

# New Meccano Models

## Clockwork Traction Engine

OUR new model this month is a powerful traction engine operated by a Clockwork Motor. It is simply designed and easy to build.

Each side of the body consists of a  $5\frac{1}{2}'' \times 3\frac{1}{2}''$  Flat Plate, bolted at the rear to a  $3\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate 1 and at the front to  $3\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips 2 and 3. The sides are extended by  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flexible Plates joined by three  $3\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips which represent the

carrying the  $\frac{3}{4}''$  Pinion. With the Rod in this position the  $\frac{3}{4}''$  Pinion and 57-teeth Gear mesh accurately.

Each of the rear wheels is a Circular Girder and a Hub Disc fitted at the centre with a Bush Wheel by means of which the wheel is fixed on the driving axle.

A Boiler fitted with one End is bolted between the Double Angle Strips 2 and 3, and a cylinder block formed by a Channel Bearing is bolted to Double Brackets

fixed to the boiler. Bearings for the piston rod are provided by Angle Brackets fixed to the Channel Bearing, and a Rod carried in a Double Bracket bolted to the side of the cylinder block represents the valve rod.

A second Boiler End is attached to the front of the Boiler by  $\frac{3}{4}''$  Bolts, and is fitted at the top with a Chimney Adapter and at the bottom with a Double Bracket 7. A further Double Bracket bolted to the Bracket 7 provides support for the front axle, which consists of a 5" Rod held by Collars in a  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strip. A short length of Cord is tied at each end to

the Double Angle Strip, and then passed several times round three Couplings fixed on Rod 8. This Rod is passed through Fishplates bolted to the front of the body, and on it is a  $\frac{1}{2}''$  Pinion 9. The Pinion engages a Worm on the steering column, which is a  $6\frac{1}{2}''$  Rod mounted in Angle Brackets fixed to the body. The Angle Brackets are spaced from the body by two Washers on each bolt holding them.

The upper edges of the  $5\frac{1}{2}'' \times 3\frac{1}{2}''$  Flat Plates are fitted with  $5\frac{1}{2}''$  Angle Girders, one of which is seen at 10. A  $3\frac{1}{2}''$  Flat Girder is bolted across these Girders and to the Double Angle Strip 3, and the Girders are also joined by a  $3\frac{1}{2}''$  Strip placed at a point three holes behind the

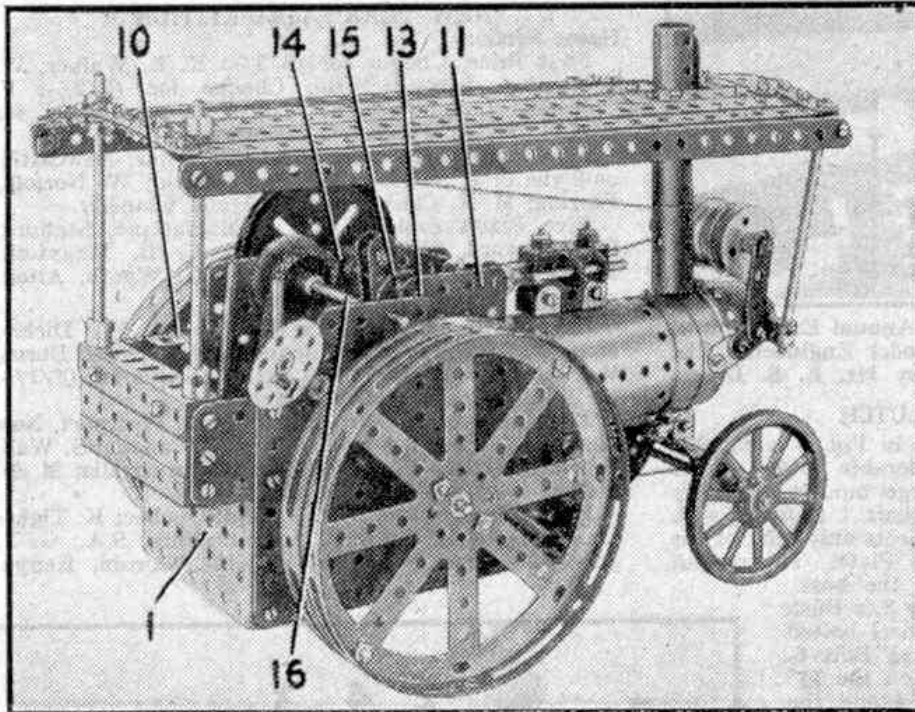


Fig. 1. A powerful traction engine driven by a No. 1 Clockwork Motor. It contains a dummy engine which operates realistically when the tractor is in motion.

coal bunker.

