

Fig. 1. This fine open car is fitted with working steering mechanism, a simple clutch of unusual design and a two speed and reverse gear-box.

New Meccano Model

Open Car

CARS are always popular with Meccano boys, and I am sure that the sporty open model shown in Fig. 1 will prove an attractive subject for model-builders who possess the parts and an E20R Motor required for its construction.

Each side of the chassis consists of two $12\frac{1}{2}$ " Strips overlapped 16 holes, and these are connected at the front and at the rear by $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips 1 and 2. An E20R Electric Motor is bolted to one side of the chassis as shown in Fig. 3, and it is connected to the other side by an Angle Bracket.

The clutch and gear-box used in this model are assembled as described in the "Among the Model-Builders" pages of this issue, and the gear-box is bolted in position in the chassis as shown.

A Universal Coupling is fitted to the gear-box output shaft and to a $3\frac{1}{2}$ " Rod that carries a $\frac{1}{2}$ " Pinion 3. The Rod is free to turn in a Coupling 4, which is mounted on the rear axle between a Collar and a $1\frac{1}{2}$ " Contrate 5. The rear axle is assembled

from a $3\frac{1}{2}$ " and a 2" Rod joined by a Coupling, and is held in place in the chassis by this Coupling and by a Collar.

The front axle is made by bolting a $4\frac{1}{2}$ " Strip 6 to a $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip fixed across the chassis. A 1" Reversed Angle Bracket is fixed at each end of the Strip 6 by a bolt 7. A Threaded Pin is passed through the top lug of each Reversed Angle Bracket and is fixed in a Coupling, and a 1" Rod is passed through an end hole of the Strip 6 and is also fixed in the Coupling. Each front wheel is free to turn on a $1\frac{1}{2}$ " Rod held in the centre transverse hole of the Coupling. The wheel is placed with its boss outward, and is spaced from the Coupling by three Washers. One of the 1" Rods carries a Crank 8 and the other is fitted with a Bell Crank 9. The ends of these parts are connected by two 3" Strips 10 overlapped four holes and pivoted at each end on a lock-nutted bolt.

A $1\frac{1}{2}$ " Contrate 11 is fixed by its grub screw on a $\frac{3}{8}$ " Bolt passed through an Angle Bracket, but the Contrate is spaced from the Angle Bracket by a Washer. The Angle Bracket is bolted tightly in the second hole from the front of the side-plate of the E20R Electric Motor, the bolt fixing also a second Angle Bracket facing to the rear at right angles to the first Angle Bracket.

A Fishplate is bolted tightly to the Contrate, and to it is lock-nutted an Angle Bracket 12, Fig. 2. A

Fishplate is lock-nutted to this Angle Bracket and is lock-nutted also to an arm of the Bell Crank 9.

A $\frac{3}{8}$ " Bolt 13, fitted with three Washers, is fixed by a nut in the Double Angle Strip 1, and two $1\frac{1}{2}$ " Bolts 14 are held by nuts in the Double Angle Strip 2.

Each side of the body is assembled on a strip 15, made from a $12\frac{1}{2}$ " and a $2\frac{1}{2}$ " Strip overlapped four holes. The side consists of a $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate 16, two $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates 17 overlapped lengthways four holes, and four $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates 18 arranged as shown in Fig. 4. The front

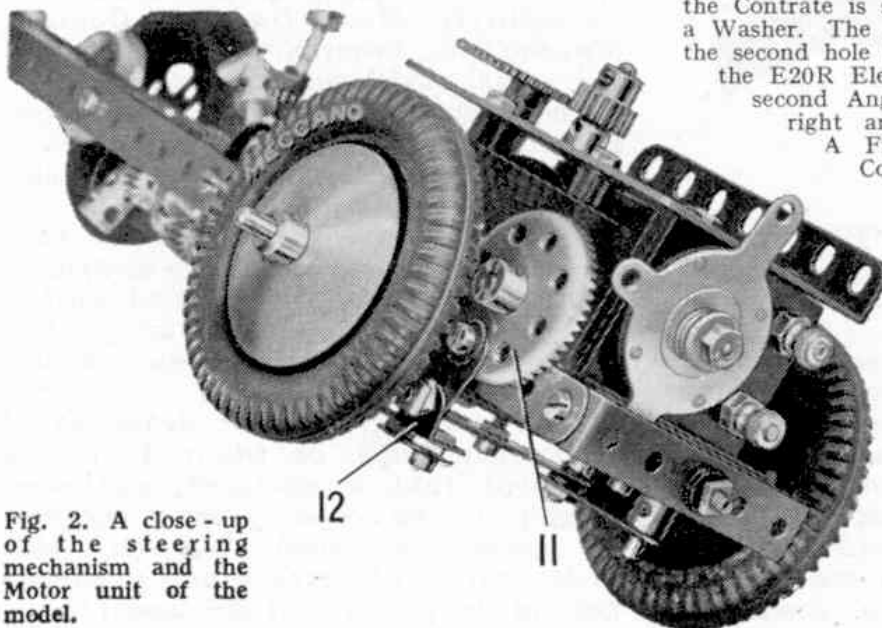


Fig. 2. A close-up of the steering mechanism and the Motor unit of the model.

