

BOARD OF TRADE
INSTRUCTIONS AS TO THE
SURVEY
OF
LIFE SAVING
APPLIANCES

LONDON: HIS MAJESTY'S STATIONERY OFFICE

1936

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Regulations, Orders, Instructions
etc., relating to
MERCHANT SHIPPING

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(Reprinted 1951)

INTRODUCTION

In this edition of the "Instructions as to the Survey of Life Saving Appliances" the Merchant Shipping (Life Saving Appliances) Rules, 1932, which, in pursuance of the provisions of the Acts under which they are made, have the force of law, are printed first and are followed by the Instructions. The relevant sections of the Merchant Shipping Acts are reproduced in Appendix A.

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APPENDIX A

SECTIONS OF THE MERCHANT SHIPPING ACTS
DEALING WITH LIFE-SAVING APPLIANCES.

NOTE.—The provisions printed in heavy type are the amendments made by the Merchant Shipping (Line-Throwing Appliances) Act, 1928, and Section 5 of the Merchant Shipping (Safety and Loadline Conventions) Act, 1932.

MERCHANT SHIPPING ACT, 1894.

As amended by the Merchant Shipping (Line Throwing Appliances) Act, 1928, and Merchant Shipping (Safety and Loadline Conventions) Act, 1932.

Rules as to Life-Saving Appliances.

427.—(1) The Board of Trade may make rules (in this Act called rules for life-saving appliances) with respect to all or any of the following matters, namely:—

(a) the arranging of British ships into classes, having regard to the services in which they are employed, to the nature and duration of the voyage, and to the number of persons carried;

(b) the number and description of the boats, life-boats, life-rafts, line-throwing appliances, life-jackets, and life-buoys to be carried by British ships, according to the class in which they are arranged, and the mode of their construction; also the equipments to be carried by the boats and rafts, and the methods to be provided to get the boats and other life-saving appliances into the water which methods may include oil for use in stormy weather;

the marking of boats, life-boats, life-rafts and buoyant apparatus so as to show the dimensions thereof and the number of persons authorised to be carried thereon;

the manning of boats and lifeboats and the qualifications and certificates of lifeboat men;

(c) the quantity, quality, and description of buoyant apparatus to be carried on board British ships carrying passengers, either in addition to or in substitution for boats, life-boats, life-rafts, life-jackets, and life-buoys;

the provision to be made for mustering the passengers and crew and for embarking them in the boats and lifeboats (including provision as to the lighting of, and as to the means of ingress to, and egress from, different parts of the ship);

(d) the practising of boat drills;

(e) the assignment of specific duties to each member of the crew in the event of emergency;

(2) Repealed by Section 35 (5) of the Merchant Shipping (Safety and Load Line Conventions) Act, 1932.

(3) Rules under this section shall not apply to any fishing boat for the time being entered in the fishing boat register under Part IV of this Act.

Penalty for Breach of Rules.

430.—(1) In the case of any ship—

(a) if the ship is required by the rules for life-saving appliances to be provided with such appliances and proceeds on any voyage or excursion without being so provided in accordance with the rules applicable to the ship; or

(b) if any of the appliances with which the ship is so provided are lost or rendered unfit for service in the course of the voyage or excursion through the wilful fault or negligence of the owner or master; or

(c) if the master wilfully neglects to replace or repair on the first opportunity any such appliances lost or injured in the course of the voyage or excursion; or

(d) if such appliances are not kept so as to be at all times fit and ready for use;

(e) if any provision of the rules for life-saving appliances applicable to the ship is contravened or not complied with, then the owner of the ship (if in fault) shall for each offence be liable to a fine not exceeding one hundred pounds, and the master of the ship (if in fault) shall for each offence be liable to a fine not exceeding fifty pounds.

(2) Nothing in the foregoing enactments with respect to life-saving appliances shall prevent any person from being liable under any other provision of this Act, or otherwise, to any other or higher fine or punishment than is provided by those enactments, provided that a person shall not be punished twice for the same offence.

(3) If the court before whom a person is charged with an offence punishable under those enactments thinks that proceedings ought to be taken against him for the offence under any other provision of this Act, or otherwise, the court may adjourn the case to enable such proceedings to be taken.

Survey of Ship with respect to Life-saving Appliances.

431.—(1) A surveyor of ships may inspect any ship for the purpose of seeing that the rules for life-saving appliances have been complied with in her case, and for the purpose of any such inspection shall have the powers of a Board of Trade Inspector under this Act.

(2) If the surveyor finds that the rules for life-saving appliances have not been complied with, he shall give written notice to the owner or master stating in what respect the said rules have not been complied with, and what, in his opinion, is required to rectify the matter.

(3) Every notice so given shall be communicated in manner directed by the Board of Trade to the Chief Officer of Customs of any port at which the ship may seek to obtain a clearance or transire, and a clearance or transire shall not be granted to the ship and the ship shall be detained until a certificate under the hand of a surveyor of ships is produced to the effect that the matter has been rectified.

MERCHANT SHIPPING ACT, 1906, AS AMENDED BY THE MERCHANT SHIPPING (SAFETY AND LOADLINE CONVENTIONS) ACT, 1932.

Power to apply Rules as to Life-saving Appliances to Foreign Ships in Certain Cases.

4. Sections four hundred and twenty-seven to four hundred and thirty-one of the principal Act relating to life-saving appliances

shall, after the appointed day, apply to all foreign ships while they are within any port of the United Kingdom as they apply to British Ships;

Provided that His Majesty may by Order in Council direct that those provisions shall not apply to any ship of a foreign country in which the provisions in force relating to life-saving appliances appear to His Majesty to be as effective as the provisions of Part V. of the principal Act, on proof that those provisions are complied with in the case of that ship:

Appointed Day.

5. For the purposes of this Part of this Act the appointed day shall be the first day of January nineteen hundred and nine, or such other day not being more than twelve months later, as the Board of Trade may appoint; and different days may be appointed for different provisions of this Part of this Act and for different foreign countries.

Saving for Ship coming in under stress of weather, &c.

6. Nothing in the foregoing provisions of this Part of this Act shall affect any foreign ship not bound to a port of the United Kingdom which comes into any port of the United Kingdom for any purpose other than the purpose of embarking or landing passengers, or taking in or discharging cargo or taking in bunker coal.

* * * * *

Entry in log-book of Boat Drill, &c.

9.—(1) The master of every British ship shall enter or cause to be entered in the official log-book, a statement, or if there is no official log-book, cause a record to be kept, of every occasion on which boat drill is practised on board the ship, and on which the life-saving appliances on board the ship have been examined for the purpose of seeing that those appliances are fit and ready for use, and if, in the case of a passenger steamer, boat drill is not practised on board the ship in any week, the Master shall enter a statement of the reasons why boat drill was not practised in that week.

(2) The master shall, if and when required by any officer of the Board of Trade, produce for inspection any record kept by him for the purposes of this section.

(3) If the master of a ship fails to comply with any requirement of this section, he shall be liable on summary conviction for each offence to a fine not exceeding ten pounds.

MERCHANT SHIPPING (LINE-THROWING APPLIANCES) ACT, 1928.

Line-throwing Appliances to be carried.

1. The power of the Board of Trade, under section four hundred and twenty-seven of the Merchant Shipping Act, 1894, to make rules for life-saving appliances, shall include power to make rules with respect to the number, description, and mode of construction of line-throwing appliances to be carried by British ships according to the class in which they are arranged; and accordingly paragraph (b) of subsection (1) of the said section shall have effect as if there were therein inserted after the word "life-rafts" the words "line-throwing appliances."

**MERCHANT SHIPPING (SAFETY AND LOADLINE CONVENTIONS) ACT,
1932.**

*Amendments of Merchant Shipping Acts as to life-saving
appliances.*

5.—(1) The power of the Board of Trade under section four hundred and twenty-seven of the principal Act to make rules for life-saving appliances shall include power to make rules with respect to all or any of the following matters, namely:—

(a) the marking of boats, lifeboats, life-rafts and buoyant apparatus so as to show the dimensions thereof and the number of persons authorised to be carried thereon;

(b) the manning of boats and lifeboats and the qualifications and certificates of lifeboat men;

(c) the provisions to be made for mustering the passengers and crew and for embarking them in the boats and lifeboats (including provision as to the lighting of, and as to the means of ingress to, and egress from, different parts of the ship);

(d) the practising of boat drills;

(e) the assignment of specific duties to each member of the crew in the event of emergency;

(f) the methods to be adopted and the appliances to be carried for the prevention, detection and extinction of fire.

(2) Subsection (1) of section four hundred and thirty of the principal Act (which imposes penalties for failure to comply with the rules for life-saving appliances) shall be amended by inserting after paragraph (d) thereof the following paragraph:—

“(e) if any provision of the rules for life-saving appliances applicable to the ship is contravened or not complied with.”

(3) The following section shall be substituted for section four hundred and thirty-one of the principal Act:—

“431.—(1) A surveyor of ships may inspect any ship for the purpose of seeing that the rules for life-saving appliances have been complied with in her case, and for the purpose of any such inspection shall have all the powers of a Board of Trade Inspector under this Act.

(2) If the surveyor finds that the rules for life-saving appliances have not been complied with, he shall give written notice to the owner or master stating in what respect the said rules have not been complied with, and what, in his opinion, is required to rectify the matter.

(3) Every notice so given shall be communicated in manner directed by the Board of Trade to the Chief Officer of Customs of any port at which the ship may seek to obtain a clearance or transire, and a clearance or transire shall not be granted to the ship and the ship shall be detained until a certificate under the hand of a surveyor of ships is produced to the effect that the matter has been rectified.”

(4) Subsection (4) of section two hundred and seventy-two of the principal Act (which relates to the statements to be made in the declaration of survey made by an engineer surveyor) shall be amended by substituting in paragraph (c) thereof the words “appliances for the prevention, detection and extinction of fire” for the words “fire hose” and subsection (2) of section two hundred and eighty-five of the principal Act shall cease to have effect.

(5) Subsection (1) of section nine of the Merchant Shipping Act, 1906 (which requires the master of every British ship to enter in the official log-book a statement of every occasion on which boat drill is practised on board the ship) shall be amended by inserting at the end thereof the words "and if, in the case of a passenger steamer, boat drill is not practised on board the ship in any week, the master shall enter a statement of the reasons why boat drill was not practised in that week."

APPENDIX B (1)

STANDARD REGULATIONS AS TO MUSTERS AND DRILLS ON PASSENGER STEAMERS.

Notes by the Board of Trade.

1. The object of these Standard Regulations is to provide the outlines of a uniform scheme for training the members of crews of passenger steamers in the duties that they would be required to undertake in the event of any accident to the ship which may, if not successfully combated, involve the abandonment of the ship. The scheme is based on the practices generally adopted on British passenger ships. It includes the requirements of the Merchant Shipping (Musters) Rules, 1933, and other statutory obligations under the Merchant Shipping (Safety and Loadline Conventions) Act, 1932, and it gives effect to the provisions of the International Convention for the Safety of Life at Sea, 1929, relating to musters and drills.

2. The scheme of the regulations contemplates an organisation in each ship under which, in an actual emergency such as fire, stranding or collision, the appropriate members of the crew will, immediately on receipt of the necessary warning signal or instructions:—

(a) Proceed to their allotted stations and carry out the duties assigned to them with a view to combating the emergency, and

(b) Should the abandonment of the ship become necessary, take the requisite action for preparing the boats and other life-saving appliances for use, warning the passengers and controlling their movements in the interests of safety.

3. There are two sets of Regulations namely (i) the General Standard Regulations and (ii) the Regulations intended for application to passenger steamers which are restricted to voyages within limits defined on their certificates, i.e., in the case of vessels plying to and from ports in the United Kingdom, passenger steamers holding home trade (St.2) passenger certificates whether with or without short voyage safety certificates, and passenger steamers holding excursion (St.3) passenger certificates. In view of the great variety of conditions found on passenger steamers and especially on those included under (ii) above in respect of such matters as the length of voyage, the number of passengers, the accommodation provided for passengers, the nature of the life-saving appliances, etc., the Regulations are capable of modification in detail as the circumstances of particular lines or trades or vessels may require.

4. The present edition of the Regulations, which has been approved by the Merchant Shipping Advisory Committee, supersedes the Regulations for passenger ships contained in Notice

No. 100 published by the Board of Trade in January, 1929. The Regulations have been entirely re-arranged and re-written and cover a number of points not included in the previous Regulations.

