Herbrand

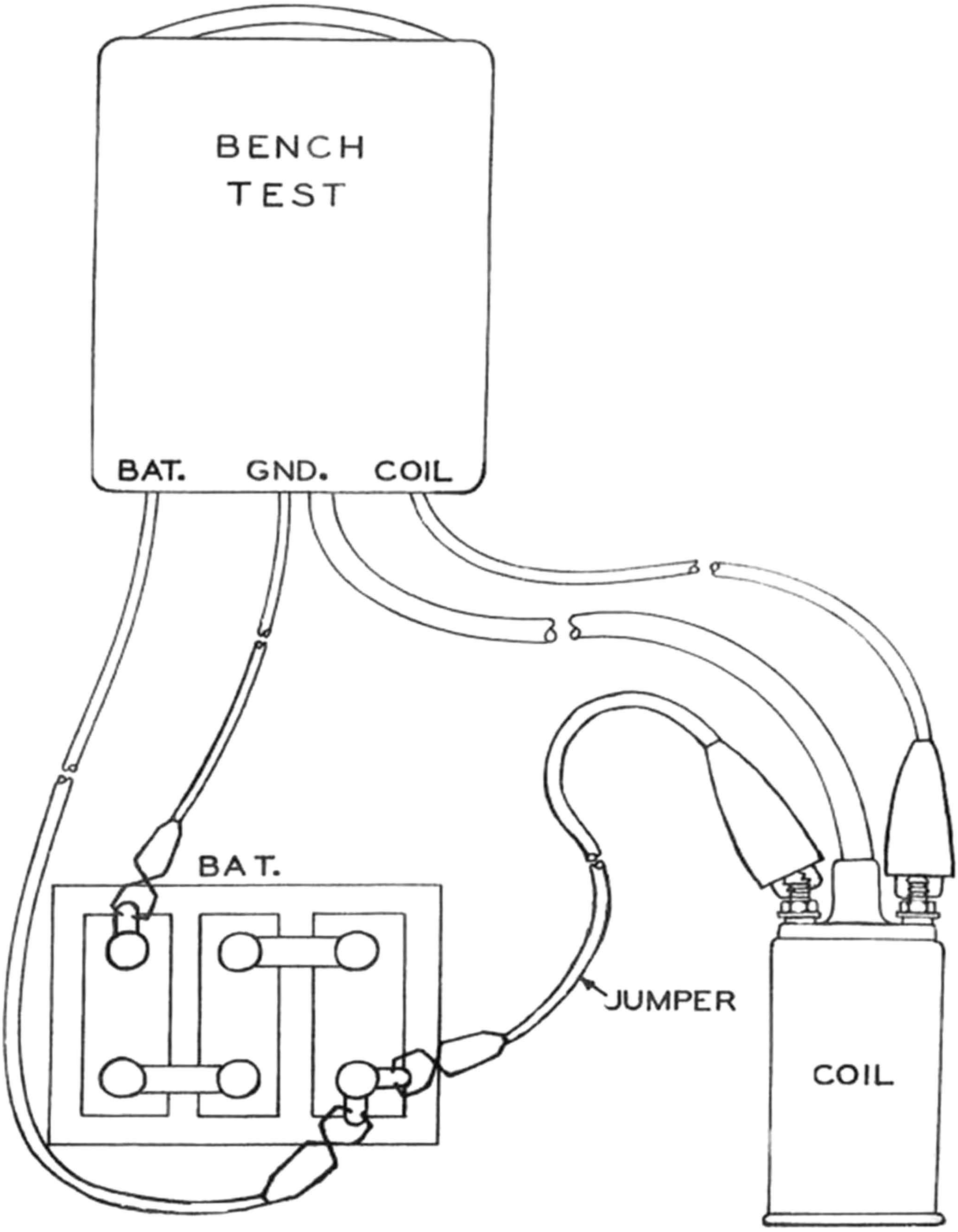
ELECTRICAL TESTING EQUIPMENT

FOR 6, 12, AND 24-VOLT SYSTEMS

INSTRUCTIONS
for
HT-660 COIL TESTER

HERBRAND EQUIPMENT SALES

FREMONT, OHIO


BENCH
TEST
BAT.
GND.
COIL
BAT.
JUMPER
COIL

BENCH TEST OF SPARK COIL AND CONDENSER

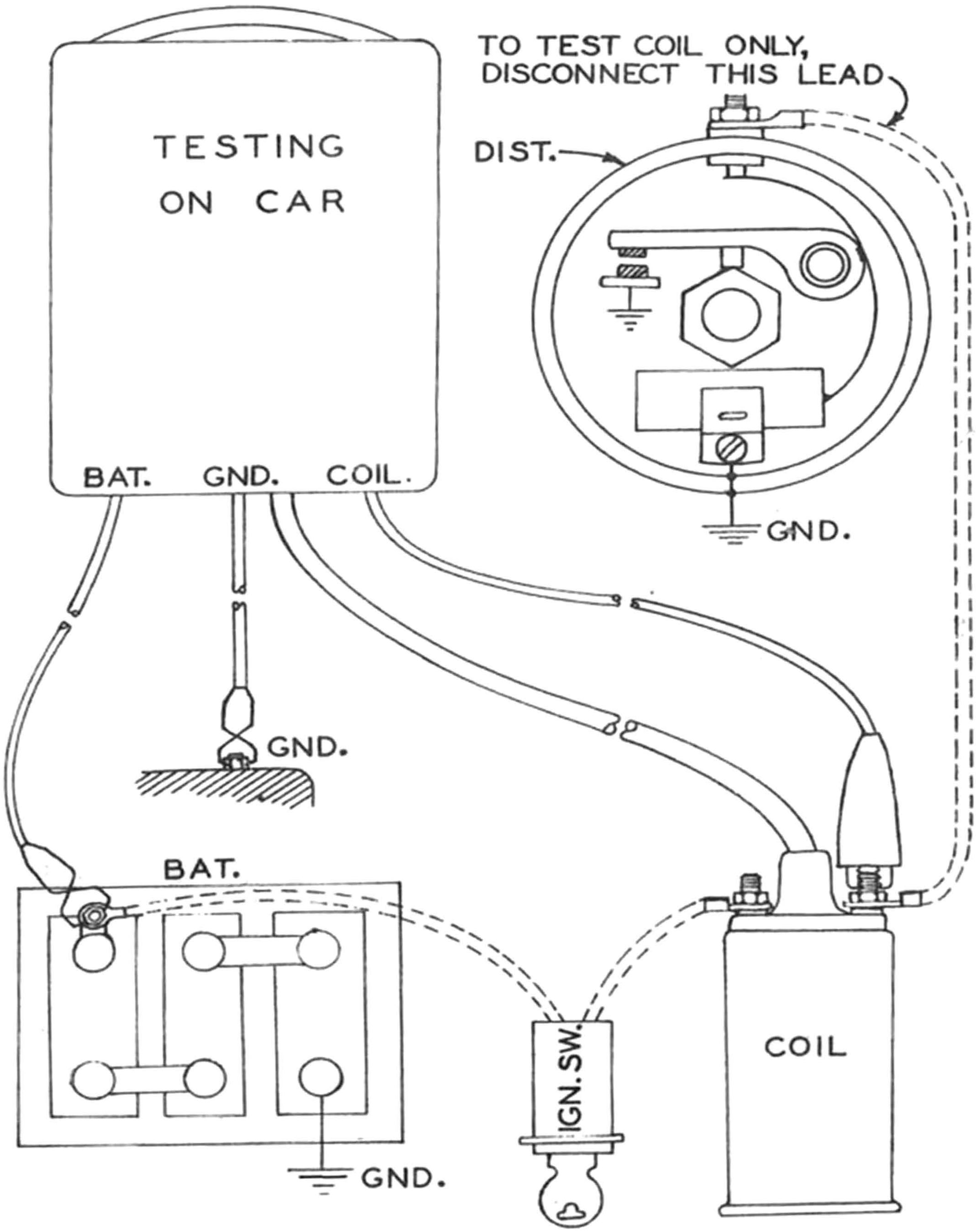
1. Use fully charged storage battery having same voltage as coil rating.
2. Turn "Volts" switch to proper voltage.
3. Turn "Test" switch to "Coil."
4. Connect "GND" lead to one side of battery. (Either side.)
5. Insert high tension lead of tester into coil.
6. Connect "COIL" lead to primary terminal of coil. (Either terminal.)
7. Connect jumper (which is furnished) between other primary terminal of coil and other terminal of battery. (Bare clip to battery.)
8. Energize tester by connecting "BAT" lead to bare test clip of the jumper.
9. Grasp insulated handle of indicator and rotate pointer to the maximum clockwise position that will allow *steady* sparks to jump from the "hot" center electrode.
10. Read coil strength at pointer position on dial.
11. Disconnect "BAT" wire to stop sparks.

