

APPENDIX VII.

CARE OF CLUTCH.

If the clutch becomes “too fierce”, a small quantity (say an egg-cupful) of engine oil should be fed with a syringe on to the surface, as shown in Fig. 62 (the clutch pedal being depressed), to make it work smoothly. The oil should be supplied with the engine running, and the clutch shaft stationary ; this will spread the oil evenly over the surface of the leather.

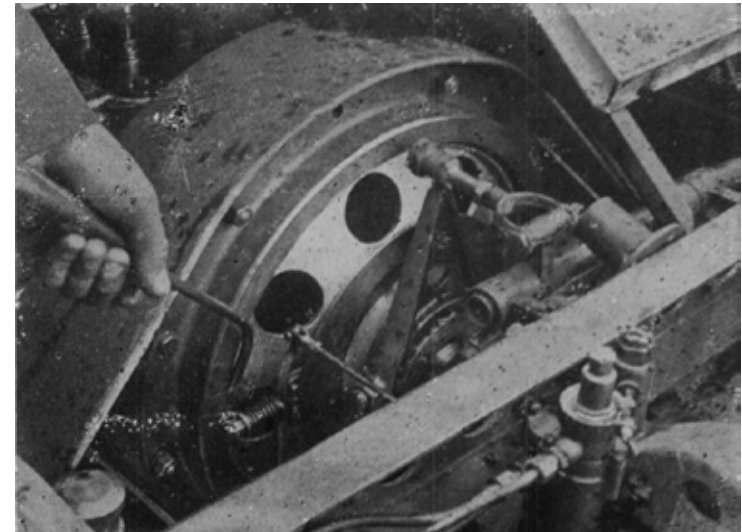


Fig. 62. - OILING CLUTCH SURFACE.

Too much oil will cause the clutch to slip ; if this occurs, ie., if the engine can be made to race when the clutch is engaged and in trying to drive the car, the car should immediately be stopped and the surplus oil let out through the plug in the flywheel, by taking this out and running the engine, or by means of a syringe, as shown in Fig. 63.

If the car is driven on with the clutch slipping, the leather will soon be burnt and destroyed, which will necessitate dismantling and re-leathering the clutch.

An over-oiled clutch will also make changing gear difficult, especially when starting the car from “rest” for, with the clutch pedal depressed, the gears will not engage, as the clutch will not readily stop revolving on account of the film of

oil between the leather and the flywheel which prevents the clutch from disengaging properly when the clutch pedal is depressed.

Should the clutch become over-oiled, though none has been applied by hand, it will probably be caused by leakage through the small valve on the end of the crankshaft. This valve, which is opened when the clutch pedal is fully depressed, allows oil from the crankshaft to feed the spigot or clutch bearings. The valve may have stuck or may not close properly, owing to some foreign substance getting underneath the seat. The spindle which actuates the valve will be seen (B, in Fig. 64) projecting from the end of the clutch shaft when the coupling is removed..

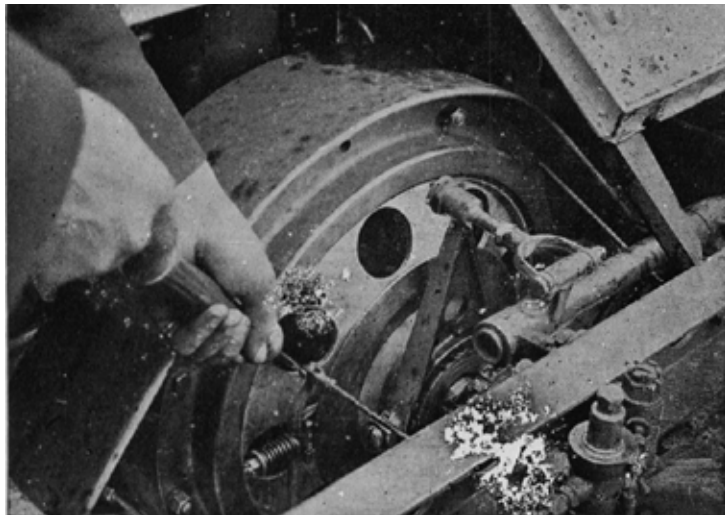


Fig.63.

