

# New Meccano Models

## Omnibus—Simple Weighing Machine

OUR larger model this month is the fine working double-deck omnibus shown in Figs. 1 and 2. It is driven by an E120 Electric Motor, and its construction forms a pleasant pastime. The chassis is shown in Fig. 2. Two  $12\frac{1}{2}$ " Angle Girders 1 are connected together at each end by a  $5\frac{1}{2}$ " Strip, the bolts at one end being used to fix in position one flange of the Electric Motor 2, the other flange of the Motor being bolted to a Flanged Sector Plate 3.

The mechanism that transmits the drive to the rear axle is now fitted. This is accomplished by first bolting a Reversed Angle Bracket 4 to the chassis, the bolt carrying three Washers on its shank for spacing purposes. The Bracket 4 forms a bearing for one end of the  $11\frac{1}{2}$ " Rod 5, which is journalled also in the Double Angle Strips and Double Bent Strip forming the sides of the dummy differential casing. Rod 5 carries a Worm 6 that meshes with a  $\frac{1}{2}$ " Pinion fastened on the  $5\frac{1}{2}$ " Rod used for the rear axle. The differential casing is prevented from moving endways by Collars.

The radiator is a  $2\frac{1}{2}$ " $\times$  $1\frac{1}{2}$ " Flanged Plate attached to Flanged Sector Plate 3 by an Angle Bracket, and it carries the second Flanged Sector Plate that forms the bonnet. A  $3\frac{1}{2}$ " Strip is bolted across the  $2\frac{1}{2}$ " $\times$  $1\frac{1}{2}$ " Flanged Plate and is used to

support the mudguards.

The near side of the bonnet is built up with a  $2\frac{1}{2}$ " $\times$  $2\frac{1}{2}$ " Flexible Plate and two  $2\frac{1}{2}$ " $\times$  $1\frac{1}{2}$ " Flexible Plates, one of the

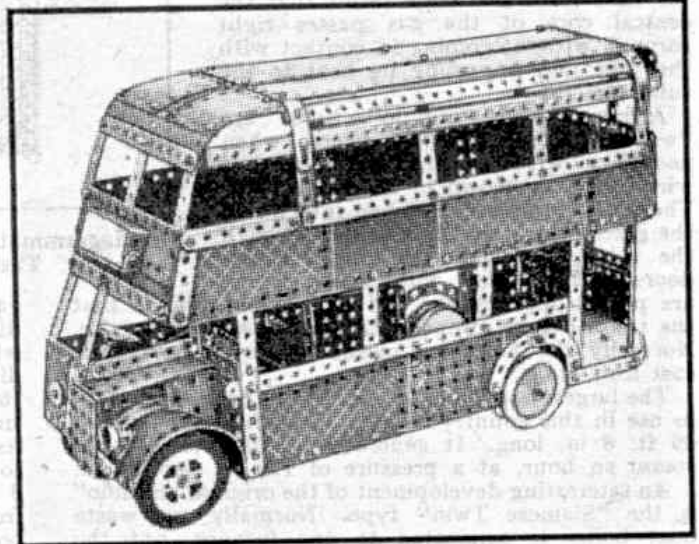


Fig. 1. General view of a fine model omnibus driven by an E120 Electric Motor.

latter being bolted to a Trunnion 7, shown in Fig. 2, while the other is curved as shown in Fig. 1. The off side of the bonnet is built up to form the driver's cab.

The construction of the body is now begun. Four Angle Brackets are bolted to the ends of the  $5\frac{1}{2}$ " Strips of the chassis, and  $5\frac{1}{2}$ " $\times$  $2\frac{1}{2}$ " Flexible Plates are bolted to the forward pair. To these Plates  $5\frac{1}{2}$ " Strips are bolted, which in turn are attached to the horizontal  $12\frac{1}{2}$ " Strips. The  $5\frac{1}{2}$ " Strips are the window sashes, and their lower ends carry the remaining Plates that form the sides of the bus.

