Dixie Magneto

This is a form of the inductor type magneto. The coil is wound around a stationary core. The field has two movable pole pieces which rotate past the ends of this core, thus reversing the direction of magnetism and producing a high tension current by the same elementary process as in the ordinary shuttle wound armatures.

Breaker contacts should open .018 in. to .020 in. Clean contacts with gasoline whenever necessary. If contacts are badly burned or pitted, resurface them with a fine, flat, jeweler's file or a piece of worn No. 00 sandpaper. To remove breaker, first take off breaker cover, remove screw fastening primary cable to magneto, take out the four screws holding breaker to magneto, then remove breaker. Spark gap should be .020 in. to .025 in. Breaker contacts should open when the rotating pole piece is .015 in. to .035 in. past the tip of the stationary pole piece, measured in the direction of rotation of the armature. This setting may be determined with a buzzer connected as shown in Figure 2. The entire coil structure is moved with the breaker mechanism each time the spark is retarded, thus the above position is maintained at all degrees of advance or retard, producing a spark of equal intensity at all positions.

The bearings of magneto are provided with oil cups. These cups should each be filled twice before the magneto is run the first time, and similarly oiled thereafter as follows: On pleasure cars, every 1,000 miles; on trucks, every 500 miles; on aeroplanes, every 25 hours of operation; on tractors, motors boats, and stationary engines, every 20 hours of actual operation. The oil cup on top of the distributor should be filled twice and two drops of oil put in the oil cup at the driving end. Use good light machine oil.

For use on large aeroplane engines, where starting with ordinary ignition system would be difficult, a special starting magneto, known as the Dixie 11-S, is provided. The external wiring diagram of this system is shown in Figure 3 and the internal diagram in Figure 4. The starting magneto is arranged to be turned by hand, or by a gear engagement, to run several times as fast as the service magnetos. It has no high tension winding, but has a primary winding and breaker similar to the ordinary Dixie magneto. When the contacts of the service magneto are closed, the starting magneto has no effect, but when the service magneto contacts open, the starting magneto winding is in series with the primary of the service magneto, thus a vibrating spark is produced in the spark gap.

A simple dual starting system is described on Plate No. 51.

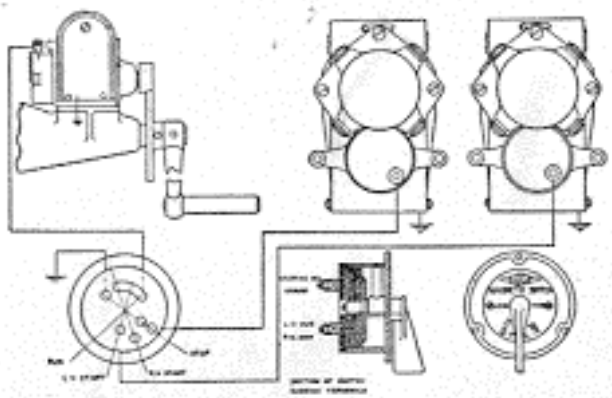

Fig. 3—Wiring diagram of Dixie 11-S starting magneto, with control switch and two service magnetos.

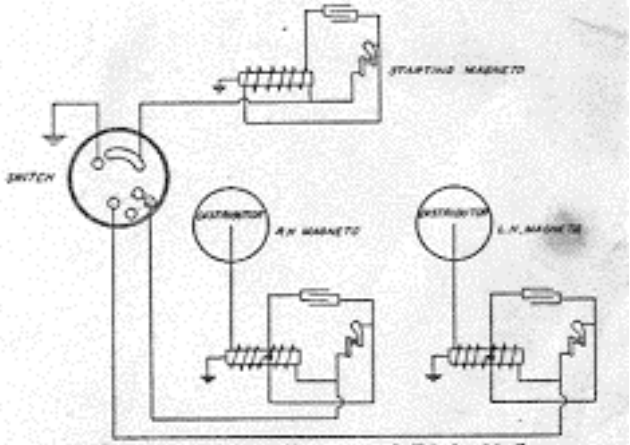

Fig. 4—Internal wiring diagram of Dixie 11-S starting magneto, control switch and two service magnetos.