NOTE: Any coil designed for use with an external resistor, should be tested with this same resistor, or one that is equal, connected in series with the primary of the coil.

12. Even more precise evaluation of coil strength can be obtained by the method of direct comparison. To do this the user substitutes a coil of known quality (which he keeps for this purpose) for the coil being tested, and uses the graduated numbers from 0 to 100 to compare their relative strengths. This method cancels out the variable factors such as the condition of the battery being used. With this method the words on the arc describing coil quality will be ignored.

CAUTION: Touching the electrode, which is inside the indicator ring, would produce a painful shock. If the battery used is not actually connected to a ground, you might feel a slight tingle when touching the indicator ring or the fuse clips, which should not be cause for alarm. This can be avoided by holding the insulated handle when turning the indicator ring.

13. Ignition condensers can be tested by connecting them to the two lugs at the lower end of the tester. Use short leads furnished. Follow instructions 1 to 10, then turn "Test" switch to "Cond." If coil strength is appreciably weakened by turning switch to "Cond", it indicates that the condenser being tested is poor.
14. For "HEAT" test, *if desired,* connect as above, turn "Test" switch to "Heat" for 10 minutes or until coil feels quite warm, then turn "Test" switch to "Coil" and determine coil strength as before. (All coils are weaker when hot.)


TESTING
ON CAR
BAT.
GND.
COIL.
TO TEST COIL ONLY,
DISCONNECT THIS LEAD
DIST.
GND.
GND.
BAT.
GND.
IGN. SW.
COIL

SPARK COIL AND CONDENSER TEST ON CAR

1. Disconnect either end of wire which runs between the primary post of distributor and the primary terminal of the coil.

2. Turn "Volt" switch to proper voltage. (Same as car battery.)

3. Turn "Test" switch to "Coil."

4. Connect "GND" lead to a clean ground on the car.

5. Insert high tension lead of tester into coil.

6. Connect "COIL" lead to the primary terminal of the coil, the one which you have just disconnected from the primary post of the distributor.

7. Turn the car ignition switch on.

8. Energize tester by connecting "BAT" lead to the battery terminal of the voltage regulator, or wherever it is convenient to get a direct connection to the hot side of the battery.

9. Grasp insulated handle of indicator and rotate pointer to the maximum clockwise position that will allow *steady* sparks to jump from the hot center electrode.

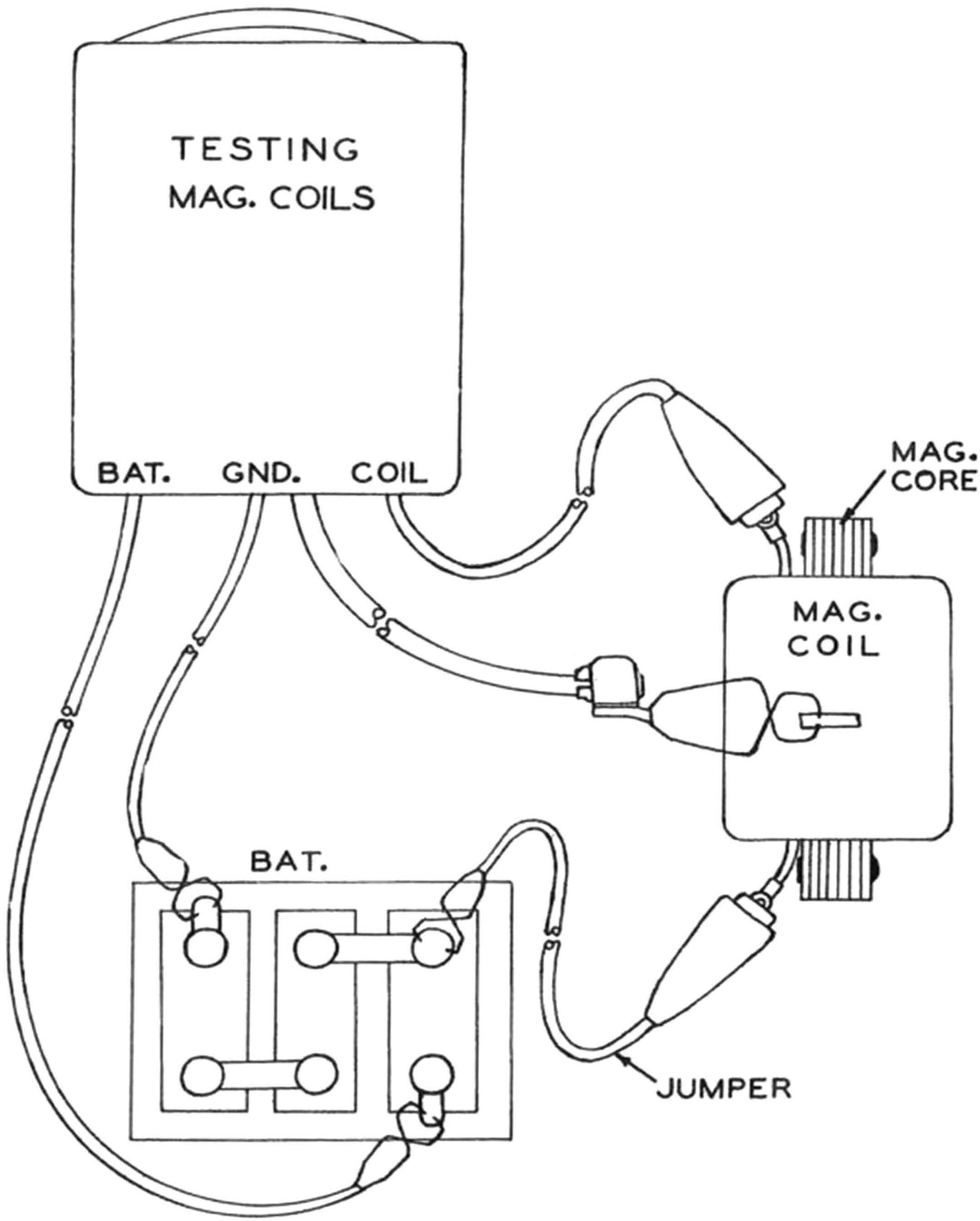
10. Read coil strength at pointer position on dial.

