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REGULATIONS
FOR
ARMY ORDNANCE SERVICES
PART II

PAMPHLET No. 11

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**LABORATORIES, LABORATORY OPERATIONS
AND GENERAL INSTRUCTIONS FOR THE
EXAMINATION OF EXPLOSIVES AND RENDER-
ING REPORTS IN CONNECTION THEREWITH**

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By Command of the Army Council,

I. J. G. J.

THE WAR OFFICE,
31st August, 1933.

REGULATIONS FOR ARMY ORDNANCE SERVICES

PART II

PAMPHLET No. 11

LABORATORIES, LABORATORY OPERATIONS AND GENERAL INSTRUCTIONS FOR THE EX- AMINATION OF EXPLOSIVES AND RENDER- ING REPORTS IN CONNECTION THEREWITH

LABORATORIES

1. (1) R.A.O.C. laboratories * in commands and stations normally consist of two rooms (inner and outer) both under "magazine conditions" (with entrance, shifting lobby and barrier), of sufficient size to enable simple laboratory operations to be carried out in connection with the examination, repair, preparation for proof, etc., of explosives as provided for in the relevant pamphlets of R.A.O.S., Part II, or as may be specially ordered by competent authority.

(2) At some stations the laboratories are provided with heating or drying apparatus.

2. The operations of filling, internally examining, repairing or emptying stores will be carried out in the inner room, the outer room being for external examination of stores before being passed to the inner room, for marking after repair, and for closing, marking and sealing of packages.

3. Care must be taken to cleanse the rooms thoroughly when changing from work on one nature of explosive to another and to ensure that all stores are clean externally before being taken into the outer room.

4. Where a separate room is available, it should be reserved exclusively for the examination of shell, bombs, etc., filled with H.E., including the repair of fillings, and/or exchange of exploders, etc.

5. In any room in which Picric powder, Picric acid, C.E., or Trotyl is to be dealt with, the walls must be smooth and

* For definitions of laboratory, magazine conditions, explosives, etc., see Magazine Regulations.

painted with "lead-free" paint, any existing paint (*other than lead-free*) on the walls being removed prior to application of the lead-free paint.

6. Certain precautions are necessary when handling Trotyl or explosives containing Trotyl (*see R.A.O.S., Part II, Pamphlet No. 10*).

GENERAL INSTRUCTIONS FOR LABORATORY OPERATIONS

7. All work on explosives in laboratories in R.A.O.C. charge will be carried out under the superintendence of an inspecting ordnance officer or other duly qualified officer as detailed by the A.D.O.S. or D.A.D.O.S. (*see also para. 29*).

8. (1) Laboratory operations will be carried out under magazine conditions in accordance with these regulations as far as the circumstances and means available will permit.

(2) Where no laboratory exists, a building or tent may, at the discretion of the I.O.O., be utilized for the purpose, but, if so, the building or tent must be situated at a safe distance from magazines, explosives stores, inhabited buildings or public thoroughfares, and magazine conditions must be observed as far as possible.

9. (1) The examination, weighing and re-wetting of wet guncotton need not be carried out in a laboratory, but the repacking of wet guncotton must be carried out under magazine conditions.

(2) Wet guncotton must not be examined if the air temperature is 32° F. or under.

10. Royal Artillery and other units concerned will indent on R.A.O.C. for repair of ammunition or for other laboratory operations affecting explosives in their charge. The work may be carried out *in situ* or in the R.A.O.C. laboratory, whichever is most advantageous.

11. The number of men employed in any building or tent which is being used for laboratory operations is not to exceed eight (*except where otherwise specified in the relevant pamphlets of R.A.O.S., Part II*) or four when cordite is being cut, and the quantity of loose gunpowder or cordite in the building at any time must not exceed 500 lb. ; other explosives should be in proportionate amounts according to natures, but in any case no more than the minimum amount necessary to maintain an even flow of work will be allowed in the laboratory or in transit between it and the magazine or explosives store, etc.

12. Different descriptions of explosives will not be allowed in the filling room at the same time, except such small quantities as are essential for the work in progress (*e.g.* exploders for H.E. shell, gunpowder igniters for cordite cartridges).

13. Laboratory operations with hygroscopic explosives (*e.g.* the attaching of gunpowder igniters to cordite cartridges) should only be carried out when the difference between the readings of the wet and dry bulb thermometer is:—

At least .. 1, 2, 3, 4, 5, 6, 8 degrees F. difference,

For temperature 40, 50, 60, 70, 80, 90, 100 degrees F.
(dry bulb),

i.e. the wet bulb reading should be below the dry bulb readings by the amounts shown in the first of the above lines.

When the dry bulb temperature is below 32° F. consideration of the wet bulb is unnecessary (*but see below*).

Work must not be carried out when the air temperature exceeds 100° F. or 75° F. with artificial heat.

14. (1) Work must not be carried out on Cordites Mk. I, R.D.B. and S.C., or Ballistite when the dry bulb temperature is 45° F. or under, or Cordites M.D., M.C., W. and R.D.N., or wet guncotton when the dry bulb temperature is 32° F. or under. There is no temperature restriction for N.C.T.

(2) Direct sunlight must never be allowed to fall upon exposed explosives.

15. Materials such as silk cloth, felt wads, etc., liable to absorb moisture, must be thoroughly dried before use, and great care must be taken that any stores to be filled are thoroughly dry inside and not colder than the air in the filling room, as otherwise moisture is liable to be deposited on them when they are brought in to be filled.

16. (1) During laboratory operations the doors and windows of the rooms must not be fastened in any way, and the exits of the rooms must at all times be clear of impediments.

(2) Work should cease and buildings be vacated and closed during thunderstorms.

17. (1) Strict attention must be paid to cleanliness in all parts of the laboratory and the ways leading thereto; also in the barrows, etc., used for the conveyance of stores in transit. All beams or ledges where explosive dust might collect must be cleaned frequently.

(2) The floor of the inner room when in use must be covered with hides or wadmiltits, unless it is permanently covered

with linoleum or other approved material ; care must be taken that wadmiltits are dry before being taken into use.

18. Any loose grains or dust of explosives spilt on the floor or otherwise exposed to possible admixture with iron filings, grit or dirt of any kind, and any loose dust or grit will at once be swept up and deposited in a bucket or tub containing water, kept just outside the laboratory.

19. Packages containing explosives will be conveyed to the laboratory, magazine or explosives store in covered barrows or trucks, in order to keep them free from dirt or grit ; if for any reason barrows without covers have to be used, the packages must be covered by wadmiltits.

20. (1) No barrow, tool or tackle used outside will be admitted within the barrier at the entrance to the laboratory.

(2) Nothing will be kept inside the barrier of the laboratory, except the necessary articles for the work in hand, and no stores, such as barrels, cases, cylinders, etc., are to be admitted without being thoroughly cleaned externally.

21. In heading and unheading gunpowder barrels only the metal driver and wood mallet will be used to tighten up or to remove the copper hoops.

23. Packages which have been emptied are to be passed out at once and stored in a clean place ; in the event of a package not being completely emptied after opening it must be reclosed and returned to the magazine or explosive store.

24. (1) The destruction of combustible stores by fire or any other means will not be permitted within the precincts of a laboratory.

(2) At the close of a day's work any oils, paints, shellac, etc., and grease or paint rags must be removed.

25. (1) When any box, cylinder or case is packed with explosives in ammunition or in bulk, a label (L. 566A) will be affixed to the inside of the lid showing :—

(a) Station monogram (Line 1).

(b) Date of packing (Line 1).

(c) Name of packer (Line 2).

(2) Should such package be opened for examination at any time, and repacked with the original stores, lines 4 and 5 of the same label will be filled in. If the package is only opened for repacking with the original stores, the word " Examined " will be deleted from line 4 of the label.

