SECTION D

THE COOLING SYSTEM

To Remove the Radiator.

Take off the bonnet by undoing the rear hinge bracket and withdrawing the bonnet rearwards from the front hinge.

Detach the forward ends of the radiator stays and disconnect the by-pass hose at the thermostat, the hose on the elbow at the pump and the main hose at the top of the thermostat.

Take out the two large, shouldered bolts holding the radiator to the headlamp brackets.

Remove the fixing nuts and locknuts from the mounting brackets. Note the position of the rubber buffers, retaining rings and washers.

The shell and radiator block will then come away together.

Fan Belt Adjustment.

Adjustment of the dynamo, fan and water pump belt tension is obtained by slightly slackening the two bolts on which the dynamo pivots, releasing the setscrew (at the top front end of the dynamo) securing it to the slotted link and pulling the dynamo bodily outwards until the belt tension is correct. Tighten up the setscrews with the dynamo in this position.

NOTE: Only gentle hand pressure must be exerted on the dynamo, or the belt tension will be excessive and cause rapid wear.

The Water Pump.

To Dismantle and Reassemble.

The water pump is fitted to the front face of the cylinder block, and is driven by a belt from the crankshaft. This belt also drives the dynamo. The pump is fitted with a special carbon gland ring which provides a water seal and needs no lubrication or adjustment. In the early life of the car a slight leak may occur, but this will automatically cease as the carbon ring beds itself down. Should it be necessary to dismantle the unit for any reason, remove the radiator and proceed as follows:—

Take off the fan blades and remove the fan belt.

Remove the pump unit by breaking the joint between the impeller housing flange and the cylinder block, moving the inner control link bracket outwards to clear.

Dismantle the pump by removing the impeller from the shaft, tapping out the taper pin attaching it to the shaft and taking care to see taht it is knocked out in the right direction. Withdraw the pressure spring and washer, which gives access to the carbon seal and gland washer assembly. Care should be taken

1—Spindle.
2—Fan pulley.
3—Felt washer (front).
4—Retaining cover (front).
5—Bearing circlips.
6—Bearings.
7—Distance tube.
8—Retaining cover (rear).
9—Felt washer.
10—Retaining washer (rear).
11—Spindle circlip.
12—Pump body.
13—Seal washer.
14—Spindle seal.
15—Gland ring.
16—Seal washer.
17—Seal ring.
18—Taper pin.
19—Gland peg.
20—Impeller vane.

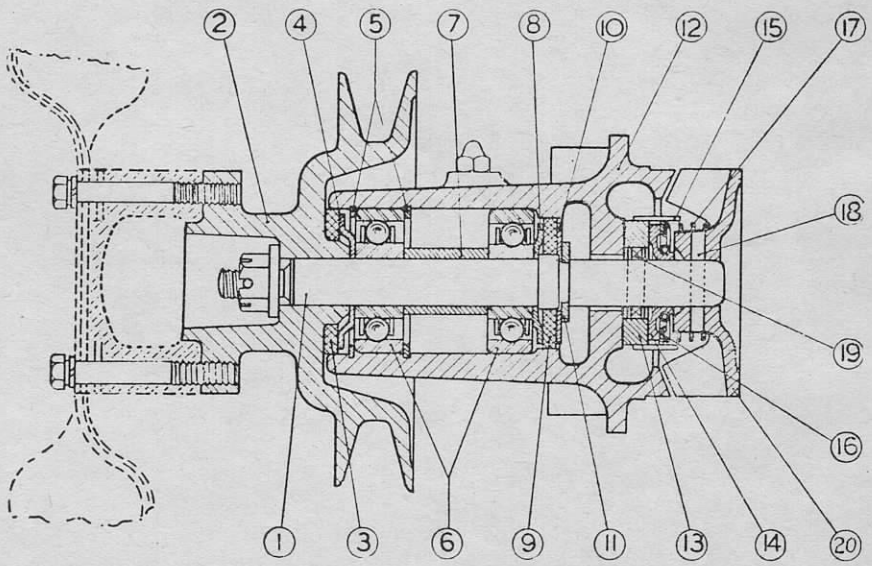

FIG. 20.—The water pump assembly.

not to damage the carbon ring, which is relatively brittle, the working face of the rubber seal, and not to lose the driving pin for the carbon gland, which is a loose fit in the shaft.

The pump spindle is carried on two ball races which should give no trouble unless they have been neglected. Access to the races is obtained by releasing the impeller and gland as described above, removing the drive pin for the gland, removing the attachment nut in the centre of the drive pulley, withdrawing the pulley, pulley key, felt sealing ring and retainer. Remove the outer bearing circlip with a pair of long-nosed pliers.

Pour a little paraffin into the impeller body around the outer bearing and tap the inner end of the spindle on a piece of wood until the outer bearing can be withdrawn. This will release the distance-piece between the bearings, which can be withdrawn, giving access to the inner race.

Remove the inner circlip by contracting the ring and inserting a screwdriver behind it to ease it out of its groove. After removal of the circlip the retaining bearing and the impeller spindle can be withdrawn.

If the felt oil sealing rings are badly worn or the bearings unduly slack, they should be renewed. Carefully examine the carbon sealing ring for cracks or undue wear and renew if necessary. The face of the brass sealing washer should be examined for flatness and all edges should be freed from burrs as this may damage the synthetic rubber seal. Fit a new seal if damaged.

Reassembly is carried out in the reverse manner to that detailed for removal, taking care that the flange jointing washer is in good condition.

The space between the two races should be partially filled with grease and the felt washers liberally soaked in engine oil or grease before replacement. The slotted nut retaining the pulley should not be over-tightened; as long as it is just firm it will be satisfactory.