

Date of design:- 1916.

Frequency:- 540 cycles/sec.

This is an old Sound Telegraphy set employing as a rule two Fessenden type oscillators (1)(2)(see page UAB). A motor-alternator with hand starter (18) and motor and alternator field regulators (17)(16) and D.C. and A.C. switchboards are fitted. A.C. output 240 volts at 12 amps.

D.C. supply is taken from the ring mains to a D.P. main switch (19) on the D.C. switchboard. Across the poles of this main switch are fitted a pair of auxiliary contacts which make just before the main switch breaks placing a non-inductive resistance (20), the kick coil, in parallel with the D.C. field coils of the oscillators (28)(29). From the main switch the D.C. passes through an ammeter (25) and then is distributed to the two oscillators, each supply having its own pair of fuses. From the live side of the main switch (19), a pair of leads are taken through a D.P. switch (21) and fuses (22) to the morse key (23) and bobbin of the magnetic key (10), a condenser (24) being placed across the contacts of the morse key.

D.C. supply for the motor alternator (15) is taken direct from the ring mains via a hand starter (18) fitted with no-volt and overload coils.

A.C. output is taken, ammeter (11), voltmeter (12), and frequency meter (13) being fitted, the supply to the two latter being controlled by a single pole switch (14), to the two send-receive switches (5)(6) in the silent cabinet, the magnetic key (10) forming a break in one of these leads. When no back shunt circuit is fitted the signalling key is connected in one lead of the A.C. circuit and there is no means of short circuiting the hydrophone telephones. From the centre of the switches A.C. supply is distributed to the A.C. coils (30)(31) of the oscillators (1)(2) each supply being taken through its own pair of fuses (3)(4). In order to keep the alternator frequency as steady as possible a back shunt circuit consisting of a resistance (9), inductance (9) and the D.P. switch (7) is connected between the back contact of the magnetic key and the dead side of the fuses (3)(4) in the oscillator leads. A second contact of the magnetic key short circuits or shunts the hydrophone telephones when the key (23) is pressed, otherwise the noise would be deafening. The resistance (32) can be adjusted so that own transmission may be read. When the send-receive switches (5)(6) are put to receive the oscillators are connected direct to special low resistance telephones (33)(34) for oscillator reception. When receiving, the switch (7) in the back shunt circuit should be broken.

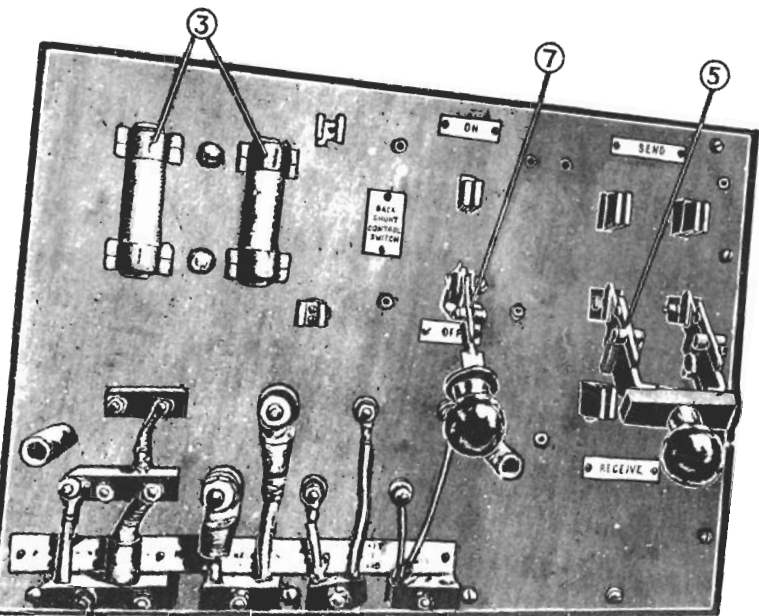


Fig. 6.

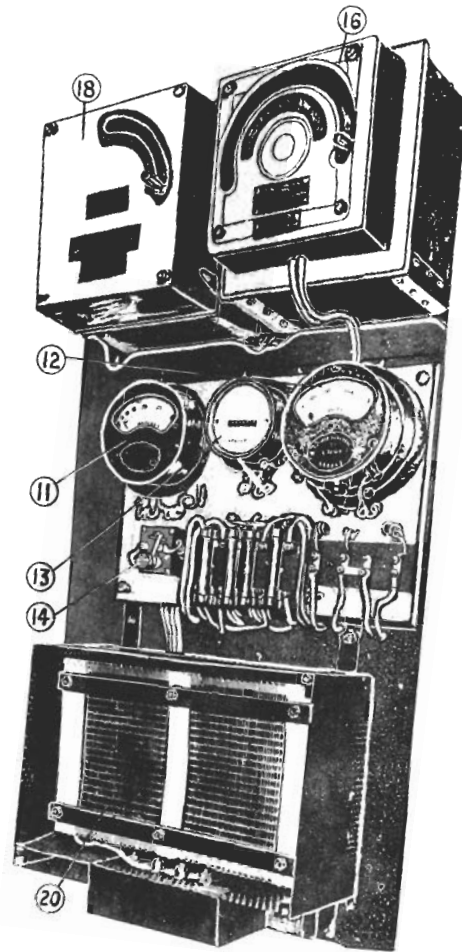


Fig. 7.