(3) Should it be necessary at any time to repack explosives in packages other than those in which they were received, care must be taken to reproduce the original markings and to affix a label as detailed in sub-para. (1).

(4) If further examination and/or repacking in the same package is carried out, an additional label will be fixed and lines 4 and 5 filled in. The old label will be left on the lid to show the complete history of the contents of the package.

(5) Lines 3 and 6 will be filled in if applicable.

(6) The last packer will be held responsible should any foreign substance be found in the packages, or should the contents of the package be found to be incorrect when the package is subsequently opened.

26. An extract from the above instructions (printed on A.F. G 940B) will be attached to a board and hung up in a convenient place for the information of all concerned.

Officers in charge of laboratories, etc., are responsible that these instructions are kept up to date by recording thereon all promulgated amendments.

EXAMINATION OF EXPLOSIVES

General Instructions and Procedure

27. For special instructions relative to ammunition for observance in time of war, *see* Magazine Regulations.

28. (1) In order that **all** explosives may be examined as provided for in the various Pamphlets of R.A.O.S., Part II, by the officer appointed for inspection duties in the area or district, units and corps are responsible for the submission annually, on the appropriate Army Forms, of records of the whole of their stock of explosives.

(2) The inspection year will be considered as terminating on 31st December of each year.

29. The annual examination of explosives must on all occasions be conducted by an officer who has passed the Ordnance Course or Advanced Class.

30. (1) In addition to the normal annual examination, certain descriptions of explosives are subject to an intermediate (*i.e.* half-yearly) examination; this is provided for in the relevant Pamphlets of R.A.O.S., Part II.

(2) Any explosives which, under the regulations, do not require examination are to have the reason stated in the "remarks" column of the Army Forms against the specific items affected.

31. Any explosives due for test which have been *in actual use by the I.O.O.* during the inspection year and *found satisfactory* need not be subjected to further proof and may be sentenced on the results obtained in such use.

32. (1) Dates of inspection of explosives stores, magazines, etc., will be arranged by the A.D.O.S. or D.A.D.O.S. with officers commanding units and corps. The A.D.O.S. or D.A.D.O.S. will also notify the dates of inspection of buildings to the Commander, Royal Engineers.

(2) *Special examinations* when required by any unit or corps will be carried out on a requisition being put forward on the A.D.O.S. or D.A.D.O.S.

33. As soon as possible after the date of inspection has been arranged, officers having explosives on charge will render, in duplicate, the appropriate Army Forms (*see* Appendix I) to the A.D.O.S. or D.A.D.O.S. for the information of the I.O.O. To avoid multiplicity of forms, officers in charge should enter explosives of the same pattern held on charge in different localities or works, or on deposit from other units, on the same form as far as practicable, the name of the station or unit being entered in the "remarks" column. "Nil" returns need not be rendered.

The officer in charge of explosives is responsible for the accurate compilation of the return, but only so far as concerns the descriptions and quantities of explosives, date of receipt and temperature of storage if required. The I.O.O. is responsible for completion of the form as regards condition of buildings, packages and explosives, the number and percentage of stores examined and the results of inspection and sentences.

Special attention should be paid by I.O.Os. to the accuracy of the information quoted on the Army Forms as regards designation, lot number, filler, etc., and the forms should be signed both by the officer in charge of the explosives and by the I.O.O.

34. (1) Examination of explosives, etc., on receipt by R.A.O.C. from Land Service units will not normally form the subject of a report provided that the condition of the stores and their packages as received is serviceable. If, however, any stores are found to be other than in a fully serviceable condition a report will be rendered on the appropriate army forms giving full particulars (*see* para. 47).

(2) Any explosives received for the Land Service by the R.A.O.C. or other army organization from the Royal Navy or the Royal Air Force will be examined, and reports rendered if necessary. Any such explosives found to be in a doubtful or unsafe condition must be segregated.

35. The inspection, when required, of explosive stores belonging to the Royal Navy or the Royal Air Force will be

carried out by I.O.Os. in accordance with regulations on the subject issued by the Admiralty or Air Ministry respectively.

36. (1) All explosives held on charge which are not of "service" pattern will, so far as possible, be inspected in the manner laid down for similar service stores, and the results of inspection included in the periodical reports.

(2) Board of Trade stores held on charge will **not** be inspected except in so far as is necessary to ascertain if they are safe for storage.

37. Before opening a package particular notice should be taken as to whether the station monogram or Inspection Department sealing and packer's labels are intact; if they are not the fact should be recorded in the report of inspection together with the reasons thereof, if possible.

38. All packages opened for examination will be marked "EXD." with the station monogram and date, such particulars replacing those of any previous examination; when the same lot of stores is again examined, other packages are to be selected. All original markings on the opened packages are to remain unaltered, unless the contents are altered, in which case opportunity should be taken to bring the markings up to date.

Irrespective of whether a package is opened or not, if the markings on it have become faint or illegible they should be renewed, and fresh packer's and sealing labels affixed.

39. In addition to the examinations called for in the relevant Pamphlets, I.O.Os. will make a general inspection of the packages in each explosives, etc., store, and, if any are found with the tape band detached or the luting defective, immediate steps will be taken to remedy the defects, the necessary materials and a competent man being provided by the R.A.O.C.

40. (1) In order to ensure that the explosives taken for proof fairly represent the bulk, selection of the samples will normally be made by the I.O.O. in person. When samples cannot be so selected steps must be taken to ensure that those received are representative; under war conditions it will be necessary to differentiate between explosives that have been subjected to exposure and/or rough usage, and those that have not.

(2) When samples of explosives are to be sent to the I.O.O. for proof, steps must be taken to ensure that the consignor packs them suitably so as to prevent possible deterioration or damage in transit; this is particularly important in the case of fuzes, detonators and similar stores. No explosive

stores will be sent by rail unless pronounced safe to travel by the I.O.O.

41. Reports of the results of all periodical inspections as laid down in the various pamphlets of R.A.O.S., Part II, or of those ordered by superior authority, will be rendered on the appropriate Army Forms (*see* Appendix I) through the channels indicated in para. 47.

42. Each item on the Army Forms, whether the stores were actually inspected or not, will have a sentence entered against it, *viz.* serviceable, "↑"; unserviceable, "+"; repairable, "R." or doubtful, "D." If minor repairs are carried out by the I.O.O., whilst inspection is proceeding, in order to render stores "serviceable" before sentencing, full details of such repairs must be entered on the Army Forms.

If the sentence is "repairable," a note should be added stating what steps are considered necessary to render the stores fully serviceable.

If the sentence is "unserviceable," no action as to replacement will be taken until after confirmation of sentence, except at stations abroad (*see* R.A.O.S., Part I, 1937, para. 158), nor will stores so sentenced be disposed of or destroyed *prior to confirmation* save as specially provided for in the various Pamphlets.

43. In the case of reports on guncotton and cordite *other than* reports of annual inspections, "serviceable" sentences which are in agreement with the regulations do not require formal confirmation.

44. In the case of cordite the Army Forms G 900 rendered at the annual inspection will show every lot on charge, but those rendered at intermediate inspections (*see* R.A.O.S., Part II, Pamphlet No. 7) will show only the lots due for testing.

45. Army forms, for stores consigned to the C.O.O., Royal Arsenal, Woolwich, for proof (including cordite for "silvered vessel test or colour test"), will be forwarded, in duplicate, direct to the Chief Inspector of Armaments, Royal Arsenal, Woolwich, at the same time as the stores are despatched, and will give all the necessary details to facilitate identification of the stores. All packages containing such stores must show clearly, either by means of stencilled markings or by labels, the purpose for which the stores are forwarded and the authority for so doing.