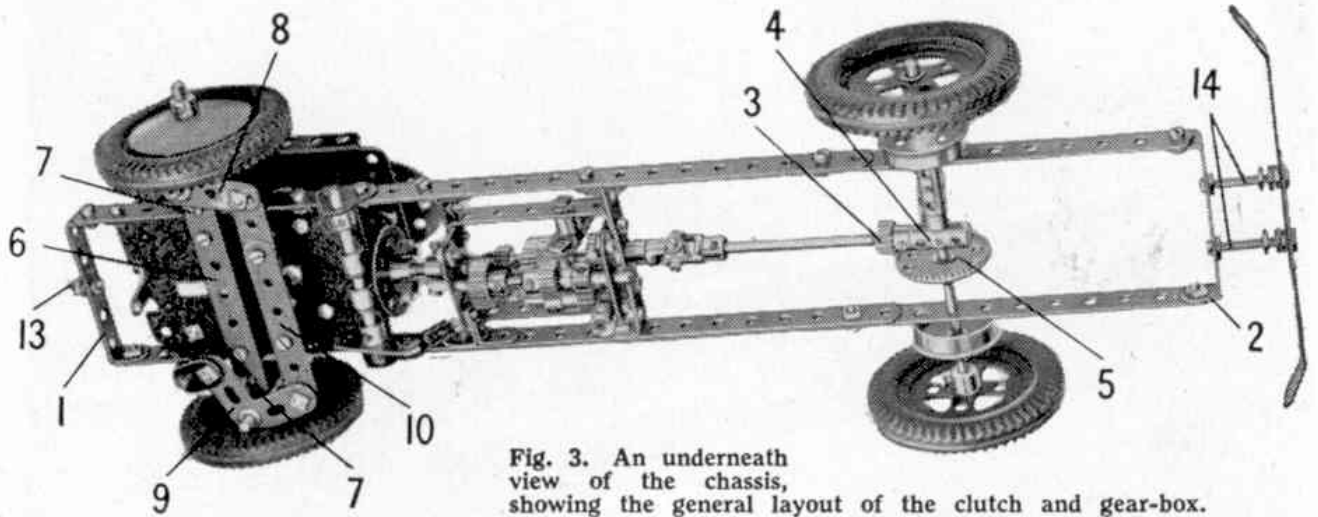


Fig. 3. An underneath view of the chassis, showing the general layout of the clutch and gear-box.

wheel arch is formed by two 3" Stepped Curved Strips bolted at their upper ends to a curved 5½" x 1¼" Flexible Plate 19. Each door consists of two 2½" x 2½" Flexible Plates overlapped two holes and supported by two Hinges.

The sides are connected at the tail by a 5½" x 2¼" Flexible Plate edged at the front by a 5½" Strip and bolted to the top edges of the Plates 17. Two curved 4½" x 2½" Flexible Plates are fixed to three of the Plates 18 on each side as shown in Fig. 4. Two Formed Slotted Strips on each side are bolted to the ends of the strips 15 and are connected by two 3¼" Strips 20, which are joined together by Fishplates.

The radiator grille is formed from two 1⅞" radius Curved Plates 21 connected together by two 2½" x 1¼" Flexible Plates. A 4½" Strip and two 2½" Strips are bolted to the front, and the headlamps, which are represented by 1" loose Pulleys, are fixed to the ends of the 4½" Strip. A 3½" Angle Girder extended at each side by a 2¼" Stepped Curved Strip, is bolted to the lower edge of the grille. The front bumper 22, made from two 5½" Strips curved at their ends, is attached to the 3½" Angle Girder by two Angle Brackets.

The top of the bonnet consists of three 4½" x 2¼" Flexible Plates 23 arranged as shown in Fig. 4. It is connected to the upper edge of the radiator grille by two Angle Brackets, and is edged at the rear by two Formed Slotted Strips joined at the centre by a 1½" Strip. A Formed Slotted Strip 24 is fixed to each of the Plates 19 and a 2¼" Curved Strip 25 is attached to it by an Angle Bracket.