Board of Trade,
December, 1933.
Notice No. 133.

I.—GENERAL STANDARD REGULATIONS.

MUSTER LIST.

1. The Muster List is required to show in respect of each member of the crew* the special duties for the event of an emergency which are allotted to him, and is to indicate in particular the station to which he has to go when the pre-arranged signal or warning of emergency is given.

2. To meet the possibility of a fire the Muster List must assign a sufficient number of the crew to the duties connected with the extinction of fire and the evacuation of passengers from their accommodation, so far as this may become necessary. To meet the situation likely to arise as a result of a collision or other accident which may result in water entering the vessel, members of the crew should be assigned to the duties of closing bulkhead doors, side scuttles, ash-shoots, rubbish shoots, lavatory and bath discharges and other similar valves giving access to the sea. Men should also be assigned to such other posts and duties as may be considered desirable for combating the results of accidents.

3. To meet the possibility that the emergency may become so serious as to necessitate the abandonment of the ship, the Muster List must provide for the allocation of members of the crew to the duties connected with the preparation of the boats and other lifesaving appliances for use, and the marshalling of passengers at suitable assembly stations with a view to their being drafted from those stations to the boats as circumstances require. The duties connected with the boats and lifesaving appliances will include the completion of the equipment of the boats, their preparation for launching, and the actual launching and lowering to embarkation stations, as well as any operations required to ensure that the buoyant apparatus shall be available.

4. In order that the duties referred to in the last sentence of the preceding paragraph may, if necessary, be carried out without delay as soon as the accident occurs, it is desirable that if practicable the men to whom these duties are assigned in the Muster List should not have any other emergency duties assigned to them.

5. The Muster List must also contain full particulars of the signals which will be used on the ship for calling the crew to their stations for emergency duties.

6. The boat stations of each member of the crew are also to be shown on the Muster List (or on a separate List if this is considered preferable) so that all the members of the crew

* In the case of ships carrying Laascar or other native crews who are unable to read English, special arrangements will be necessary for notifying them of emergency duties allotted to them.

(including those to whom emergency duties not connected with the preparation of boats are assigned) may know their stations in the event of their having to take to the boats.

7. When making out the Muster List* the Master should bear the following points in mind:—

(1) The crew assigned to each lifeboat should include, according to the size of the boat, at least the number of certificated lifeboatmen specified in Rule 43 of the Life Saving Appliances Rules, 1932. The allocation of other certificated lifeboatmen remains within the Master's discretion.

(2) A Deck Officer or certificated lifeboatman must be assigned to take charge of each lifeboat, and a second-in-command is also to be nominated.

(3) A man capable of working the motor is to be assigned to each motor boat carried.

(4) A man capable of working the wireless and search-light installations is to be assigned to boats carrying these equipments.

(5) The duties connected with the marshalling of passengers to their assembly stations are normally to be assigned to members of the Stewards' Department.

8. The preparation of the Muster List may, if desired, be supplemented by the issue, to each member of the crew, of a card showing (among other particulars) his boat station, his emergency station or stations and duties, and any signals connected therewith.

9. The Master will be responsible for the preparation of the Muster List, which should be signed and dated by him. The Muster List should be prepared, or, if a new list is not necessary, should be revised, before the ship puts to sea for the first time after the agreement with the crew has been signed; and if after the Muster List has been prepared any change takes place in the crew which necessitates an alteration in the Muster List, the Master must either revise the list, or prepare a new list.

10. The Muster List is to be posted conspicuously in such parts of the ship as will ensure that it is readily available for the crew to read. In particular, it must be exhibited throughout the crew's quarters. It must be posted before the ship proceeds to sea and kept so posted while the ship is at sea. The responsible officers should ascertain that the persons under their supervision are fully acquainted with the requirements of the Muster List which affect them and with the meaning of the various signals which will be used for emergency purposes on the ship, and also that they know the boats to which they are assigned.

SIGNALS.

11. The general emergency signal shall be a succession of more than six short blasts followed by one long blast on the whistle or sirens. In ships holding General Safety Certificates this signal is required to be supplemented by electrically operated signals throughout the ship controlled from the bridge, but this requirement is not obligatory in the case of existing ships hold-

* In this and other paragraphs, the expression "Muster List" is to be understood as including the Boat Stations List.

ing such certificates and carrying passengers on not more than two decks. In existing ships where a non-electrical system has been provided, it may be accepted if efficient.

12. The general emergency signal must be used only on the Master's responsibility. Its use in emergencies should be confined to occasions in which it is considered necessary for the passengers to be collected at the passenger assembly stations with a view to the possible evacuation of the ship.

13. The nature of the signals or other means to be used for calling the crew to emergency duties (other than a general emergency), or to crew practices remains within the discretion of the Master. Such signals should be distinct from navigational signals and if given on the ship's whistle or siren should be distinct from the general emergency signal.

14. It is desirable that arrangements should be made for speedy communication between the bridge and the crew's quarters so that in the event of a fire or other emergency necessitating immediate action no delay may occur in summoning the members of the crew whose services may be required.

CREW EMERGENCY PRACTICES.

15. In order that the crew emergency practices may make the crew familiar with the action they would be called on to take in the event of an emergency, they should include:—

- fire drill (see paragraphs 18 and 19);
- drill in the closing of doors, side scuttles, valves, etc. (see paragraph 20);
- boat drill (see paragraphs 21 to 24); and
- drill in the duties connected with the marshalling of passengers (see paragraph 25).

The practices should be so arranged that the crew thoroughly understand the duties they have to perform, and are exercised in those duties so far as practicable.

16. Crew emergency practices are required to be held weekly when practicable, and, in ships in which the voyage exceeds one week, before leaving port. At practices held in port all the drills referred to in the preceding paragraph should be combined in one comprehensive practice. At practices held at sea, the same method may be followed, or the different drills may be held either separately or partly combined with one another as the Master may consider most effective in the circumstances, provided always that all the drills are practised weekly.

17. At the time appointed for a practice, all members of the crew (or in the case of a sectional practice the members of the crew concerned), with the exception of those who cannot be relieved from immediate duties, should muster with their life jackets with a view to performing or being instructed in the duties assigned to them. The officers or other persons in charge of particular sections of emergency duties should have a list of the persons under their orders and should see that they are acquainted with their several duties.

Fire Drill.

18. For the purposes of this drill an outbreak of fire should be assumed to have occurred in a part of the ship (not the engine room) selected by the officer in charge of the drill and a mock

attack on the supposed fire should be made. On receipt of the signal or other warning in the engine room the fire pumps should be prepared for operation. The members of the crew forming the fire party or parties should be sent to the seat of the assumed fire. The hoses in that neighbourhood should be laid out and the fire extinguishers unshipped, and occasionally one of the extinguishers should be discharged. Water should be played through a proportion of the fire hoses selected by the officer in charge of the drill. In addition, the hydrants should be tested under pressure. Men should be exercised in the closing of doors, ventilating shafts and other openings in the vicinity of the space affected by the supposed fire so as to reduce the supply of air to the fire and isolate it as far as practicable from other parts of the ship, especially stairways and lift shafts. The fire party should be exercised in the use of smoke helmets or any other breathing apparatus carried on the ship and should also be instructed in the use of all other descriptions of fire fighting appliances on the ship.

19. The fire appliances in other parts of the ship, including the engine room and machinery spaces, should be examined, so as to ensure that they are in good order and readily available for use in an emergency; and fire alarms and fire detecting apparatus, where fitted, should, so far as possible, be inspected to see that they are in sufficient working order. If this is not done on the occasion of each successive fire drill, arrangements should be made to secure that it shall be carried out within the same intervals, i.e., weekly.

Drill in closing of doors, side-scuttles, etc.

20. The drill for practising the closing of water-tight and fire resisting doors, side-scuttles, ash shoots, rubbish shoots, lavatory and bath discharges, and other similar valves giving access to the sea should be so arranged as to secure compliance with the relevant requirements of Section 22 and the Third Schedule of the Merchant Shipping Act, 1932. Under this enactment the opening and closing of

- (i) all water-tight doors in main transverse bulkheads,
- (ii) side-scuttles in certain positions,
- (iii) the covers and valves of all ash shoots, rubbish shoots or other similar contrivances having their inboard openings below the margin line, and
- (iv) the closing mechanism of all scuppers having their inboard openings below the margin line,

must be practised once a week, and also before the steamer proceeds to sea on any voyage which is likely to last more than a week;* and every valve, the closing of which is necessary to make any compartment water-tight, and every water-tight door in the main transverse bulkheads and the mechanism and indicators connected therewith are to be inspected at least once a week.

Boat drill.

21. The crew of each boat (other than the men who cannot be relieved from their normal duties or who are simultaneously engaged in practising other emergency duties elsewhere) should muster at their boat stations with their lifejackets. The person

* The practices held at sea do not include those doors and side scuttles which the Schedule requires to be closed before the steamer proceeds to sea and to be kept closed at sea.

in charge of each boat should have a list of its crew and should see that the men placed under his orders are acquainted with their several duties. The boats to be used in the drill are to be selected by the officer in charge. They should include some from each side of the ship and should be so distributed as to enable the crews of the other boats to watch the operations. Different groups of boats should be used in turn at successive drills.

22. When the drill is held at sea, at least a quarter of the total number of boats attached to davits should, if weather and other circumstances permit, be cleared and swung out. The equipment of these boats should be checked and the side ladders and embarkation arrangements should also be prepared.

23. All the boats not used in the drills should be examined to ensure that the boats themselves, their lowering appliances and equipment are in order. If motor boats are carried the engines and the wireless and the searchlight equipment should be examined and tested. Similarly, if boats fitted with Fleming gear are carried, this gear should be examined and tested. In ships where inboard boats are carried, the arrangements for transporting these boats to the side of the ship should be tested. The buoyant apparatus and other life-saving appliances carried should be inspected in order to see that they are in good condition and readily available in case of an emergency. If the operations specified in this paragraph are not done on the occasion of each successive boat drill, arrangements should be made to ensure that they are carried out within the same intervals, i.e., weekly.

24. When the drill is held in port, it should be carried out in the same manner as at sea, except that as many as possible of the boats attached to davits should be cleared and swung out. They should also, so far as practicable, be lowered into the water and the crews exercised in pulling and sailing. On ships where more than one boat is served by the same set of davits and the first boat is lowered into the water, the other should, so far as practicable, be prepared and swung out and as many as possible of these boats should also be lowered into the water and the crews exercised as indicated above.

Drill in duties connected with marshalling of passengers.

25. For the purpose of drill in the marshalling of passengers those members of the crew who have been assigned to this duty should take up their places in the stairways and passage ways leading to the passenger assembly stations and also at the assembly stations. The officers in charge should ascertain that they are acquainted with their duties which include:—

(a) warning all passengers and impressing on them the importance of securing suitable covering and of donning their life-jackets in a proper manner;

(b) marshalling the passengers to the assembly stations, keeping order in the stairways and passages and doorways and generally controlling the movements of passengers;

(c) impressing on passengers the risk of injury from jumping overboard, and the importance of using the side ladders provided for the purpose of entering the boats should it prove necessary to embark in them after they have been lowered into the water.

PRACTICE MUSTER OF PASSENGERS.

26. A practice muster of passengers is required to be held within twenty-four hours of the commencement of each voyage. In the event of passengers being embarked at ports of call after the practice has been held, it will rest with the Master to decide what steps should be taken to ensure that they shall be made acquainted with the procedure to be followed in an emergency.

27. The time at which a practice muster of passengers is to take place must in all cases be notified to the passengers in advance.

28. On the occasion of a practice muster of passengers, those members of the crew who have been assigned the duties mentioned in paragraph 25 should be careful to satisfy themselves that the sections of the passenger accommodation for which they are responsible are completely clear of passengers. When the passengers are assembled at the passenger assembly stations they should be instructed in the manner of putting on lifejackets and in the matters referred to in sub-paragraphs (a) and (c) of paragraph 25. Before the passengers are dismissed the officers in charge should explain the process of embarkation to them and should emphasise that the general emergency signal is not in itself a signal for the abandonment of the ship, but is intended to secure the orderly marshalling of passengers to the appointed assembly stations should the occurrence of a serious accident make this advisable.