On completion of proof, the results thereof and sentences will be entered on both forms, and, after confirmation of sentence, the duplicate form will be returned to the command

or station for retention and whatever action may be necessary as a consequence of the sentences.

46. (1) Reports of examination of explosives by I.O.Os. should always be accompanied by lists showing the forts, magazines and explosives stores inspected, by particulars of the army forms rendered, and by a covering letter in which any *special* points should be brought to notice.

Particular attention should be paid to the state of the drains, etc., of the buildings inspected, and any apparent defects should at once be brought to the notice of the local R.E. representative.

(2) The I.O.O. should enter in the "remarks" column of the army forms whether he considers any deterioration noted is due to "fair wear" or otherwise; if the latter, a further reference should be made to the matter in his covering letter.

(3) The officer commanding, in transmitting the reports and covering letter, should state what action has been taken in regard to the sentences and recommendations. When the sentence is "repairable," it should be stated what action has been taken locally to effect repairs in anticipation of confirmation of sentence, but, in doubtful cases, repairs should not be carried out until after confirmation. No action, however, is to be taken in the case of stores sentenced "unserviceable," except as provided for in para. 42, until such sentences have been confirmed.

47. (1) On completion of the inspection the I.O.O. will forward the reports, etc., to the A.D.O.S. or the D.A.D.O.S., who will pass them to the officers commanding units, etc., for transmission by them through the headquarters of the command to the Chief Inspector of Armaments, Royal Arsenal, Woolwich.

(2) In transmitting the reports the originals only are to be forwarded, the duplicates being retained by the I.O.O. for reference.

48. Cordite reports (A.F. G 900) should be transmitted immediately on completion and independently of reports dealing with other explosives, but should cover units, districts, etc., corresponding to those dealt with on the main report.

50. When inspecting explosives in Royal Artillery charge, if a laboratory or tent is not available, the selected percentages of cylinders, cases, etc., will be opened one by one for examination in a suitable place where the air is dry, and magazine conditions observed so far as possible. Packages must be reclosed immediately after examination has been completed.

51. Materials and stores expended in examination and repairs at inspections will be expended through the accounts of the R.A.O.C., no indents being necessary from the units concerned beyond the initial indent for the performance of the service.

52. When inspections and repairs are being carried out in forts, works, etc., the necessary assistance of working parties will be supplied by the units in charge of the explosives.

53. When defects are found in any stores of sufficient importance to form the subject of a separate report, samples of the defective stores should always accompany such report, provided the samples are not so dangerous, bulky or heavy as to entail undue difficulty in transport.

54. When returning defective explosives to the C.O.O., Royal Arsenal, Woolwich, for "special examination" by the Chief Inspector of Armaments, care should be taken that they are forwarded in their original packages, if practicable, all markings and labels being left intact. If this is not possible, an explanation of the circumstances must be stated on the vouchers accompanying the stores.

55. When packages (except projectile and S.A.A. boxes) containing explosives are emptied a label is to be so attached that the package cannot be opened without tearing it; the label is to show the unit or department by which emptied, together with the date and station, and must be signed by the person who examined and/or emptied the package.

56. A certificate to the effect that such packages are "free from explosives" will be furnished on each copy of the voucher, inspection form or examination order, by the inspecting ordnance or other officer, or responsible official of the ordnance factories supervising the removal of explosives from the packages, to the ordnance officer on whose charge the packages are held. A copy, duly certified, of the form applicable will accompany the packages when returned to store, in order that the storeholder or foreman concerned may be fully cognizant of their condition.

The certificate must show the rank and name of the officer or official, the unit or department to which he belongs, and the date of examination and station.

This certificate will be the authority of the ordnance officer, as consignor, for certifying as "free from explosive matter," empty packages consigned to another depot or factory or to a contractor.

57. At no inspection will final reduction in class of gunpowder or condemnation of explosives be made, except as permitted by para. 42. nor will any consequent transfer in the store ledger be carried out until orders to that effect have been received. The authority must always be quoted on the transfer voucher covering the transaction.

58. Gunpowder which has been recommended for reduction in class or for condemnation will not be considered as available for service in its original class, except in time of emergency.

59. A list of stores required for the examination and proof of explosives is given in Appendix II, and for re-forming certain natures of Q.F. blank ammunition in Appendix III.

60. *The I.O.O. may at any time correspond, through the D.A.D.O.S. of the area, with the Chief Inspector of Armaments, Royal Arsenal, Woolwich, on any questions relating to the technical details of inspection.*

APPENDIX I

List of Army Forms for reports of the examination
of explosives

Army Form	Subject
B 202	Diagram of proof of S.A. ammunition.
G 803	Inspection of S.A., rim fire and aiming rifle ammunition.
G 842	Proof of fuzes, time or time and percussion.
G 847	Inspection of High Explosives, in bulk.*
G 848	Proof of detonators, electric tubes and fuzes, pyrotechnics and miscellaneous explosives.
G 864	Inspection of gunpowder.
G 897	Proof of percussion fuzes (<i>except detonating fuzes</i>) and friction or percussion tubes.
G 897A	Proof of detonating percussion fuzes.
G 898	Inspection of filled cartridges, all natures (<i>except S.A. ammunition</i>).
G 900	Inspection of cordite in bulk and in cartridges (<i>except S.A. ammunition</i>).
G 911	Inspection of filled shell, bombs, etc.
G 930	Inspection of wet guncotton.
G 931	Inspection of dry guncotton and tonite.

* Only required by units and departments holding H.E. in bulk in their charge.

APPENDIX II

List of Stores required by Inspecting Ordnance Officers for carrying out the examination and proof of Explosives, etc., in the Land Service.

NOTES.—1. Only such stores as are actually necessary in carrying out inspections of explosives, etc., held on charge within the jurisdiction of the I.O.O. will be demanded.

