Easy Model-Building

Spanner's Special Section for Juniors

ONE of my two new models this month is an attractive Motor Coach that should delight those who have an Outfit No. 2 and a *Magic* Motor. For model-builders with an Outfit No. 3 or one larger, there is a working Windmill, which is also fitted with a *Magic* Motor as the power unit.

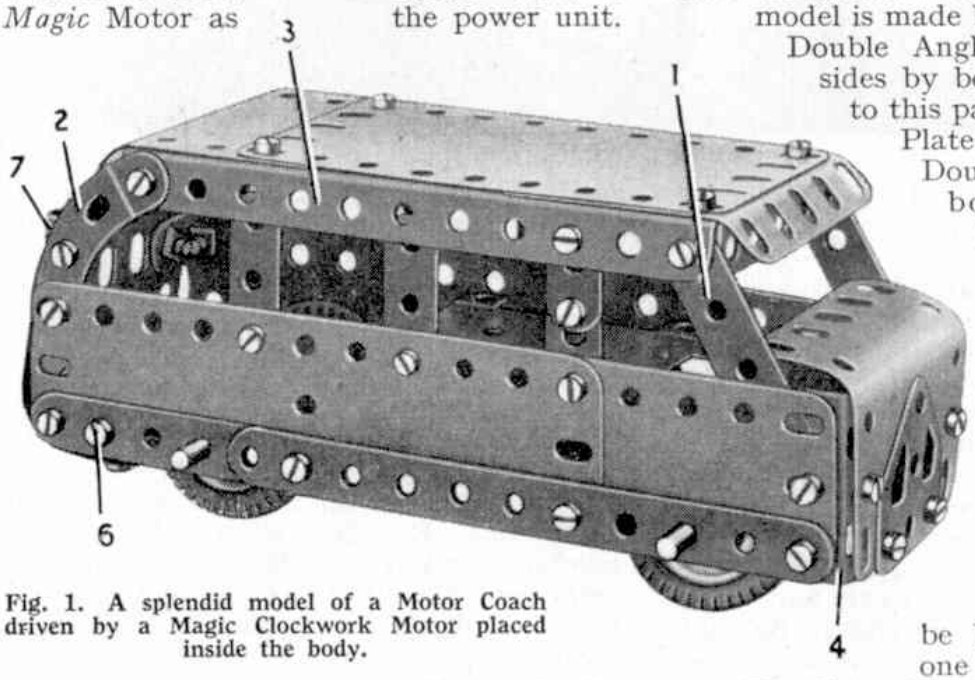

Fig. 1. A splendid model of a Motor Coach driven by a Magic Clockwork Motor placed inside the body.

Let us start with the Motor Coach, which is seen in Figs. 1 and 2 on this page. Each side of the Coach is formed by a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ and a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate. These Plates are strengthened along their lower edges by two $5\frac{1}{2}''$ Strips overlapped seven holes. A $2\frac{1}{2}''$ Strip 1 is fixed at an angle to the front end of each side, and a $2\frac{1}{2}''$ Stepped Curved Strip 2 is bolted to the rear end. A $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 3 is supported by the Strips 1 and the Curved Strips 2 of the sides, and the window frames on each side are represented by two $2\frac{1}{2}''$ Strips and two Fishplates bolted together.

The front of the Coach is made by bolting a Trunnion 4 to each side, and to these Trunnions is fixed a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate curved as shown and fitted with a Flat Trunnion. The rear end of the model is made by attaching a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip between the sides by bolts 6 and then fixing to this part a U-section Curved Plate 5. A further $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 7 is bolted between the Curved Strips 2.

The roof is completed by bolting a $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate, a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and a $1\frac{11}{16}''$ radius Curved Plate to the Flanged Plate 3.

If a *Magic* Clockwork Motor is available it can be bolted by its lugs to one side of the model (see Fig. 2), and its pulley connected by a Driving Band to a $\frac{1}{2}''$ Pulley on the rear axle.

Parts required to build the Motor Coach: 4 of No. 2; 6 of No. 5; 4 of No. 10; 2 of No. 12; 2 of No. 16; 4 of No. 22; 43 of No. 37a; 40 of No. 37b; 4 of No. 38; 2 of No. 48a; 1 of No. 52; 2 of No. 90a; 3 of No. 111c; 2 of No. 126; 1 of No. 126a; 4 of No. 142c; 2 of No. 188; 2 of No. 189; 2 of No. 190; 1 of No. 191; 1 of No. 199; 1 of No. 200; 1 *Magic* Clockwork Motor.

