New Meccano Models

Three Wheel Car—Balance—Tramcar

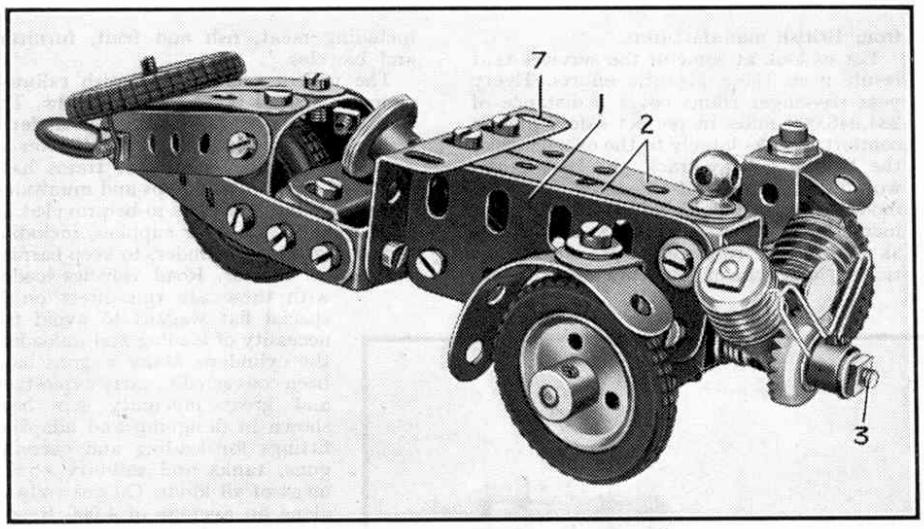

Fig. 1. A miniature three wheel car that displays many novel uses for Meccano parts.

READERS who like building miniature models will be interested in the neat three wheel car shown in Fig. 1. This is constructed from very few parts, yet its appearance is remarkably realistic.

The top and sides of the bonnet are formed by a Girder Bracket, to which two $2\frac{1}{2}''$ Flat Girders 1 are secured by means of Angle Brackets, and also two $2\frac{1}{2}''$ Strips 2. The Strips are held in place by the shank of a Handrail Support passed through a Double Bracket bolted to the Flat Girders. The Double Bracket carries also the plunger of a Spring Buffer, which represents an electric horn. A second Double Bracket provides support for the steering mechanism.

The "engine" consists of two 1″ Threaded Rods screwed into a spider removed from a Swivel Bearing. The spider is pushed on a 2″ Threaded Rod 3, which carries also a $\frac{3}{4}''$ Contrate Wheel that represents the crankcase. A Worm is placed on each of the 1″ Screwed Rods and is held in place by a Nut. Pieces of thin copper wire twisted around the Worms and bent as shown represent valve rods.

The steering arrangement comprises two Corner Angle Brackets 4 secured to Threaded Bosses on the $2\frac{1}{2}''$ Strips 5 by means of Threaded Pins, which form bearings for the front wheels. The $2\frac{1}{2}''$ Strip is bolted to the lower Double Bracket, and the Threaded Bosses are held to it by $\frac{3}{8}''$ Bolts. They are held in place by Bolts passed through the Reversed Angle Brackets and into the Threaded Bosses. The track rod is a 2″ Axle Rod 6 fitted with a Collar and a Cord Anchoring Spring at each end. Bolts are passed through the remaining free holes in the Corner Angle Brackets 4, and half a Compression Spring is slipped on each of their shanks before they are screwed into the Collars.

A 3″ Axle Rod is pushed through a hole in the Girder Bracket 7, and its lower end is journalled in a Collar secured in the centre bottom hole of the Flat Girder forming the side of the bonnet. Two Washers are placed on the Bolt before it is tightened up. The lower end of the 3″ Axle Rod touches the $2\frac{1}{2}''$ Strip mentioned previously, and a Cord Anchoring Spring, which is placed on the Rod below the Collar, prevents upward movement. Cord is wound around the lower end of the Rod, and its ends are tied to the Cord Anchoring Springs on the track rod.

The rear of the body consists of two $3\frac{1}{2}''$ Strips bolted to $1'' \times \frac{1}{2}''$ Angle Brackets fixed to the Girder Bracket 7. A 3″ Strip is bent as shown, and 2″ and $2\frac{1}{2}''$ Strips are bolted to it. The $3\frac{1}{2}''$ and $2\frac{1}{2}''$ Strips are joined at their rear ends by a $\frac{3}{8}''$ Bolt. The 2″ Strips are bent downward slightly, and to them is fixed a 1″ loose Pulley with tyre.

The driving seat is a $1\frac{1}{2}''$ Angle Girder fixed by two Angle Brackets between the $3\frac{1}{2}''$ Strips. Two $1\frac{1}{2}''$ Strips are fastened to a Double Bracket 8 bolted to the Angle Girder, and a 1″ Axle Rod journalled in holes in the Strips forms the axle of the rear wheel.

The model is completed by fixing in place the exhaust pipe, which is represented by a $3\frac{1}{2}''$ Crank Handle.

Parts required to build model three-wheel car: 2 of No. 3; 9 of No. 5; 3 of No. 11; 8 of No. 12; 1 of No. 9f; 1 of No. 19h; 4 of No. 22; 1 of No. 29; 2 of No. 32; 12 of No. 38; 24 of No. 37a; 19 of No. 37b; 1 of No. 48a; 4 of No. 59; 2 of No. 64; 2 of No. 82; 1 of No. 81; 4 of No. 111c; 1 of No. 120a; 1 of No. 136; 1 of No. 161; 4 of No. 142c; 2 of No. 125; 1 of No. 154a; 1 of No. 154b; 3 of No. 176; 4 of No. 217b; 1 spider (from Swivel Bearing).

Construction of the tramcar shown in Fig. 3 should be commenced by overlapping two $5\frac{1}{2}'' \times 3\frac{1}{2}''$ Flat Plates $1\frac{1}{2}''$ along their short sides. The Plates are then bolted centrally under the flanges of two $12\frac{1}{2}''$ Angle Girders, so that the slotted holes in the Girders are vertical. Two $3\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plates are fitted to the projecting ends of the Girders at each end of the chassis, across which, $2\frac{1}{2}''$ from the ends, two $3\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips are bolted. Four $5\frac{1}{2}''$ Strips are bolted to the lugs of the Double Angle Strips,

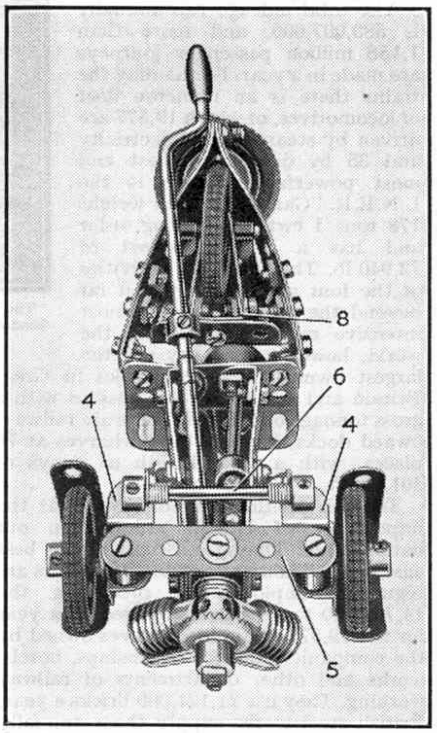

Fig. 2. An underneath view of the three wheel car.