The windscreen on each side consists of a 2½" Strip, and a 1¼" Strip attached by an Obtuse Angle Bracket. The top ends of these Strips are connected by Angle Brackets and support two 3" Strips overlapped four holes. A 4" Stepped Curved Strip is bolted to Angle Brackets fixed to the 3" Strips.

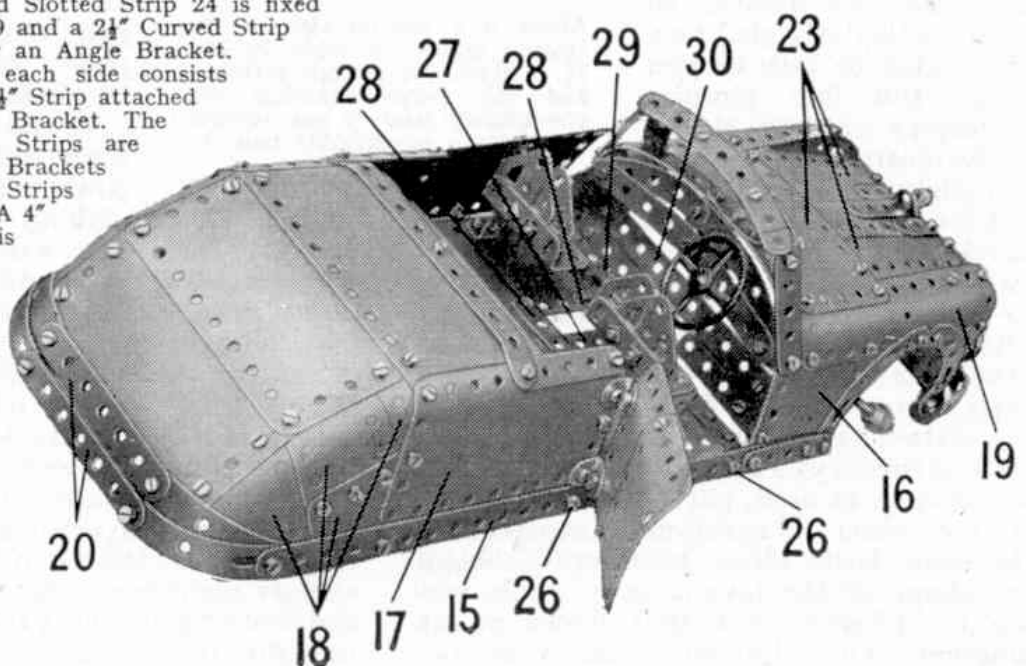
The floor is formed by a 4½" x 2¼" Flexible Plate on each side bolted at their ends to two built-up strips, each of which is made

from two 5½" Strips overlapped 10 holes. These strips are connected to the sides by Angle Brackets held by bolts 26 on each side. Three 2" Strips are bolted between the rear three holes of each 4½" x 2¼" Flexible Plate, and a 3¼" Strip 27 is attached to the centre one of the three Strips. Two 1½" Strips 28, Fig. 4, are bolted in place to leave a gap to accommodate the gear-lever. A 3¼" Strip 29 is attached to one side of the floor by Fishplates.

The footboard 30 consists of two 5½" Strips overlapped 10 holes, with two 2¼" Strips attached to them by Fishplates. It is connected to the sides of the body by Angle Brackets. The dashboard is formed by a 2½" Curved Strip and a 2¼" Strip on each side. The Curved Strips are joined at the centre by a 1½" Strip, and the 2¼" Strips are connected by a Fishplate. The dashboard is attached to the centre of the rear edge of the bonnet and to the sides of the body by Angle Brackets.

Each front seat is formed by a Girder Bracket fitted with two Flat Trunnions, and is supported by a 1" Reversed Angle Bracket. The back of the rear seat is made from two Semi-Circular Plates and a 2¼" x 1¼" Flexible Plate bolted to a 5½" Strip 31. It is connected by Angle Brackets to the seat cushion, which is a 5½" x 1¼" Flexible Plate. The front edge of the seat is made from two 5½" Strips joined by Fishplates and attached to the seat cushion by Angle Brackets. The rear seat is bolted (Continued on page 306)

Fig. 4. The car body removed from the chassis. This view shows the arrangement of the Plates that form the tail.



On the Road—(Continued from page 279)

been doing the run every year since well before the war, and has had many gold medals. Those old Trojans, of course, pulled like packhorses.