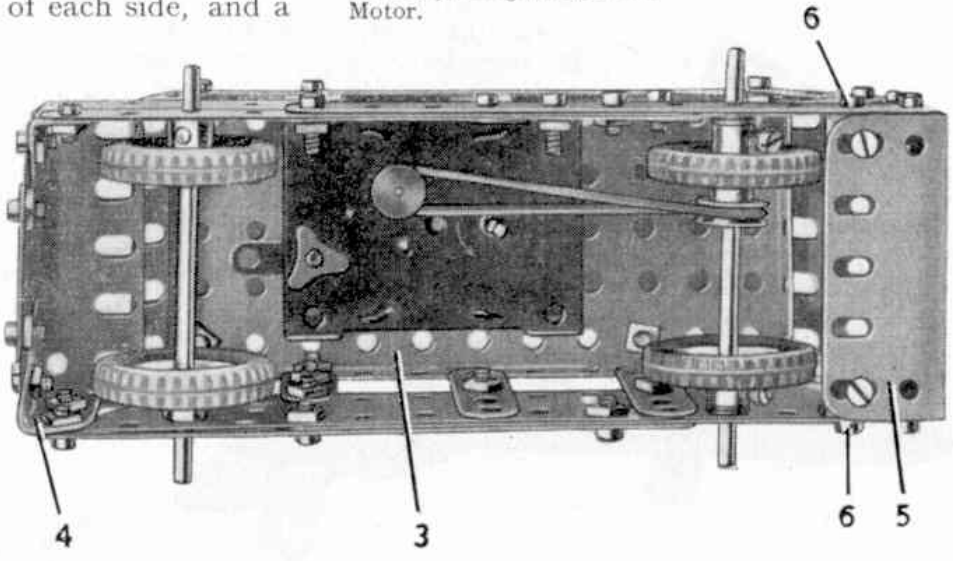

Fig. 2. This picture of the Motor Coach shows how the Magic Motor is connected to the rear wheels.

Now for the Windmill, which is pictured in Figs. 3 and 4. Let us start building the Windmill at the base, which is a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate. The curved $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates that form the supporting column 1 are attached to it by Angle Brackets, and the top edges of the Plates are strengthened by four Formed Slotted Strips.

Each side of the windmill body is a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate, with its upper and lower edges strengthened by $2\frac{1}{2}''$ Strips. The sides are connected at the top by $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips, each of which supports a Semi-Circular Plate 2. The lower edge of each side is attached by a bolt 3 to a $\frac{1}{2}''$ Reversed Angle Bracket that is bolted to the column 1. The top of the body is a curved $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate bolted to the sides.

At the front the sides are connected by Angle Brackets to two $2\frac{1}{2}''$ Strips 4 overlapped three holes, and these Strips are attached to a Fishplate bolted to the column 1. Two $2\frac{1}{2}''$ Stepped Curved Strips 5 at the rear are bolted to the column 1 as shown and are connected to the sides of the body by Angle Brackets.

