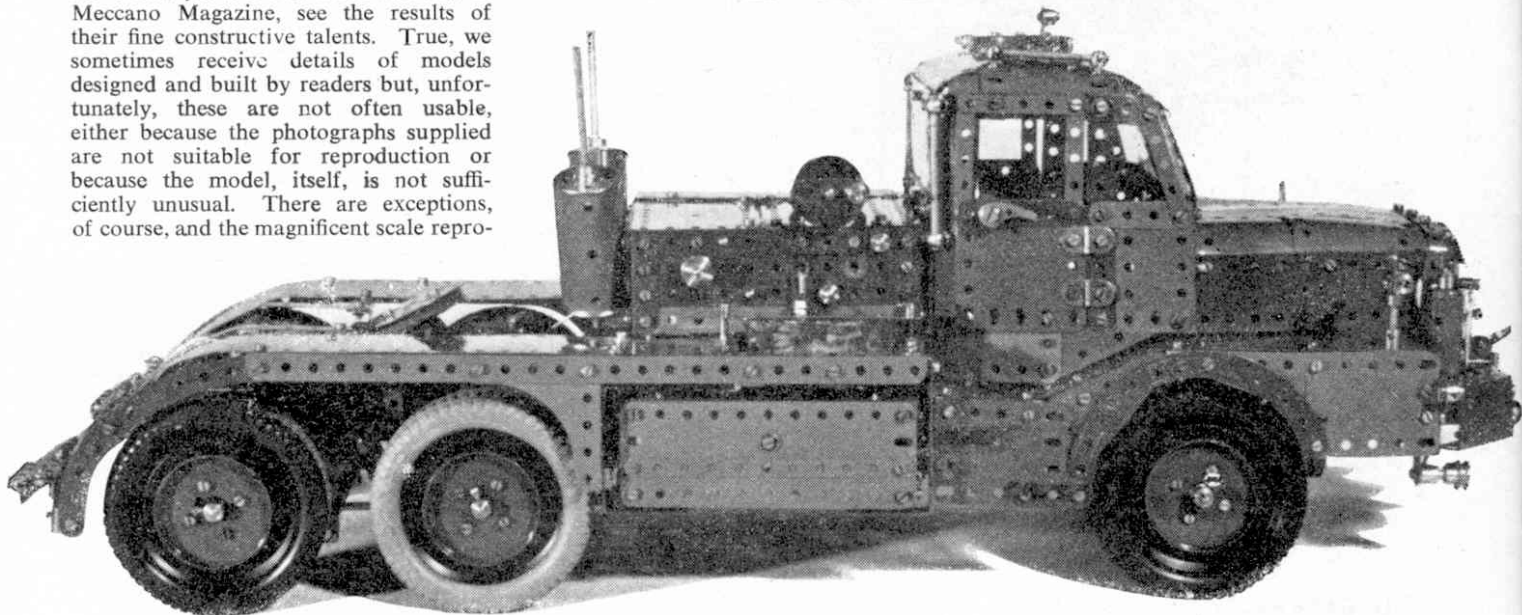


MIGHTY MECCANO ANTAR

MECCANO model-builders of distinction can be found everywhere in the world, yet it is not often that we, on Meccano Magazine, see the results of their fine constructive talents. True, we sometimes receive details of models designed and built by readers but, unfortunately, these are not often usable, either because the photographs supplied are not suitable for reproduction or because the model, itself, is not sufficiently unusual. There are exceptions, of course, and the magnificent scale repro-



