

How to use The Meccano *Magic* Motor

Before winding the Motor, oil the bearings and gears with Meccano Lubricating Oil. This oiling should be repeated at frequent intervals.

See that the brake lever 1 (Fig. 1) is pressed down. Then press the key on to the winding shaft 2 to its fullest extent and wind anti-clockwise only as indicated by the arrow on the side-plate. **Do not turn the key clockwise.**

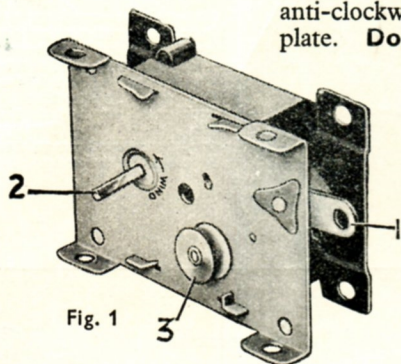


Fig. 1

To start the Motor release brake lever.

When the Motor is used to drive models the extra Pulley supplied with it should be secured to the driven Axle Rod by means of the grub screw. A driving band of suitable length is passed over this Pulley and round the pulley 3, and then serves as a driving belt. Three pairs of driving bands of different length are supplied with the Motor.

If the above instructions are carried out the *Magic* Motor will give excellent service.

By driving your models with a Motor you

will add to the interest and get far more fun!

Examples of various methods of mounting the *Magic* Motor in models are shown overleaf. The Motor can be made to drive most of the working models built with the smaller Outfits, and by arranging suitable pulley systems the drive from the Motor can be taken to any part of the model.

Fig. 2 shows a method of driving a Rod that is not conveniently placed for a direct drive. The Motor is shown mounted in position on the base of the model Drilling Machine. A driving band of medium length is passed round the Motor pulley, and round a 1" Pulley Wheel. The Rod carrying this Pulley is fitted with the $\frac{1}{2}$ " Pulley 1 that is supplied with the Motor. A long driving band passes round the Pulley 1 and over two guide Pulleys 2, before passing round the 1" Pulley at the head of the Rod representing the drill. It is necessary for one of the guide Pulleys to be free on its Rod, as the two rotate in opposite directions. The free Pulley is retained on the Rod by a Spring Clip. Two Angle Brackets 3 form the lower bearings for the Drill Rod and are bolted to a $2\frac{1}{2}$ " Strip attached to the vertical member of the drilling machine.

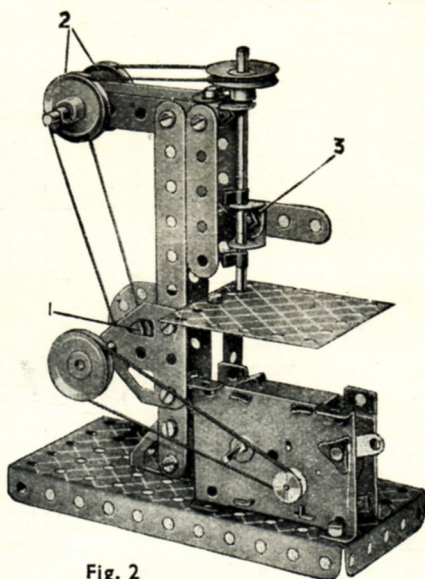


Fig. 2

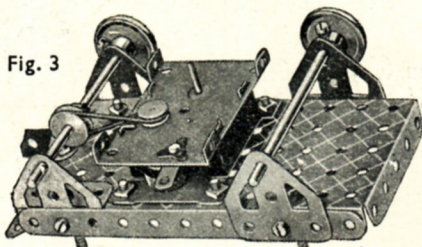


Fig. 3

On models that travel, it is generally convenient to mount the Motor beneath the model. Fig. 3 is an underneath view of a small cart (shown overleaf) and shows clearly how a drive can be arranged. A short driving band is passed from the Motor pulley to the $\frac{1}{2}$ " Pulley on the axle of the travelling wheels. In fitting the band in position it should be twisted correctly to ensure that the model travels in the required direction.

The four models shown below are examples of Meccano models fitted with the *Magic Motor*. The method of connecting the Motor to models of the type of the Lumber Truck and Horse and the Bread Van is shown in Fig. 3 on the other side of this leaflet. In the other two models the method of fitting is clearly seen in the illustrations.