29. The passenger assembly stations are to be so selected and arranged that the passengers can readily be drafted from them to the required positions on the embarkation deck as circumstances may necessitate.

NOTICES TO PASSENGERS.

30. The following information should be shown conspicuously on cards in all spaces which provide sleeping accommodation for passengers:—

- (1) The passenger assembly station of the occupants,
- (2) The nature and meaning of the general emergency signal,
- (3) Illustrated instructions of the method of putting on the lifejackets provided.

Information under (2) and (3) should also be posted conspicuously in other suitable positions in the passenger accommodation. The information should be worded in English and such other language or languages as may be considered necessary having regard to the nationality of the passengers normally carried on the voyage.

ENTRIES IN OFFICIAL LOG BOOK.

31. Particulars of all the practices specified in the preceding paragraphs should be recorded in the official log book and if, in any week, a practice is not held, an entry should be made stating the reasons for the omission.

ADDITIONAL PRACTICES.

32. When emergency boats are carried, the crews of these boats should, weather permitting, be mustered at least three times a week while the vessel is at sea. The full equipment of the boats should be overhauled each day, and each night a lighted lamp should be placed in position in each boat.

33. The opening and closing of all hinged or power operated watertight doors in main transverse bulkheads which are in use at sea are required to be practised daily while the steamer is at sea, and the practice recorded in the official log book.

MISCELLANEOUS.

34. To avoid any delay in sending out the ship's position in the event of a sudden accident, the position of the ship and the true course and speed should be posted up in the chart room and the wireless room every two hours.

35. Officers and others in charge of lifeboats should be cautioned that it is advisable for boats after launching to remain as much as possible in the vicinity of the accident and not to attempt to pull any distance unless there are special reasons for doing so.

36. Where motor boats are carried the crews should be instructed that it is a part of their duty to cruise about shepherding the oared boats.

37. In view of the fact that the general emergency signal is not in itself a signal for the abandonment of the ship and that after the signal has been given members of the crew may be required to remain on duty below deck (for example in the engine room), definite arrangements should be made on all ships and should be notified to all members of the crew as part of the arrangements for dealing with emergencies, to ensure that, in the event of the abandonment of the ship being decided on, those members of the crew working below deck would be effectively warned by signals or other means in time to enable them to get away.

II.—MODIFIED REGULATIONS APPLICABLE TO PASSENGER SHIPS ON RESTRICTED VOYAGES.

MUSTER LIST.

1. The Muster List is required to show in respect of each member of the crew the special duties for the event of an emergency which are allotted to him, and is to indicate in particular the station to which he has to go when the pre-arranged signal or warning of emergency is given.

2. To meet the possibility of a fire the Muster List must assign a sufficient number of the crew to the duties connected with the extinction of fire and the evacuation of passengers from their accommodation, so far as this may become necessary. To meet the situation likely to arise as a result of a collision or other accident which may result in water entering the vessel, members of the crew should be assigned to the duties of closing bulkhead doors, side scuttles, ash-shoots, rubbish shoots, lavatory and bath discharges and other similar valves giving access to the sea. Men should also be assigned to such other posts and duties as may be considered desirable for combating the results of accidents.

3. To meet the possibility that the emergency may become so serious as to necessitate the abandonment of the ship, the Muster List must provide for the allocation of members of the crew to the duties connected with the preparation and launching of the boats and buoyant apparatus, and the distribution of life-jackets to the passengers. In addition to showing the boat stations to

which members of the crew should proceed for the purpose of preparing the boats for launching, the Muster List should allot members of the crew to go away in the boats with the passengers (see paragraph 5 (1)). In the case of vessels having enclosed passenger accommodation from which the passengers would have to be marshalled in the event of an emergency (e.g. sleeping accommodation for passengers on vessels which proceed by night), the Muster List must assign members of the crew to the duties connected with the marshalling of the passengers at assembly stations situated at suitable positions for the purpose of abandoning the ship.

4. The Muster List must also contain full particulars of the signals which will be used on the ship for calling the crew to their stations for emergency duties.

5. When making out the Muster List the Master should bear the following points in mind:—

(i) There should be assigned to each lifeboat according to its size at least the number of certificated lifeboatmen specified in Rule 43 of the Life Saving Appliances Rules, 1932.

(ii) A deck officer or certificated lifeboatman should be assigned to take charge of each lifeboat and a second in command is also to be nominated.

(iii) The duties connected with the assisting and controlling of passengers should normally be assigned to members of the Stewards' Department.

(iv) In vessels where the boats do not provide accommodation for the total number of persons allowed to be carried, the allocation of members of the crew to the duties of distributing the lifejackets to the passengers in various parts of the vessel and preparing and launching the buoyant apparatus should receive special attention.

6. The preparation of the Muster List may, in the case of some ships, be facilitated if the List shows the bunk or berth numbers (instead of the names) of the individual members of the crew with the emergency duties assigned to them, a card being fixed to each bunk showing the emergency duties and station of the occupant and any signals connected with those duties.

7. The Master will be responsible for the preparation of the Muster List, which should be signed and dated by him. The Muster List should be prepared, or if a new list is not necessary should be revised, before the ship puts to sea for the first time after the agreement with the crew has been signed; and if after the Muster List has been prepared any change takes place in the crew which necessitates an alteration in the Muster List, the Master must either revise the list, or prepare a new list.

8. The Muster List is to be posted conspicuously in such parts of the ship as will ensure that it is readily available for the crew to read. In particular, it must be exhibited throughout the crew's quarters. It must be posted before the ship proceeds to sea and kept so posted while the ship is at sea. The responsible officers should ascertain that the persons under their supervision are fully acquainted with the requirements of the Muster List which affect them and with the meaning of the various signals which will be used for emergency purposes on the ship.

SIGNALS.

9. The general emergency signal shall be a succession of more than six short blasts followed by one long blast on the whistle or siren. This may be supplemented by other signals throughout the ship at the discretion of the Master.

10. The general emergency signal must be used only on the Master's responsibility. Its use in emergencies should be confined to occasions in which it is considered necessary for the passengers to be warned with a view to the possible evacuation of the ship.

11. The nature of the signals or other means to be used for calling the crew to emergency duties (other than a general emergency) or to crew practices remains within the discretion of the Master. Such signals should be distinct from navigational signals and if given on the ship's whistle or siren should be distinct from the general emergency signal.

Crew Emergency Practices.

12. In order that the crew emergency practices may make the crew familiar with the action they would be called on to take in the event of an emergency, they should include:—

 firedrill (see paragraphs 14 and 15);

 drill in the closing of doors, side scuttles, valves, etc. (see paragraph 16);

 boat drill and drill in the other duties connected with the abandonment of the ship (see paragraphs 17 to 20).

The practices should be so arranged that the crew thoroughly understand the duties they have to perform, and are exercised in those duties so far as practicable.

13. Crew emergency practices are required to be held weekly when practicable, either in port or at sea. At the time appointed for a practice, all members of the crew, with the exception of those who cannot be relieved from immediate duties, should muster with their lifejackets with a view to performing or being instructed in the duties assigned to them. The officers or other persons in charge of particular sections of emergency duties should have a list of the persons under their orders and should see that they are acquainted with their several duties.

Fire Drill.

14. For the purposes of this drill an outbreak of fire should be assumed to have occurred in a part of the ship (not the engine room) selected by the officer in charge of the drill and a mock attack on the supposed fire should be made. On receipt of the signal or other warning in the engine room the fire pumps should be prepared for operation. The members of the crew forming the fire party or parties should be sent to the seat of the assumed fire. The hoses in that neighbourhood should be laid out and the fire extinguishers unshipped, and occasionally one of the extinguishers should be discharged. Water should be played through a proportion of the fire hoses selected by the officer in charge of the drill. In addition, the hydrants should be tested under pressure. Men should be exercised in the closing of doors, ventilating shafts and other openings in the vicinity of the space affected by the supposed fire so as to reduce the supply of air to the fire and isolate it as far as practicable

from other parts of the ship, especially stairways and lift shafts. The fire party should be exercised in the use of smoke helmets or other breathing apparatus if carried, and should also be instructed in the use of all other descriptions of fire fighting appliances on the ship.

15. The fire appliances in other parts of the ship, including the engine room and machinery spaces, should be examined, so as to ensure that they are in good order and readily available for use in an emergency; and fire alarms and fire detecting apparatus, where fitted, should, so far as possible, be inspected to see that they are in efficient working order. If this is not done on the occasion of each successive fire drill, arrangements should be made to secure that it shall be carried out within the same intervals, i.e., weekly.

Drill in closing of doors, side-scuttles, etc.

16. The drill for practising the closing of water-tight and fire resisting doors, side-scuttles, ash shoots, rubbish shoots, lavatory and bath discharges, and other similar valves giving access to the sea should be so arranged as to secure compliance with the relevant requirements of Section 22 and the Third Schedule of the Merchant Shipping Act, 1932. Under this enactment the opening and closing of

- (i) all watertight doors in main transverse bulkheads,
- (ii) side-scuttles in certain positions,
- (iii) the covers and valves of all ash shoots, rubbish shoots or other similar contrivances having their inboard openings below the margin line, and
- (iv) the closing mechanism of all scuppers having their inboard openings below the margin line,

must be practised once a week, and also before the steamer proceeds to sea on any voyage which is likely to last more than a week*; and every valve, the closing of which is necessary to make any compartment watertight, and every watertight door in the main transverse bulkheads and the mechanism and indicators connected therewith are to be inspected at least once a week.

Boat drill.

17. The members of the crew responsible for the preparation of the boats (other than those who cannot be relieved from their normal duties) should muster at their boat stations with their life-jackets. The person in charge of each boat should see that the men placed under his orders are acquainted with their several duties. All the boats or, if this is not practicable, as many as possible of them should be cleared and swung out. They should also, so far as practicable, be lowered into the water and the crews exercised in pulling. The equipment of the boats should be checked and the side ladders and embarkation arrangements should also be examined and prepared for use. The boats used at successive drills should be selected in such manner as to secure that all the boats on the ship are lowered into the water and the crews exercised at least once a month.

18. The boats not used in the drill should be examined to ensure that the boats themselves, their lowering appliances and equipment are in order. The buoyant apparatus and other life-

* The practices held at sea do not include those doors and side scuttles which the Schedule requires to be closed before the steamer proceeds to sea and to be kept closed at sea.

saving appliances carried should be inspected in order to see that they are in good condition and readily available in case of an emergency. The buoyant apparatus should be cleared for use and the arrangements for distributing life-jackets to passengers should be rehearsed.

19. If a drill is held at sea it should be carried out so far as possible in the same manner as in port, at least a quarter of the total number of boats being cleared and also being swung out if weather and other circumstances permit.

Drill in duties connected with marshalling of passengers.

20. In ships in which duties connected with the marshalling of passengers are provided for in the Muster List, the stewards or other members of the crew assigned to these duties should take up the places allotted to them, and the officers in charge should ascertain that they are acquainted with their duties which include:—

(a) Warning all passengers and assisting them to obtain and put on life-jackets and explaining to them the use of the buoyant apparatus.

(b) Keeping order in the stairways and passages and doorways and generally controlling the movements of the passengers.

(c) Impressing on passengers the risk of injury from jumping overboard, and the importance of using the side ladders provided for the purpose of entering the boats should it prove necessary to embark in them after they have been lowered into the water.

PRACTICE MUSTER OF PASSENGERS.

21. In ships where, having regard to the length of the voyage and the conditions under which the passengers are carried, a practice muster of passengers is considered by the Master to be practicable and desirable, it should generally be held at an early period of the voyage. The time at which a practice muster of passengers is to take place must in all cases be notified to the passengers in advance.

22. On the occasion of a practice muster of passengers those members of the crew assigned to the duty should carry out the duties mentioned in paragraph 20, being careful to satisfy themselves that the sections of the passenger accommodation for which they are responsible are completely clear of passengers. When the passengers are assembled at the passenger assembly stations they should be instructed in the manner of putting on life-jackets and in the matters referred to in sub-paragraphs (a) and (c) of paragraph 20. Before the passengers are dismissed the officers in charge should explain the process of abandonment to them and should emphasise that the general emergency signal is not in itself a signal for the abandonment of the ship, but is intended to secure the orderly marshalling of passengers to the appointed assembly stations should the occurrence of a serious accident make this advisable.

NOTICES TO PASSENGERS.

