can be set in the correct position. In this position the movement of the gear lever necessary to engage the ratchet teeth will be approximately the same in each direction.

If the plate is incorrectly adjusted, it may be found that, after moving from top to third or from bottom to second gear, the outer ratchets do not engage the teeth on the inner ratchets correctly.

If, when fitting new parts, it is found that the gears do not engage properly, ascertain whether a little more movement is required or whether there is too much movement so that the gear slips right through second or third gear into neutral. If more movement is required, this can be obtained by filing the adjuster plate very slightly at the points of contact with the pegs on the ratchet ring.

If too much movement is already present, a new adjuster plate giving less movement must be fitted.

64. Reassembling the Gearbox

The procedure is the reverse of that given in Subsection 61, but the following points should be noted:—

If the mainshaft top gear pinion and dog have been removed, make sure that the dog is replaced the right way round or third and top gears can be engaged simultaneously.

Make sure that the trunnions on the operator fork engage with the slots in the inside operator.

See that the mainshaft is pushed right home. It may tighten in the felt washer inside the final drive shaft nut.

The layshaft top gear and kickstarter pinion should be assembled on the layshaft and the kick-starter shaft and ratchet assembled on to it before fitting the end cover. Do not forget the washer on the layshaft between the kickstarter pinion and the kickstarter shaft.

The joint between the gearbox and the inner cover should be made with gold size, shellac or a similar jointing compound.

Make sure that all parts are clean before commencing assembly. In normal climates the recesses in the gearbox should be packed with soft grease and the box should be filled up to the correct level with engine oil. (See Subsection 68). **On no account must heavy yellow grease be used.**

65. Dismantling and Reassembling the Clutch

The method of removing the clutch is described in Subsection 42.

When reassembling the clutch, the following sequence must be adhered to, after first securing the clutch sprocket with the large circlip.

Fit the cush rubbers, retaining plate and three distance tubes, and follow with the pressure plate assembly as follows:—

Plain dished plate (dish projecting outwards).
Friction plate (with bonded facings).
Plain flat plate.
Friction plate (with bonded facings).
Plain flat plate.
Friction plate (with bonded facings).
Plain dished plate (dish projecting inwards).
Friction plate (with bonded facings).
Front plate.
Pressure plate and springs.

When reassembling the pressure and front plates, see that the three distance pieces are fitted over the pins securing the pressure plate to the clutch centre drum. These must pass through the holes in the front plate into the three recesses in the clutch centre retaining plate. Note that three strong (13g) and three weak (14g) springs are used. These *must* be fitted alternately and, the 14g springs *must* be fitted behind the adjusting screws. The three pressure plate pins must be locked up tight.

If the clutch lifts unevenly adjust one or, if necessary, two of the adjusting screws in the pressure plate. These screws can also be used to increase the spring pressure when wear has taken place on the friction surfaces but care must be taken not to screw them in too far. This could reduce the lift of the clutch by causing some of the springs to become coil bound, thus causing clutch drag.

66. Adjustment of Clutch Control

It is essential that there is about $\frac{1}{32}$ in. free movement in the clutch cable, to ensure that all the spring pressure is exerted on the plates.

There are three points of adjustment for the clutch control. The first is in the clutch operating lever in the gearbox and is accessible after removing the lower inspection cover in the front cover of the gearbox (see Fig. 17). The clutch cable should be slacked right off or, preferably, disconnected when making this adjustment. Slacken the locknut and adjust the centre screw in or out until it is as nearly as possible in line with the clutch push rod. Tighten the locknut and check that no part of the lever is hard against the inside of the gear box front cover or either of the inspection covers.

The second and third adjustments are in the outer casing of the clutch control cable. There is an adjustable sleeve with a locknut forming the abutment for the outer casing at the gearbox end and also a finger-operated sleeve and locknut at the handlebar end.

To adjust the control cable, having first set the adjuster in the gearbox clutch operating lever correctly, couple up the control cable, screw the adjusting sleeve at the handlebar end of the casing in as far as possible then unscrew it two turns.