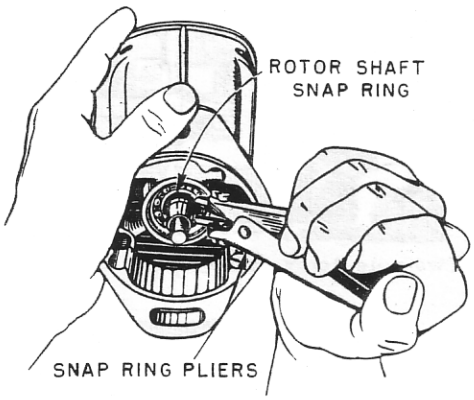

Fig. 20. Replacing Rotor Drive End Shaft Snap Ring

the rotor shaft; replace the rotor shaft seal inner washer, rotor shaft seal and rotor shaft seal outer washer.

When replacing the magnetic rotor on the FM-O, FM-XO, FM-XOR, FM-XY, FM-XV and all magnetos with three piece ball bearings, end end play tolerance of the magnetic rotor between its bearings should be held below 0.007 inches.

Coil Replacement

Before replacing bearing support, set the coil, Fig. 21, in the housing. Tighten the two coil bridge setscrews and seal them with a drop or two of gasket varnish.

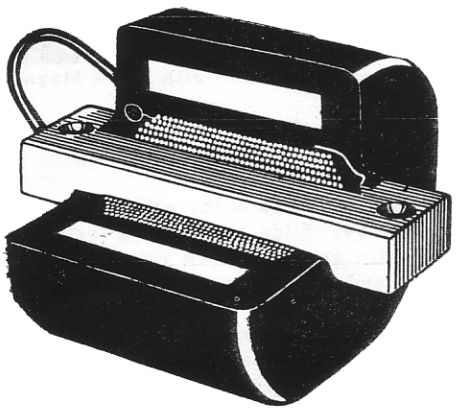

Fig. 21. Cutaway of Molded Coil

Replacement of Bearing Support Assembly and Internal Timing

Replace the distributor shaft and gear assembly in the bearing support of types FM-XF2, FM-X4, and FM-XE4 magnetos and secure it in place with the distributor shaft snap ring. Fasten the bearing support assembly in the housing. Replace the magnetic rotor gear pin and magnetic rotor gear. The former can be tapped into position by placing a hollow cylindrical tool, such as the OMT82, over the cam end of the rotor with the gear partially in place, and striking the cylindrical tool a few light taps. On later model magnetos the new type magnetic rotor can be easily assembled on the cam end of the magnetic rotor without special tools. A snap ring holds this gear onto the shaft. Care must be exercised in meshing the marked teeth of the magnetic rotor gear with the marked teeth of the distributor gear, Fig. 22. when reassembling a clockwise magneto the gears must mesh so that the tooth painted red on the magnetic rotor will mesh between the two teeth on the distributor gear marked "C". On a counterclockwise magneto the red tooth on the magnetic rotor gear must mesh between the two teeth on the distributor gear marked "A".

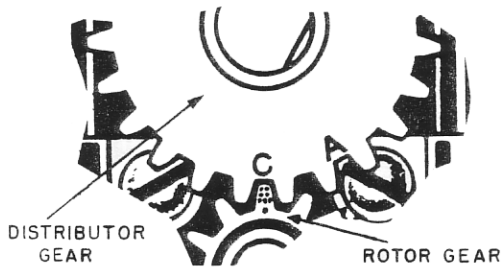

Fig. 22. Gear Markings

Rotation of Coupling Drive Springs

The coupling drive spring can be used for either rotation by simply turning it over. Care must be taken to place the spring correctly in the shell, since incorrect assembly will damage the inside anchor end. Fig. 23. illustrates the correct location of drive springs in series U coupling shells. Catch the inner end of the drive spring in the longer slot of the coupling hub and complete the assembly by winding the drive spring one full turn. Push the assembly together and key the coupling onto the rotor shaft. Replace the impulse coupling nut lockwasher, screw the impulse coupling nut into place, and turn up the lugs on the impulse coupling nut lockwasher, or replace the coupling nut lockwire, if used.

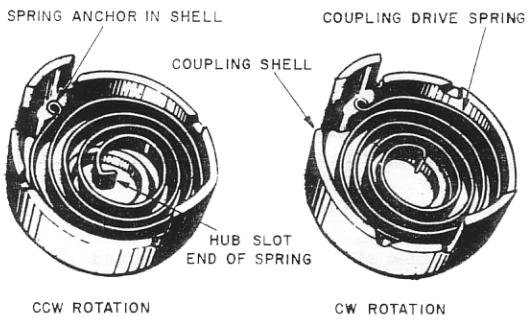

Fig. 23. Position of Drive Spring in Coupling Shell

Assembly of Breaker Mechanism

Remount the condenser on the bearing support. On type FM-XV magnetos the cam wick and holder assembly is mounted on the condenser mounting screw, along with the condenser. On all other magnetos except those with feed-thru condensers the cam wick and holder assembly is supported by the No. 8 contact support locking screw. Remount the breaker arm support bracket by means of the two support bracket locking screws, lockwashers, and flat washers. Slide the arm onto the fulcrum pin and replace the fulcrum pin snap ring.

Place the lead wire terminal from the coil, the terminal from the condenser, the terminal from the ground switch, and the end of the breaker arm spring onto the breaker arm terminal screw, and fasten this screw in