23. The following information should be shown conspicuously on cards exhibited throughout the passenger accommodation:—

(i) The nature and meaning of the general emergency signal.

(ii) Illustrated instructions of the method of putting on the life-jackets provided.

In vessels in which assembly stations have been appointed for the passengers, cards should be exhibited in each cabin or section of the passenger accommodation showing the position of the assembly stations.

It is desirable that the notices relating to the nature and meaning of the general emergency signal should also contain information and guidance for the event of an emergency, e.g., that when the emergency signal is made, each passenger should obtain a life-jacket and adjust it in accordance with the illustrated instructions which are posted throughout the ship, and should proceed in a quiet and orderly manner as may be directed (or to the appropriate passenger assembly station, if such stations have been appointed). The notices might further state that life-jackets are distributed widely throughout the ship in stowage places clearly marked with the word "Life-jackets," and might advise passengers to familiarise themselves with the positions of those stowage places and the method of adjustment of life-jackets.

The notices referred to in this paragraph should be worded in English and such other language or languages (if any) as may be considered necessary having regard to the nationality of the passengers normally carried on the vessel.

ENTRIES IN OFFICIAL LOG BOOK.

24. Particulars of all the practices specified in the preceding paragraphs should be recorded in the official log book and if, in any week, a practice is not held, an entry should be made stating the reasons for the omission.

ADDITIONAL PRACTICES.

25. The opening and closing of all hinged or power-operated water-tight doors in main transverse bulkheads which are in use at sea are required to be practised daily while the steamer is at sea, and the practice recorded in the official log book.

MISCELLANEOUS.

26. To avoid any delay in sending out the ship's position in the event of a sudden accident, the position of the ship and the true course and speed should be posted up in the chart room and, if the ship is fitted with wireless, in the wireless room every two hours.

27. Officers and others in charge of lifeboats should be cautioned that it is advisable for boats after launching to remain as much as possible in the vicinity of the accident and not to attempt to pull any distance unless there are special reasons for doing so.

28. In view of the fact that the General Emergency Signal is not in itself a signal for the abandonment of the ship and that after the signal has been given members of the crew may be required to remain on duty below deck (for example in the engine room), definite arrangements should be made on all ships and should be notified to all members of the crew as part of the arrangements for dealing with emergencies, to ensure that, in the event of the abandonment of the ship being decided on, those members of the crew working below deck would be effectively warned by signals or other means in time to enable them to get away.

29. The crew should be instructed that great care is necessary when launching heavy pieces of buoyant apparatus to avoid damage or injury to other pieces of the apparatus, boats or persons that may be in the vicinity.

APPENDIX B (2)

STANDARD REGULATIONS AS TO MUSTERS AND DRILLS
ON CARGO SHIPS.

NOTE BY THE BOARD OF TRADE.

1. In December, 1933, Standard Regulations as to Musters and Drills on Passenger Steamers were issued by the Board of Trade (Notice No. 133), which Regulations took the place of the Passenger Steamer Muster Regulations formerly contained in Notice No. 100 issued in 1929. The latter Notice, however, also contained certain Muster Regulations applicable to Cargo Ships. These particular Regulations have now been revised and are being issued as a separate Notice though at the first suitable opportunity they will be incorporated in Notice No. 133. With the issue of these revised Cargo Ship Regulations, Notice No. 100 is completely superseded.

2. As in the case of passenger steamers, the Standard Regulations applicable to cargo ships are intended to provide the outlines of a uniform scheme for training the members of crews of cargo ships in the duties that they would be required to undertake in an emergency or in the event of an accident to the ship which, in the absence of successful counter measures, might involve the abandonment of the ship. In view, however, of the greatly differing conditions on board cargo ships, the varying sizes of crew carried and the different nature of the voyages undertaken, the regulations are capable of modification in details as the circumstances of particular vessels or trades may require.

STANDARD REGULATIONS APPLICABLE TO CARGO
SHIPS.

MUSTER LIST.

1. A Muster List should be prepared in respect of each cargo ship. The Master is responsible for the preparation of this List, which should be prepared, or, if a new List is not necessary should be revised, before the ship puts to sea for the first time after the Agreement with the crew has been signed. If, after the Muster List has been prepared, any change takes place in the crew which necessitates an alteration in the Muster List, the Master should revise the List or prepare a new List. On the occasion of the preparation or revision of a Muster List it should be signed and dated by the Master.

2. The Muster List should show the special duties for the event of an emergency which are allotted to each member of the crew* and the station to which he is to go when the pre-arranged signal or warning of emergency is given.

3. The duties, provided for in the Muster List should include:—

- (1) those connected with the extinction of fire;
- (2) those connected with the closing of bulkhead doors (if any), scuppers and other openings in the ship's side which would have to be closed in the event of a collision or other accident involving the possibility of water entering the ship;

* In the case of ships carrying Lascar or native crews who are unable to read English special arrangements will be necessary for notifying them of the emergency duties allotted to them

(3) those connected with the abandonment of the ship, i.e., the preparation of the boats and other life-saving appliances for use, including the completion of the equipment of the boats, their preparation for launching, and the actual swinging out.

4. The Muster List should also show (i) the boat stations of each member of the crew, and (ii) full particulars of the signal or signals which will be used on the ship for calling the crew to their stations for emergency duties.

5. The preparation of the Muster List may, in the case of some ships, be facilitated if the List shows the bunk or berth numbers (instead of the names) of the individual members of the crew with the emergency duties assigned to them, a card being fixed to each bunk showing the emergency duties and station of the occupant and any signals connected with those duties.

6. The Muster List should be posted conspicuously in such parts of the ship as will ensure that it is readily available for the crew to read. In particular, it should be exhibited throughout the crew's quarters. It should be posted before the ship proceeds to sea and kept so posted while the ship is at sea. The responsible officers should ascertain that the persons under their supervision are fully acquainted with the requirements of the Muster List which affect them and with the meaning of the special signals which will be used for emergency purposes on the ship, and also that the various members of the crew know their boat stations.

SIGNALS.

7. The general emergency signal shall be a succession of more than six short blasts followed by one long blast on the whistle or siren. This signal should only be used on the Master's responsibility. If any signals in addition to the general emergency signal are adopted for calling the crew to emergency duties or to crew practices, they should be distinct from navigational signals.

8. Arrangements should be made for speedy communication between the bridge and the crew's quarters so that in the event of a fire or other emergency necessitating immediate action no delay should occur in summoning those members of the crew whose services may be required.

EMERGENCY PRACTICES.

9. Emergency practices should, as a general rule, be held fortnightly and should include:—

- (1) fire drill;
- (2) drill in closing of watertight doors, side scuttles and all openings in the ship's sides;
- (3) boat drill.

At practices held in port all three drills should follow one another, if possible, in the order given. At practices held at sea the same routine should be followed, if possible, or the different drills may be carried out separately as opportunity offers, provided always that the different drills are practised at least once a fortnight.

10. At the time appointed for a practice all members of the crew (or in the case of a sectional practice those members concerned) with the exception of those who cannot be relieved from

their immediate duties should muster with their life-jackets with a view to performing or being instructed in the duties assigned to them. Officers or other persons in charge of particular sections of emergency duties should have a list of the persons under their orders and should see that they are acquainted with their several duties.

Fire Drill.

11. For the purpose of this drill an outbreak of fire should be assumed to have occurred in a part of the ship, not the engine room, selected by the Officer in charge of the drill and a mock attack on the supposed fire should be made. On receipt of the signal or other warning in the engine room the fire pumps should be prepared for operation. The members of the crew forming the fire party or parties should be sent to the seat of the assumed fire, the hoses in that neighbourhood should be laid out and the fire extinguishers (if any) unshipped. Water should be played through a proportion of the fire hoses selected by the Officer in charge of the drill and the hydrants tested under pressure. Men should be exercised in the closing of any openings in the vicinity of the space affected by the supposed fire so as to reduce the supply of air to the fire and isolate it as far as practicable from other parts of the ship. Where smoke helmets or other breathing apparatus are carried the fire party should be exercised in their use, and should also be instructed in the use of any other descriptions of fire fighting appliances in the ship.

12. The fire appliances in the other parts of the ship, including the engine room and machinery spaces, should be examined so as to ensure that they are in good order and readily available for use in an emergency.

Drill in Closing of Doors, Side Scuttles, etc.

13. This drill should include practice in the closing of water-tight doors (if any), side scuttles and any other openings in the ship's side which, if not closed, might facilitate the admission of water to the holds or other compartments in the event of a collision or other accident affecting the hull of the vessel.

Boat Drill.

14. The crew, other than the men who cannot be relieved from their normal duties, should muster at their boat stations with their life-jackets. The person in charge of each boat should have a list of its crew and should see that the men under his orders are acquainted with their several duties. The boat or boats to be used in the drills should be selected by the Officer in charge. In the case of ships having not more than two boats, the crew should be exercised in the use of each boat at each practice. In ships having more than one boat on each side, the boats selected for the practice should, wherever practicable, include at least one on each side of the ship, and different boats should, as far as practicable, be used in turn at successive drills, thus ensuring that all the boats are used within a short period.

15. When the drill is held at sea, the boats used at the practice should, if weather and other circumstances permit, be cleared and swung out. The equipment of the boats should

be checked and the crew instructed as necessary in its use. The boat-lowering appliances and chocks should be examined to ensure that they are in working order.

16. Every opportunity should be taken when in port or at anchor to carry out the drill. When so carried out the same procedure should be followed as at sea except that as many boats as possible should be cleared and swung out, and, so far as practicable, lowered into the water and the crews exercised in pulling and sailing.

17. On every occasion when boat drill is practised the life-buoys, life-jackets, line-throwing apparatus (if carried) and any other life-saving appliances on board should be inspected in order to see that they are in good condition and readily available in case of an emergency.

ENTRIES IN OFFICIAL LOG.

18. Particulars of practices specified in the preceding paragraphs should be recorded in the Official Log Book and if in any fortnight a practice is not held an entry should be made stating the reasons for the omission.

MISCELLANEOUS.

19. To avoid any delay in sending out the ship's position in the case of a sudden accident to a vessel fitted with wireless telegraphy, the position of the ship and the true course and speed should be posted up in the chart room and the wireless room at regular intervals, if practicable, once every two hours.

20. Officers and others in charge of lifeboats should be told that it is advisable for boats after launching to remain as much as possible in the vicinity of the accident and not to attempt to pull any distance unless there are special reasons for so doing.

21. Definite arrangements should be made on all ships to ensure that in the event of the abandonment of the ship being decided on those members of the crew working below deck will be effectively warned by signals or other means in time to enable them to get away.

APPEN
STANDARD SCANTLINGS FOR WOOD

No.	ITEM.	MATERIAL.				
1	Keel	American elm, teak, oak, or Australian spotted gum.				
NOTE.—Full thickness of keel to be preserved from						
2	Stem and Sternpost ...	<table border="1" style="width: 100%;"> <tr> <td data-bbox="461 422 792 487">British oak, teak, American elm or Australian spotted gum.</td> <td data-bbox="792 422 925 487">Head ...</td> </tr> <tr> <td></td> <td data-bbox="792 487 925 548">Heel ...</td> </tr> </table>	British oak, teak, American elm or Australian spotted gum.	Head ...		Heel ...
British oak, teak, American elm or Australian spotted gum.	Head ...					
	Heel ...					
NOTE.—Stemband to be forged to suit siding of keel and the bearding provided the breadth is not						
3	Hog piece	Teak, oak or Australian spotted gum ...				
4	Planking	Yellow pine, larch or Kauri pine				
		Teak or mahogany				
		Landings and butts as worked to be coated good coat of paint before				
		Security of hood ends				
5	Gunwales	<table border="1" style="width: 100%;"> <tr> <td data-bbox="461 844 792 933">American elm, teak, oak or ash.</td> <td data-bbox="792 844 925 933">If solid ...</td> </tr> <tr> <td></td> <td data-bbox="792 933 925 982">If box ...</td> </tr> </table>	American elm, teak, oak or ash.	If solid ...		If box ...
American elm, teak, oak or ash.	If solid ...					
	If box ...					
6	Sheerstrake... ..	Mahogany, teak or elm				
7	Timbers	American elm, ash, oak or teak				
8	Aprons	Oak, teak or ash, moulded at head ...				
9	Deadwoods	Oak or ash				
10	Keelson	<table border="1" style="width: 100%;"> <tr> <td data-bbox="461 1193 792 1266">Oak, teak, Oregon pine, pitch pine or Douglas fir.</td> <td data-bbox="792 1193 925 1266" style="text-align: center;"> \uparrow 5° \downarrow </td> </tr> </table>	Oak, teak, Oregon pine, pitch pine or Douglas fir.	\uparrow 5° \downarrow		
Oak, teak, Oregon pine, pitch pine or Douglas fir.	\uparrow 5° \downarrow					
11	Thwarts	Teak, oak, red or pitch pine, larch, Douglas fir, or other imported fir of suitable quality.				
		<table border="1" style="width: 100%;"> <tr> <td data-bbox="792 1266 925 1315">Number...</td> </tr> <tr> <td data-bbox="792 1315 925 1356">Size ...</td> </tr> </table>	Number...	Size ...		
Number...						
Size ...						
NOTE.—If the mast thwart is cut to take the mast the size centre is not less						
12	Gangboards to be of same dimensions and materials as thwarts and to					

DIX C.

