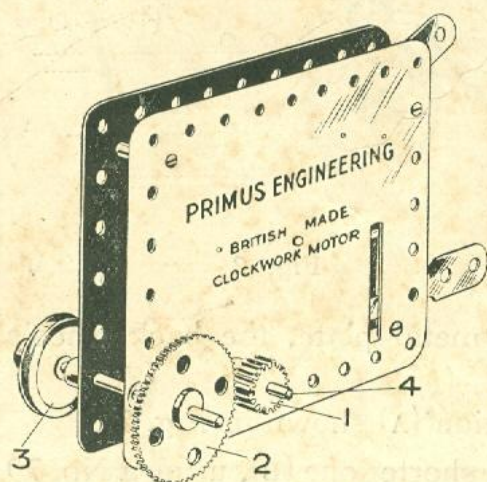


HOW TO USE A



CLOCKWORK MOTOR

For working most Models the simplest form of Drive is by means of a Belt, *i.e.*, a cord passed round a Pulley Wheel fixed to the central driving pinion of the Motor. The various Primus Gear Wheels, however, provide endless ways of transmitting power from the Motor to any working model, and by clever manipulation a great variety of speeds can be obtained.



The illustration shows the Primus Motor fitted with Pinion Wheel (1), Cog Gear Wheel (2), and Pulley Wheel (3). This method of gearing reduces the speed to about one-fifth of normal.

There are big advantages attached to a reduction of speed, because the Primus Clockwork Motor fitted with Gear Wheels functions in the same way as a gear box on a motor car. When the driver of an ordinary car wishes to negotiate a steep hill, he changes to a lower gear, which has the effect of making the car run slower but increasing the propelling power of the Engine. In the same way, by gearing down the Primus Clockwork Motor, it can be made to lift bigger weights or pull heavier loads than would be the case if the power were taken direct from the main driving spindle.

It is impossible for us to illustrate every method of gearing, but if the Pulley Wheel shown in the illustration above is replaced by a Cog Gear Wheel, then working models can be operated by direct gear drive.

Generally speaking, Models which are operated slowly or at reasonable speed will work better and longer without giving trouble than those which are run at high speed. If, however, great speed is required, then the drive should be taken direct from the driving spindle (4), either by means of a Cog Gear Wheel or Pulley Wheel.

Because of the limited space available, the Motor Chassis is probably the most difficult Model to fit up with a power unit. We have, therefore, taken this Model in order to demonstrate the adaptability of the Primus Clockwork Motor (see overleaf).

Fixing a Primus Clockwork Motor to a Primus Motor Chassis

The following extra Primus Engineering Parts are required :



2 No. 77 Axles 3½in.

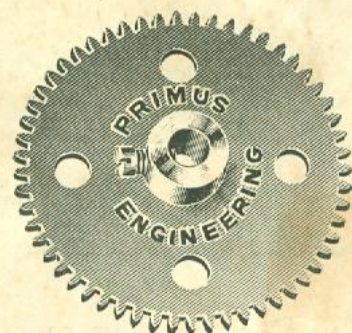
1 No. 79 Axle 1½in.



