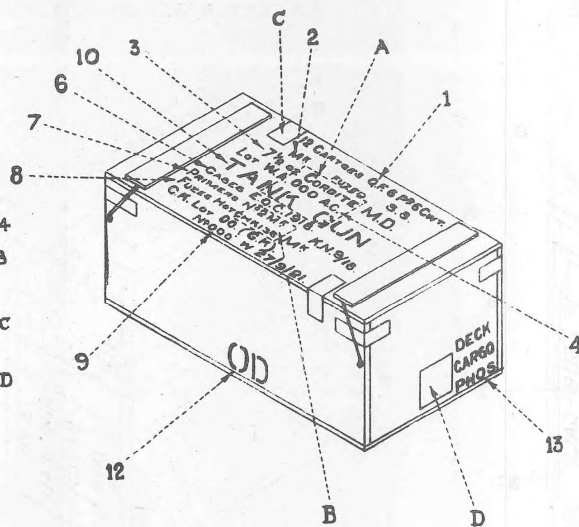
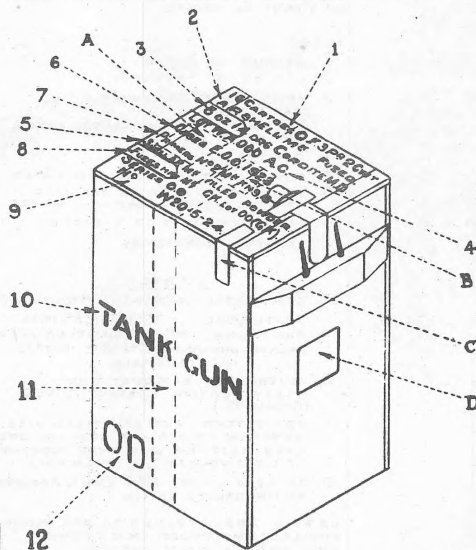


PLATE XXVI.

NOTES.

BOX PAINTED GREEN FOR SMOKE.
BOX STAINED VANDYKE BROWN (A.P. OR PRACTICE).
LID PAINTED GREY.
BODY OF BOX STAINED VANDYKE BROWN } 6 PR 6 CWT.
STENCILLING IN BLACK ON LID AND BOTH SIDES.
NOTE: WHEN BOX IS RE-STENCILLED THE COLOUR OF LETTERING IS YELLOW.

ITEM.

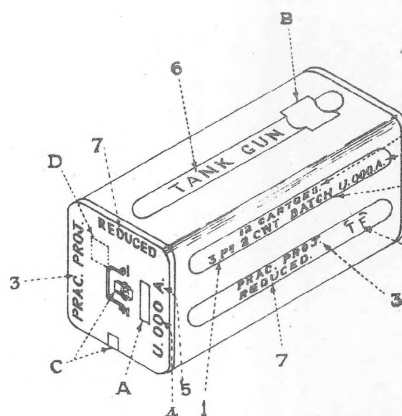
- 1 NUMBER OF CARTRIDGES AND CALIBRE OF GUN.
- 2 NATURE AND MARK OF SHELL.
- 3 WEIGHT OF CHARGE, NATURE AND LOT NUMBER OF PROPELLANT.
- 4 "AC" IF ADJUSTED CHARGE.
- 5 "SHELL A.P." MARK AND NATURE OF FILLING (NOT APPL. CABLE TO 6 PR).
- 6 "CASES" MANUFACTURERS INITIALS, DATE AND SYMBOL  OR REPAIR MARKINGS AND SYMBOLS  AS APPLICABLE.
- 7 "PRIMERS NO 2" MARK, MONOGRAM AND DATE, OR CAPS MK II, AS APPLICABLE.
- 8 "FUZES" HOTCHKISS OR "FUZES HKS" MARK, MANUFACTURERS, INITIALS AND LOT NUMBER OR PARTICULARS OF BURSTER WHEN PACKED SMOKE SHELL.
- 9 MONOGRAM OF STATION, DATE OF ASSEMBLING AND SERIES NUMBER.
- 10 "TANK GUN" ON LID FOR 6 PR 6 CWT. AND BOTH SIDES FOR 3 PR 2 CWT.
- 11 YELLOW BAND FOR PRACTICE AMMUNITION.
- 12 "O.D." WHEN BOX IS OIL DRESSED.
- 13 "DECK CARGO" AND "PHOS" ON ENDS WHEN PACKED SMOKE SHELL.

LABELS.

- A DESCRIPTIVE LABEL AFFIXED TO UNDERSIDE OF LID.
 - B PACKER'S LABEL NO 566 A, AFFIXED TO UNDERSIDE OF LID.
 - C TWO STATION LABELS AFFIXED OVER JUNCTION OF LID AND BODY, OR ONE OVER HARP AND ONE OVER JUNCTION OF LID AND BODY.
 - D GOVERNMENT EXPLOSIVE CLASSIFICATION LABEL NO L1608 GROUP II, OR NO L1612 GROUP III FOR SMOKE AMMUNITION.
- LABELS ARE AFFIXED TO BOX WITH SHELLAC AND THOSE ON EXTERIOR ARE COATED WITH SHELLAC AFTERWARDS.