BOATS OF CLASSES 1 AND 3

LENGTH OF BOATS.†								No.
30 & 29 ft.	28 & 27 ft.	26 & 25 ft.	24 & 23 ft.	22 & 21 ft.	20 & 19 ft.	18 & 17 ft.	16 ft.	
6' × 3'	5½' × 3'	5½' × 2½'	5' × 2½'	4½' × 2½'	4' × 2½'	4' × 2½'	4' × 2½'	1
front of stem to back of sternpost.								
5½' × 2½'	5' × 2½'	4½' × 2½'	4½' × 2½'	4' × 2½'	4' × 2½'	4' × 2'	4' × 2'	2
7½' × 3'	7' × 3'	7' × 2½'	6½' × 2½'	6' × 2½'	6' × 2½'	6' × 2½'	5½' × 2½'	
at the fore edge of stem, or alternatively convex iron may be used less than frds the full siding of stem.								
5½' × 1½'	5½' × 1½'	5½' × 1½'	5' × 1'	5' × 1'	5' × 1'	4½' × 1'	4½' × 1'	3
½'	½'	½'	← 4 bottom strakes ½' → Remainder ¼'			½'	½'	
← 4 bottom strakes ½' → Remainder ½'			← 4 bottom strakes ½' → Remainder ¼'			½'	½'	4
with good oil paint. Inside of planking to have one working timbers.								
23 to 30 ft., one row of brass screws and one row of copper nails.				16 to 22 ft., two rows of copper nails.				
—	—	—	2½' × 2'	2½' × 2'	2' × 2'	2' × 1½'	2' × 1½'	5
1' × 3½'	1' × 3½'	¾' × 3½'	¾' × 3'	—	—	—	—	
¾'	¾'	¾'	¾'	1½'	1½'	1½'	1'	6
1½' × 1'	1½' × 1'	1½' × 1'	1½' × 1'	1½' × 1'	1½' × 1'	1½' × 1'	1½' × 1'	7
3½'	3½'	3'	3'	2½'	2½'	2½'	2½'	8
The moulding at throat to be not less than depth of keel plus 1 inch, the siding to be sufficient to give a faying surface of 3 inches exclusive of the rabbet.								9
5½' × 3'	5' × 3'	4½' × 3'	4½' × 3'	4½' × 3'	4' × 3'	3½' × 2½'	3½' × 2½'	10
Depth to be increased ½' if scored over timbers.								
7	6	6	5	5	5	4	4	
9' × 1½'	9' × 1½'	9' × 1½'	9' × 1½'	9' × 1½'	8' × 1½'	8' × 1½'	8' × 1½'	11
of this thwart must be increased so that its width at than given in the table.								
be strongly secured.								12

† See page 184.

APPEN
STANDARD SCANTLINGS FOR WOOD

No.	ITEM.	MATERIAL.	
13	Side Benches	Yellow, red or pitch pine, teak, larch, silver spruce, Douglas fir, or other imported fir of suitable quality.	
14	Thwart Knees	Oak, grown to form	Siding ...
		Iron (wrought or stamped) ...	Siding ...
		Convex iron (alternative method)	Section...
15	Lower cross seats (portable)	Teak, larch, fir, elm, cypress, red, white or pitch pine, silver spruce, Douglas fir, or other imported fir of suitable quality.	
16	Rubbers	American elm, oak, teak or ash	
17	Risings*	American elm, oak, teak, larch or pitch pine.	
18	Bilge stringer	American elm, teak, larch or pitch pine.	
19	Bottom boards	Teak, elm, larch, silver spruce, Douglas fir, or other imported fir of suitable quality.	
20	Tank cleading	Red or white pine (veed), teak, silver spruce, Douglas fir or other imported fir of suitable quality.	
21	Transoms	English elm or teak	
22	Rudder	English elm, teak or mahogany	Thickness
	Thickness and width to be maintained to level of top of keel		Cheek-pieces
23	Gauge of fastenings ...	Plank landings
		Stringers, hood ends, timbers and garboards.
		Risings and gunwales
NOTE.—All rooves to be of substantial section and not $\frac{1}{8}$ " dia \times 18 S.W.G. for 12—10 S.W.G. fastenings			
24	Ringbolts	Wrought iron (2 in number)	
25	Length of mast	Norway spar	
26	Diameter of mast at clasp and head ... ..	... ..

* See page 184.

DIX C—cont.

BOATS OF CLASSES 1 AND 3—cont.

LENGTH OF BOATS.†								No.
30 & 29 ft.	28 & 27 ft.	26 & 25 ft.	24 & 23 ft.	22 & 21 ft.	20 & 19 ft.	18 & 17 ft.	16 ft.	
1½"	1½"	1"	1"	1"	1"	1"	1"	13
1½" double	1½" double	1½" double	2" single	2" single	1½" single	1½" single	1½" single	14
1½" double	1½" double	1½" double	1½" single	1½" single	1½" single	1½" single	1½" single	
8" × 1½"				Hardwood stretchers 2" × 2"				15
Sufficient in number to provide full seating accommodation in boat. Also to act as stretchers.								
1½" × 1½"	1½" × 1½"	1½" × 1½"	1½" × 1½"	1½" × 1½"	1½" × 1½"	1½" × 1½"	1½" × 1½"	16
4" × 1"	4" × 1"	3½" × 1"	3½" × 1"	3" × 1"	3" × 1"	3" × 1"	2½" × 1"	17
A reduction of ½" in depth may be made at the ends of boats.								
4" × ½"	4" × ½"	3" × ½"	3" × ½"	3" × ½"	3" × ½"	3" × ½"	3" × ½"	18
½"	½"	½"	½"	½"	½"	½"	½"	19
¼" underthwarts ½" elsewhere.		¼" under thwarts ½" elsewhere.						20
NOTE.—Cleating under thwarts to be fitted as a support to thwarts.								
If not in one piece to be rabbeted and well secured.				1½"	1½"	1½"	1½"	21
Fashion pieces to be worked to take inner row of plank end fastenings.								
1½"	1½"	1½"	1½"	1"	1"	1"	1"	22
¾"	¾"	¾"	¾"	½"	½"	½"	½"	
12 S.W.G.				13 S.W.G.				23
10 S.W.G.				11 S.W.G.				
8 S.W.G.				9 S.W.G.				
less than ½" dia. × 16 S.W.G. for 13 S.W.G. fastenings, and ½" dia. × 17 S.W.G. for 9—8 S.W.G. fastenings.								
¾"	¾"	¾"	¾"	½"	½"	½"	½"	24
19 ft.	18 ft.	16 ft.	15 ft.	14 ft.	12½ ft.	11 ft.	10 ft.	25
4½"-3½"	4½"-3½"	4"-3"	3½"-2½"	3½"-2½"	3½"-2½"	3"-2½"	2½"-2½"	26

† See page 184.

APPENDIX C—continued.

NOTE 1.—An additional length of boat not exceeding 6 inches beyond the standard lengths 28 ft., 26 ft., 24 ft., etc., shown in the columns of the Tables, pp. 181 and 183, is allowable before scantlings of a higher grade are required.

NOTE 2.—The risings are in no case to be less in thickness than one inch. But, if desired, the thickness may be increased and the breadth slightly decreased provided the required sectional area of material is fully maintained.

APPENDIX D (1)
LIFTING HOOKS FOR LIFEBOATS.

STANDARD SIZES FOR LIFTING HOOKS OF ROUND SECTION, AND KEEL PLATES.

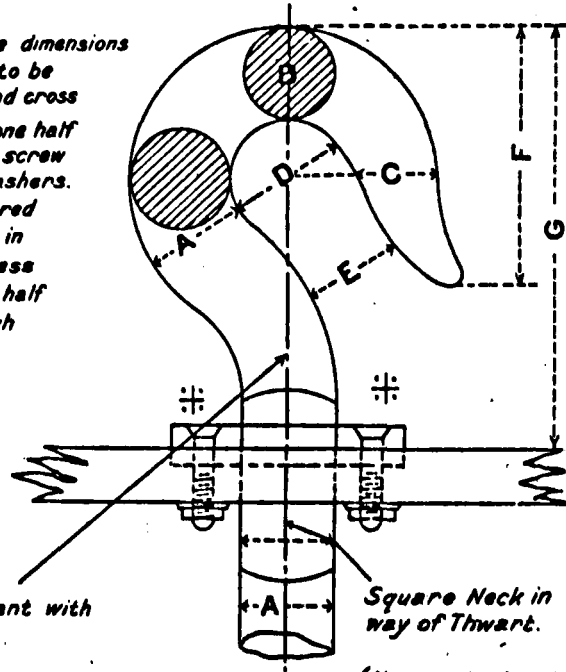
*Length of Boat in Feet.	30 & 29	28 & 27	26 & 25	24 & 23	22 & 21	20 & 19	18 & 17	16								
Maximum dead load including weight of boat (at 8 lbs. per cu. ft.) weight of persons (at 166 lbs. per person) and equipment.	7.9 tons.	6.5 tons.	5.4 tons.	3.9 tons.	3.0 tons.	2.3 tons.	1.9 tons.	1.5 tons.								
	Note.—For intermediate dead loads the dimensions A & D may be obtained by interpolation.															
Type of Keel connection.	Type A		Type A		Type A		Type B		Type B		Type C		Type C		Type C	
Material.	Iron	Steel	Iron	Steel	Iron	Steel	Iron	Steel	Iron	Steel	Iron	Steel	Iron	Steel	Iron	Steel
Size at	"A"	2 $\frac{3}{8}$ "	2 $\frac{1}{2}$ "	2 $\frac{3}{8}$ "	1 $\frac{11}{16}$ "	1 $\frac{7}{8}$ "	1 $\frac{11}{16}$ "	1 $\frac{7}{8}$ "	1 $\frac{3}{4}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
"B"	2"	2"	1 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
"C"	1 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "	1 $\frac{5}{8}$ "	1 $\frac{5}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1"
"D"	3 $\frac{1}{4}$ "	2 $\frac{7}{8}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{4}$ "	2 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	2"	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{5}{8}$ "	1 $\frac{5}{8}$ "	1 $\frac{5}{8}$ "	1 $\frac{5}{8}$ "	1 $\frac{5}{8}$ "
"E"	2"	2"	1 $\frac{7}{8}$ "	1 $\frac{7}{8}$ "	1 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "	1 $\frac{5}{8}$ "	1 $\frac{5}{8}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "
"F"	6 $\frac{3}{8}$ "	6 $\frac{3}{8}$ "	6"	6"	5 $\frac{1}{2}$ "	5 $\frac{1}{2}$ "	5 $\frac{1}{8}$ "	5 $\frac{1}{8}$ "	4 $\frac{3}{4}$ "	4 $\frac{3}{4}$ "	4 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "
"G"	10"	10"	9 $\frac{1}{2}$ "	9 $\frac{1}{2}$ "	9"	9"	8 $\frac{3}{4}$ "	8 $\frac{3}{4}$ "	8"	8"	7 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "	7"	7"	6 $\frac{3}{4}$ "	6 $\frac{3}{4}$ "
"H"	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	1"	1"	$\frac{1}{8}$ "	$\frac{1}{8}$ "	$\frac{1}{2}$ "	$\frac{1}{2}$ "	$\frac{1}{2}$ "	$\frac{1}{2}$ "
"K"	3 $\frac{3}{8}$ "	3 $\frac{3}{8}$ "	3 $\frac{1}{2}$ "	3 $\frac{1}{2}$ "	3"	3"	—	—	—	—	—	—	—	—	—	—
Thickness of Keel Plate.	1 $\frac{1}{8}$ "		$\frac{5}{8}$ "		$\frac{4}{8}$ "		—		—		—		—		—	
Size of Securing Pin.	1 $\frac{1}{2}$ "		1 $\frac{1}{8}$ "		1"		—		—		Screwed into plate and clenched.					
No. of Securing Bolts.	3		3		3		2		2							
Size of " "	1 at 1 $\frac{7}{8}$ " 2 at $\frac{1}{4}$ "		3 at $\frac{1}{4}$ "		1 at $\frac{3}{8}$ " 2 at $\frac{1}{8}$ "		2 at $\frac{1}{4}$ "		2 at $\frac{1}{8}$ "		Length of plate 3 $\frac{1}{2}$ " breadth as Keel.					