2. The following list does not include such stores as ordinarily form the equipment of laboratories or forts, etc.

Description of Stores	Purpose for which required	Number or Quantity
<i>Section B3</i>		
Tools, cleaning—		
Brushes ..	Cleaning hole in base of "Apparatus proving No. 101 type fuzes with gaines"	1
<i>Section F</i>		
Brushes, sash tool—		
No. 2	for use with thin luting; also cleaning mills for App. heat test cordite	2
No. 8	for cleaning vents and receivers	1
Drills, stock, hand	for use in preparation for proof of fuzes Nos. 44, 44/80 and gaine No. 8	1
Drills, twist, $\frac{1}{8}$ -in.	.. ..	as required
Gauges, feeler, (8 blades)	gauging depth of cap below base of case in Q.F. cartridges	1
Rule, steel, 6-in. ..	for use in conjunction with the "feeler gauge" ..	1
<i>Section H1</i>		
Bottles, glass, stoppered, wide mouth, $\frac{1}{2}$ -pint	storage of picric powder explosives required for moisture test	2
Methylated spirit, industrial ..	for use with heat test apparatus when gas is not available ..	as required
<i>Section H2</i>		
Skins, chamois leather	Cleaning colorimeter (colour test cordite)	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section KF</i> Funnel, tin, 1 pint } Scissors, lamp }	for use with heat test apparatus when gas is not available	{ 1 { 1 pair
<i>Section P1</i> Lanyard, firing, No. 33	proof of tubes	1
<i>Section Q1</i> Matches, fuzees, safety or Portfire, common }	for use in proof of pyrotechnics, and fuze, instantaneous, detonating, etc. ..	as required
<i>Section Q2</i> Adapters, 2-in. fuze-hole, No. 2, Mk. II or III ..	for use with " Pump extracting explosives "	1
Implements, ammunition—		
Keys—		
No. 8, Mk. II**, III* or IV ..	large and medium base fuzes	1
No. 10 ..	G.S. fuze-hole fuzes	1
No. 23 ..	plugs and D.A. fuzes with square keyholes in cap ..	1
No. 26 ..	inserting or removing primer, Q.F. 4·3-in. howr.	1
No. 27 ..	inserting or removing primer, 18-pr. and 13-pr.	1
No. 30 ..	inserting or removing primer, percussion, No. 2	1
No. 34 ..	inserting or removing primer, 3-in. 20-cwt. gun and 3·7-in. howr.	1
No. 53 ..	2-in. percussion fuzes, and adapter, 2-in. fuze-hole, No. 2	1
No. 69, with set of key-pieces ..	Fuze No. 44/80, gaines, adapters and exploder containers	1
No. 93 ..	large and medium base fuzes	1
No. 110 ..	for fuze No. 132	1
Pincers, removing H.E. shell exploders	removal of exploders from shell cavities	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section Q2—contd.</i>		
Luting, lead free—		
Thick	Lubrication of fuzes, primers, etc., before insertion and proof of fuze, instantaneous, detonating	as required
Thin	Lubrication of fuzes, primers, etc., before insertion ..	as required
Machine, rocket signal	proof of signal rockets ..	1
Sticks, portfire ..	proof of portfires	as required
<i>Section R2</i>		
Screws, fixing fuze	securing fuzes in shell ..	as required
<i>Section S1</i>		
Exploders (various)	replacement of unserviceable exploders	as required
<i>Section S2</i>		
Gauges—		
Depth fuze-hole—		
Filled H.E. shell—		
No. 1 .. }	examination of H.E. shell	1
No. 2 .. }	cavities	1
Base percussion fuzes—		
No. 1 .. }		1
No. 2 .. }	examination of cavities, base	1
No. 3 .. }	fuzed shell	1
No. 4 ..		1
Implements, ammunition—		
Keys—		
No. 24 ..	inserting adapter, Q.F. cartridges	1
No. 25 ..	removing adapter, Q.F. cartridges	1
Tools, cartridge, Q.F. blank—		
Rod, 12·7-in.	driving primer from case, 6 and 3-pr.	1
Screwdrivers, primer	inserting and removing primers, 6 and 3-pr.	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section T1</i>		
Cordite, M.D. 4 $\frac{1}{4}$..	proof of primer percussion No. 2	as required
Detonators—	proof of fuze, instantaneous detonating, etc.	"
No. 27	proof of No. 8 detonator and proof of fuze instantaneous detonating	"
Fuze, safety, No. 11	" proof of No. 44/80 fuze	"
Guncotton, dry, primers, field, 1-oz.		
Gunpowder, G.12		
<i>Section T2</i>		
Rectifiers, guncotton primers .. ..	.. .. .	1
Unions, fuze and detonator ..	proof of fuze, instantaneous, detonating	as required
<i>Section U</i>		
Acetone, special, in 1 gallon or 1 quart sealed cans ..	colour test of S.C. or W. cordite	1
Ammeters, 3-amp., with rheostat ..	proof of electric detonators and tubes	1
Apparatus, heat test, cordite—		
Balance	see "Apparatus, testing gunpowder."	
Bath .. ..	.. .. .	1
Blades, cutter, cordite .. ..	.. .. .	1
Bottles, dropping, Mk. III	for glycerine and water mixture	2 (1 spare)
Box, cordite cuttings ..	.. .. .	1
Brushes	for cleaning test tubes	4
Burners, Argand, gas	.. .. .	1
Caps, paper, black	for test tubes	6 for each bath
Cutters, cordite	.. .. .	1
Discs, lead ..	to cover unoccupied holes in lid of bath	6 for each bath
Forceps, weights grain ..	see "Apparatus, testing gunpowder."	
Gauges, heat test papers	measuring wetted portion of test paper	1†

† Chief Chemical Inspector supply.

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, heat test, cordite— <i>contd.</i>		
Glycerine and water mixture .. ..	.. .. .	4-oz. bottle
Lamps, spirit (Berzelius)	also for "Apparatus, testing gunpowder" when gas is not available	2
Wicks (for lamp) .. ..	.. .. .	18
Mills, Mk. III**, IV*, or V .. ..	.. .. .	1
Papers—		
Standard tint .. ..	.. .. .	} a supply†
Test .. ..	.. .. .	
Plates, glass, perforated	for supporting test papers when piercing	1
Rings, test tube .. ..	.. .. .	12
Rods, glass—		
Bottle, dropping	for wetting test papers	4
Mk. I .. ..	.. .. .	12
Scoops	for use in weighing ground cordite	2
Screens .. ..	.. .. .	1
Sieves, Mk. I .. ..	.. .. .	1
Stands, test tube—		
With holes .. ..	.. .. .	2
With pegs .. ..	.. .. .	2
Stands, tripod .. ..	.. .. .	1
Stoppers, rubber—		
Bottle, dropping	.. .. .	2
Glass rod, platinum hook .. ..	.. .. .	12
Thermometer, Mk. I .. ..	.. .. .	4
Test tubes	for cordite under test	12
Thermometers—		
Chemical standard, Mk. I	for checking thermometers,	1
Mk. II	also for "Apparatus, testing gunpowder"	2
Tubing, rubber, ½-in.	for burner, Argand, gas	6 yds.‡
Weights, grain	see "Apparatus, testing gunpowder."	

† Chief Chemical Inspector supply.

‡ Only required when gas is available.

APPENDIX II—continued

Description of Stores	Purposes for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, heat test, dynamite and gelatine dynamite—		
Cylinder, glass (5 ml. graduated) ..	.. .. .	1
Cylinders, glass (1-in. diameter, 5-in. high)	In addition to those required for heat test, cordite. ..	2
Filter paper ..	.. .. .	A supply
French chalk ..	.. .. .	A supply
Funnel, glass (3-in. diameter at top) ..	.. .. .	1
Rod, glass ..	.. .. .	1
Spatula, wood or bone ..	.. .. .	1
Stand, filtering ..	.. .. .	1
Tile, porcelain, glazed (or glass, common, 3-in. square) ..	.. .. .	1
Apparatus, proving D.A. and percussion fuzes and gaines—		
Adapters—		
F. Mk. I ..	fuzes Nos. 13, 18, 44, 44/80, 45, 45P, 132 and gaine No. 8; for block No. 1, Mk. I* or II and No. 2, Mk. IC ..	1
G, Mk. I or II ..	fuzes Nos. 106, 106E, 115 and 115E, for block No. 1, Mk. I* or II and No. 2, Mk. IC ..	1
M, Mk. I ..	fuze No. 139; for block No. 1, Mk. I* or II and No. 2, Mk. IC ..	1
U, Mk. 1 ..	gaine No. 9; for block No. 1, Mk. I* or II and No. 2, Mk. IC ..	1
Blocks—		
No. 1, Mk. I* or II ..	{ fuzes Nos. 13, 18, 44, 44/80, 45, 45P, 106, 106E, 115, 115E, 132, 139 and gaines Nos. 8 and 9	1
No. 2, Mk. IC ..		

