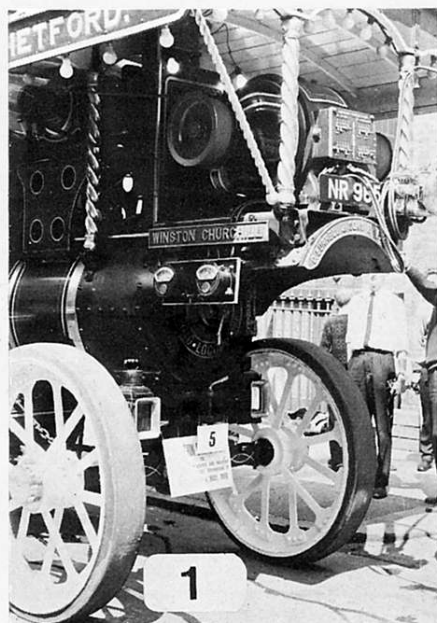


Modelling Showmen's Engines and Traction Engines in Meccano has now reached a very advanced form as the various Meccano Shows up and down the U.K. have proved in recent years, and the high standards achieved have been obtained by painstaking detail reproduced in standard Meccano parts and by close study of the correct proportions of the prototype on which the particular model is based. When a "glamour" shot of a real life showman's engine is taken, it is often done so from the view which clearly shows its front end, often because this is where detail and ornamentation proliferate as Fig. 1 illustrates. Winston Churchill is a Burrell compound Showman's Engine still taking pride of place at many a Steam Rally and such engines are favourites for Meccano modelling. However, choice of parts is very important and the selection of the Circular Girder or Hub Disc both for front wheels and for boiler dimensions is bound to get the proportions wrong immediately. It is quite

obvious in the case of the Burrell, looking at Figs. 1 and 2, that wheel diameter and boiler diameter are quite different.

If the smaller scale of modelling is adopted as in Figs. 5 and 6, then the 3" Spoked Wheel and the Meccano Boiler do give a reasonable proportion, but if the front wheels are based on a 5½" diameter, then the boiler must be reduced in diameter to compensate and the illustrations in Figs. 7 and 8 show excellent results by advanced model-builders in getting the proportions right. We must be careful not to be too pedantic about proportions because they vary according to maker and as to whether an agricultural machine or a road locomotive is being modelled.

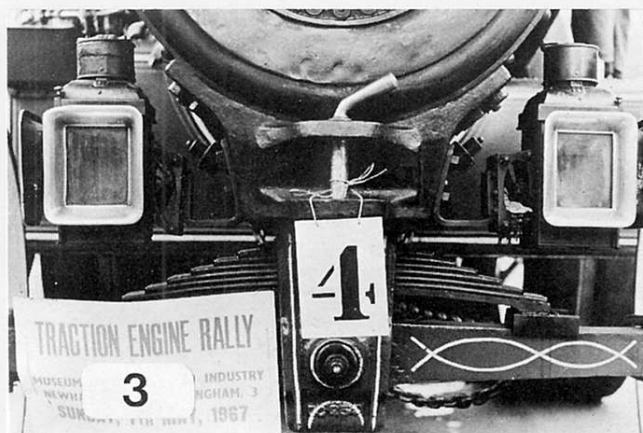
Constructors who want the best take the trouble to write to the makers, or to study published works giving full dimensions (and often detailed drawings) of the prototype they wish to model. They then do some careful paperwork to scale down the original.