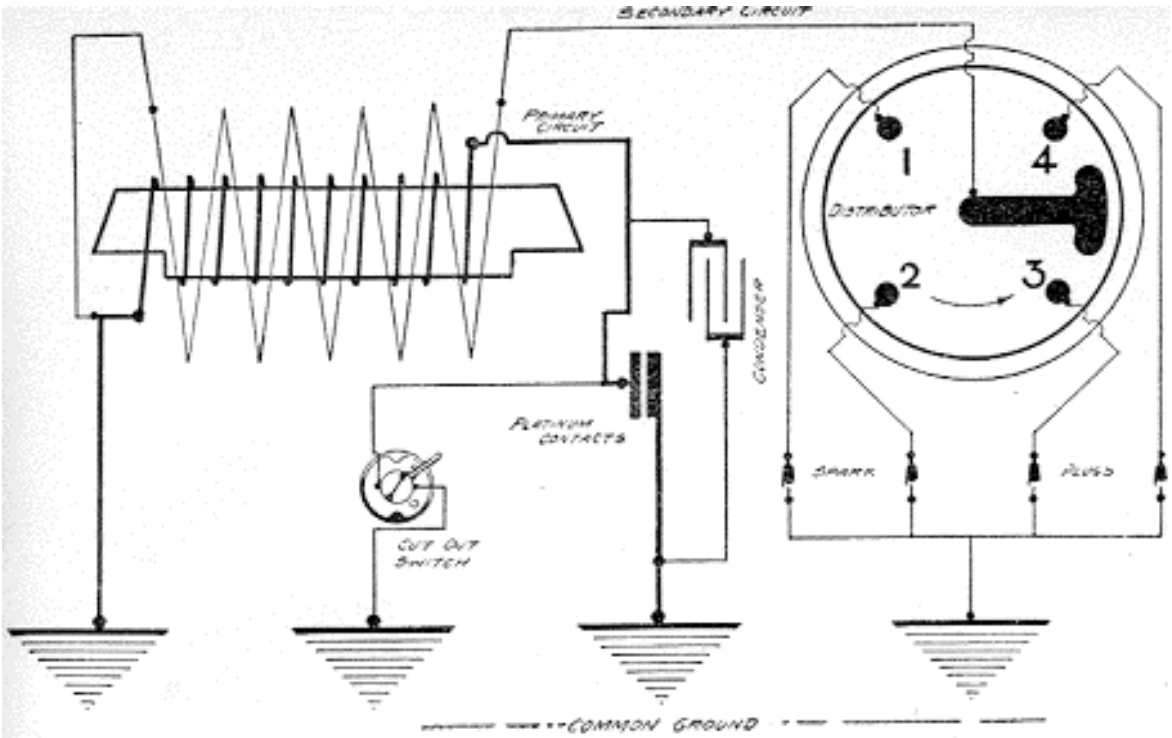

Fig. 1—Internal Wiring Diagram.

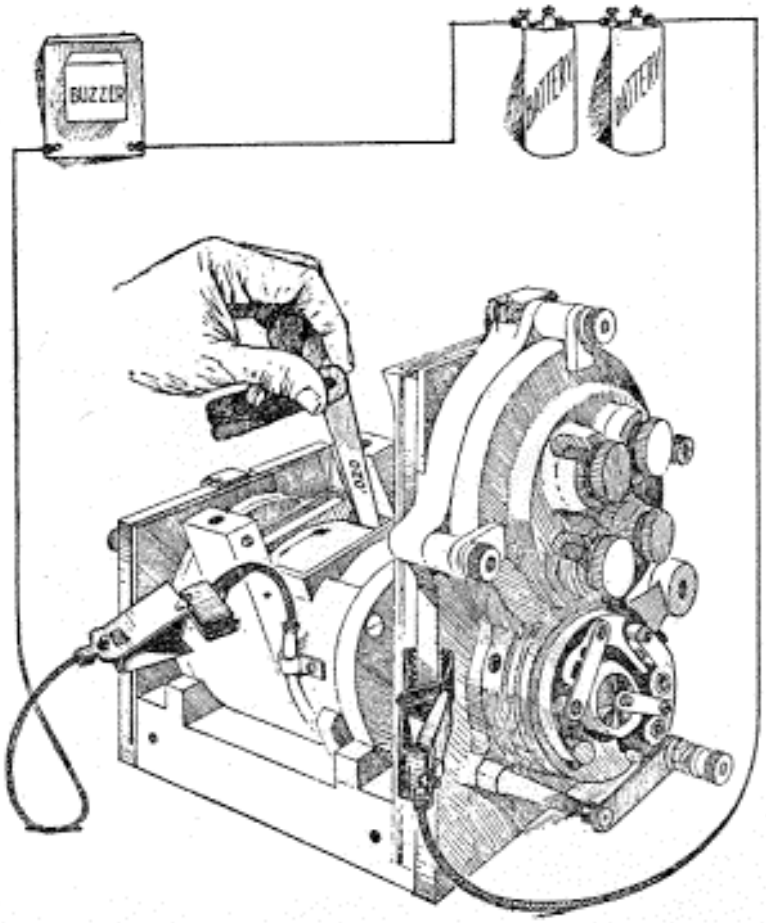

Fig. 2—Method of connecting buzzer to magneto primary circuit, for accurately setting the relation of contact opening, to rotor position.