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, proving D.A. and percussion fuzes and gaines— <i>contd.</i>		
Blocks— <i>contd.</i>		
Blast, No. 1, Mk. I ..	for block No. 1	1
Blast, No. 2, " No. 3	for block No. 2	1
Wood ..	for fuze No. 132	1
Guide, weight—	" " " "	as required
No. 1, Mk. I	for block No. 1	1
No. 2, Mk. I	for blocks Nos. 1 and 2 ..	1
Jigs—		
No. 1, Mk. I	removing punch stabs, gaine No. 9	1
No. 2, Mk. I	removing punch stabs fuzes Nos. 44, 44/80 and gaine No. 8	1
Liners—		
No. 1, Mk. I* or II ..	for block No. 1, Mk. I* or II	1
No. 2, Mk. I* or II	for block, No. 2, Mk. IC ..	1
Magazine firing		
No. 44/80 fuze and gaine No. 8	for use with plugs No. 1, Mk. I* or II and No. 2, Mk. IC	1
Piece, retaining, No. 1, Mk. I	for fuze No. 139, for use with adapter M	1
Pins, safety, Mk. I ..	for guide, weight	1
Plugs—		
No. 1, Mk. I* or II	fuzes Nos. 13, 18, 44, 44/80, 45, 45P, 106, 106E, 115, 115E, 132, 139, and gaines Nos. 8 and 9; for blocks No. 1, Mk. I* or II and No. 2, Mk. IC	1
No. 2, Mk. IC ..		
Plungers—		
A, Mk. I ..	fuzes Nos. 13, 18, 44, 45, 45P and 132; for plugs, Nos. 1 and 2	1
C, Mk. I* or II ..	fuzes Nos. 106, 106E, 115 and 115E for plugs, No. I, Mk. I* or II and No. 2, Mk. IC ..	1
D, Mk. I ..	gaine, No. 9; for plugs, No. 1, Mk. I* or II and No. 2 Mk. IC	1

APPENDIX II—*continued*

Description of Stores	Purposes for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, proving D.A. and percussion fuzes and gaines— <i>contd.</i>		
Plungers— <i>contd.</i>		
F. Mk. I ..	fuze No. 139 ; for plugs, No. 1, Mk. I* or II and No. 2, Mk. IC	1
Tommies, Mk. I	for plugs	1
Tongs, Mk. I	for removing adapters ..	1
Weights—		
12-lb., Mk. I	fuzes Nos. 13, 18, 45, 45P, 106, 106E, 115, 115E, and 132 ..	1
3½-lb., Mk. I	fuzes Nos. 44, 139 and gaine No. 9	1
† Apparatus, proving detonators, bursters, igniters and primers for mortar bombs and grenades—		
Adapters—		
J, Mk. II ..	for detonator No. 36M grenade	1
N, Mk. I ..	„ „ H.E. bomb, 3-in. mortar ..	1
Circuit-breaker, Mk. I ..	delay test No. 36M grenade detonator; also proof of time fuzes	2
Circuit-breaker, Mk. II ..	delay test No. 36M grenade detonator; also for use in conjunction with <i>circuit breaker Mk. I</i> when using the “Instrument, electro-magnetic, operating stop watch”	1
Pin, release, Mk. II ..	for use with circuit-breaker, Mk. II	1
Needles, C, Mk. I ..	grenade and mortar bomb detonators	1
Pellets, C.E.—		
No. 1 ..	for detonator H.E. bomb, 3-in. mortar	as required
No. 5 ..	for detonator Nos. 36M grenade	„
Pins, safety, Mk. I ..	(with line and hook) ..	1

† This apparatus will not be issued to I.O.Os. at present.

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, proving detonators, bursters, igniters and primers for mortar bombs and grenades— <i>contd.</i>		
Pistols, Mk. I, with needle holder No. 1, spring and pin, release, Mk. I ..	.. .. .	1
Stands, tripod, Mk. I, with lever ratchet .. .. .	.. .. .	1
Strikers, A, Mk. I for detonator No. 36M grenade		1
Tools, arming pistol .. .. .	.. .. .	1
Washers, paper No. 1 ..	for detonator No. 36M grenade	as required
Apparatus, proving fuzes—		
Adapters, gad, 2-in. ..	for 2-in. gauge fuzes ..	2
Gads, Mk. III ..	for proof of time fuzes ..	2
Springs, spiral, No. 1 ..	for preparation of fuze No. 199	as required
Apparatus, proving No. 101 type fuzes with gaine, Mk. I—	.. .. .	1
Copper wire ..	for suspending needle ..	as required†
Gauges, needle ..	.. .. .	1
Guards ..	.. .. .	1
Needles ..	.. .. .	as required
Weights, 12-oz. ..	.. .. .	1
Apparatus, proving percussion caps and primers, and detonators of fuzes—		
Adapters—		
G, Mk. I ..	for caps, Q.F., 6 or 3-pr., for block G	1
I, Mk. I ..	for primer, percussion, No. 2 Mk. III, for block I ..	1

† To be provided locally, soft copper wire, No. 22 S.W.G.

APPENDIX II—*continued*

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i> Apparatus, proving percussion caps and primers, and detonators of fuzes— <i>contd.</i>		
Anvils—		
G, Mk. I ..	for fuze, percussion, base, Hotchkiss	1
K, Mk. II* .. or Mk. III	for fuze, percussion, base, No. 11, Mks. I* to IV, No. 12, Mks. I to V, and No. 15, Mks. I and II	1
Blocks—		
B, Mk. I ..	for fuze, percussion, base, No. 12, Mks. VI and above ..	1
C, Mk. I ..	for primers, Q.F. blank cartridges	1
D, Mk. I ..	for No. 1 primers	1
F, Mk. I ..	for fuzes, percussion, base No. 11, Mks. V and VI, No. 15, Mks. III to VI, No. 15C, No. 16, and No. 16D ..	1
G, Mk. I ..	for caps, Q.F., 6 or 3-pr., with adapter G	1
I, Mk. I ..	for primers No. 2, Mks. IV, IV*** and VII or No. 2, Mk. III (with adapter I) ..	1
K, Mk. I ..	for 95 grain M.L. mortar cartridges	1
W, Mk. I ..	for fuze, percussion, spigot, No. 146	1
Caps—		
C, Mk. I*** of IV ..	for fuze, percussion, base, No. 12, Mks. VII to X	1
D, Mk. I* or II ..	for fuze, percussion, base, No. 12, Mk. XI	1
F, Mk. I** or III ..	for fuzes, percussion, base, No. 11, Mks. V and VI, No. 15, Mks. III to V, No. 15C, Mks. I and II, No. 16, Mks. I to III, and No. 16D, Mks. II and III	1
G, Mk. I** or III ..	for fuzes, percussion, base, No. 15, Mk. VI, No. 16, Mk. IV, and No. 16D, Mk. IV ..	1
W, Mk. I ..	for fuze, percussion, spigot, No. 146	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i> Apparatus, proving percussion caps and primers, and detonators of fuzes— <i>contd.</i>		
Levers, Mk. I Needles—	adjusting screws	1
B, Mk. I ..	for fuzes, percussion, base, No. 11, Mks. V and VI, No. 12, Mks. VII and above, No. 15, Mks. III and above, No. 15C, No. 16, and No. 16D	1
W, Mk. I ..	for fuze, percussion, spigot, No. 146	1
Stand, Mk. III	.. ..	1
Vent, G, Mk. I	for No. 1 primers	1
Weights—	.. ..	1
C, Mk. I ..	for primers, Nos. 1 and 2, primer, Q.F. blank cartridges, and caps, Q.F. 6 and 3-pr... ..	1
O, Mk. VII	for fuzes, percussion, base, Nos. 11, 12, 15, 15C, 16, 16D, and Hotchkiss; and percussion, spigot, No. 146	1
Apparatus, proving tubes and primers—		
Adapters, No.	for tube, percussion, S.A.	
3, Mk. I ..	cartridge	1
Base pieces,	.. ..	
Mk. I ..	.. ..	1
Clips, support-	.. ..	
ing receiver F	.. ..	1
Contact pieces, B	for 4-in. electric vent tubes ..	1
Extractors,	.. ..	
5-in. vent	.. ..	
tubes ..	.. ..	1
Keys, vent,	for insertion and removal of	
Mk. I ..	vents, J and L	1
Levers, Mk. I	extracting 4-in. and 5-in. electric and percussion vent tubes	1
Locks, per-		
cussion—	.. ..	
No. 1, Mk. I	for 4-in. and 5-in. percussion vent tubes	1
No. 2, Mk. I	for tubes, percussion, S.A. cartridges	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, proving tubes and primers— <i>contd.</i>		
Receivers—		
F, Mk. I ..	for .4-in. and .5-in. electric and percussion tubes	1
L, Mk. I ..	for vent, T, Mk. I* or II, for T tubes	1
Slides, Mk. IV	for .4-in. electric vent tubes ..	1
Spanners—		
Large, Mk. I	.. .. .	1
Small, Mk. II	.. .. .	2
Stand, Mk. IV	.. .. .	1
Terminals ..	for .4-in. and .5-in. electric vent tubes	2
Vents—		
A, upper part, Mk. II ..	for friction tubes	1
A or F, lower part, Mk. II	.. .. .	1
F, upper part, Mk. I ..	for .4-in. percussion vent tubes and tubes, percussion, S.A. cartridges	1
J, Mk. I ..	for .4-in. vent tubes	1
L, Mk. I ..	for .5-in. vent tubes	1
T, Mk. I* or II	for receiver L, for T tubes ..	1
Apparatus, proving tubes, primers percussion caps, and detonators of fuzes—		
Receiver, K, Mk. I ..	for vents A or G	1
Apparatus, removing gaines, 2-in. fuzes	for removing adapter with gaine, from 2-in. percussion fuzes.. ..	1
†Apparatus, removing magazines, bottom caps and gaines from 2-in. percussion fuzes (complete)—		
Collets, Mk. I	for fuzes, Nos. 101E and 106E for No. 101 type fuze and gaine two to a set, for use with fuzes, No. 106E	1 1 spare
Grips		2 spare
Wrench .. ..	.. .. .	1 spare