Angle Girders 9 extended by  $12\frac{1}{2}$ " Strips form the main members of the upper deck, and a  $5\frac{1}{2}$ " $\times$  $2\frac{1}{2}$ " Flanged Plate 8 is bolted in position to provide a roof for the driver's cab. The Plates enclosing the upper deck are now added. Plate 10 is half of a Hinged Flat Plate from which the centre pin has been removed; the other half of the Plate is used in a similar position on the opposite side of the model. The sides are connected at the front by  $5\frac{1}{2}$ " $\times$  $1\frac{1}{2}$ " Flexible Plates and Angle Brackets. Strip 11 is a compound strip made by overlapping two  $5\frac{1}{2}$ " Strips six holes.

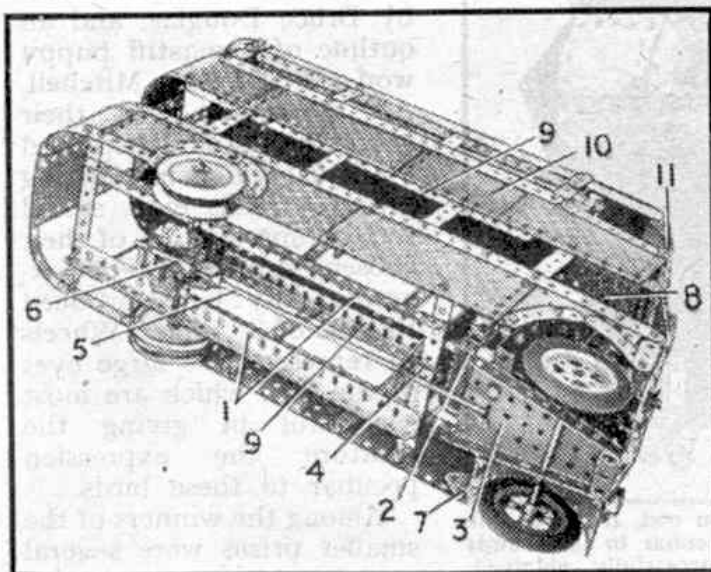


Fig. 2. Underneath view of the Meccano omnibus.

The roof is constructed as shown in Fig. 1. It consists of  $12\frac{1}{2}'' \times 2\frac{1}{2}''$  Strip Plates extended by Flexible Plates of various sizes, the whole being strengthened with Angle Girders. This assembly is extended at each side by  $12\frac{1}{2}''$  Strips and Angle Girders bolted to Formed Slotted Strips, and is then fixed to the window sashes of the upper deck.

Parts required to build the model Omnibus: 4 of No. 1; 18 of No. 2; 6 of No. 3; 2 of No. 4; 11 of No. 5; 3 of No. 6a; 8 of No. 8; 7 of No. 10; 1 of No. 11; 12 of No. 12; 2 of No. 12c; 1 of No. 13; 1 of No. 14; 1 of No. 15; 1 of No. 15a; 1 of No. 16; 2 of No. 20a; 1 of No. 20b; 1 of No. 22; 1 of No. 23; 1 of No. 23a; 1 of No. 24; 1 of No. 26; 1 of No. 32; 4 of No. 35; 150 of No. 37; 10 of No. 37a; 24 of No. 38; 1 of No. 45; 1 of No. 46; 2 of No. 48; 7 of No. 48a; 2 of No. 48b; 2 of No. 51; 1 of No. 52; 3 of No. 53; 2 of No. 54a; 4 of No. 59; 2 of No. 90; 4 of No. 90a; 2 of No. 111; 2 of No. 111a; 6 of No. 111c; 1 of No. 125; 2 of No. 126; 1 of No. 126a; 2 of No. 142a; 1 of No. 147b; 1 of No. 186; 4 of No. 187; 4 of No. 188; 5 of No. 189; 6 of No. 190; 2 of No. 191; 4 of No. 192; 2 of No. 193; 2 of No. 195; 2 of No. 197; 1 of No. 198; 1 of No. 199; 2 of No. 200; 1 of No. 214; 8 of No. 215; 2 of No. 217a; 2 of No. 217b; 1 E120 Electric Motor.

