I. L. 2637
Filing No. 47-000

Westinghouse

Primary Relay for Step Voltage Regulators

INSTRUCTIONS

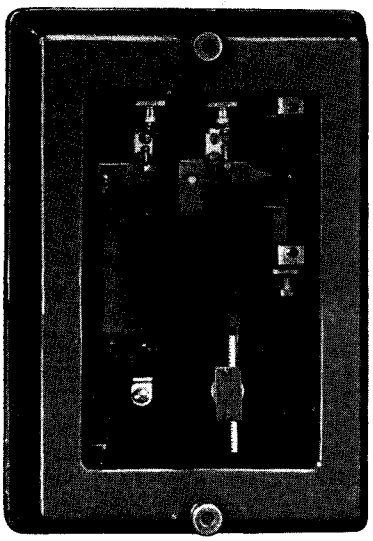

FIG. 1—PRIMARY RELAY

The primary relay consists of two pairs of contacts, two compounding coils, and an operating solenoid, the main operating solenoid being sensitive to variations in the voltage impressed on it. The spring tension on the balance arm is adjusted so that at a particular voltage the solenoid will hold this arm in the horizontal position. If the voltage impressed on the solenoid falls, the solenoid end of the balance arm will fall and one set of the relay contacts will close. If the voltage impressed on the solenoid rises, the solenoid end of the balance arm will be raised and the other relay contacts will close.

Compounding coils are provided so that when a change in voltage causes either pair of contacts to close, the compounding coils are energized, thus making a firm contact and holding the contacts closed until the impressed voltage has returned to nearly the value for which the spring tension was adjusted.

Adjusting screws provided on the main contacts and on the compounding coils make it possible to change the limits within which the relay will operate. A self-locking micrometer adjustment makes a quick and convenient method of changing the spring tension on the balance arm to set the relay for different voltages. The standard relay may be adjusted to operate at voltages from 90 to 140 volts (115 volts normal).

The primary relay used on Step Voltage Regulators is enclosed in a metal case with a dust-proof cover. A glass front allows ready inspection of the operating parts.

Primary Relay for Use with Compensator

When the primary relay is to be used with a line drop compensator or when it is used without a compensator but on a type of regulator which normally has a compensator, the main operating coil and the corresponding coils are wound for lower voltages than normal and series resistors are used with them. If a compensator is used, these resistances are mounted in the compensator case; but if a compensator is not used, these resistances are mounted in a case which is mounted on the control panel in the space normally used for the compensator.

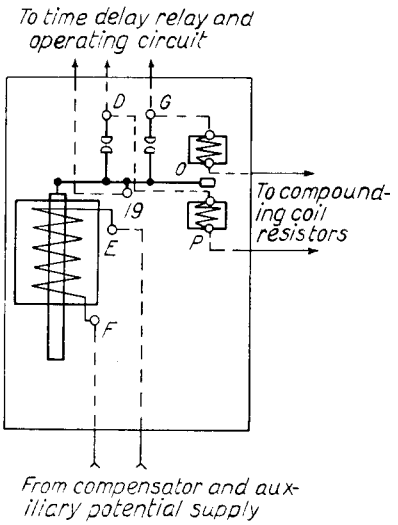

FIG. 2—SCHEMATIC DIAGRAM OF PRIMARY RELAY

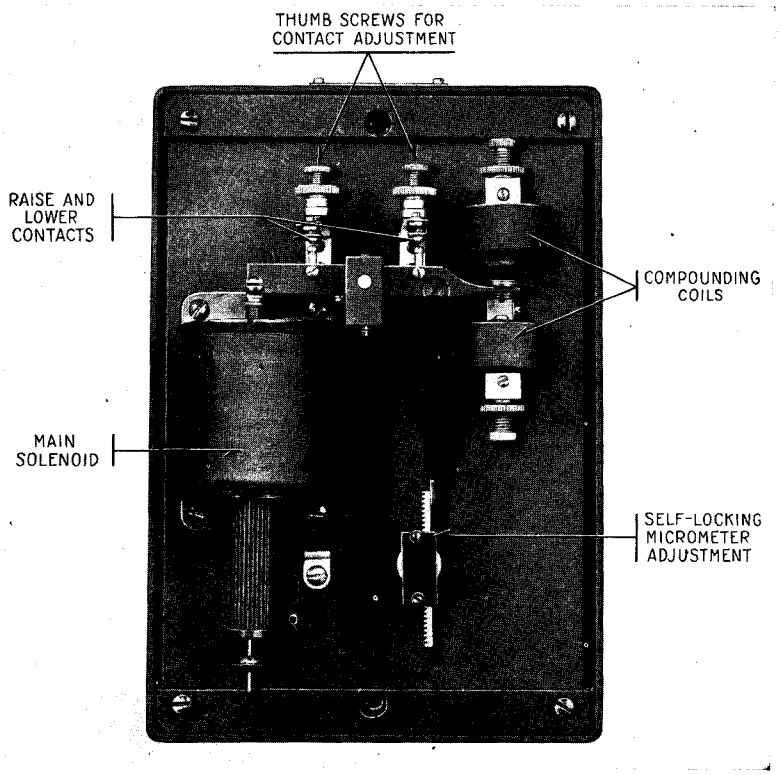

FIG. 3—PRIMARY RELAY WITH COVER REMOVED

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