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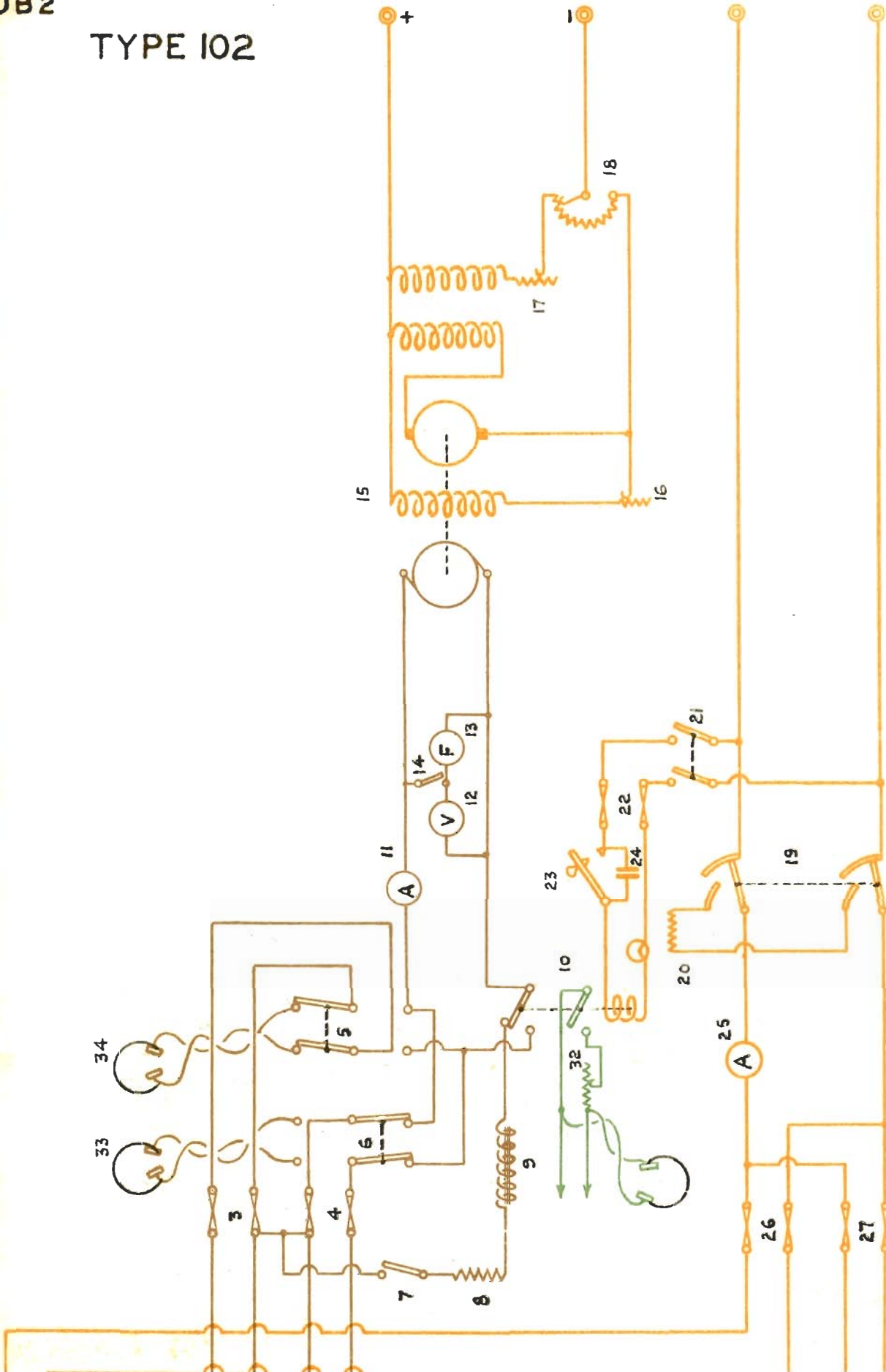


FIG. 1

