

Spanner's Special Section  
For Juniors

# Easy Model-Building

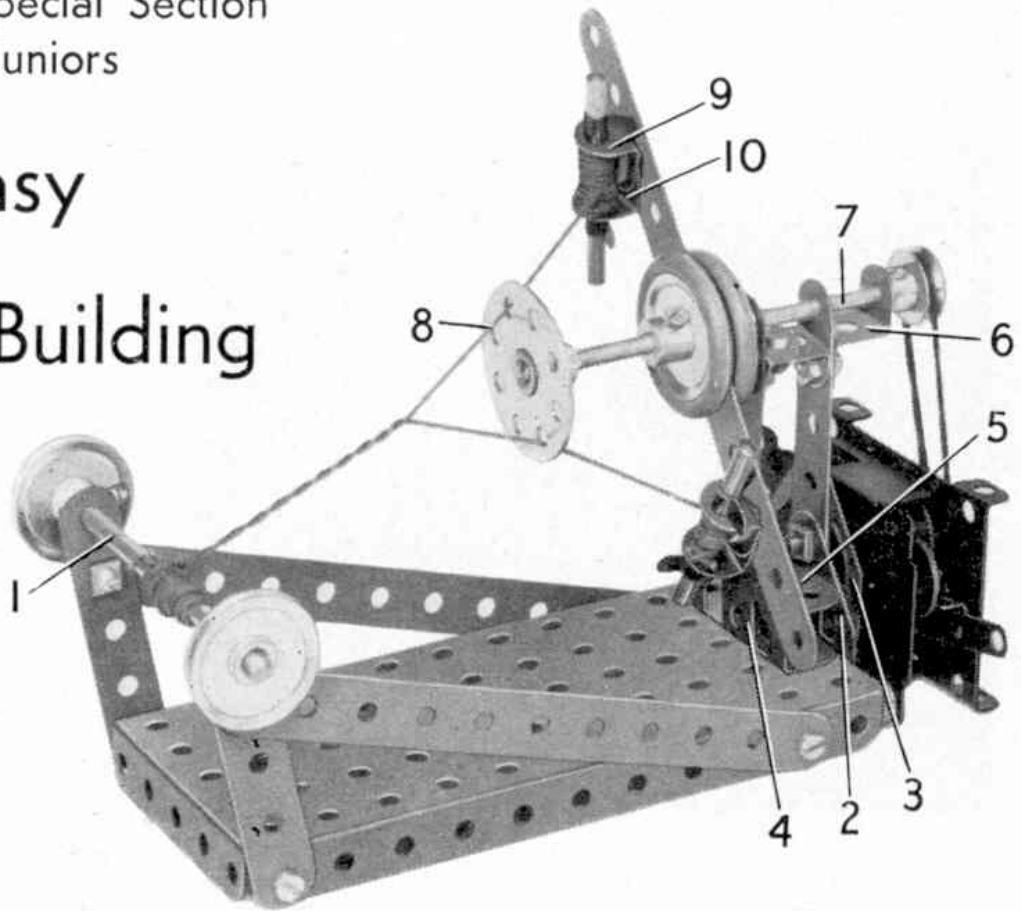


Fig. 1. A simple but interesting Wire Twisting Machine that can be built with parts in Outfit No. 1, with the addition of one No. 23a  $\frac{1}{2}$ " Pulley.

## Wire Twisting Machine

The little machine shown in Fig. 1 is designed for twisting together two separate strands of wire. It can be built from parts in Outfit No. 1. To each side of a  $5\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flanged Plate a  $5\frac{1}{2}$ " Strip is bolted. The other end of each Strip is bolted to a  $2\frac{1}{2}$ " Strip that is also bolted to the side of the Flanged Plate as shown. The  $2\frac{1}{2}$ " Strips carry a  $3\frac{1}{2}$ " Rod 1, which is held in place by two 1" Pulleys.

At the other end of the Flanged Plate two Flat Trunnions 2 and 3 are bolted and also two Trunnions 4 and 5. To these, two  $2\frac{1}{2}$ " Strips are bolted vertically. The  $2\frac{1}{2}$ " Strips are joined near their upper ends by two Angle Brackets as indicated, and the bolt that holds one of the Angle Brackets to the Strip is used to fix also a  $\frac{1}{2}$ " Reversed Angle Bracket 6.

A  $3\frac{1}{2}$ " Rod 7 is passed through the end holes of the  $2\frac{1}{2}$ " Strips and the Reversed Angle Bracket and is fitted with a  $\frac{1}{2}$ " Pulley at the rear end and a Bush Wheel 8 at the front end. Also on the Rod are a  $5\frac{1}{2}$ " Strip and two 1" Pulleys fitted with Rubber Rings. The Rod passes through the centre hole of the  $5\frac{1}{2}$ " Strip and the 1" Pulleys are pressed tightly against each side of the Strip

so that the Rubber Rings grip the Strip and hold it firmly in place. A bolt is now passed through the third hole from each end of the  $5\frac{1}{2}$ " Strip and is fitted with a nut. Two Angle Brackets 9 and 10 are then placed on the bolt; finally, a second nut. The nuts are then tightened against the Angle Brackets to grip them tightly, and it must be noted that the bolt must be free to turn in the Strip. A 2" Rod is passed through the holes of each pair of Angle Brackets and is held in place by Spring Clips. A length of Cord is now tied to the centre of each of these Rods and then wound on to the Rod. The ends of each Cord are passed through opposite holes in the Bush Wheel 8 and then tied together on the Rod 1.

A *Magic* Motor is bolted to the rear end flange of the Flanged Plate, and is connected by a Driving Band or a Cord belt to the  $\frac{1}{2}$ " Pulley on the Rod 7.

Parts required to build the Wire Twisting Machine: 3 of No. 2; 2 of No. 5; 6 of No. 12; 2 of No. 16; 2 of No. 17; 4 of No. 22; 1 of No. 23a; 1 of No. 24; 4 of No. 35; 21 of No. 37a; 18 of No. 37b; 6 of No. 38; 1 of No. 40; 1 of No. 52; 2 of No. 111c; 1 of No. 125; 2 of No. 126; 2 of No. 126a; 2 of No. 155; 1 *Magic* Motor, which is not included in Outfit No. 1.