* The lengths given are for standard boats accommodating a normal number of persons. In other cases the sizes of the lifting hooks are to be determined by the maximum dead loads irrespective of the lengths of boats (see para. 33 (1)).

Hooks to be of Best Cable Iron or Mild Steel and without welds. Keel Plates to be of Mild Steel and without welds.

APPENDIX D.(2). DETAILS LIFTING HOOKS.

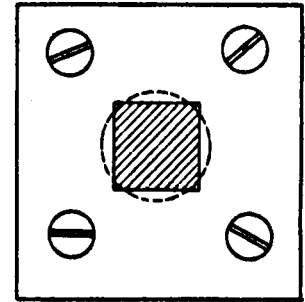
*** NOTE:** - Gang-boards are to be of the same dimensions and materials as the Thwarts and to be through fastened to the Thwarts and cross pieces. The plate should be let down one half in thickness and secured by four $\frac{1}{4}$ " screw bolts with nuts hove up on plate washers. When keel plate of type "A" are required and the gang-board plate is fitted in halves its thickness should not be less than $\frac{1}{2}$ " and the dimensions of each half sufficiently large to take 3 through fastenings.



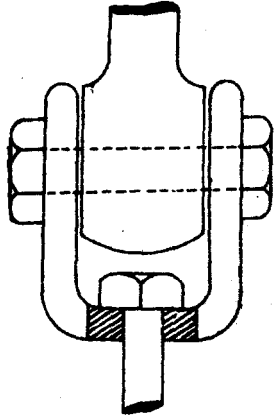
Centre of Hook to be in Alignment with Centre of Bolt.

Square Neck in way of Thwart.

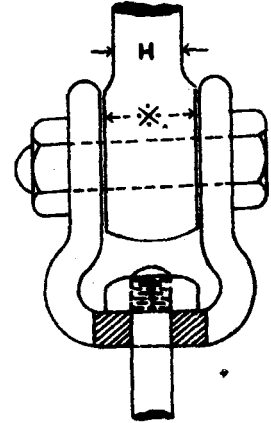
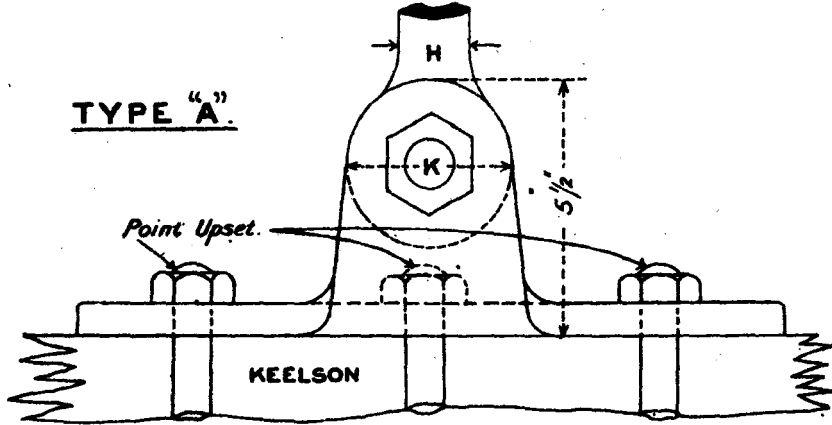
(Not required with Type "A"
Keel connection)



APPENDIX D. (3).
DETAILS OF KEEL CONNECTION.

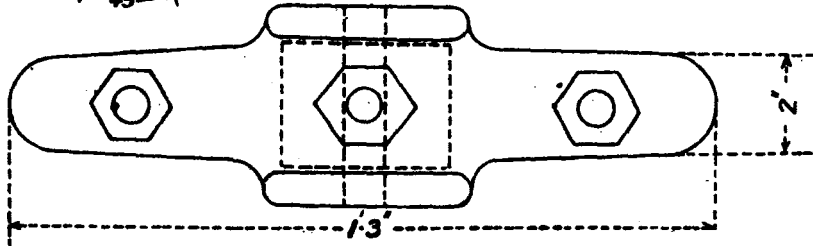
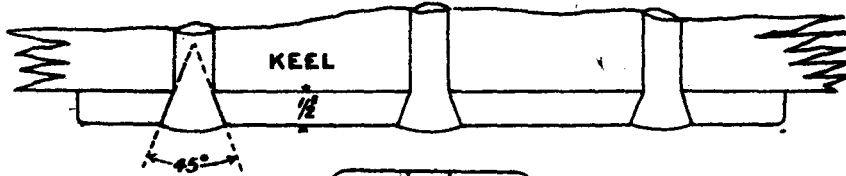


TYPE "A"

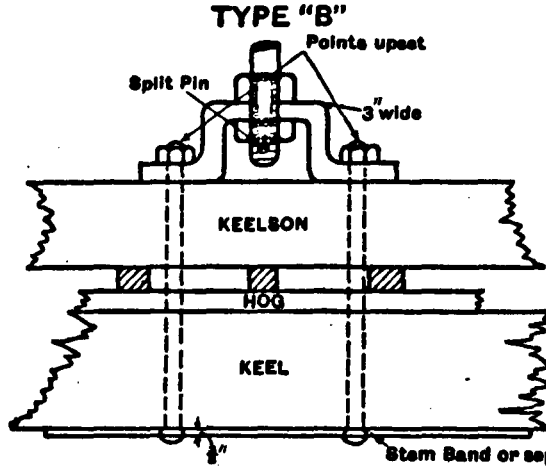


ALTERNATIVE SECTION.

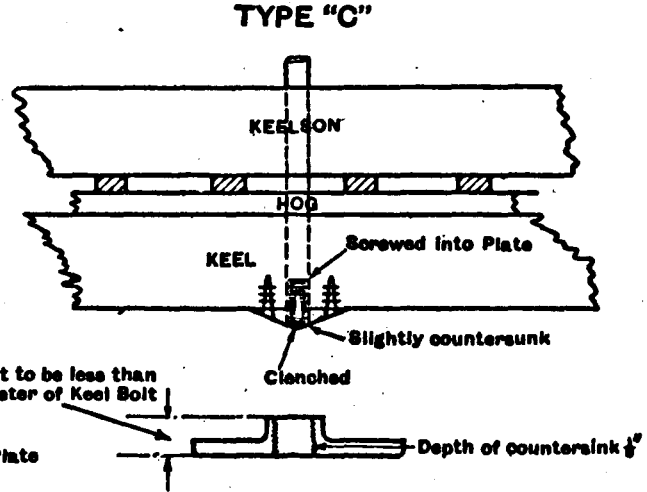
⚠ *This dimension need not exceed "H".*



APPENDIX D (4)
DETAILS OF KEEL CONSTRUCTION.

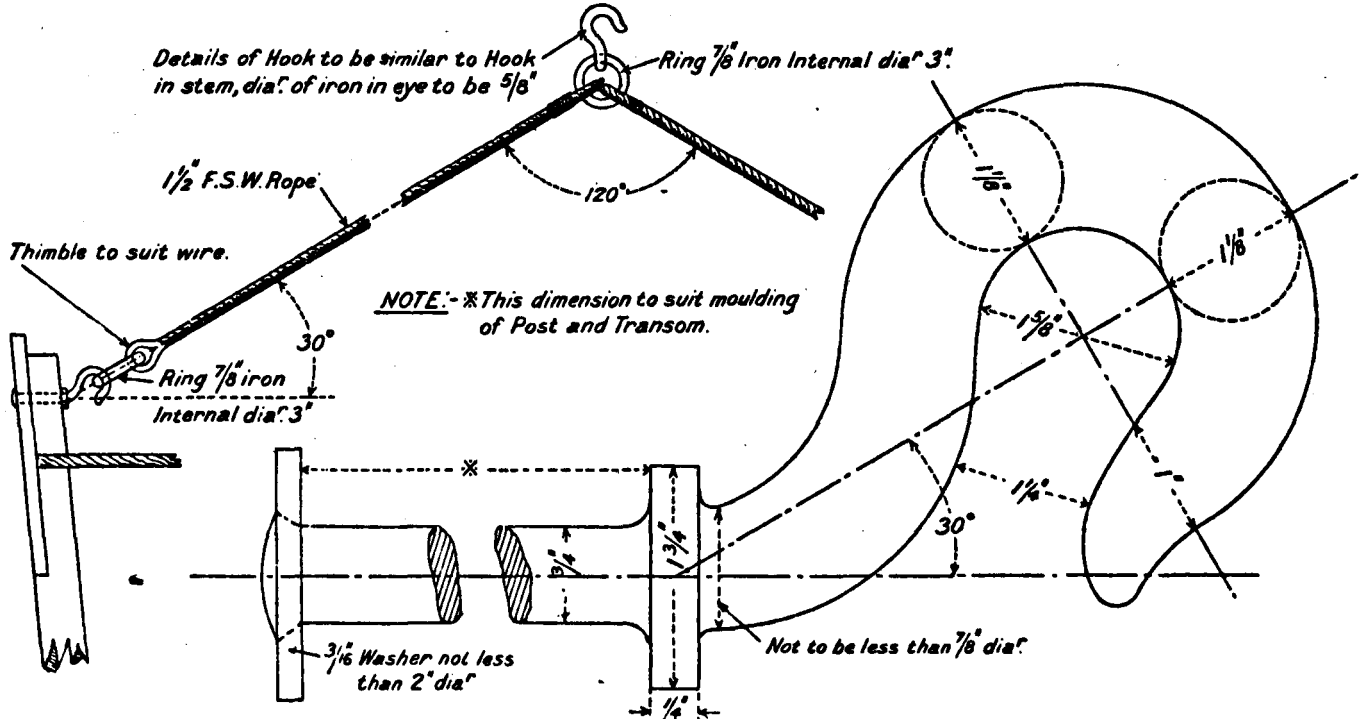


Wood Chocks to be fitted between
 Timbers in way of Securing Bolts



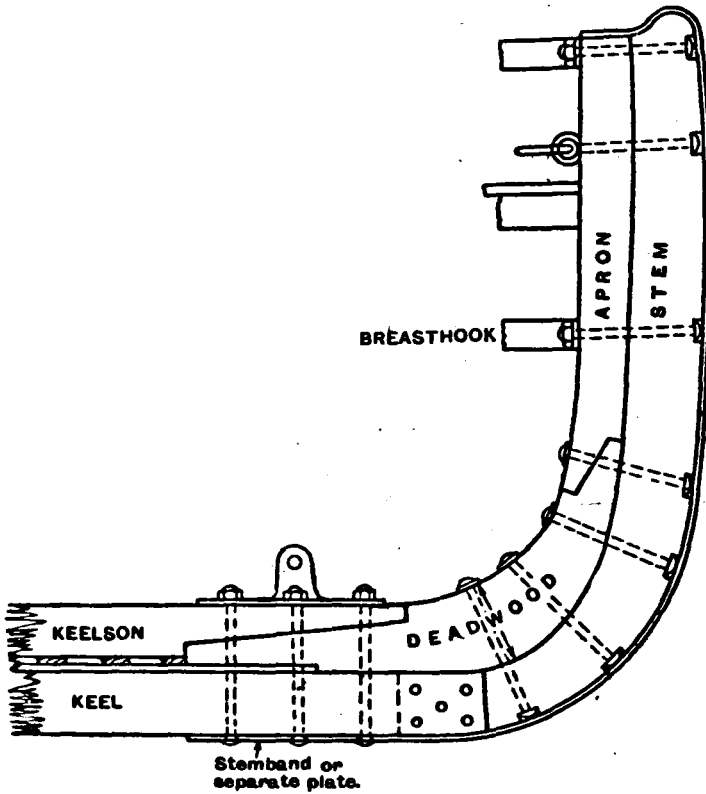
**ALTERNATIVE FORM OF KEEL PLATE
 FOR TYPE C**

APPENDIX D.(5).
LIFTING HOOKS FOR SQUARE STERNED BOATS.
16 FEET AND UNDER.



