SECTION THROUGH DECK TUBE.

SCALE 1/16.

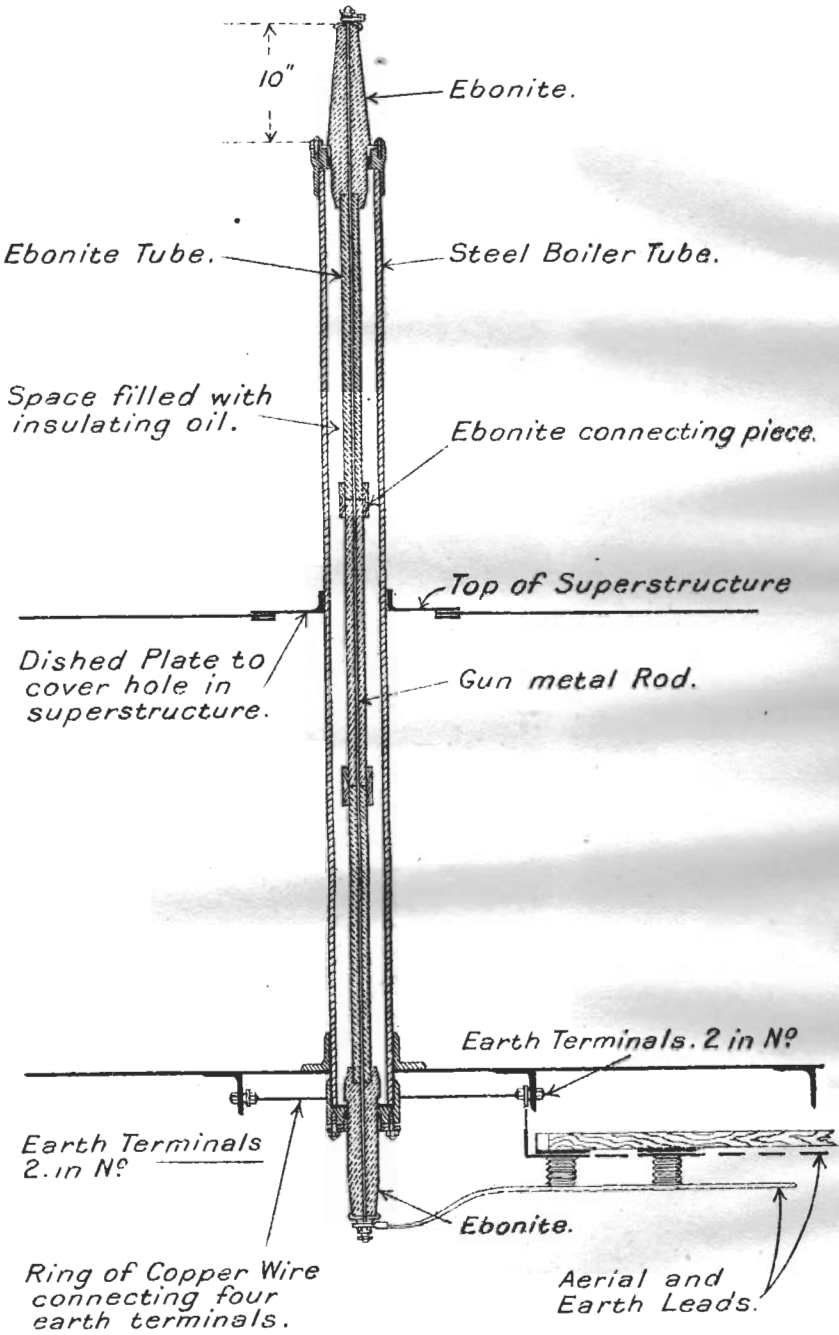

Fig. 11.

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Malby & Sons, Lith.

Deck Tube (see *Fig.* 11).—The connection between the aerial and transmitting instruments is maintained by means of a $\frac{3}{8}$-inch diameter gunmetal rod passing down a steel tube filled with insulating oil, through the hull of the submarine, and insulated from it by means of a long ebonite tube.

Where possible, the deck tube should be fitted within the superstructure, and should stand 3 feet above it. It should admit of a clear lead for the aerial feeders being obtained and should be affected by as little wash as possible when the submarine is on the surface. The positions of the cabinet and deck tube depend upon each other, and neither can be decided without reference to the other; the cabinet should not be at a greater distance from the bottom of the deck tube than 6 feet.

Aerial and Earth Terminals.—The terminals at the top and bottom of the deck tube and also the four earth terminals must be carefully fitted in order to ensure permanently good low resistance electrical connections for the high-frequency currents, as a very slight resistance will impede the very faint receiving currents which have to pass along this path. A sharp biting contact is the best for oscillatory currents, and this principle has been embodied in the design of the terminals.

The earth terminals are permanently set up by the dockyard and then coated with anti-sulphuric enamel, but the aerial connection is only made when required. The aerial feeders should be well sweated to the gunmetal cable eye of the aerial terminal.