Lumber Truck and Horse

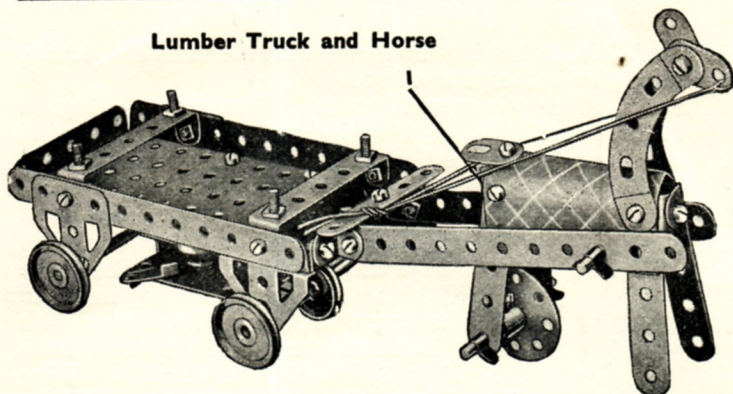
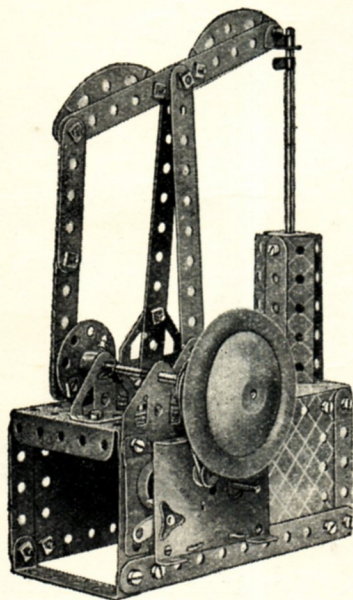


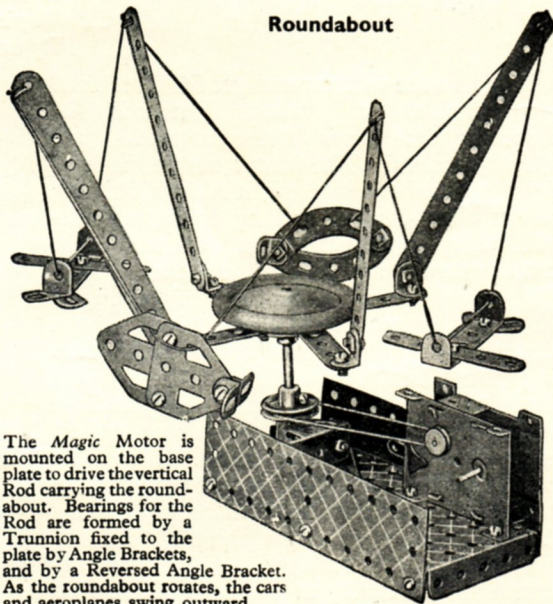
Fig. 3 overleaf shows how the *Magic Motor* is mounted beneath the cart to drive the front wheels. The Pulley supplied with the Motor is mounted on the front axle, and the rubber band is fitted as shown. Two Angle Brackets secure the forelegs of the horse, and this construction is duplicated at 1 for the hind-legs. The forelegs are kept clear of the ground by means of the reins.

Pump

A 1" Pulley on the crankshaft of the pump is connected by a rubber band to the driving pulley on the *Magic Motor*. As the crankshaft rotates, the pivoted beam rocks up and down and thus operates the pump. The pivoted joints are lock-nutted.



Roundabout



The *Magic Motor* is mounted on the base plate to drive the vertical Rod carrying the roundabout. Bearings for the Rod are formed by a Trunnion fixed to the plate by Angle Brackets, and by a Reversed Angle Bracket. As the roundabout rotates, the cars and aeroplanes swing outward.

Bread Van

The method of fitting the *Magic Motor* to this model is shown in Fig. 3 overleaf. The horse travels on a loose Pulley mounted between its hind-legs. The forelegs should be kept clear of the ground by tying the reins to the Angle Bracket 1.