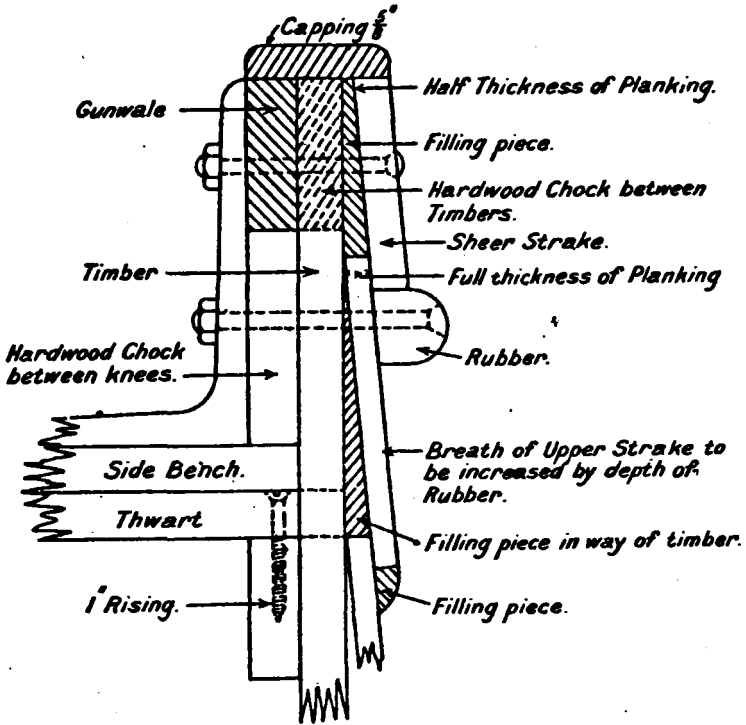
APPENDIX E (1)

ARRANGEMENT OF STEM, APRON, &c.

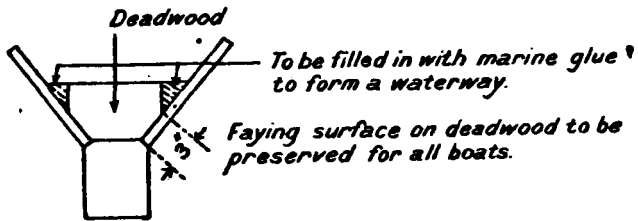


The moulding at throat to be not less than the depth of keel plus 1 inch.

APPENDIX E. (2).
SECTION THROUGH BOX GUNWALE.

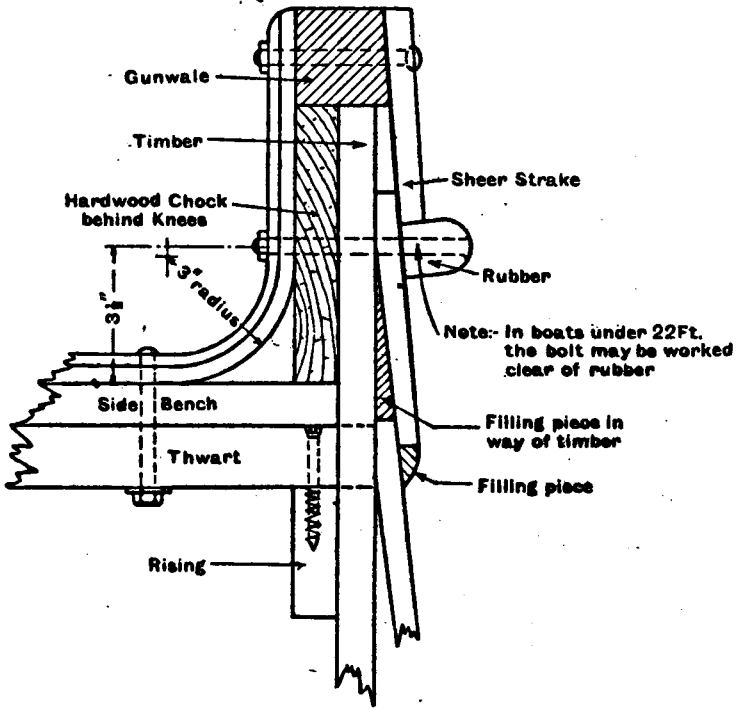


SECTION THROUGH DEADWOOD IN LARGE BOATS.

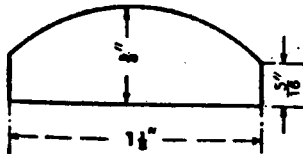


APPENDIX E (3)

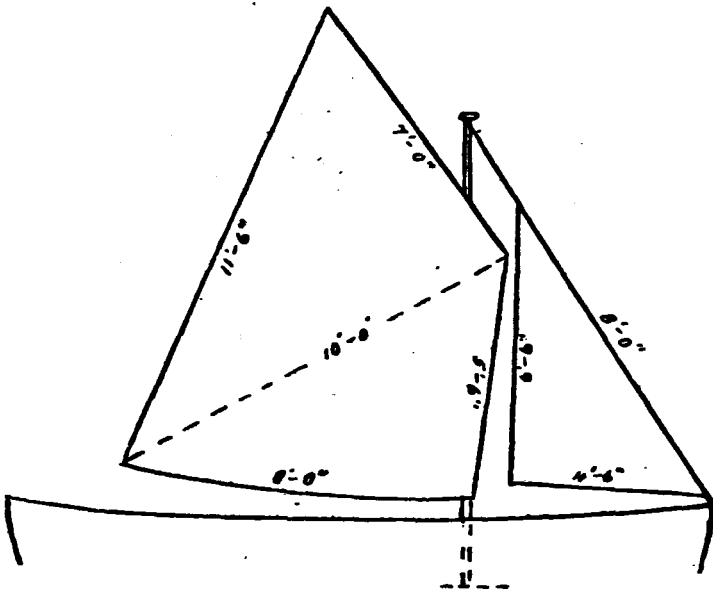
SECTION THROUGH GUNWALE SHOWING ALTERNATIVE KNEE OF CONVEX IRON.



SECTION OF CONVEX IRON



APPENDIX F

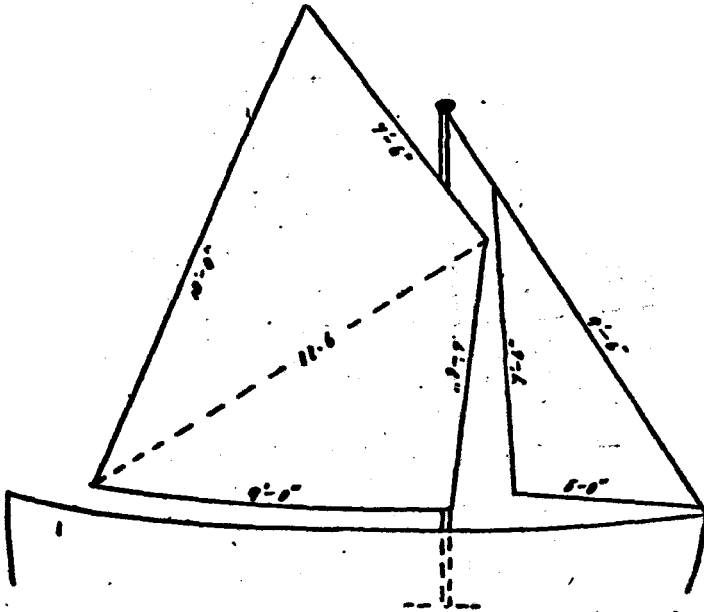


Jib, 15 sq. ft. ; lug sail, 58 sq. ft.

FIG. 1.
16 ft. boat.

NOTE.—The mast should be stepped between the first and second thwarts and properly supported.

APPENDIX F—cont.



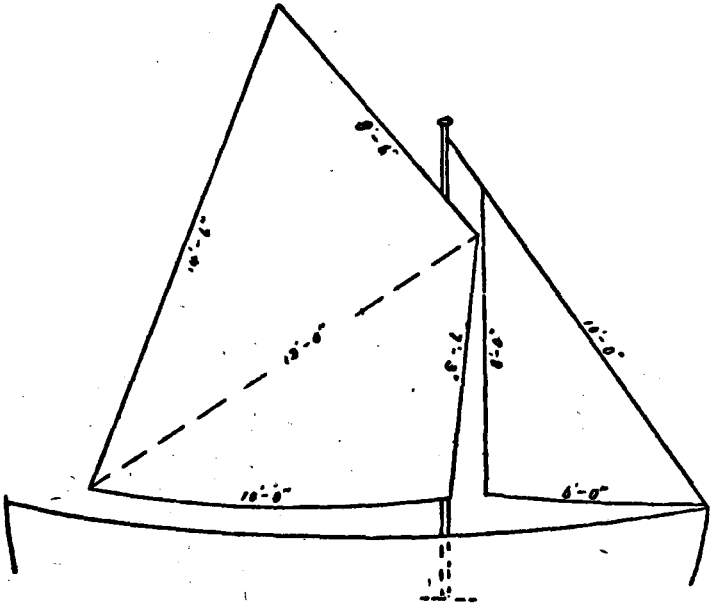
Jib, 18.6 sq. ft.; lug sail, 78 sq. ft.

FIG. 2.

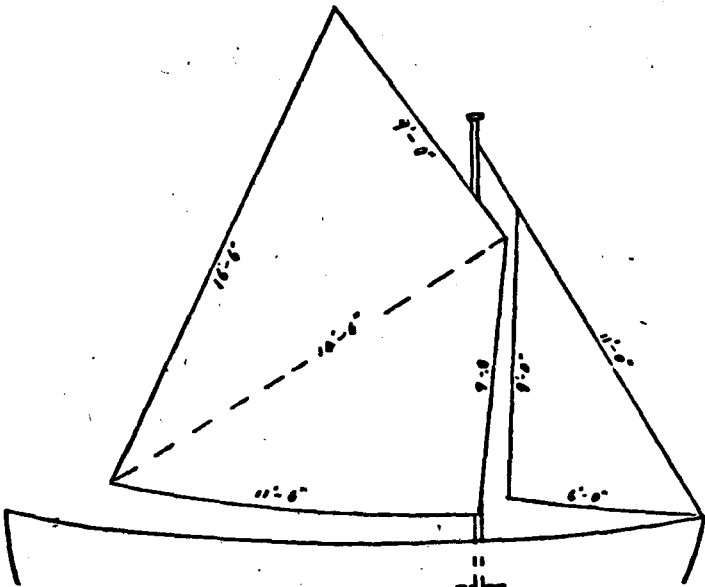
17 and 18 ft. boat.

† **Note.**—The mast should be stepped between the first and second thwarts and properly supported.

APPENDIX F—cont.

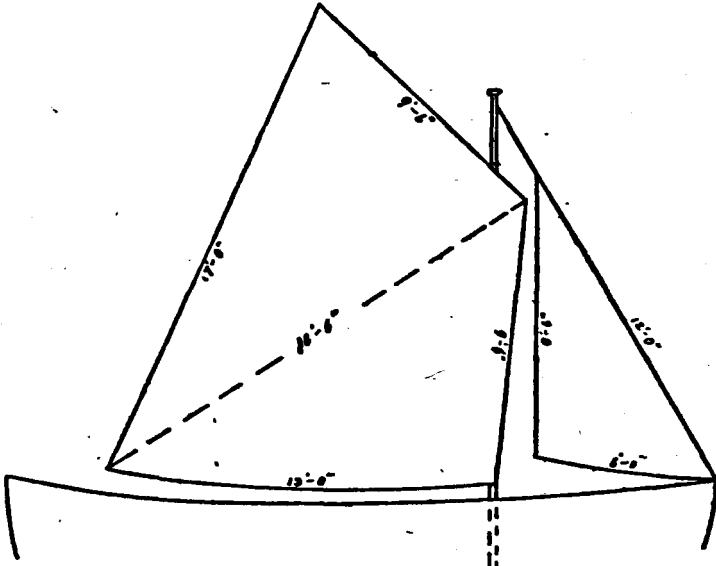


Jib, 24 sq. ft.; lug sail, 91 sq. ft.
 FIG. 3.
 19 and 20 ft. boat.

