TYPE 709

Date of design:- 1929.

This installation consists of three Mark V Hydrophone Plates (1)(2)(3)(see page XA2) - two bow and one stern plate - a switchboard Plate Hydrophone A/S1 (figures b. and c.) fitted for controlling the plates, and a Board Charge Discharge A/S2 (figure d.) for two batteries each consisting of 2 pattern 1551B cells (see page NA2). The 4 volt supply from the battery is taken through the Charging Board (figure d.) to the Switchboard (figures b. and c.) where it passes through a S.P. switch (4) to a potentiometer (5) whence any voltage from 1 to 4 volts can be taken to supply the microphone circuits. Each microphone circuit consists of the primary of its own transformer (6)(7) or (8), and a 200 ohm resistance (9)(10)(11) for adjusting each hydrophone to equal sensitivity. The telephones (12) are connected, through a 2 mfd. condenser (24), to the secondary windings of the transformers (6)(7) or (8). Switches (21)(22)(23) are provided in the telephone circuits to enable the operator to listen on any hydrophone he wishes. A milliammeter (13) and push switches (14)(15) or (16) are connected in parallel with the positive lead so that the current through any microphone can be read off when the appropriate switch is closed.

The batteries are charged from the 220 volt mains through a 375 ohm resistance (17), an ammeter (18) and the charging switches (19)(20). A voltmeter (21) is fitted to show the voltage on discharge. As there is no reverse current switch in the charging circuit care must be taken to see that the switches (19)(20) are not in the "charge" position at any time when the supply fails or the batteries will discharge through the charging resistance.

Remote control leads are connected to enable the captain to listen on the hydrophones. He also has communication with the cabinet by electro-megaphone.

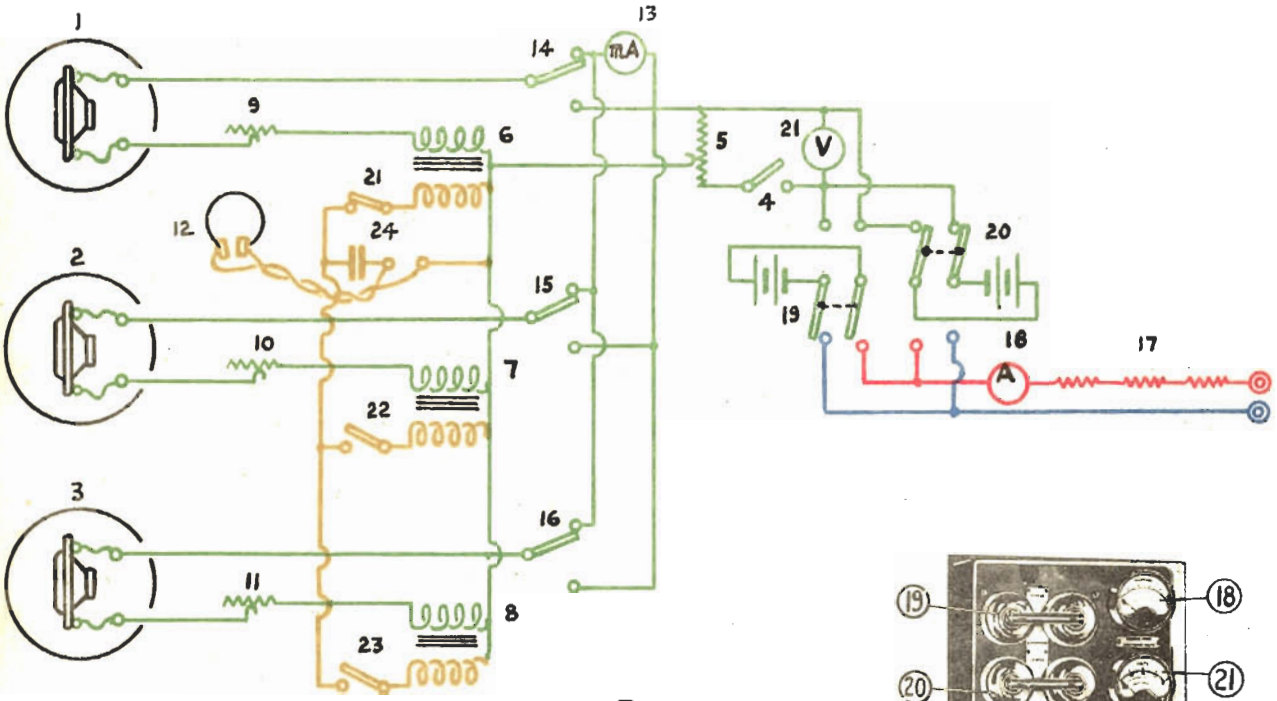

FIG. a

FIG d.

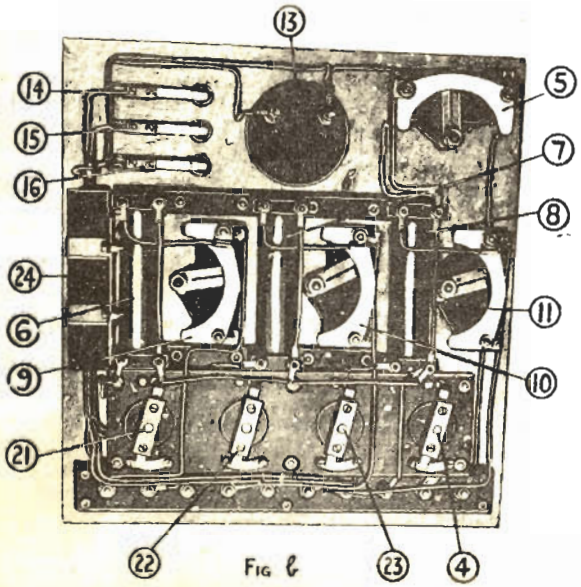

FIG b

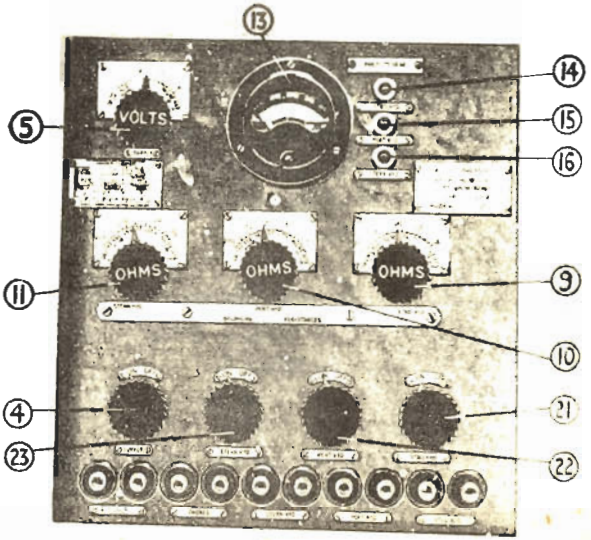

FIG C.