**TYPICAL FOR BOX AMMUNITION STEEL, CONTAINING CARTRIDGES Q.F., 3 P² 2 CWT.
FOR TANK GUN; BATCHED AMMUNITION.**

FIRST BATCHING SYSTEM.



LATEST BATCHING SYSTEM.

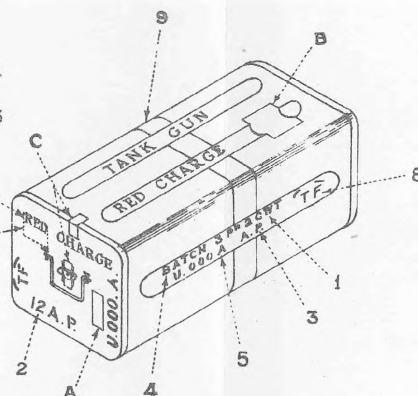


PLATE XXVII

NOTES.

BOX PAINTED SERVICE COLOUR.
STENCILLING IN YELLOW ON BOTH SIDES,
LID, AND BOTTOM.

ITEM.

1. CALIBRE OF GUN.
2. NUMBER OF CARTRIDGES.
3. NATURE OF PROJECTILE.
4. BATCH LETTER AND NUMBER,
AS APPLICABLE.
5. SUB-BATCH LETTER, AS APPLICABLE.
6. "TANK GUN" IN FLUTE
7. "REDUCED" or "RED CHARGE",
IF APPLICABLE.
8. "T" or "TF" DENOTING TRACER OR
TRACER FUZE.
9. YELLOW BAND DENOTING PRACTICE
AMMUNITION.

LABELS.

- A. BATCH LABEL AFFIXED TO INSIDE OF BOX.
PRACTICE PROJECTILE... N^o L 1825.
CASE SHOT... N^o L 1825.
A.P... N^o L 1827A.
A.P. PRACTICE... N^o L 1825.
- B. GOVERNMENT EXPLOSIVE AND
CLASSIFICATION LABEL N^o L 1606 (COMPY).
- C. TWO STATION LABELS, ONE AFFIXED OVER
WING NUT, AND ONE OVER JUNCTION
OF LID AND BODY.
- D. PACKERS LABEL N^o L 566 A AFFIXED
TO INSIDE OF BOX.

LABELS ARE AFFIXED TO BOX WITH
SHELLAC, AND THOSE ON EXTERIOR ARE
COATED WITH SHELLAC AFTERWARDS.

TYPICAL FOR:-

BOX, CONTAINING BOMBS, M.L. SMOKE, 3 INCH MORTAR,
10 LB. -IN CYLINDERS, FUZED OR PLUGGED, WITH COMPONENTS.

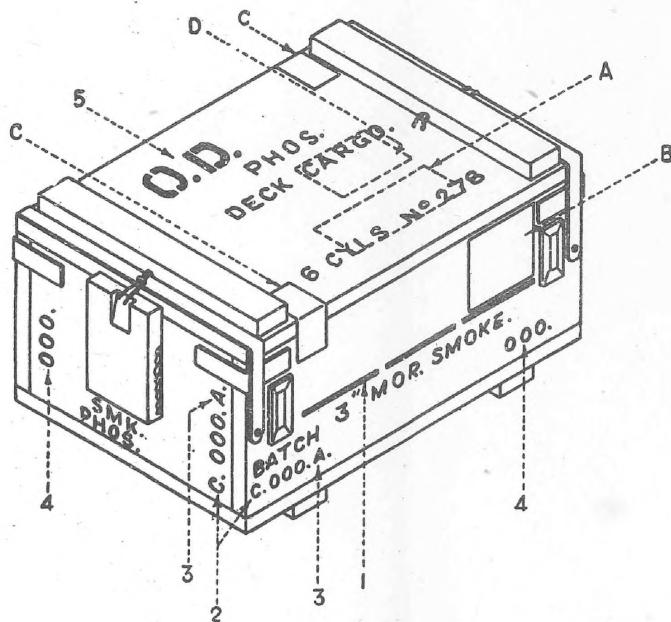


PLATE XXVIII.

NOTES.

BOX TO BE PAINTED GREEN.
STENCILLING TO BE IN $\frac{3}{4}$ INCH
YELLOW LETTERING, ON BOTH SIDES,
LID, AND BOTH ENDS, EXCEPT WHERE
OTHERWISE STATED.

ITEM.