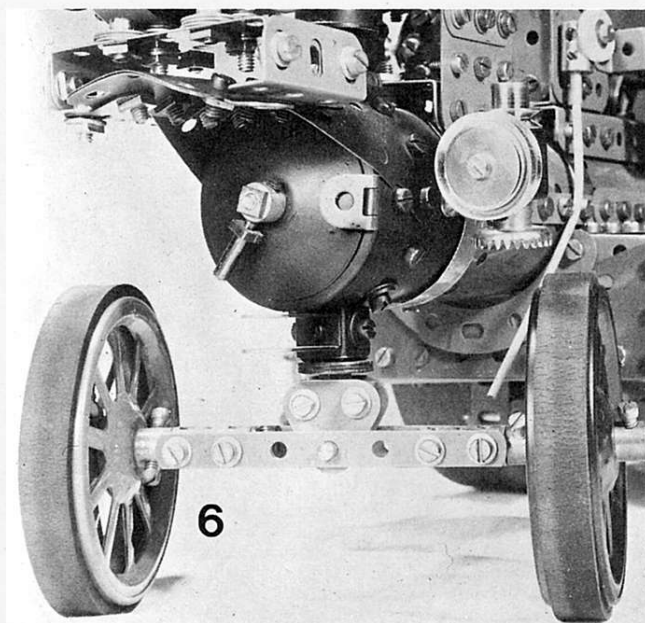
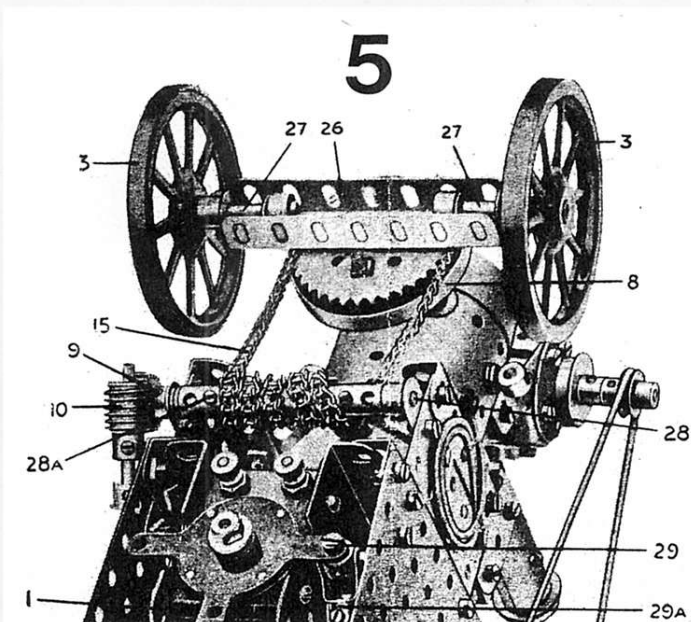


In this second article on traction engine modelling COLIN HAMILTON looks at ...

FRONT ENDS ON SHOWMAN'S ENGINES

If a standard Meccano part does happen to scale in correctly and has acceptable internal proportions of its own, i.e. flange depths, etc., then all well and good, but where this does not apply, the patient enthusiast simply builds up the required part to correct scale. This often involves a high degree of skill, imagination and patience on the part of the model builder if he is to achieve the results shown by the standards of Figs. 7 and 8. Indeed, Fig. 8 shows a front wheel construction for a Burrell compound Road Locomotive in which everything is built up from Narrow Strips, Curved Strips, Wheel Discs and gently curved Flat Girders.





A well-loved, but badly proportioned pre-War design of Meccano Traction Engine has its steering gear shown from below in Fig. 5. The 2" Sprocket Wheel bolted solidly to a Wheel Flange give a rigid vertical steering pivot allowing no 'float' for the front axle when negotiating uneven ground. Some constructors have emulated this design and even incorporated Meccano Ball Bearings in a complicated steering swivel. Scaled up, such ball bearings would be as big as tennis balls! Essentially, traction engines or road locomotives have a simple front beam axle on a simple, but universal, central pivot. This is clearly shown in Figs. 6, 7 and 8. These last two illustrations

show how the job can be tackled in Meccano parts. In the case of Fig. 7, the model of an agricultural traction engine, the axle beam is braced from below by a strut running back to the steering base and the necessary sideways deflection of the axle is catered for in the swivel design shown. Fig. 3 makes it clear that the Burrell Showman's Engine is provided with a sprung front axle and this is reproduced by the modeller in Fig. 8 from standard parts. In this case provision is made for a vertical rise and fall of the axle as the spring flexes.

As in railway steam locomotives, the smoke box needs cleaning and an access door is required, as the close-up of the Burrell's front

shows in Fig. 4. It is interesting to compare how two different advanced model-builders have tackled the reproduction in Figs. 7 and 8. Again, prototype makers are different for the two models and so is their work purpose and the boiler/wheel diameter ratio is not the same. These differences have been catered for in both models. A careful study of the illustrations in this article should help the enthusiast to discover the forms and details of the prototypes and some of the building techniques required to obtain realism in a Meccano model. A wealth of details abound on models and prototypes alike, but these will be dealt with separately in a later article.

