

# A Fine New Special Model

## Big Wheel with Electric Drive

THE model Big Wheel shown in Fig. 1 is a splendid subject for model-builders interested in amusement devices and is most fascinating to watch in motion. It is easy to assemble and its construction will provide a pleasant pastime for those who have a good supply of Angle Girders and Flat Plates at their disposal.

Construction is commenced by building the base. This consists of four  $12\frac{1}{2}$ " Angle Girders, which are bolted together to form a square. The Girders forming the sides and the one forming the back of the base have their flanges facing outward, but the front Girder 1 is secured in place by  $\frac{1}{2}$ "  $\times$   $\frac{1}{2}$ " Angle Brackets in the position shown in Fig. 1. Three  $12\frac{1}{2}$ " Angle Girders and four  $18\frac{1}{2}$ " Angle Girders are bolted to the side Girders in the positions shown, and the space between each pair of  $18\frac{1}{2}$ " Angle Girders is filled in with a  $12\frac{1}{2}$ " Strip Plate, two  $5\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flexible Plates and a Semi-Circular Plate.

The corresponding pairs of legs forming the towers are joined at their upper ends by  $5\frac{1}{2}$ " Strips, Girder Frames and 1" Triangular Plates 2, and the structure is held rigid by  $18\frac{1}{2}$ " Angle Girders bolted at their lower ends to the base, and at their upper ends to the  $5\frac{1}{2}$ " Strips and Girder Frames. The inner pairs of  $18\frac{1}{2}$ " Angle Girders are braced by  $5\frac{1}{2}$ " Strips, but two  $4\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flexible Plates and a  $5\frac{1}{2}$ " Curved Strip 3 are bolted to the front pair of Girders.

The upper ends of the  $18\frac{1}{2}$ " Angle Girders are spaced apart by  $2\frac{1}{2}$ " Angle Girders.

Two  $5\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flat Plates and a  $2\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " one are bolted to the base as shown. A step leading to the loading platform is constructed by bolting a  $4\frac{1}{2}$ "  $\times$   $2\frac{1}{2}$ " Flat Plate 4 to the base, and a  $4\frac{1}{2}$ "  $\times$   $1\frac{1}{2}$ " compound Flat Plate, consisting of two  $3"$   $\times$   $1\frac{1}{2}"$  Flat Plates overlapped, is attached to this Plate 4 by two  $1"$   $\times$   $\frac{1}{2}"$  Angle Brackets. The compound Plate is flanged on one side by a  $4\frac{1}{2}"$  Angle Girder 5. A  $4\frac{1}{2}"$   $\times$   $3\frac{1}{2}"$  compound Flat Plate 6 made up from two  $4\frac{1}{2}"$   $\times$   $2\frac{1}{2}"$  Flat Plates forms the loading platform, and this is joined to the  $18\frac{1}{2}"$  Angle Girders by two  $3\frac{1}{2}"$  Angle Girders. Two  $3\frac{1}{2}"$  Braced Girders are bent as shown, and are also bolted to the  $18\frac{1}{2}"$  Angle Girders. The guard rails consist of  $3\frac{1}{2}"$  and  $4"$  Rods held in Handrail Supports bolted to the towers. The front of the model is completed by attaching a  $3"$  Curved Strip to the Girder Frame by means of two  $1\frac{1}{2}"$  Discs, and a similar Disc is then secured to the Curved Strip.

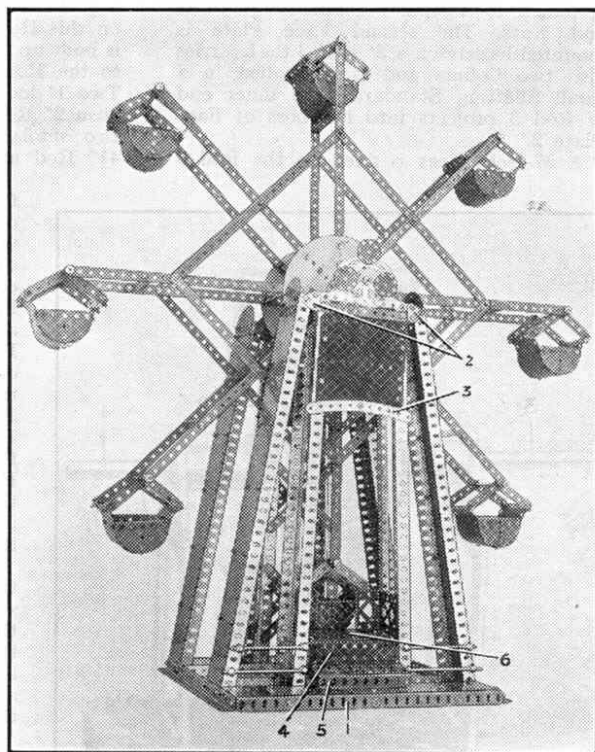


Fig. 1. A fine Meccano model Big Wheel driven by an Electric Motor.