A No. 1 Clockwork Motor of the new reversing type is attached to the body by a 3" Angle Girder bolted to one of the Motor side-plates, and by two  $1'' \times \frac{1}{2}''$  Angle Brackets 4. A  $\frac{1}{2}''$  Pinion on its driving shaft meshes with a 57-teeth Gear 5 on a  $2\frac{1}{2}''$  Rod 6. Rod 6 is mounted in the Motor side-plates, and carries above the 57-teeth Gear a  $\frac{1}{2}''$  Pinion. A  $1\frac{1}{2}''$  Contrate mounted on a transverse Rod meshes with the  $\frac{1}{2}''$  Pinion, and a  $\frac{3}{4}''$  Pinion also fixed on the transverse Rod meshes with a 57-teeth Gear on the driving axle. The axle is a  $6\frac{1}{2}''$  Rod, and it is mounted in the body at a point one hole below and three holes in front of the Rod

Flat Girder. The Girder Brackets 11 provide bearings for the crankshaft and are bolted to the  $3\frac{1}{2}$ " Strip and the  $3\frac{1}{2}$ " Flat Girder.

The crankshaft is a 2" Rod 12 and a 1" Rod 13, each of which is fitted at its inner end with a Double Arm Crank. Rod 12 carries a  $\frac{3}{4}$ " Pinion 14 and Rod 13 an Eccentric 15. The connecting Rod is a 2" Strip pivoted on a  $\frac{1}{2}$ " Bolt passed through the slotted holes of the Double Arm Cranks. The Bolt is fixed to each of the Cranks by nuts. The connecting rod is linked to the piston rod by a Rod and Strip Connector, and the Eccentric 15 is connected to the valve rod by a second Rod and Strip Connector.

The  $\frac{3}{4}$ " Pinion 14 meshes with a 50-teeth Gear on Rod 16. This Rod is mounted in Girder Brackets bolted to the  $5\frac{1}{2}$ " Angle Girders 11, and is fitted with a 1" Sprocket. The Sprocket is connected to a similar Sprocket on the Rod carrying the  $1\frac{1}{2}$ " Contrate.

A  $2\frac{1}{2}$ " x  $1\frac{1}{2}$ " Flexible Plate forms a platform for the dynamo and is attached to the boiler front by a Fishplate at the top and by a  $1\frac{1}{2}$ " Strip extended by a Fishplate at each side. The dynamo is made up of four  $1\frac{1}{8}$ " Flanged Wheels fixed on a 3" Screwed Rod. A  $\frac{1}{2}$ " Pulley at the end of the Screwed Rod is connected by Cord to the flywheel on the

