New Meccano Models

Stacking Crane Breakdown Car Tap Dancer Cart and Horses

TWO of the four Meccano models described this month have a pleasantly easy holiday air. They represent a tap dancer, whose antics will give rise to much amusement, and a cart drawn by two horses. The Outfits required for the construction of these interesting models are Nos. 1 and 3 respectively. For the more serious model-builder there are a breakdown car that can be built from Outfit No. 4, and a small stacking crane designed for construction from Outfit No. 6.

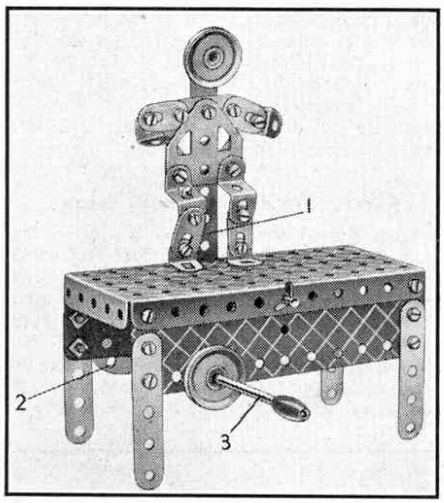

Fig. 1. An amusing model of a tap dancer built from an Outfit No. 1.

The tap dancer is shown in Fig. 1, and the model is set in motion by turning the Crank Handle provided. Its construction is commenced by bolting two $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates to the sides of a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate to form a stage, the legs of which are then made of four $2\frac{1}{2}''$ Strips bolted in a rigid position to the ends of the $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates. The figure of the dancer is composed of two Flat Trunnions pivoted at their ends in the third hole from one end of a $5\frac{1}{2}''$ Strip 1. The $5\frac{1}{2}''$ Strip itself is pivoted on a $3\frac{1}{2}''$ Rod journalled in the flanges of the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate, and held in position by Spring Clips.

A 1″ Pulley bolted at the end of the $5\frac{1}{2}''$ Strip forms the dancer's head. His right leg is made up of a Reversed Angle Bracket pivotally connected by a Flat Bracket to an Angle Bracket that forms one of his feet, and his left leg consists of two Angle Brackets joined in the shape of a Reversed Angle Bracket and connected by means of a lock-nutted bolt to a Flat Bracket, which in turn is lock-nutted to an Angle Bracket representing the left foot.

A Crank-Handle 3 passes through the two Flexible Plates and is locked in position at the front by a 1″ Pulley Wheel, and at the rear by a Bush Wheel 3, the boss of which faces inwards. The lower end of the $5\frac{1}{2}''$ Strip is pivotally connected by a $2\frac{1}{2}''$ Strip to the Bush Wheel, in such a manner that the figure oscillates when the Crank Handle is turned. The bolts attaching the $2\frac{1}{2}''$ Strip to the Bush Wheel and the $5\frac{1}{2}''$ Strip are fitted with lock-nuts.

Parts required to build the model tap dancer: 1 of No. 2; 5 of No. 5; 6 of No. 9; 4 of No. 10; 1 of No. 16; 2 of No. 22; 1 of No. 24; 3 of No. 35; 30 of No. 37a; 24 of No. 37b; 1 of No. 52; 1 of No. 111c; 1 of No. 125; 2 of No. 126a; 2 of No. 189.

Another simple model of the lighter type is the cart drawn by two horses shown in Fig. 2. This model is a good example of the constructional possibilities of Outfit No. 3. The cart consists of a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate, to the flanges of which are bolted two Flat Trunnions and two Trunnions. These form bearings for the wheel axles, which are $3\frac{1}{2}''$ Rods. Four 1″ Pulleys fitted with Rubber Rings form the wheels. The shafts are $5\frac{1}{2}''$ Strips, and they are pivotally attached by lock-nutted bolts to Double Brackets fixed to the front flange of the Flanged Plate.

The construction of the horses is quite easy to follow from Fig. 2. The one in the rear is mounted between the shafts by passing a 2″ Rod through the centre holes in the sides of the U-Section Curved Plate, the horse being spaced from the insides of the shafts by Spring Clips. The front horse also has a 2″ Rod pushed through its body, Cord being used to connect the Rod to the shafts.

If desired the model may be driven by means of a *Magic* Motor, which should be bolted underneath the cart. The drive is taken to a $\frac{1}{2}''$ fast Pulley fixed to the rear axle. The horses should be joined by a $5\frac{1}{2}''$ Strip bolted to their backs, and a $3\frac{1}{2}''$ Rod fitted at its centre with a Bush Wheel should be passed through the end holes of the Strips forming the hind legs of the front horse. The purpose of the Rod is to hold the legs of the horses clear of the ground.

Parts required to build horses and cart: 2 of No. 2; 8 of No. 5; 4 of No. 10; 2 of No. 11; 8 of No. 12; 2 of No. 16; 2 of No. 17; 4 of No. 22; 6 of No. 35; 28 of No. 37a; 24 of No. 37b; 1 of No. 40; 1 of No. 52; 4 of No. 90a; 2 of No. 111c; 2 of No. 126; 2 of No. 126a; 4 of No. 155a; 2 of No. 190.

The chassis of the model breakdown car shown in Fig. 4 is built by bolting $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates to the long flanges of a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate. Next $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates are attached to the ends of the first Plates and they support between them a Flanged Sector Plate. On the front end of this is built the bonnet, which comprises two $1\frac{11}{16}''$ radius Curved Plates connected at their upper ends to a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip. The radiator is a Flat Trunnion bolted to a Trunnion, the latter being fixed to the Flanged Sector Plate. The ends of the $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates are now connected by a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flanged Plate and the uprights that support the cab roof are added. The latter consist of $2\frac{1}{2}''$ Strips lengthened with $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips, which are joined by $2\frac{1}{2}''$ Strips. A $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate is bolted to the turned-up ends of the Double Angle Strips. The back of the cab also is a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate.

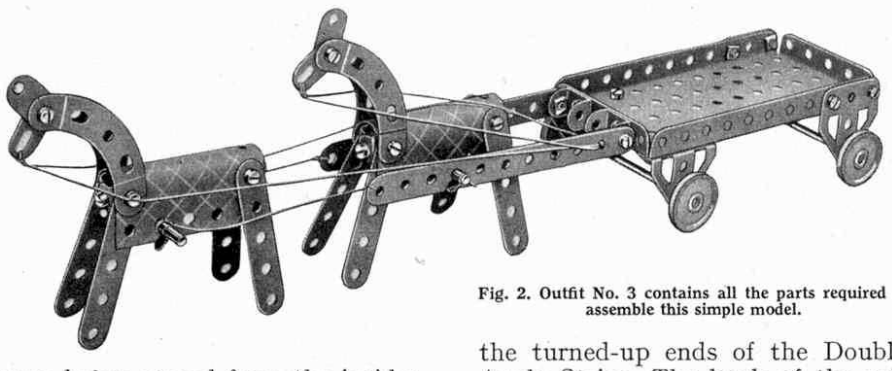

Fig. 2. Outfit No. 3 contains all the parts required to assemble this simple model.