



Fig. 1. A Mechanical Horse and Trailer that can be built with parts in Outfit No. 1.

3 of No. 38; 2 of No. 48a; 1 of No. 52; 2 of No. 90a; 3 of No. 111c; 1 of No. 125; 2 of No. 126; 2 of No. 126a; 4 of No. 142c; 1 of No. 189.

Our next model is intended for rather more advanced model-builders, and is a fine Cargo Steamer built with the parts in Outfit No. 3.

You will notice that this model makes effective use of new parts now included in a No. 3 Outfit. The tapering fore-deck of a Meccano ship,

particularly a fairly small model such as the one described here, was formerly rather difficult to fill in neatly. The Triangular Flexible Plates now available are designed specially for this type of work, and in the Cargo Steamer four $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Triangular Flexible Plates fill in the fore-deck neatly and conveniently.

Construction of the model is begun by bolting a $12\frac{1}{2}''$ Strip 1 on each side to the long flange of a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate. At the bow a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate is fixed to each of the Strips 1, and these Plates and the Strips are then connected by a $\frac{3}{8}''$ Bolt 3. The sides of the hull on

A SIMPLE Mechanical Horse and Trailer suitable for very young model-builders is the first of two new models described this month. It is designed for Outfit No. 1 and is shown in Figs. 1 and 2.

You should make the tractor unit of the model first. Begin by bolting an Angle Bracket to one end of each of two $5\frac{1}{2}''$ Strips, and then connect the Angle Brackets by attaching to them a Trunnion 1. Now use the bolts that fix the Angle Brackets to the Strips to secure also $2\frac{1}{2}''$ Stepped Curved Strips on each side, and this assembly will then form the chassis of the tractor. For the rear wheels use 1" Pulleys and fit them with Motor Tyres. Fix the Pulleys on a $3\frac{1}{2}''$ Rod mounted in the chassis as shown in the illustrations.

To form the sides and front of the tractor body you will need a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate. Curve this to U-shape, and then bolt it to the $5\frac{1}{2}''$ Strips of the chassis so that on each side it overlaps the chassis by four holes. The top of the bonnet is covered by a Trunnion 2 attached to the Flexible Plate by Angle Brackets. Place a Bush Wheel, which forms the front wheel, freely on a 2" Rod, and pass the Rod through holes in the Strips and the Flexible Plate. Hold the Rod in place by Spring Clips.

Now assemble the back of the cab by fixing two $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 3 to Angle Brackets bolted to the chassis. Attach a Flat Trunnion to the Double Angle Strips as shown in Fig. 2, and at their upper ends connect them together by two Fishplates 4. These Fishplates are also used to support another Flat Trunnion that forms the cab roof. Complete the cab by bolting two $2\frac{1}{2}''$ Strips to each side to make the window and windscreen frames.

For the trailer use a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate. Its wheels are 1" Pulleys and they should be fixed on a $3\frac{1}{2}''$ Rod. Support the Rod in two Fishplates, each attached to an Angle Bracket bolted underneath the Flanged Plate.

In order to attach the tractor to the trailer a coupling is needed and this is formed by a $\frac{3}{8}''$ Bolt in the trailer engaging a hole in a $\frac{1}{2}''$ Reversed Angle Bracket bolted to the tractor. You can see this $\frac{3}{8}''$ Bolt marked 5, and the Reversed Angle Bracket is attached to the Trunnion 1 as shown in Fig. 2.

The complete list of the parts you will require to build the Mechanical Horse and Trailer is as follows: 2 of No. 2; 4 of No. 5; 4 of No. 10; 8 of No. 12; 2 of No. 16; 1 of No. 17; 4 of No. 22; 1 of No. 24; 4 of No. 35; 27 of No. 37a; 24 of No. 37b;

Fig. 2. The Mechanical Horse seen from the rear.

