To select shims for new pinion head bearing

To correctly position the pinion, relative to the crown wheel, shims of selective thickness are interposed between the bearing outer race and the casing. (See Fig. 21.)

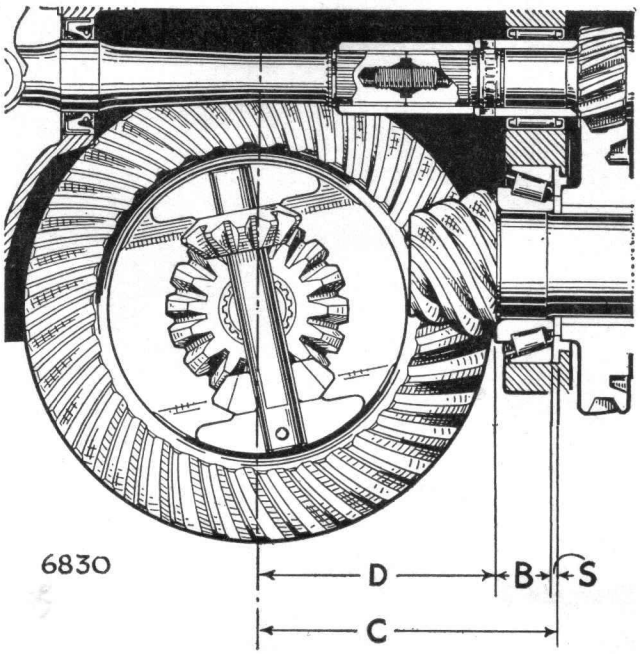

Fig. 21. *Dimensions for pinion shims*

This shimming is accurately set before the car leaves the factory, and should remain undisturbed as far as possible.

If the inner bearing is renewed, the following formula is given to calculate the thickness of shimming required.

$S = C-(B+D)$. (See Fig. 21.)

Where S = thickness of shims (unknown).

C = distance between bearing shoulder in casing and crown wheel axis (by measurement).

B = abutment height of bearing (by measurement).

D = pinion setting distance, marked on pinion head.

To measure the distance between the bearing shoulder in the hypoid casing and the crown wheel axis (C) requires great accuracy and it is recommended that the special tool (RG365) be used.

Fit the dummy bearings and shaft into the clutch casing and the dummy pinion to the hypoid casing as shown in Fig. 22.

Fit the casings together, tightening the nuts to the torque given in General Data.

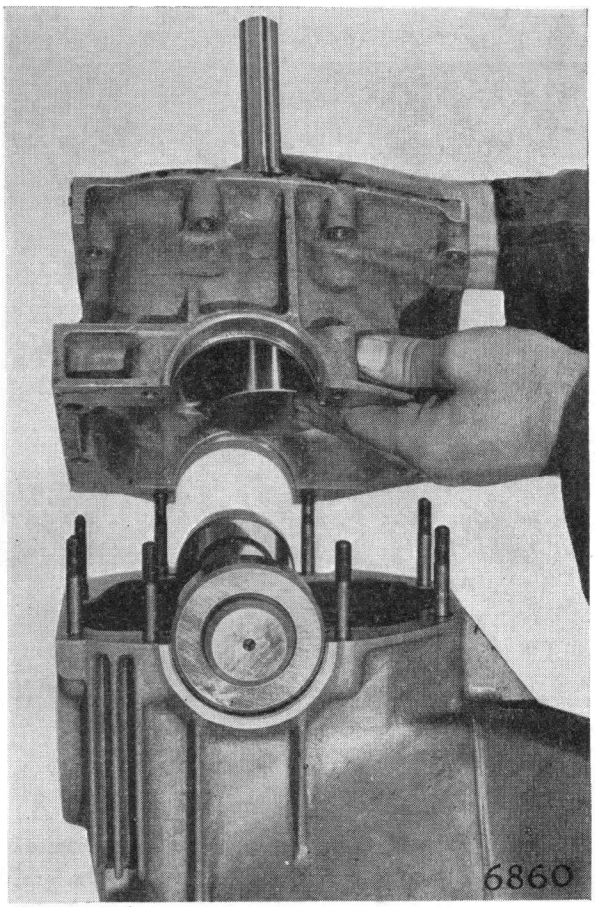

Fig. 22. *Fitting dummy pinion set*

Holding the dummy pinion head against the bearing shoulder and using feeler gauges through the inspection aperture in the clutch casing, measure the gap between the head of the dummy pinion and the dummy shaft. (See Fig. 23.)

The length of the dummy pinion head (2·991 in.) (75·97mm) plus the radius of the dummy shaft (·813 in.) (20·65 mm) plus the measurement of the gap will equal the distance between the bearing shoulder in the casing and the crown wheel axis (C, Fig. 21). (See Example 1.)