Each of the passenger cars consists of a  $5\frac{1}{2}"$   $\times$   $2\frac{1}{2}"$  and a  $2\frac{1}{2}"$   $\times$   $1\frac{1}{2}"$  Flexible Plate, overlapped one hole and bent to the shape shown in Fig 1. The sides of the cars are Semi-Circular Plates secured to the compound Plate by  $\frac{1}{2}"$   $\times$   $\frac{1}{2}"$  Angle Brackets. The seats are  $2\frac{1}{2}"$   $\times$   $1"$  Double Angle Strips. Four  $2\frac{1}{2}"$  Strips are attached to the corners of each car by  $\frac{1}{2}"$   $\times$   $\frac{1}{2}"$  Angle Brackets, and they form links by means of which the car is suspended from its arm of the Wheel. A  $4"$  Rod is pushed through the end hole in the appropriate arm of the Wheel and through the end holes of the  $2\frac{1}{2}"$  Strips. The axle of the Wheel is held in position in its bearings by means of Collars.

Parts required to build the big wheel: 24 of No. 1; 16 of No. 2; 32 of No. 5; 16 of No. 7a; 7 of No. 8; 1 of No. 9a; 2 of No. 9b; 8 of No. 9d; 82 of No. 12; 2 of No. 12b; 1 of No. 13; 1 of No. 15a; 10 of No. 15b; 2 of No. 16; 1 of No. 16b; 2 of No. 24; 1 of No. 26; 1 of No. 27a; 2 of No. 32; 32 of No. 35; 486 of No. 37a; 478 of No. 37b; 30 of No. 38; 19 of No. 48a; 16 of No. 48b; 3 of No. 53a; 23 of No. 59; 2 of No. 70; 1 of No. 72; 2 of No. 73; 8 of No. 77; 1 of No. 89; 1 of No. 89a; 1 of No. 94; 1 of No. 95a; 1 of No. 96; 2 of No. 97; 4 of No. 113; 8 of No. 136; 2 of No. 146; 8 of No. 188; 2 of No. 191; 16 of No. 192; 4 of No. 197; 20 of No. 214; 3 of No. 217a. 1—E120 Electric Motor.

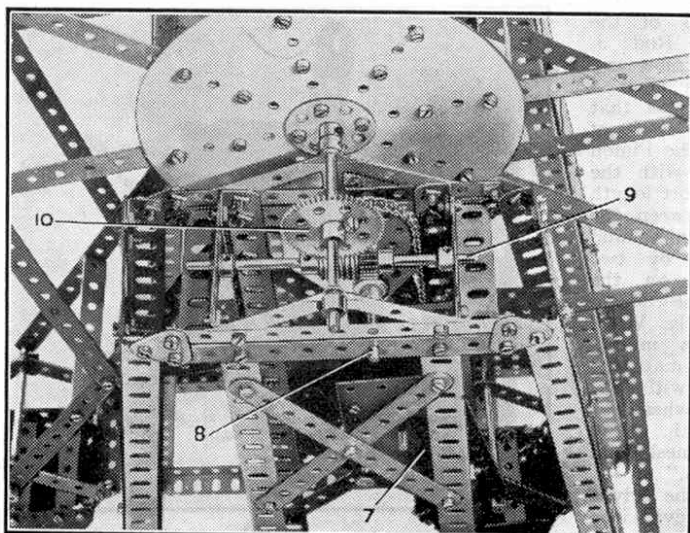


Fig. 2. The rear of the Big Wheel, showing the drive from the Electric Motor.

An E120 Electric Motor 7 is bolted to one of the rear pairs of  $18\frac{1}{2}"$  Angle Girders, as shown in Fig. 2, and a  $1"$  Sprocket on its armature shaft is connected by Sprocket Chain to a  $1\frac{1}{2}"$  diam. Sprocket on a  $3"$  Rod 8, which is journalled in the  $5\frac{1}{2}"$  Strips at the top of the rear tower. A Worm on Rod 8 meshes