SHOWING OIL DRAIN AND ALTERNATIVE METHOD OF WITHDRAWING SURPLUS OIL.

This spindle moves with the clutch and is held in position by a grub screw (A, in Fig. 64), which passes through the driving pin on which the square blocks are fitted. By unscrewing this grub screw the spindle is free to move endways, and if pushed in towards the engine will be found to come against a surface which gives to further pressure. This is the valve which opens when pressed, but is closed by means of a spring when pressure is released. This is a means of ascertaining if the valve has stuck. This action is, of course, carried on in a similar manner by depressing the clutch when the spindle is held in position with the grub screw. To set this spindle, the clutch should be engaged and the spindle brought into

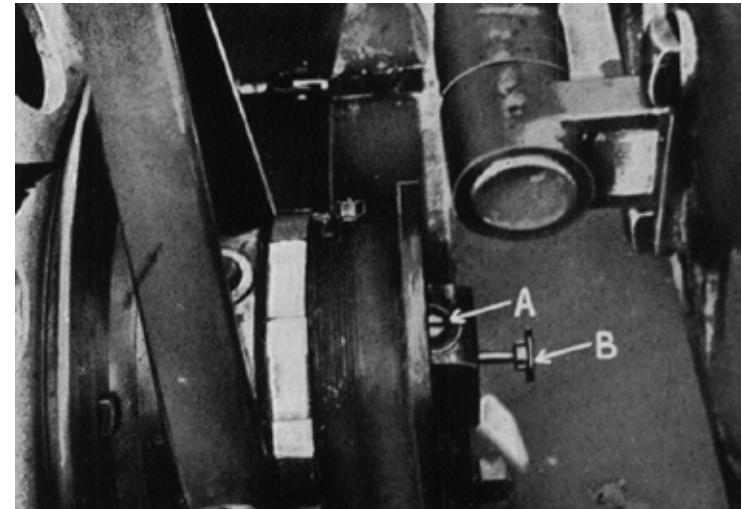


Fig. 64.

SHOWING COUPLING REMOVED

position so as just to touch the valve (but not open it). It should then be brought back 1/16 in., and locked by means of the grub screw. This is the normal position and should be increased or reduced as found suitable.

Fig. 65 shows the parts of this device ; the spring E should be inserted (large end first) after the worsted plug A ; fix valve B in seating C, and screw bodily into end of spigot.

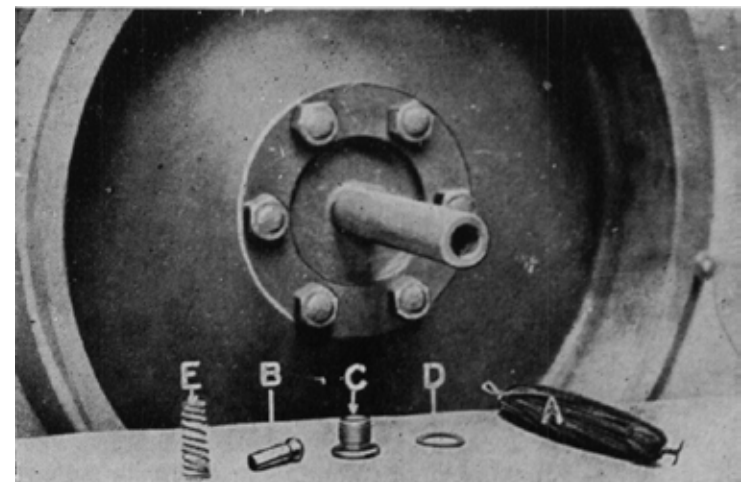


Fig. 63

CLUTCH OIL VALVE DISMANTLED

Should there be anything wrong with the valve, it can be taken out and cleaned by dismantling the clutch. *Before* putting the clutch together, the engine should be run with