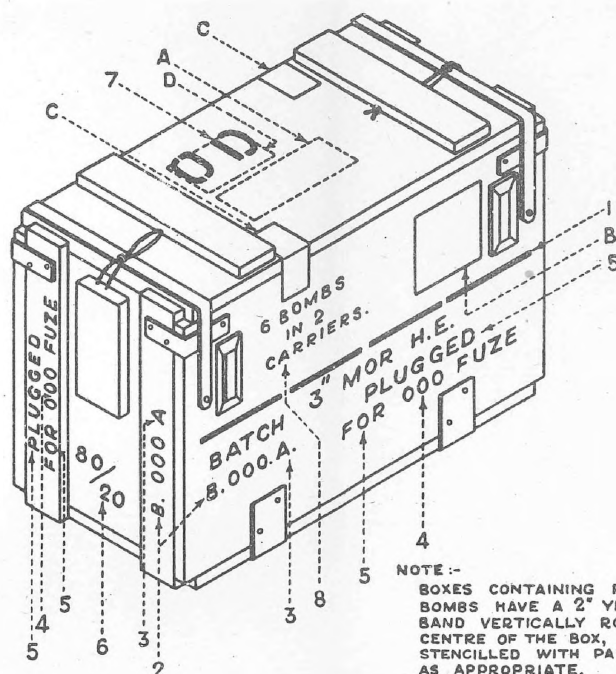
1. YELLOW HORIZONTAL LINE, $\frac{1}{4}$ INCH
WIDE, STENCILLED ACROSS CENTRE
OF BOX.
2. BATCH LETTER AND NUMBER, AS
APPLICABLE.
3. SUB-BATCH LETTER AS APPLICABLE.
4. FUZE NUMBER, AS APPLICABLE,
OR "PLGD" WHEN ISSUED PLUGGED.
5. ONLY TO BE STENCILLED
(IN 2 INCH LETTERS) WHEN BOX
HAS BEEN OIL DRESSED.

- A. BATCH LABEL No L.1945 A.
AFFIXED TO UNDERSIDE OF LID.
- B. GOVERNMENT EXPLOSIVE AND
CLASSIFICATION LABEL No L.1612.
(GROUP XII).
- C. TWO STATION LABELS, AFFIXED
OVER JUNCTION OF LID AND BODY,
ON OPPOSITE SIDES.
- D. PACKERS LABEL, No L.566 A.
AFFIXED TO UNDERSIDE OF LID.

LABELS TO BE AFFIXED TO BOX
WITH SHELLAC, AND THOSE ON
EXTERIOR TO BE COATED WITH
SHELLAC AFTERWARDS.

BOXES CONTAINING H.E. BOMBS
ARE STAINED BROWN AND
STENCILLED SIMILARLY WITH
PARTICULARS AS APPROPRIATE,
OMITTING THE WORDS "PHOS" AND
"DECK CARGO".
(SEE PLATE XXIX FOR DETAILS).

TYPICAL FOR:-
BOX, CONTAINING BOMBS, M.L., H.E. 3 INCH MORTAR, 10 LB, IN CARRIERS.
FUZED or PLUGGED, WITH COMPONENTS.



NOTE:-
 BOXES CONTAINING PRACTICE BOMBS HAVE A 2" YELLOW BAND VERTICALLY ROUND THE CENTRE OF THE BOX, AND ARE STENCILLED WITH PARTICULARS AS APPROPRIATE.

PLATE XXIX.

NOTES.

BOX TO BE STAINED VANDYKE BROWN. STENCILLING TO BE IN YELLOW, SIZE $\frac{3}{4}$ INCH, EXCEPT WHERE OTHERWISE STATED.

STENCILLING TO BE ON BOTH SIDES AND BOTH ENDS, AS SHOWN.

ITEM.

1. YELLOW HORIZONTAL LINE, $\frac{1}{4}$ INCH WIDE, STENCILLED ACROSS CENTRE OF BOX.
2. BATCH LETTER, AND NUMBER AS APPLICABLE.
3. SUB-BATCH LETTER AS APPLICABLE.
4. FUZE NUMBER, AS APPLICABLE. } TO BE $\frac{1}{2}$ INCH ON ENDS.
5. WHEN PLUGGED.
6. FRACTION DENOTING COMPOSITION OF AMATOL.
7. ONLY TO BE STENCILLED (IN 2 INCH LETTERS) WHEN BOX HAS BEEN OIL DRESSED.
8. TO BE IN $\frac{1}{2}$ INCH STENCILLING.

- A. BATCH LABEL N° L.1944 A. AFFIXED TO UNDERSIDE OF LID.
- B. GOVERNMENT EXPLOSIVE AND CLASSIFICATION LABEL N° L.1608. (GROUP VIII).
- C. TWO STATION LABELS, AFFIXED OVER JUNCTION OF LID AND BODY, ON OPPOSITE SIDES.
- D. PACKERS LABEL N° L.566 A. AFFIXED TO UNDERSIDE OF LID.

LABELS TO BE AFFIXED TO BOX WITH SHELLAC, AND THOSE ON EXTERIOR TO BE COATED WITH SHELLAC AFTERWARDS.

BOXES CONTAINING SMOKE BOMBS ARE PAINTED GREEN AND STENCILLED SIMILARLY WITH PARTICULARS AS APPROPRIATE, AND THE WORDS "PHOS", "DECK CARGO" ON THE LID. (SEE PLATE XXVIII FOR DETAILS).