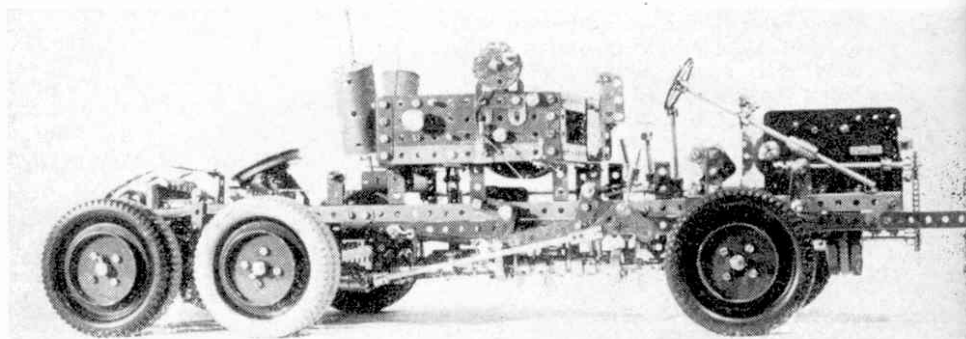
duction of a Thornycroft Mighty Antar Tractor, featured here, is an excellent example.

This splendid model was designed and built by Rev. W. H. Erby of Heston, Middlesex, from plans and information kindly supplied by the makers of the full-sized vehicle. The scale followed was one inch to a foot because, as Rev. Erby, himself, said, 'This scale was really set by the size of the wheels, which are almost the correct size'. He further added that it was, '... a very convenient scale to use in Meccano models as so many of the parts seem suited to it'. Constructors would do well to accept this as a useful hint when designing models of their own.

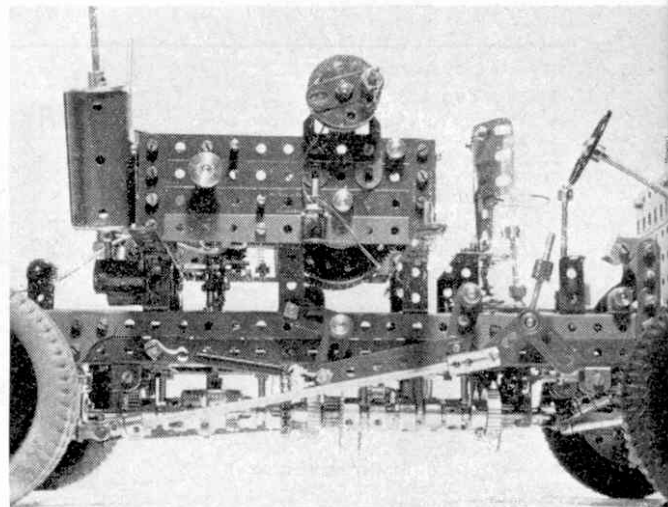
A General Description

At this juncture, to prevent readers spending time and money on writing letters for further information, we must explain that full step-by-step building instructions are *not* available. All details in existence are mentioned here, therefore, we would not be able to help anybody wanting more precise information. We feel quite strongly, however, that this should not prevent us from featuring a superb model, and we hope you will agree with us.

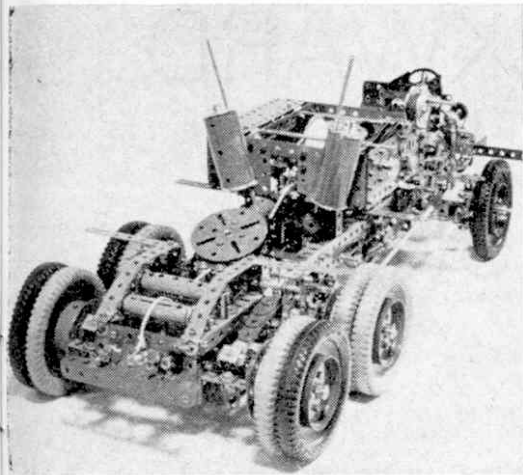
Power for the Tractor is provided by an E15R Electric Motor, connected by