† This apparatus will not be supplied to I.O.Os. at stations abroad.

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Apparatus, repairing H.E. shell fillings—		
Guides, 2-in. fuze-hole ..	.. .. .	1
Gouge, clearing exploder cavity, 75-in.	.. .. .	1
Apparatus, testing gunpowder—		
Balances ..	also for Apparatus, heat test, cordite	1
Forceps, weights grain ..	.. .. .	1
Funnels, glass ..	.. .. .	1
Glasses—		
Common ..	.. .. .	as required
Watch ..	.. .. .	„
Lamps, spirit (Berzelius Wicks, for lamp	see Apparatus, heat test, cordite.	
Mortars ..	.. .. .	1
Ovens, water..	.. .. .	1
Pestles ..	.. .. .	1
Spatulas ..	.. .. .	2
Stands ..	for water oven	1
Thermometers, Mk. II ..	see Apparatus, heat test, cordite	2
Weights, grain	also or Apparatus, heat test, cordite	1 set
Apparatus, timing fuzes at rest ..	.. .. .	1
Bottles, glass, surveillance test—		
Ballistite, Mk. II ..	.. .. .	as required
N.C.T., Mk. I ..	.. .. .	„
Braces, magazinè, Mk. III ..	.. .. .	1
Bits—		
Removing Trotyl exploders ..	for use with Apparatus, repairing H.E. shell fillings ..	1
Fixing screw recess, No. 80 fuze ..	.. .. .	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Braces, magazine— <i>contd.</i>		
Bits— <i>contd.</i>		
Fixing screw recess, base cover plates		1
Cylinders, No. 6 ..	for carriage of exploders ..	1
Forceps, test papers		1
Funnels, exploder, lyddite shell ..	for inserting pellets in exploder bags	1
Galvanometers, detector, 3 ohms ..	for testing electric detonators, fuzes and tubes	1
Gauges—		
Cartridges, Q.F.—		
6-in. gun ..	.. .. .	1†
4.7-in. Mks. I to IV* guns		1†
4-in. Mks. III and III* guns		1†
4.5-in. howr. ..	.. .. .	1
3.7-in. howr. ..	.. .. .	1
3-in. 20-cwt. ..	.. .. .	1†
18-pr. ..	for complete rounds	1†
13-pr. ..	.. .. .	1†
12-pr. 12-cwt. ..	.. .. .	1†
6-pr. ..	for complete rounds	1†
3-pr. ..	.. .. .	1†
3-pr. 2-cwt. ..	.. .. .	1
Depth of cavity, filled H.E. shell		
No. 1 ..	.. .. .	1
No. 2 ..	.. .. .	1
No. 3 ..	.. .. .	1
Depth of cavity, filled H.E. or smoke shell, No. 6 ..	.. .. .	1
Implements, ammunition—		
Apparatus, fixing base cover plates, A.P. shell—		
Spanners,		
$\frac{1}{2}$ -in. and $\frac{3}{8}$ -in. ..	.. .. .	1
Tommies,		
.5-in. dia. ..	.. .. .	1

† Only when stock of "Gauges, chamber, low" (see "Tools, reforming cartridges") is used up.

APPENDIX II—*continued*

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
<i>Implements, ammunition—contd.</i>		
Apparatus, fixing basecover plates, A.P. shell, No. 3	for 6-in. and 9·2-in.	
Clamps—		
9·2-in. . .	.. .. .	1
6-in. . .	.. .. .	1
Crossbars—		
9·2-in. . .	.. .. .	1
6-in. . .	.. .. .	1
Keys, perforated plate	.. .. .	1
Keys, screwed ring—		
9·2-in. . .	.. .. .	1
6-in. . .	.. .. .	1
Nuts, fixing perforated plate key	.. .. .	1
Screws, adjusting screwed ring key . .	.. .. .	1
Apparatus, fixing basecover plates, A.P. shell, No. 4	for 4·7-in. S.A.P.	
Clamps . .	.. .. .	1
Crossbars . .	.. .. .	1
Keys, base plate . .	.. .. .	1
Keys, screwed ring . .	.. .. .	1
Nuts, fixing base plate key . .	.. .. .	1
Screws, adjusting screwed ring key . .	.. .. .	1
Hooks, extracting exploders . .	.. .. .	1
Keys—		
No. 6	extracting D.A.I. and D.A. fuzes, except No. 106 type	1
No. 9	removing top caps of base fuzes	1
No. 21 . . .	for Hotchkiss fuze and plug . .	1

APPENDIX II—*continued*

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Implements, ammunition— <i>contd.</i>		
Keys— <i>contd.</i>		
No. 79 ..	for removing adapter with gaine, No. 101 type fuzes ..	1
No. 80 ..	inserting metal igniters ..	1
Mallets, common	examination of shell ..	1
Punches, stabbing		
H.E. shell plugs	.. .. .	1
Tongs, Mk. III ..	extraction of exploders ..	1
Tools, compressing exploders		
in shell ..	insertion of exploders ..	1
Ring, adjusting ..	.. .. .	1
Tools, opening cartridges, Q.F.	.. .. .	1
Tools, rectifying gascheck—		
B.L. 9·2-in. ..	.. .. .	1
B.L. or Q.F., 6-in. ..	.. .. .	1
Instrument, electromagnetic, operating stop watch ..	proof of time fuzes	1
Liquid, testing litmus paper ..	(in 4-oz. bottles)	1
Models, points, A.P. projectiles—		
No. 1 .. ..	.. .. .	1
No. 2 .. ..	.. .. .	1
No. 3 .. ..	.. .. .	1
Papers—		
Congo red ..	acidity test of guncotton and tonite	1 box
Litmus blue—	for testing zinc cartridge cylinders for presence of zinc chloride	
Bottles, filled	(containing 300 pieces) ..	1
Methyl violet	surveillance test of ballistite and N.C. powder (tube of 50)	1†
(tenth normal)		
Standard tint—		
Ballistite ..	(in corked tubes)	as required †
Nitrocellulose powder ..		