The simple model scales shown in Fig. 3 will indicate the weight of light articles placed on the pan, by the movement of an arm across a graduated scale. The model is constructed by attaching two Trunnions to a  $5\frac{1}{2}'' \times 3\frac{1}{2}''$  Flanged Plate that forms the base. Two  $5\frac{1}{2}''$  Strips are fixed to the Trunnions, and their end holes provide bearings for a 2" Rod, to which is attached a beam formed from two  $5\frac{1}{2}''$  Strips. These are mounted on the Rod between two 1" Pulleys, and the scale pan, consisting of two Trunnions bolted together to form a square, is suspended from their right-hand ends by lengths of Cord.

Two  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips, lengthened by two  $2\frac{1}{2}''$  Strips and Flat

Brackets, are bolted to the other end of the beam. A  $\frac{3}{8}''$  Bolt fixed to the lower ends of the Double Angle Strips provides a pointer for the scale. The latter consists of a piece of paper gummed to one of two  $2\frac{1}{2}''$  Cranked Curved Strips, which are attached to the base by two  $\frac{1}{2}'' \times \frac{1}{2}''$  Angle Brackets and spaced at their outer ends by a  $\frac{3}{8}''$  Bolt and nuts. The scale is calibrated by placing small articles of

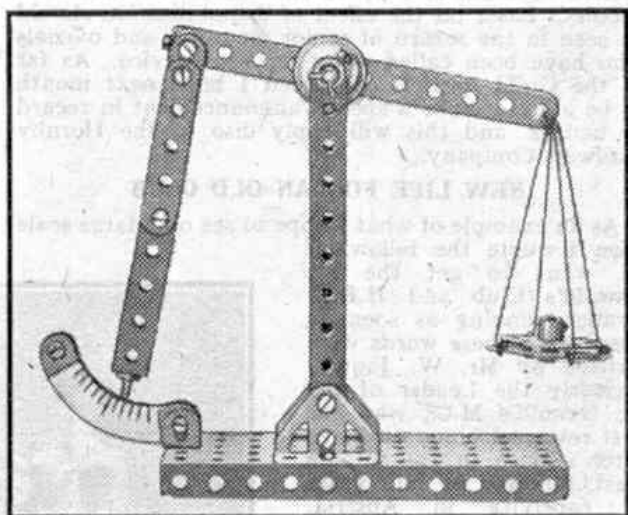


Fig. 3. These simple scales can be used to weigh light articles.

known weight on the pan and then marking the position taken up by the pointer for each weight.

If it is desired to weigh heavier articles, a few Strips or a 50 Gramme Weight should be bolted to the lower ends of the Double Angle Strips.

Parts required to build model Scales: 4 of No. 2; 2 of No. 5; 4 of No. 10; 4 of No. 12; 1 of No. 17; 8 of No. 22; 4 of No. 35; 22 of No. 37a; 18 of No. 37b; 2 of No. 38; 2 of No. 48a; 1 of No. 52; 2 of No. 90a; 2 of No. 111c; 2 of No. 126; 2 of No. 126a.

## Prizes for Model-Builders

In the September "M.M." we announced details of an important model-building contest for which Meccano models of any type or size may be submitted. This competition is still open and therefore we are repeating the main details governing entries for the benefit of readers who did not see the original announcement.

Models of any kind, large and small, are suitable for entry in the Contest. The model itself is not required, all that should be sent being a photograph or drawing, with any notes required to explain special constructional features. Each photograph or drawing must bear the competitor's name, address and age, and the entry should be forwarded to "Autumn Model-

*Building Contest, Meccano Limited, Binns Road, Liverpool 13.*"

Entries will be divided into two sections, A for competitors of all ages living in the British Isles, B, for competitors of all ages living Overseas. Section A will close on 31st October, but Section B will remain open for entries until 31st December.

The following prizes will be awarded in each Section of the Contest to the builders of the most interesting models received: First, £2/2/-. Second and Third Prizes will consist respectively of £1/1/- and 10/6. There will be also five further prizes of 5/-.

All prize-winners will be notified as soon as possible after the closing date.