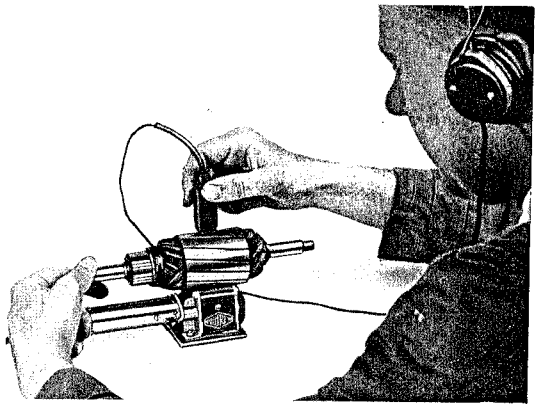

Fig. 15

3. An internal ground occurs when the armature core makes contact with the windings or when carbon dust enters the windings. The test is made using a 40 volt source and 40 volt test lamp holding the test prods on the commutator and armature core. The test lamp should not light.

4. If the commutator is out of round, burned, or scored, it should be turned and reconditioned. Such damage can only be properly corrected by turning and polishing.

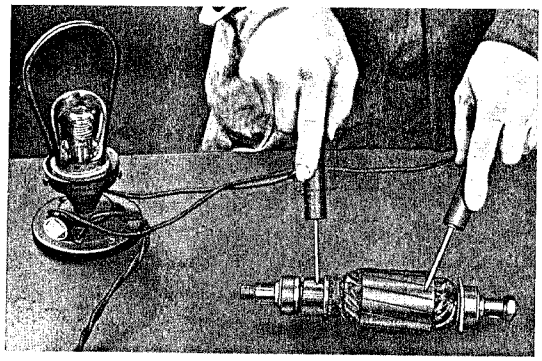

Fig. 16

The insulation between the segments should be cut down 0.3 to 0.5 mm (.012 to .020 in.) below commutator surface using a commutator saw.

Testing Field Coils

11 LI

Test field coils for open circuits, short circuits, and grounds.

1. Test each field coil separately for open circuits by connecting the coil in series with a 6 volt test lamp and a 6 volt battery. If the test lamp does not light the field coil is faulty.

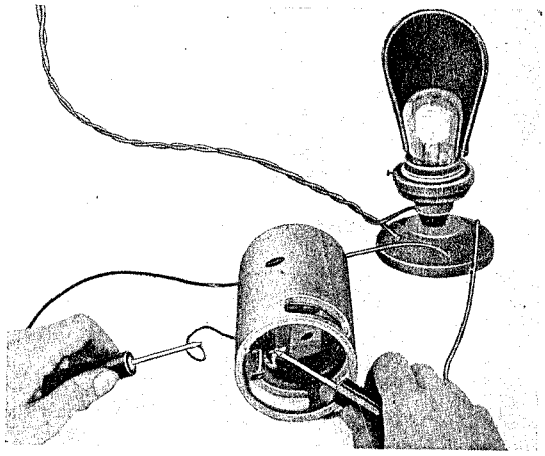

Fig. 17

2. Test each field coil for short circuity by connecting an ohmmeter to the ends of the coil and comparing the readings to the standard values (page 85). If an ohmmeter is not available, an ammeter and 6 volt battery may be connected in series to each coil to compare the current flow. If the current flow of the coils differs by more than 5 amp. the coil with the higher reading is faulty.
3. Test for grounds while field coils are installed in the generator housing by connecting a 40 volt test lamp (using 40 volt source) connecting one prod to the field winding connector and the other to the generator housing. The lamp should not light.

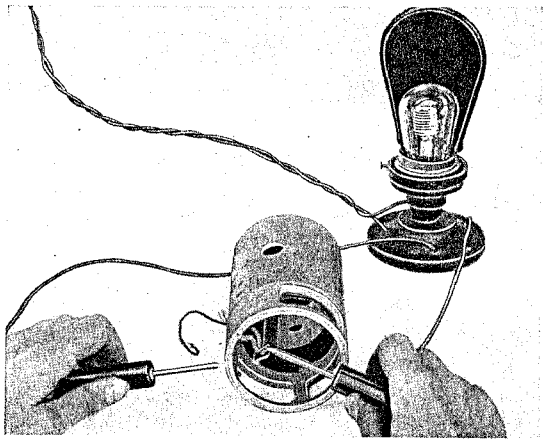

Fig. 18

4. Test the assembled field coils for continuity and solid connections in the housing (use 6 volt test lamp).