† Chief Chemical Inspector supply.

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Puffs, powder, No. 6	proof of tubes, primers and caps	as required
Pumps, extracting explosives, Mk. I	removal of loose explosive debris from shell cavities ..	1
Adapters—		
Large base fuze-hole	.. .. .	1
Medium base fuze-hole ..	.. .. .	1
Buckets .. ..	.. .. .	1
Valves for shell	.. .. .	1
Rods, inserting exploders, H.E. shell .. ..	.. .. .	1
Shalloon, undyed, No. 1	proof of primers	as required
Shell, proof No. 2 gaine	proof of No. 101 type fuzes ..	1
Tools, extracting bullets, S.A. ..	for S.A. cartridges	
Tools, reforming cartridges, Q.F.—		
Gauges, chamber low—		
6-in. ..	.. .. .	1
4-7-in. Mks. I to IV*guns	.. .. .	1
4-in., No. 1	.. .. .	1
3-in. 20-cwt.	.. .. .	1
18-pr. ..	.. .. .	1
13-pr. ..	.. .. .	1
12-pr. 12-cwt.	.. .. .	1
6-pr. ..	.. .. .	1
3-pr. ..	.. .. .	1
Gauges, depth of cap, 6 and 3-pr.	.. .. .	1
Gauges, plain, primer hole—		
No. 1 ..	for primer percussion, No. 2, Mks. IV and VII	1
No. 2 ..	for primer, percussion, No. 1	1
No. 3 ..	for primer, percussion, No. 2, Mk. III	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>Section U—contd.</i>		
Tools, reforming cartridges, Q.F.— <i>contd.</i>		
Gauges, screw, primer hole—		
No. 1 ..	for 6-in., 4·7-in., 4-in. Mks. III and III* and 12-pr. 12-cwt. guns, also No. 2 percussion primer, Mks. IV and VII ..	1
No. 2 ..	for primer, percussion, No. 1	1
No. 3 ..	for primer, percussion, No. 2, Mk. III	1
Hammers, cop- per .. .. .	.. .. .	1
Machines—		
No. 1, extract- ing shell ..	for 6-pr., 3-pr. and 3-pr. 2-cwt.	1
No. 2, indent- ing ..	for 3-pr.	1
No. 3, indent- ing ..	for 6-pr.	1
No. 7, extract- ing shell ..	for 3-in. 20-cwt.	1
No. 8, indent- ing ..	for 3-in. 20-cwt.	1
No. 9, extract- ing, insert- ing and con- ing ..	for 18 and 13-pr.	1
†No. 10, ex- tracting, in- serting and coning or indenting	for 3-in. 20-cwt., 18 and 13-pr.	1
Primers, dummy, centring charge, 13 and 18-pr. ..	.. .. .	as required
Rods—		
17-in. ..	driving caps from 6 and 3-pr. capped cases	1
4-in. ..	inserting caps in cases, 6 and 3-pr.	1
Stamps, Arabic numeral ..	(sets)	1

† When stocks of Nos. 8 and 9 machines have been used up.

APPENDIX II—continued

Description of Stores	Purposes for which required	Number or Quantity
<i>Section U—contd.</i>		
Tools, reforming cartridges, Q.F.— <i>contd.</i>		
Taps, primer hole—		
No. 1 ..	for primer, percussion, No. 2, Mks. IV and above ..	1
No. 2 ..	for primer, percussion, No. 1 ..	1
No. 3 ..	for primer, percussion, No. 2 Mk. III	1
Wrenches, tap and rimer, 6 and 3-pr. ..	.. .. .	1
Wadmits—		
Large }	for use during examination of powder filled shell }	as required
Small }		
Warmers, cordite ..	.. .. .	1
<i>Section V1</i>		
Instruments, time of flight	proof of time fuzes, delay proof of detonators ..	1 (as authorized)
<i>Section V2</i>		
Barometers, aneroid, 4½-in.	proof of time fuzes	1
Glass, reading, No. 1 (1½-in. dia.) ..	inspection of gunpowder ..	1
Watches, stop—		
½-second .. ..	.. .. .	1
1/10-second .. ..	.. .. .	1
<i>Section W2</i>		
Cable, electric, E.1, Mk. II	proof of electric detonators, tubes, etc., and for demolition	as required
Cells—		
Daniell, B, Mk. I ..	for use with galvanometer, detector	1
Inert, A	test and firing battery, proof of electric detonators, tubes, etc.	as required
Exploders, dynamo, Mk. V or V* ..	demolition	1

APPENDIX II—continued

Description of Stores	Purpose for which required	Number or Quantity
<i>N.I.V.</i>		
Detonators—		
1·7-grains ..	proof of detonator, H.E. bomb	
	3-in. mortar	as required
Needles	piercing heat-test papers ..	"
Paper, white, fine..	proof of detonator, H.E. bomb	"
	3-in. mortar, also fuze No.	
	44/80	"
Stand, signal rocket	.. ..	1
Cylinders, measuring,		
glass, 50 ml. ..	.. ..	2*
Colorimeter, colour		
test cordite ..	.. ..	1
Flasks, conical,		
100 ml. .. ..	.. ..	12*
Corks .. ..	.. ..	36*
Standard colour solution, in 4-oz. bottle—	colour test of S.C. or W. cordite	
No. 1 .. ..	.. ..	1*
No. 2 .. ..	.. ..	1*
No. 3 .. ..	.. ..	1*
No. 4 .. ..	.. ..	1*
No. 5 .. ..	.. ..	1*
No. 25 .. ..	.. ..	1*
Tinfoil .. ..	.. ..	4-oz.*
Plasticine		as required
Pliers, parallel jaws (or tongs)		1 pair
Plate, mild steel (size as convenient from 2 to 3 inches thick)	proof of fuze, instantaneous detonating	

* Chief Chemical Inspector supply.

APPENDIX III

Reforming Q.F. 4-in., 3-in. 20-cwt., 18, 13, 12, 6 and 3-pr. blank cartridges.

(Referred to in para. 59)

Article	Cartridge						Scale of Issue
	4-in. Mks. III and III*	3-in. 20-cwt.	18 and 13-pr.	12-pr.	6-pr.	3-pr.	
Tools, cartridge—							
Q.F., blank—							
Drifts—							
4-in. Mks. III and III*	1	—	—	—	—	—	
18-pr.	—	—	1	—	—	—	
13-pr.	—	—	1	—	—	—	
12-pr.	—	—	—	1	—	—	
6 and 3-pr. ..	—	—	—	—	1	1	
Screwdrivers, primers	—	—	—	—	1	1	
Tools, reforming—							
Cartridges, Q.F.—							
Gauges, chamber, low							
4-in., No. 1.. ..	1	—	—	—	—	—	
3-in., 20-cwt. ..	—	1	—	—	—	—	
18-pr.	—	—	1	—	—	—	
13-pr.	—	—	1	—	—	—	
12-pr., 12-cwt. ..	—	—	—	1	—	—	
6-pr.	—	—	—	—	1	—	
3-pr.	—	—	—	—	—	1	
Hammers—							
Copper	1	1	1	1	1	1	
Holders—							
Handwheel	1	—	—	1	—	—	
Stud, primer hole, No. 1	1	—	—	1	—	—	
Mallets—							
Heavy	1	—	—	—	—	—	
Light	—	1	2	1	1	1	
Mandrills—							
4.7 or 4-in., No. 1 ..	1	—	—	—	—	—	
3-in., 20 cwt.	—	1	—	—	—	—	
13- and 18-pr.	—	—	1	—	—	—	
12-pr.	—	—	—	1	—	—	
6-pr.	—	—	—	—	1	—	
3-pr.	—	—	—	—	—	1	

3-in. 20-cwt., 18 and 13-pr.—1 set for each command.
 4-in., 12-pr., 6-pr. and 3-pr.—1 set for each district where such guns are mounted.

