

SECTION THROUGH BOTTOM CORNER OF CABINET.

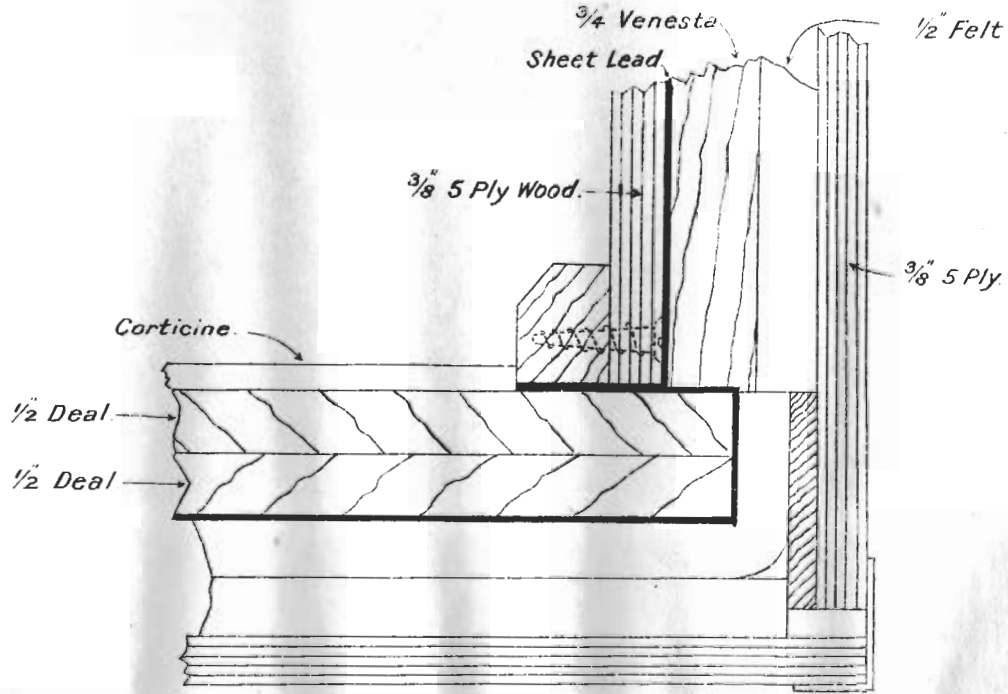


Fig. 7.

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CHAPTER IV. SILENT CABINET.

The object of the cabinet is to allow very faint telephone messages to be received without interference from outside noises and vibration.

The exact size and shape of the cabinet will vary according to the space available for it in the boat.

A rectangular cabinet is provided where possible.

The cabinet is of special design, and although comparatively light as compared to those of usual service design, it is nevertheless sufficiently sound-proof.

Each cabinet consists essentially of two carcasses, one inside the other, the inner being completely separated from the outer by means of soft felt packing.

Working from inside outwards, the inner carcass consists of one thickness of $\frac{3}{8}$ of an inch 5-ply wood, a layer of lead lining, and finally one thickness of $\frac{3}{4}$ of an inch Venesta double mattress sound-proof board. (See Fig. 7.)

The outer carcass consists of one thickness of $\frac{3}{8}$ of an inch 5 ply wood.

The inner carcass is not built up all in one piece. The inner thickness of $\frac{3}{8}$ of an inch 5-ply wood is formed into a skeleton cabinet first, then the remaining thickness of the walls (including the Venesta boards, felt, and outer 5-ply) are held together by means of canvas round the edges, and each wall is secured to the skeleton framework in one piece.

All edges and joints are then strengthened by means of metal bindings.

Method of Building up.—The cabinet is designed with a view to its portability, as it will not be possible to build it in its

final position owing to the restricted space. Further, it will in many cases be impossible to ship it in one piece, built up and complete.

When building up, first the floor of the cabinet should be assembled, and the lead lining inserted beneath the floor boards. Then the inner thickness of 5-ply should be built into a complete skeleton cabinet ready to take the four walls, each side being covered with lead lining **before being placed** in position. When building up the remainder of each wall, first the outer thickness of 5-ply should be placed flat, and the canvas strip secured round the edges. Then the felt should be placed on top, then the Venesta boards placed on top of that, and finally the canvas strips which are secured round the sides of the outer 5-ply should be **stretched taut over the Venesta boards** and secured to it by means of tacks.

The walls are now ready for screwing into position, which is done by means of screws from the inside of the cabinet.

The top is built up in place in a similar manner. The glass for the various windows is fitted after the cabinet is built up.

Ventilation.—The air for ventilation is led through long passages under the seat of the operator. These passages have several "dead sides" and many sharp turns; the air is thus well baffled and sound thereby kept out. The lower part of the space underneath the seat of the operator is used in a similar manner for the ventilation exhaust, and the air is finally blown out through an aperture at the bottom of the cabinet. A wood trunk is fitted in one corner of the cabinet to carry the exhaust air down to this passage. The supply aperture in the outer carcase is fitted with a sheet steel trunk running up the outside of the cabinet and terminating in a 3½-inch hose connection.

The seat and ventilation passages are built up in one box and fitted as a whole into the cabinet.

The construction of the door, with the lead and felt round the edges, ensures that good compression takes place when the door is closed. The arrangements are such as to obtain not only a sound-proof joint, but also a good electrical connection all round between the lead sheet on the door and that on the cabinet. The door is heavy with two brass butt hinges, and suitable corner plates are fitted to strengthen the frame in the wake of these hinges.

A forged steel lever handle is fitted to the door, and is so arranged that when the door is closed and the handle pressed up, the door is drawn tightly into the door frame.