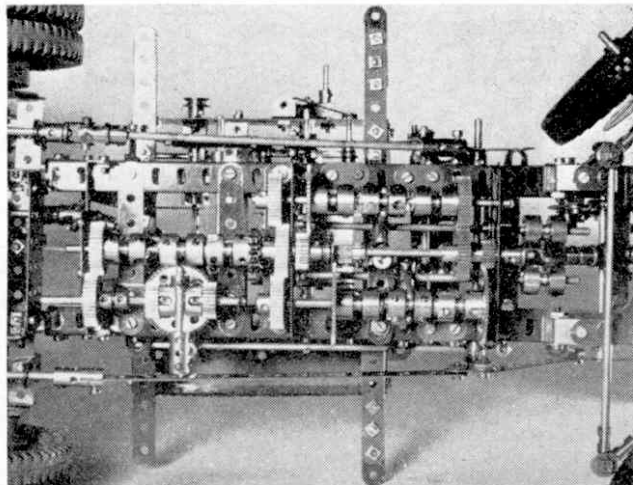
Above: the completed chassis with the cab and bodywork removed



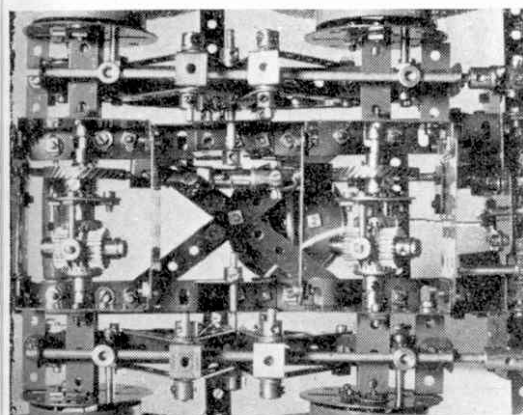
A close-up view showing the powered winch and capstan arrangements



The completed chassis viewed from the rear



A close-up view of the main and auxiliary gear boxes



The twin rear axles showing both differentials

Sprocket Chain to a pedal-operated twin-plate clutch, built up from two Wheel Flanges, with a 2 in. Pulley and Tyre between them. The drive is then transferred to the main gear box via an intermediate propeller shaft incorporating two Universal Couplings.

The Gear Box

The gear box provides four ratios, all the Pinions and Gears being attached to Socket Couplings, and kept from moving to and fro along their axles by Threaded Pins engaged in the centre channels of the Socket Couplings. The other socket of each Coupling carries one section of a Dog Clutch which engages in its corresponding section carried in another Socket Coupling mounted between the gears. This last Coupling slides backwards or forwards, with the layshaft Rod, engaging one or other of the gears and is actuated by the gear lever in the cab.

Also fitted to the model is an auxiliary gear box that allows the output from the main gear box to be transferred either to the rear wheels or to the power take off and, if to the latter, to provide forward

or reverse motion. As in the main box, Socket Couplings in connection with Dog Clutches are used. It is interesting to note that all the above three motions are determined by only one lever.

Each of the two rear axles includes a normal Meccano-type differential driven by an overhead $\frac{1}{2}$ in. Helical Gear engaging with a $1\frac{1}{2}$ in. Helical Gear on the axle. The latter Gear, not having any holes drilled in it, as does, for example, the 57 tooth Gear, is connected to the epicyclic motion through a Wheel Disc by means of Spring Clips held on Bolts screwed (not right home) into its boss. Multi-leaf springs, obtained from Perforated Strips, are pivotally connected to the chassis members to provide a useful suspension system.

As on the real-life vehicle the front axle consists of a rectangular-section beam on semi-elliptic springs. Worm and Pinion steering of a type used on many

Meccano models is provided. Brakes are not fitted to the front wheels, but each of the rear wheels is equipped with a working expanding brake using Rod and Strip Connectors on Threaded Pins.

Mounted on the back of the model is a working winch with both drum and cable being to scale. Also provided is a capstan with its drum of rope, as on the prototype vehicle. The lever selecting either winch or capstan drive is operated on the spot, not from the cab, but the double-disc winch brake has cab control. The Power Take Off from the auxiliary gearbox is, incidentally, taken through a single Universal Coupling.

Besides the intermediate propeller shaft mentioned above, there is a main propeller shaft between the auxiliary gear box and foremost rear axle, and an intermediate shaft between the two rear axles. Both these shafts incorporate two Universal Couplings.



The bulk and power of the Thorneycroft Mighty Antar are well brought out in this photograph