APPENDIX III—continued

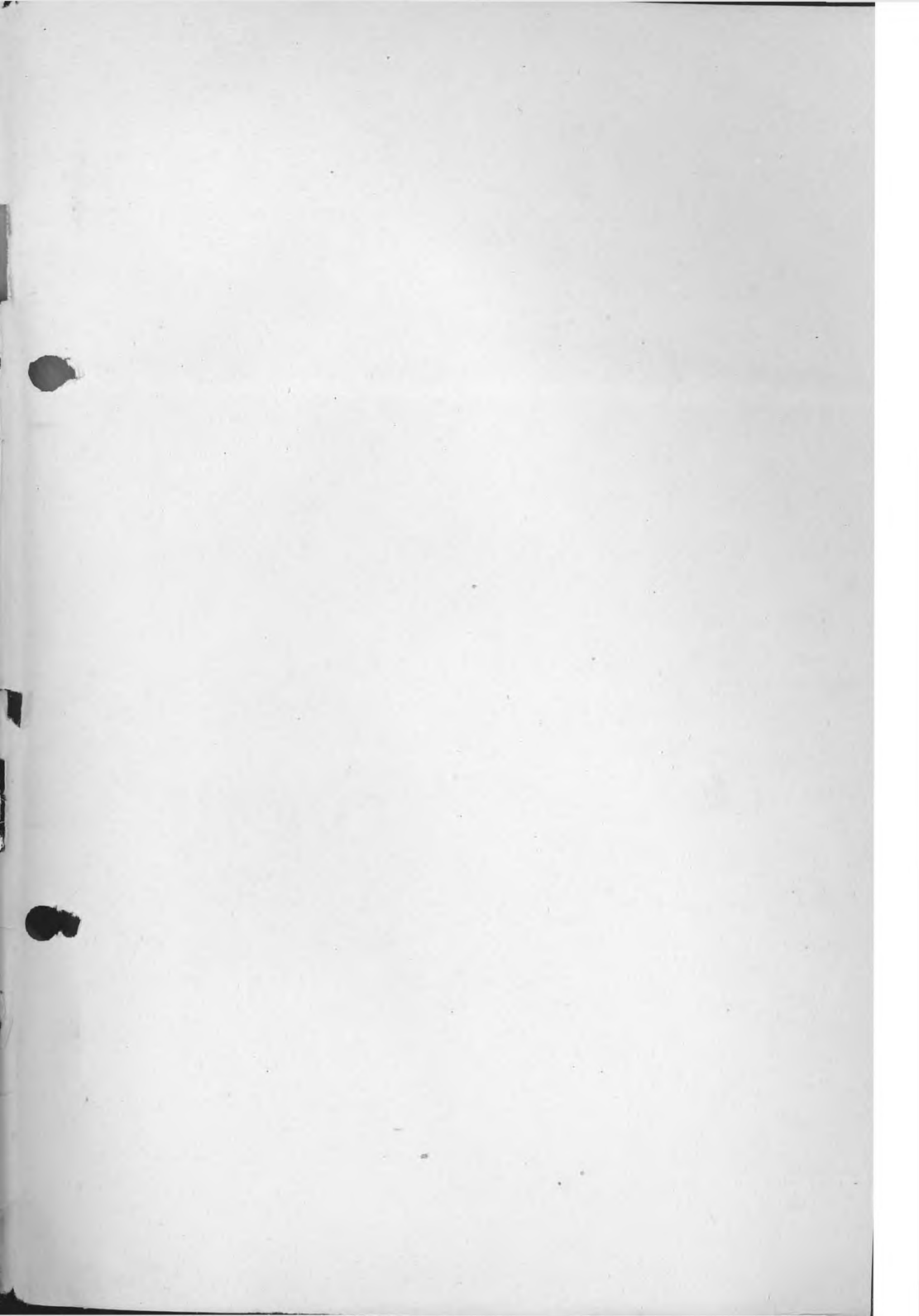
Article	Cartridge						Scale of Issue
	4-in. Mk. III and III*	3-in. 20-cwt.	18 and 13-pr.	12-pr.	6-pr.	3-pr.	
Tools, reforming, cartridges, Q.F.— <i>contd.</i>							
Plugs—							
4-in., No. 1.. ..	1	—	—	—	—	—	
18-pr.	—	—	1	—	—	—	
13-pr. and 3-in. ..	—	1	1	—	—	—	
12-pr.	—	—	—	1	—	—	
Presses, screw—							
Dies—							
12-pr.	—	—	—	1	—	—	
6-pr.	—	—	—	—	1	—	
3-pr.	—	—	—	—	—	1	
Punches, centre ..	—	—	—	1	1	1	
Rods—							
17-in.	—	—	—	—	1	1	
4-in... ..	—	—	—	—	1	1	
Taps, primer hole—							
No. 1	1	—	—	1	—	—	
No. 2	—	1	1	—	—	—	
No. 3	—	—	—	—	1	1	
Wrench, tap and rimer	—	—	—	—	1	1	
Implements, ammunition—							
Holders, cartridge, Q.F.—							
4-in.	1	—	—	—	—	—	
3-in., 20 cwt. ..	—	1	—	—	—	—	
18-pr.	—	—	1	—	—	—	
13-pr.	—	—	1	—	—	—	
12-pr.	—	—	—	1	—	—	
6-pr.	—	—	—	—	1	—	
3-pr.	—	—	—	—	—	1	
							3-in. 20-cwt., 18 and 13-pr.—1 set for each command. 4-in., 12-pr., 6-pr. and 3-pr.—1 set for each district where such guns are mounted.

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26
Regulations
2106

**REGULATIONS FOR ARMY
ORDNANCE SERVICES, PART II**

PAMPHLET No. 11, 1933

AMENDMENTS (No. 1A)

APPENDIX II.

Pages 18, 19, 30 and 34. Footnote. For " W.D. Chemist " substitute " Chief Chemical Inspector " in each case.

Page 19. Add at end of Table :—

26 Regulations 2106	Designation	Purpose for which required	Number or Quantity	Amdt. 1A July, 1941
	Apparatus, heat test :			
	Dynamite and gelatine dynamite—			
	Cylinder, glass (5 ml. graduated)		1	
	Cylinders, glass (1-in. diameter, 5-in. high) ..		2	
	Filter paper	In addition to those required for heat test, cordite.	A supply.	
	French chalk		A supply.	
	Funnel, glass (3-in. diameter at top)		1	
	Rod, glass		1	
	Spatula, wood or bone ..		1	
	Stand, filtering		1	
	Tile, porcelain, glazed (or glass, common, 3-in. square)		1	

Noted in A.C. 1. 30th July 1941

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REGULATIONS FOR ARMY ORDNANCE SERVICES, PART II

PAMPHLET No. 11, 1933

By Command of the Army Council,

I. J. G. J.

THE WAR OFFICE,
30th July, 1941.

Page 19. Add at end of Table:—

Number or Quantity	Purpose for which required	Description
1		Apparatus, heat test:
2		Dynamometer and gelatine dynamometer
3		Cylinder, glass (6 in. diameter) graduated
4		Cylinder, glass (1 in. diameter) graduated
5		Filter paper
6		French chalk
7		Funnel, glass (8 in. diameter) at top
8		Red glass
9		Specimens, wood or bone
10		Stand, filtering
11		The apparatus, heat test:
12		in addition to those required for heat test, carbonate

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