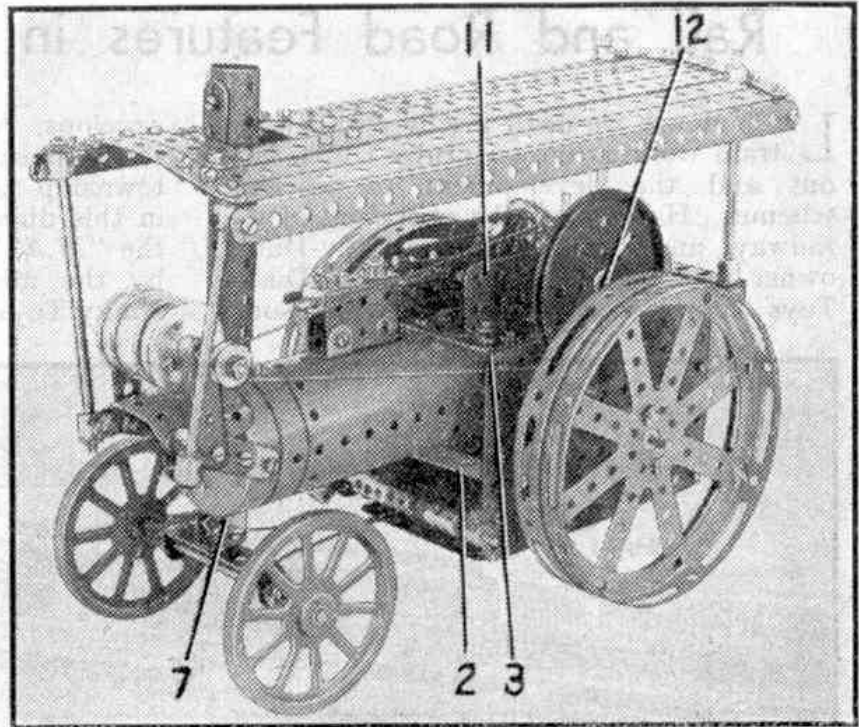


Fig. 2. Another view of the traction engine.

crankshaft. The dynamo is held between 2" Strips bolted to the platform.

#### OCTOBER GENERAL MODEL-BUILDING COMPETITION

This month usually brings the start of the main model-building season of the year, and with this in mind we are announcing a new General Model-Building Contest. These competitions have always been very popular, and in view of the approaching long dark evenings we are looking forward to receiving a record number of entries.

The competition is open for models of all types built from Meccano parts, and there is no restriction on the size of Outfit or number of parts that may be used. The main points the judges will look for in entries are originality in the choice of subject, neatness in design, and novelty in the use of parts.

*Actual models must not be sent.* All that is required is a clear photograph or sketch, together with a few brief notes covering the main points in design and any interesting constructional features.

The contest will be divided into two sections, for Home and Overseas readers respectively. The closing date in the Home section will be 30th November, 1949; entries in the Overseas section will be accepted until 31st January, 1950. Entries must be addressed "October General Model-Building Contest, Meccano Ltd., Binns Road, Liverpool 13," and the competitor's age, name and address must be written clearly on the back of each photograph or sketch submitted.

The following prizes will be awarded in each Section of the Contest. First, Cheque for £3/3/-; Second, Cheque for £2/2/-; Third, Cheque for £1/1/-. There will be also five prizes each of 10/6 and five of 5/-.

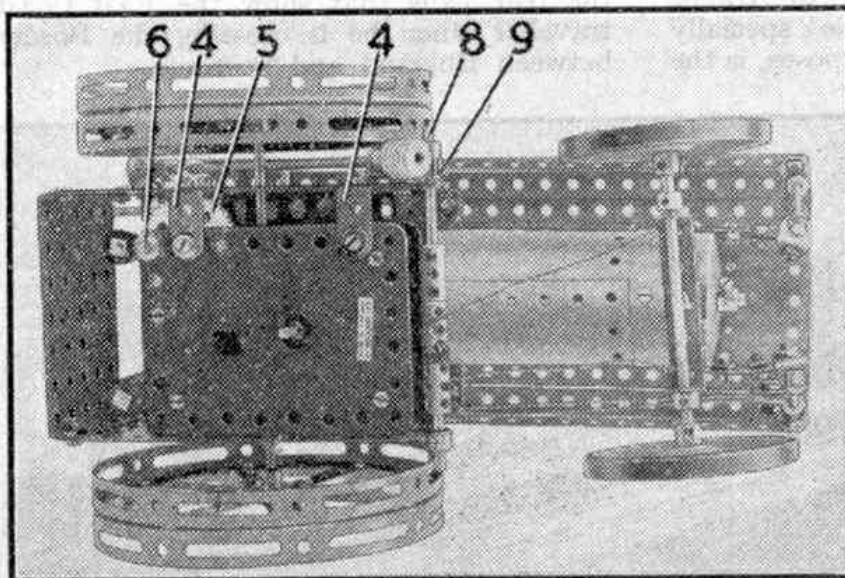


Fig. 3. An underneath view of the tractor showing how the Motor is fitted.