

upper extremities of the trolleys engage with the overhead wires and pick up the electric current. The overhead conductor wires are suspended from standards built up from Angle Girders, with Strips for the overhanging arms.

The strong coil springs that keep the trolley pulleys in contact with the overhead wires are made with Meccano Springs, and the complete unit is extremely realistic. The trolleys may be mounted in several different ways according to the parts available. In the model illustrated they are mounted on short Rods fastened in Swivel Bearings that in turn are journalled in Double Bent Strips bolted to Strips spaced from the roof. This arrangement allows the trolleys to swivel in any direction just like the trolley of an actual vehicle when turning corners or drawing in to the roadside.

The trolley bus model illustrated is of the single deck type. The double-decker type that is now in use in London and many other cities and towns offers very attractive possibilities to the keen model-builder, and those who are unable to obtain by direct observation the details they require should have no difficulty in building good models of the buses illustrated in the article on page 252 to which reference has already been made.

The most popular public vehicles for passenger transport are motor omnibuses, and among the different designs of these vehicles are many excellent subjects for models. Generally they have six wheels, but a few are still made with only four wheels. In most cases the engine is forward mounted, and the driver is accommodated in an enclosed cabin alongside. In some vehicles the engine is mounted behind the driver, however, and this arrangement facilitates streamlining of the front of the vehicle because of the absence of the radiator. There are various designs of bodywork, some with entrances at the front or in the middle of one side, and the model-builder has an almost bewildering choice in this respect.

Before commencing to build a model it is best to decide whether it is to be power-driven or not as this will greatly affect the method of construction. If a power unit of some kind is to be included, sufficient space must be provided in the chassis to accommodate it. If it is decided to use a Clockwork Motor it is best to mount this near the side of the model so that it is easily accessible for winding. An Electric Motor can be placed at any suitable point, however, as it will not be necessary to obtain access to the Motor once it has been connected to the source of current supply. The connection should be made with twin flex.

The power unit should be mounted in position when the

main part of the chassis is completed. In small models where a complete system of transmission is not possible, it is a good plan to mount the Motor directly over the rear axle, and to transmit the drive through suitable reduction gear. If it is intended to incorporate all the main details of a motor chassis, however, the Motor should be mounted in a

position corresponding to that of the driving unit in the actual vehicle.

In constructing any kind of motor vehicle it is best to build the coachwork as a separate unit, so that it can easily be removed from the chassis. If the parts available are limited, internal details such as seating and staircases can be omitted,

but where a realistic appearance is desired, these items must of course be included. To avoid difficulty in bolting the seats in position it is best to build each seat as a separate unit. Several seats should then be bolted in rows to Strips of suitable length. It is then only necessary to place the Strips in position in the interior of the coach and to bolt down their ends. Accessories such as number plates and destination boards can be represented by Strips and Double Angle Strips, but a more pleasing effect can be obtained with

pieces of cardboard bearing the route number and destination.

A good example of a six-wheeled double-deck motor omnibus is shown in Fig. 1. The chassis is constructed on similar lines to the Meccano Super Model Motor Chassis (Instruction Leaflet No. 1a), and it is fitted with rear axles that are mounted between short Strips pivoted in the centre and arranged to form springs. Steering gear of the regulation pattern and operating on the Ackermann principle, is another feature of the model, the front wheels being moved by a Crank attached to the lower end of the steering column.

In designing the cab of a model of this kind it is

great fun selecting suitable Meccano parts to represent the various controls and there is ample opportunity here for the clever model-builder to display his knowledge of the uses of the various Meccano parts.

Considerable interest can be added to a model omnibus by equipping the interior of the coach with electric lighting. For this a number of 3.5 volt bulbs may be screwed in Meccano Lamp Holders wired up to a switch mounted in the driver's cab. Alternatively, the pea lamps supplied with the Meccano Lighting Sets may be used to advantage. These may be arranged as flush-fitting wall lights similar to the lighting units in some actual vehicles.

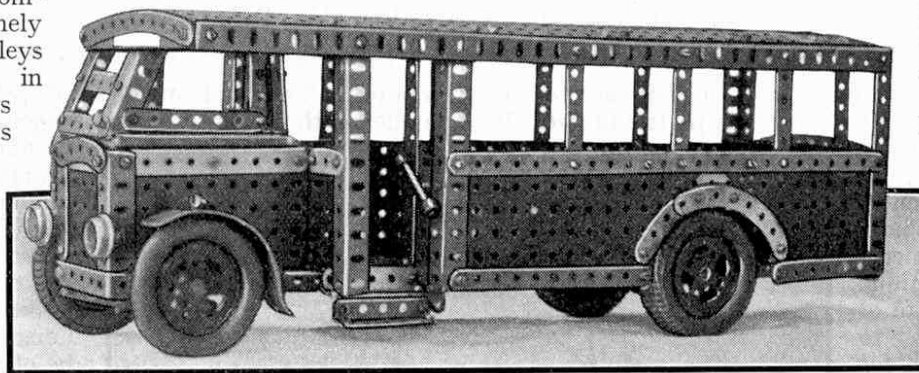


Fig. 3. C. Bills, Blackpool, is the constructor of this model single deck motor omnibus. An interesting feature is the realistic appearance of the cab, obtained with simple parts.

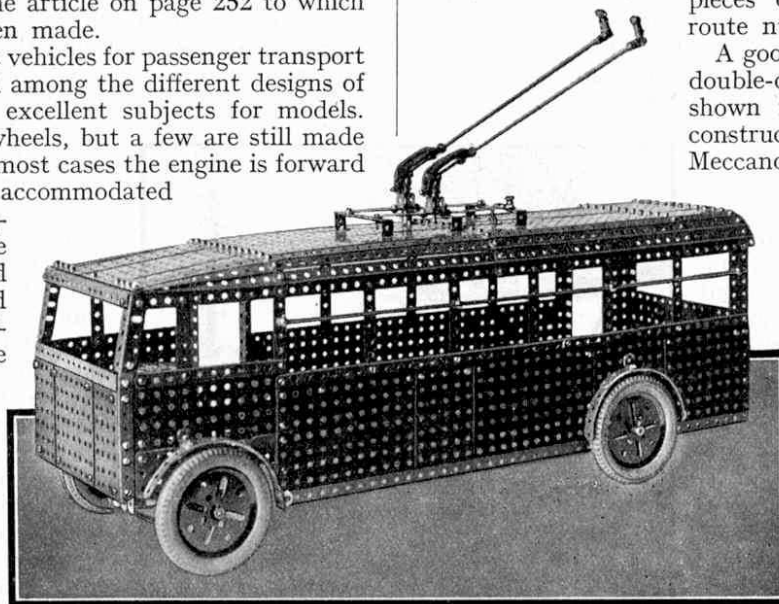


Fig. 4. This neat model of a trolley omnibus was built by P. Grenier, Barcelona. The trolleys are mounted on a platform insulated from the roof.