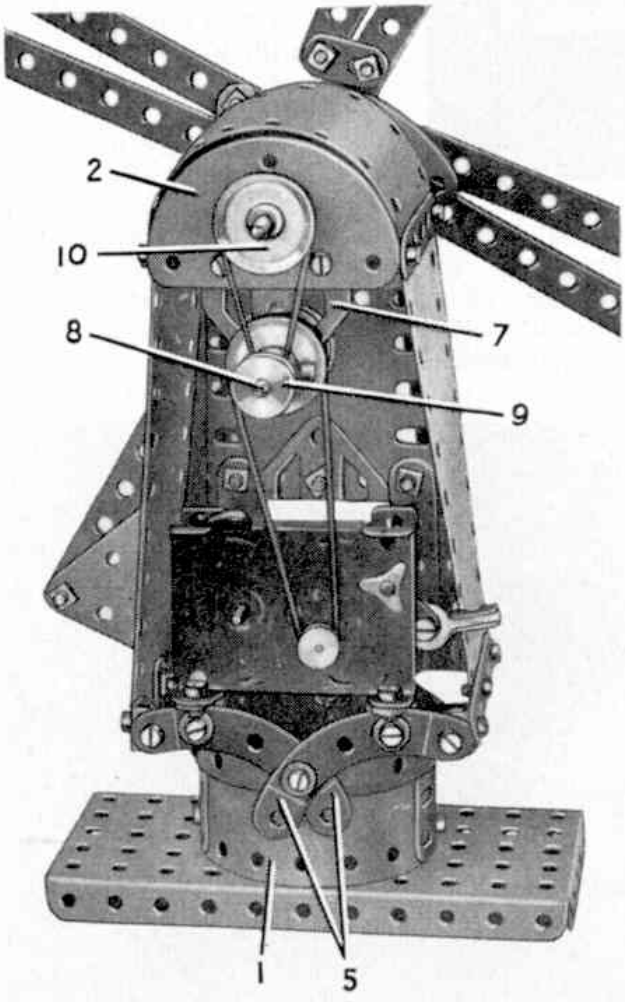

Fig. 4. This view of the Windmill from the back shows the drive to the sails in detail.

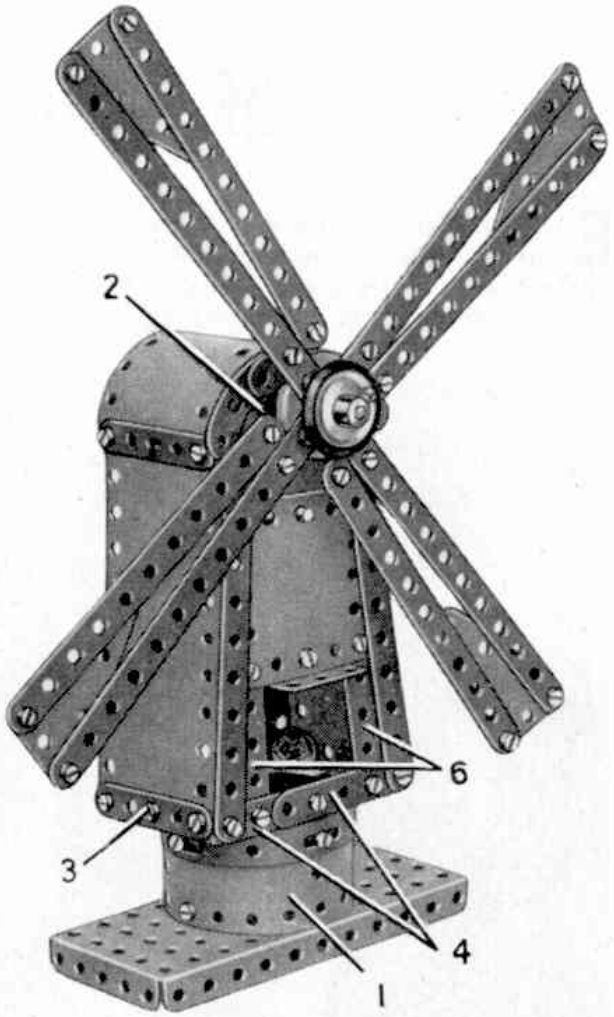

Fig. 3. Another fine model driven by a Magic Clockwork Motor. This Windmill can be built with parts in a No. 3 Outfit.

The front of the mill is filled in by two $5\frac{1}{2}''$ Strips, a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate, a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and two $2\frac{1}{2}''$ Strips 6. The $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate is bolted to the Semi-Circular Plate 2 at the front, and the Strips 6 are fixed between the $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and the Strips 4. Two $2\frac{1}{2}''$ Stepped Curved Strips are fixed to the front Semi-Circular Plate as shown, and a Trunnion is bolted to the lower edge of the $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate. A Flat Trunnion 7 is attached to the Semi-Circular Plate at the rear.

A *Magic* Clockwork Motor is supported by two Angle Brackets bolted to the Curved Strips 5. The Motor pulley is connected by a Driving Band to a 1" Pulley on a 4" Rod 8, which is mounted in the front of the mill and in the Flat Trunnion 7. A $2\frac{1}{2}''$ Driving Band is passed over Rod 8, and is held on the Rod by a $\frac{1}{2}''$ Pulley 9, which is supplied with the *Magic* Clockwork Motor. The $2\frac{1}{2}''$ Driving Band is passed round a 1" Pulley 10 that is

(*Continued on page 278*)