4 No. 82 Collars and Screws



1 No. 161 Pinion Wheel



1 No. 160 Cog Gear Wheel

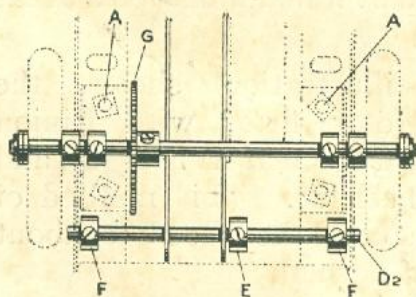


Fig. 1

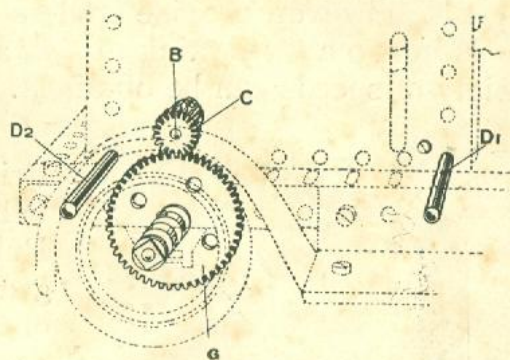


Fig. 2

1. Remove driving seat, the 8 x 3 metal plate, the back wheels and trunnions.
2. Refit No. 74 Trunnions into position (A) shown in Fig. 1.
3. ~~Change the Driving Spindle for a shorter one (B), using a No. 79 Axle; this is done by loosening grub screw of brass pinion wheel inside motor (Fig. 2).~~
4. Fit a No. 161 Pinion Wheel (C) to the new Driving Spindle (B) on the right-hand side of the motor (the flat side) with gears outward (Fig. 2).
5. Fix two No. 77 Axles at lower corners of motor (D1, D2) (Fig. 2), placing two No. 82 Collars—one on right side of D1 and another on left side of D2. Fit two more No. 82 Collars (F) on the right and left sides of rear spindle (D2) to prevent it fouling the wheels (Fig. 1).
6. Place motor into position on Chassis by putting the two No. 77 Axles (D1, D2) through the 2nd and 10th holes of the Chassis (from the rear) (Fig. 2).
7. Take the Back Wheel Axle and fit a No. 160 Gear Wheel (G) to engage with Pinion Wheel (C) on Driving Spindle (B) (Fig. 1).
8. Refit back wheels and driving seat.

Fixing a Primus Clockwork Motor to a Primus Motor Chassis

The following extra Primus Engineering Parts are required :



2 No. 77 Axles 3½in.

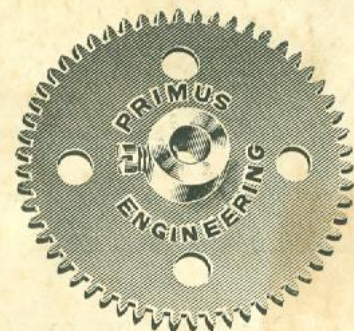
1 No. 79 Axle 1½in.



4 No. 82 Collars and Screws



1 No. 161
Pinion Wheel



1 No. 160 Cog Gear Wheel

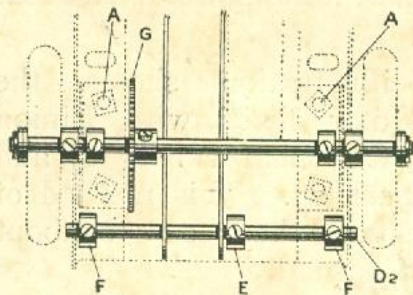


Fig. 1

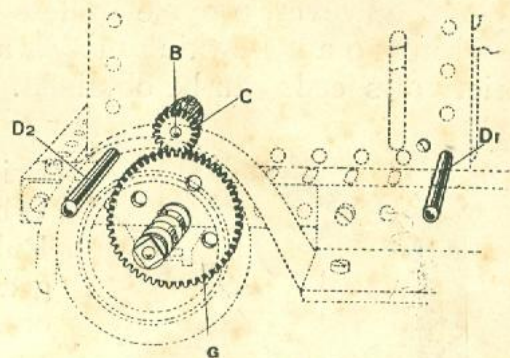


Fig. 2

1. Remove driving seat, the 8 x 3 metal plate, the back wheels and trunnions.

NOTE.

Spindle in motor is not correctly placed, owing to packing, this should be adjusted by loosening grub-screw in pinion wheel of motor, and secured again when in correct position.

the right and left sides of rear spindle (D2) to prevent it fouling the wheels (Fig. 1).

6. Place motor into position on Chassis by putting the two No. 77 Axles (D1, D2) through the 2nd and 10th holes of the Chassis (from the rear) (Fig. 2).
7. Take the Back Wheel Axle and fit a No. 160 Gear Wheel (G) to engage with Pinion Wheel (C) on Driving Spindle (B) (Fig. 1).
8. Refit back wheels and driving seat.