11. Disconnect "BAT" lead to stop sparks.

12. To test the condenser, which is in the car distributor, be sure that the distributor points are open by placing a piece of insulating material between the breaker points if necessary. Now reconnect the primary wire between the primary post of the distributor and the primary terminal of the coil, leaving the "Coil" lead of the tester also connected to the same primary terminal of the coil. Turn "Test" switch on tester to "Cond." Reconnect the battery lead from the tester as before. If coil strength is appreciably weaker than it was during the original coil test, it indicates that the condenser is poor.

13. If the coil is cold, and the "Heat" test is desired, the coil can be heated by turning the "Test" switch to "Heat" for 10 minutes or until coil feels quite warm, then test coil as before. (All coils are weaker when hot.)

14. Turn ignition switch off when tests are completed.


TESTING
MAG. COILS
BAT.
GND.
COIL
MAG.
CORE
MAG.
COIL
BAT.
JUMPER

TESTING MAGNETO COILS AND CONDENSERS

This instrument can be used for testing all kinds of magneto coils. For best results, compare a magneto coil of known quality, and of the same type, with the magneto coil being tested. However, once the reading has been established for a certain type of magneto coil, other magneto coils of this same type can be tested without the need for a "comparison" magneto coil. The words "Good," "Bad," etc. on the tester describing coil strength, accurately apply to spark coils only. Use the numerical scale for comparison purposes when testing magneto coils. Before testing the magneto coil, it must be disassociated from the permanent magnet, and disconnected from the breaker points and condenser. The laminated iron core must be left inside the magneto coil. A 6-volt storage battery will be needed. To test the magneto coil, proceed as follows:

1. Connect "GND" lead of the tester to either terminal post of the battery.
2. Connect "COIL" lead of the tester to one of the primary wires coming out of the magneto coil.
3. Connect a jumper from the other primary wire of the magneto coil to a 4-volt tap (2 cells) on the storage battery.
4. Arrange the high tension lead of the tester so as to make contact with the high tension (output) terminal of the magneto coil.
5. Turn the "Volts" switch to "6."
6. Turn the "Test" switch to "Coil."
7. Energize the tester by connecting "BAT" lead of the tester to the remaining terminal post of the battery.
8. Grasp insulated handle of indicator and rotate pointer to the maximum clockwise position that produces *steady* sparks.
9. Read the relative magneto coil strength on the numerical scale of the tester.
10. Disconnect the "BAT" lead of the tester from the battery to stop the sparks.
11. The condenser from the magneto can be tested by connecting it across the two lugs at the bottom of the tester, using the two short jumpers provided. Turn the "Test" switch to "Cond" and connect the "BAT" lead of the tester to the battery as before. A spark appreciably weaker than that which was obtained when the "Test" switch was in "Coil" position indicates a poor condenser.