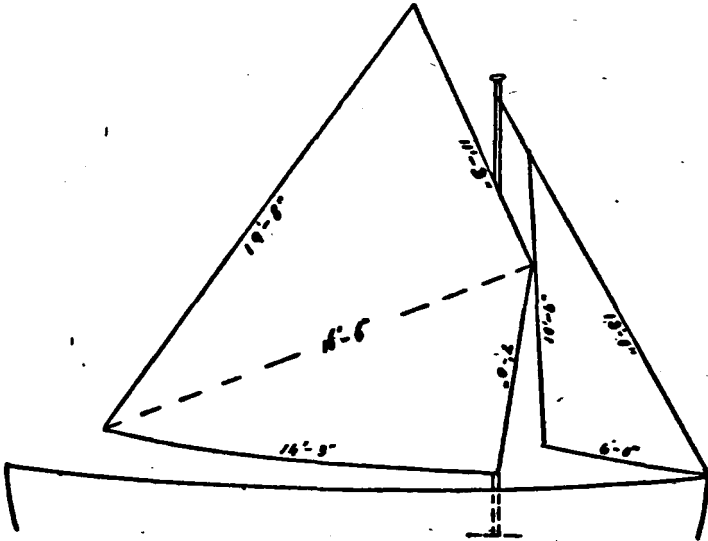


Jib, 27 sq. ft.; lug sail, 112 sq. feet.
 FIG. 4.
 21 and 22 ft. boat.

APPENDIX F—cont.

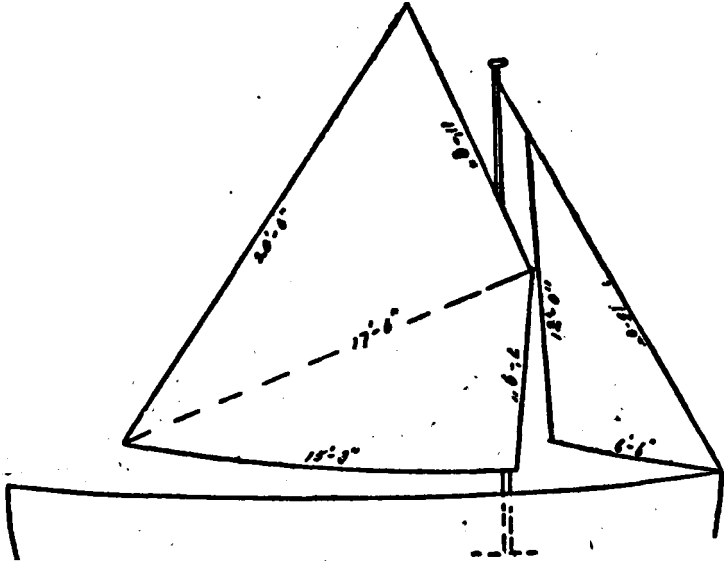


Jib, 28 sq. ft.; lug sail, 138 sq. ft.
 FIG. 5.
 23 and 24 ft. boat.



Jib, 30 sq. ft.; lug sail, 145 sq. ft.
 FIG. 6.
 25 and 26 ft. boat.

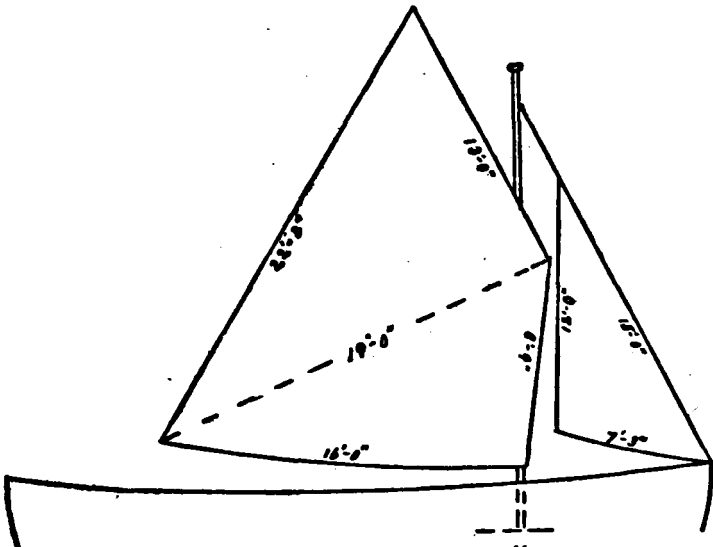
APPENDIX F—cont.



Jib, 34 sq. ft.; lug sail, 165 sq. ft.

FIG. 7.

27 and 28 ft. boat.



Jib, 38 sq. ft.; lug sail, 198 sq. ft.

FIG. 8.

29 and 30 ft. boat.

APPENDIX G

Sketches of lowering
bollards for attachment to
davits.

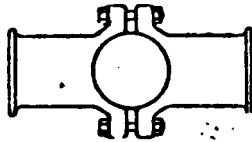
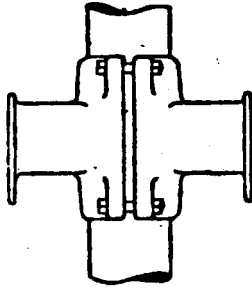


FIG. 1.

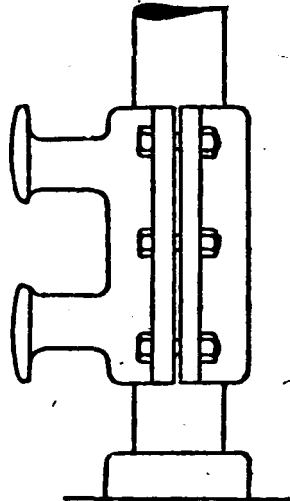
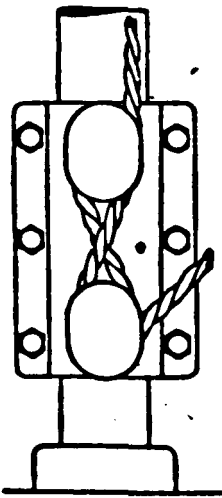


FIG. 2.

APPENDIX H

SPECIFICATION OF STANDARD LIFEJACKETS.

I.—SPECIFICATION OF STANDARD LIFEJACKET (КАПОК).

TYPE.—Circular overhead lifejacket for adult or child.

BUOYANCY.—To consist of not less than 24 *oss.* of the best quality Java or other approved kapok, well teased, evenly packed and free from foreign matter. The jacket must be capable of supporting at least 20 lbs. of iron after floating in fresh water for 24 hours with 16½ lbs. of iron attached.

MATERIAL.—

Cover.—To be of good quality grey cotton duck in accordance with paragraph 186 of these Instructions; the bands on the shoulders joining the front and back pockets must be 3-ply and 4-ply at the extremes of the armholes.

Tapes.—Two in number, to be of linen thread web 1½ inches wide, not less than 96 inches long, and capable of bearing a strain of 200 lbs. in accordance with the Manchester Chamber of Commerce test.

The tapes to be rove through a 2-inch hem encircling the jacket and to be sewn in the form of an oblong 3 inches long and across from corner to corner, the sewing to be at the middle length of each tape and through the tapes and both parts of the hem at the middle and bottom of each pair of pockets. The ends of the tapes to protrude front and back in a line with the outside corners of the pockets, and to have an overhand knot in each to prevent unreeving; the hem here to be strongly crossed-stitched to prevent the stitching of the hem from giving way.

Sewing.—To be with thread of not less quality than No. 25, the seams round the neck opening of the pockets to be flat. The ends of all machine stitching to be securely finished off.

NUMBER OF POCKETS.—One in front and one at the back.

EXTREME BLOCK DIMENSIONS WHEN COMPLETED:—

Front pocket, top 11 inches, bottom 16 inches	...	...	...
by 8½ inches by 4½ inches, containing	...	12	<i>oss.</i> kapok
Back pocket, top 11 inches, bottom 16 inches	...	...	...
by 8½ inches by 4½ inches, containing	...	12	„ „
Length, fully extended, 28½ inches.			
Breadth, 23 inches.			
Curve of pockets for neck, 5½ inches by 1½ inches deep.			
Outer circumference of hem encircling jacket, 102 inches.			
Depth of hem, 2 inches.			
Neck opening, when completed, 7½ inches by 7½ inches.			
Armholes of empty cover 20 inches by 3½ inches at shoulder,			
2 inches at bottom.			

WEIGHT OF JACKET.—

Weight of kapok, not less than	...	...	...	24	<i>oss.</i>
Approximate weight of covering and tapes made of	...	...	...	9½	„
material of the minimum standard	...	...	...
Approximate total weight	...	...	...	33½	„

MARKING.—

“Board of Trade Standard Lifejacket” in letters 1 inch deep on one side and maker’s name or trade mark in smaller lettering on the other side of jacket. All marking to be indelible.

GENERAL.—The material, workmanship, packing and marking to be good, sound and equal to the original sample approved.

ADJUSTMENT.—Place the jacket over the head and pass the arms through the armholes. The jacket will slip over the head more easily if the hollow shape of the back pocket is first placed against the neck and the jacket is then drawn down over the head. Tie a half knot with the tapes in front, draw them well tight, then complete the knot.

II.—SPECIFICATION OF STANDARD LIFEJACKET (CORK).

TYPE.—Circular overhead lifejacket for adult or child.

BUOYANCY.—To consist of pieces of good quality cleaned cork of not less than 10 cubic inches each and weighing not more than 12 lbs. per cubic foot, and to be capable of supporting 16½ lbs. of iron in fresh water for 24 hours.

MATERIAL.—

Cover.—To be of all linen Tecklenburg or cotton duck in accordance with paragraph 186 of these instructions. The material must be of 3-ply at the extremes of the armholes.

Tapes.—Two in number to be of linen thread web 1½ inches wide and not less than 96 inches long, and capable of bearing a strain of 200 lbs. in accordance with the Manchester Chamber of Commerce test.

The tapes to be rove through a 2-inch hem encircling the jacket, and to be sewn in the form of an oblong 3 inches long and across from corner to corner, the sewing to be at the middle-length of each tape and through the tapes and both parts of the hem, at the middle and bottom of each pair of pockets. The ends of the tapes to protrude front and back in a line with the outside corners of the pockets and to have an overhand knot in each to prevent unreeving; the hem here to be strongly cross-stitched to prevent the stitching of the hem from giving way.

Sewing.—The exterior ends of the pockets and hem in line with same to be sewn with double linen thread which must be at least as strong as No. 25a five-cord Whittemore cord.

All other sewing is to be made with linen thread of not less quality than No. 25.

The ends of all machine stitching to be securely finished off.

No. of Pockets.—Two in front and two at the back.

EXTREME BLOCK DIMENSIONS WHEN COMPLETED.—

Each pocket 7½ inches by 5 inches by 4½ inches with a curve 1 inch deep on the neck side.

Pockets to be so sewn that each is 9½ inches wide before filling.

All corners and edges of the cork to be well rounded off, especially at both inside and outside at the neck opening.

Length fully extended 30 inches.

Breadth “ 23 “

Outer circumference of hem encircling jacket 102 inches.
 Depth of hem 2 inches.
 Neck opening of completed jacket $8\frac{1}{2}$ inches by 5 inches.
 Armholes of empty cover, each 20 by 2 inches at ends,
 5 inches at shoulder.

WEIGHT OF JACKET.

	<i>lbs. ozs.</i>
Weight of cork not to exceed	4 4
Approximate weight of linen covering and tapes made of material of the minimum standard ...	0 14 $\frac{1}{2}$
Approximate total weight when dry ...	5 2 $\frac{1}{2}$

MARKING.—

“Board of Trade Standard Lifejacket” in letters 1 inch deep on one side and maker’s name or trade mark in smaller lettering on the other side of jacket.

All marking to be indelible.

GENERAL.—The material, workmanship, packing, and marking to be good, sound, and equal to the original sample approved.

ADJUSTMENT.—Place the jacket over the head and pass the arms through the armholes. The jacket will slip over the head more easily if the hollow shape of the back pocket is first placed against the neck and the jacket is then drawn down over the head. Tie a half knot with the tapes in front, draw them well tight, then complete the knot.

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