During that Easter week-end, there were road-race meets at Brands Hatch and Crystal Palace, and spectators saw some fine riding, especially on the part of young John Surtees, "Old" Eric Oliver—may he forgive me, and he is not a day older than I am, if anybody cares to make anything out of that!—and Cyril Smith. I could not get to those meetings, but I went to a popular and very pleasant grass-track meeting run by a club in Surrey, and revelled in the odour of racing oil, and the crisp music of open exhausts.

Behind the Scenes—(Continued from page 288)

pits and is illuminated at night. At Berne, where the Swiss Grand Prix takes place, the laps completed by each car are shown on a giant thermometer.

Course commentators are located at several vantage points around the circuit, and dovetail their reports in such a way that a commentator is "with" the cars from start to finish of each lap. There are times when the commentators cannot be heard, however, usually when something really interesting is being reported, due to the fact that no loudspeaker on any race track can compete with the B.R.M.s or a pack of 500s in full cry!

Well—next time you go motor-racing spare a thought for the men (and women) behind the scenes. Many of them are unpaid volunteers and some of them—because of their duties—are never able to watch a race. Motor-racing in this country—more popular than ever this year—owes the Back Room Boys a hearty "Thank You."

New Meccano Model—(Continued from page 295)

to Angle Brackets fixed to the sides of the body and to the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate of the tail.

The completed body is fixed by nuts on the ends of the Bolts 13 and 14, and the $5\frac{1}{2}''$ Strips that form the rear bumper are held by nuts on the Bolts 14.

The steering column is a $6\frac{1}{2}''$ Rod supported in the dashboard, and it carries a $\frac{1}{2}''$ Pinion that engages the Contrate 11. The lower end of the Rod is mounted in the Angle Bracket previously mentioned as at right angles to the Angle Bracket that supports the Contrate 11. The $6\frac{1}{2}''$ Rod is held in position by a Collar located against the dashboard.

Parts required to build the Open Car: 6 of No. 1; 13 of No. 2; 3 of No. 2a; 4 of No. 3; 4 of No. 4; 13 of No. 5; 3 of No. 6; 10 of No. 6a; 1 of No. 9b; 20 of No. 10; 32 of No. 12; 3 of No. 12c; 1 of No. 14; 2 of No. 16; 1 of No. 16a; 2 of No. 16b; 3 of No. 17; 4 of No. 18a; 3 of No. 18b; 2 of No. 20; 4 of No. 20a; 1 of No. 22; 2 of No. 22a; 1 of No. 24; 4 of No. 25; 5 of No. 26; 1 of No. 27a; 2 of No. 28; 237 of No. 37a; 225 of No. 37b; 37 of No. 38; 7 of No. 48a; 1 of No. 50; 13 of No. 59; 1 of No. 62; 2 of No. 62b; 5 of No. 63; 2 of No. 77; 4 of No. 89a; 1 of No. 89b; 4 of No. 90; 2 of No. 90a; 1 of No. 111a; 3 of No. 111c; 2 of No. 111d; 4 of No. 114; 2 of No. 115; 1 of No. 120b; 4 of No. 124; 4 of No. 126a; 1 of No. 128; 1 of No. 140; 4 of No. 142a; 2 of No. 147a; 1 of No. 155; 2 of No. 161; 1 of No. 185; 2 of No. 187a; 11 of No. 188; 3 of No. 189; 6 of No. 190; 11 of No. 191; 1 of No. 192; 2 of No. 200; 2 of No. 212; 2 of No. 214; 8 of No. 215; 1 E20R Electric Motor.

NATIONAL TRACTION ENGINE RALLY

Readers who are traction engine enthusiasts will be interested to learn that a National Traction Engine Rally will be held on Saturday, 12th June, at Bridge Farm, Appleford, near Abingdon, Berkshire. The Rally has been organised by The National Traction Engine and Tractor Association Incorporated, and will be open to the general public from 2.30 p.m. Many enthusiasts, however, are certain to want to have a closer look at the engines, and perhaps to take



This striking Meccano fancy dress and Royal crown won First Prize for Master Spottiswoode, of Egremont, Cumberland, in a local competition last year.

photographs as well, and for their benefit admission to the Rally will be possible from 10.30 a.m. onwards. For this purpose, a special Admission ticket will be available for which a nominal charge may be made.

Further information and an entry form can be obtained from the Secretary, N.T.E. & T.A., Duke Street Chambers, Duke Street, Reading, Berkshire.

This Month's Special Articles

	Page
Building up a Refinery	264
The Boeing Stratofreighter by John W. R. Taylor	267
Vancouver's New Bridge	270
A Famous Ferry Service by John P. Barrett	274
Designed to be Shot At by John W. R. Taylor	277
Railways Among Mountains	282
Behind the Scenes by Peter Lewis	286