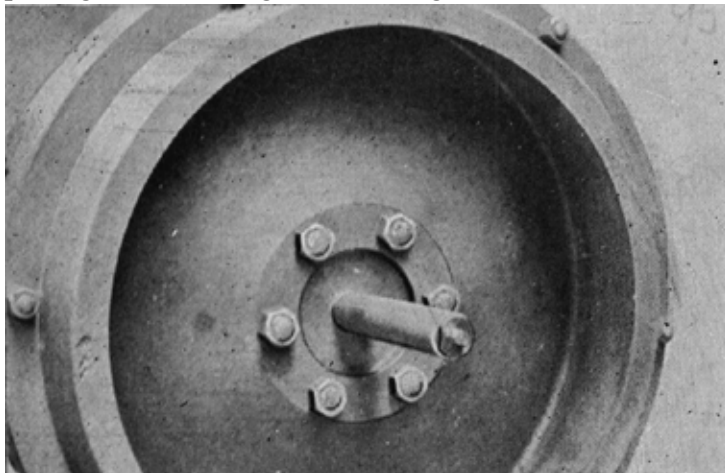


Fig. 66.
OIL VALVE IN PLACE.

the valve in place (Fig. 66) to test if the valve really shuts off the oil *i.e.*, whether it is properly ground to an oil-tight joint. The worsted plug (A, Fig. 65) fitted at the crankshaft extension is to prevent a too free supply of oil from flowing to the clutch, and to act as a filter to the oil. This plug should be as tight a fit as possible.

Care must be taken that the joint made between the valve seating and the end of the clutch spigot is oil-tight.

Note that the above oiling device is for oiling the clutch bearing only, not the clutch itself.

RESUMÉ

Should a “slipping” clutch be experienced at any time, the following are the probable causes :-

- (a) Too much oil (which can be drawn out with a syringe (Fig. 63) or by removing the special plug in the fly-wheel, and running the engine for a while).
- (b) The parts have worn out of adjustment, resulting in the pedal lever catching the floor board or other mechanism, having reached the limit of its stroke. This can be adjusted by shortening the link which is situated at the top end of the vertical levers, giving

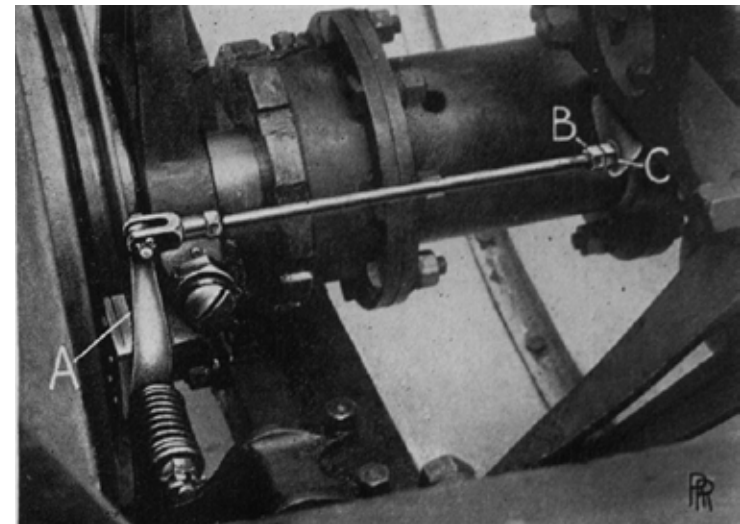


Fig. 67.
CLEARANCE A FOR CLUTCH PAD.

it a few complete turns. In case the fault cannot be remedied at the time, it is advisable to *change on to a lower gear* until the clutch cools or a place is reached where the necessary adjustment can be made.

- (c) The clutch leather worn until the coupling has no end-play, resulting in the coupling preventing the clutch spring forcing the clutch into the conical portion of the fly-wheel.

N.B. It is most essential not to run the car with the clutch slipping, but to stop and attend to the fault at once, otherwise the leather may quickly be destroyed.

CLUTCH PAD

There is a small brake in the form of a fibre pad against which the clutch rubs when depressed. The object of this brake is to stop the clutch from revolving, when “out” and so facilitate the changing of gears. It may at times require adjusting, *i.e.*, bringing nearer to the flange of the clutch on which it rubs. To do this, slack off the nut B (Fig. 67) quite clear. Then follow this with the nut C until the fibre pad is 1/32 in. clear of the flange; the nut B should then be screwed up again to lock it in position. The nuts retaining the compression spring should be moved by the same amount in order to retain the same amount of pressure on the pad.