In Search of New Models

Motor Buses, Tramcars and Trolley Buses

THIS month we are dealing with the possibilities for model-building provided by the many different kinds of public vehicles used for passenger transport in towns and cities. These vehicles make excellent subjects for models, and they are now made in such a variety of types and designs that their reproduction gives ample opportunity for the display of model-building skill. Models of this type are particularly well adapted for the inclusion of Clockwork or Electric Motors, so that after the fun of building and completing them, there is the additional pleasure of setting them in motion.

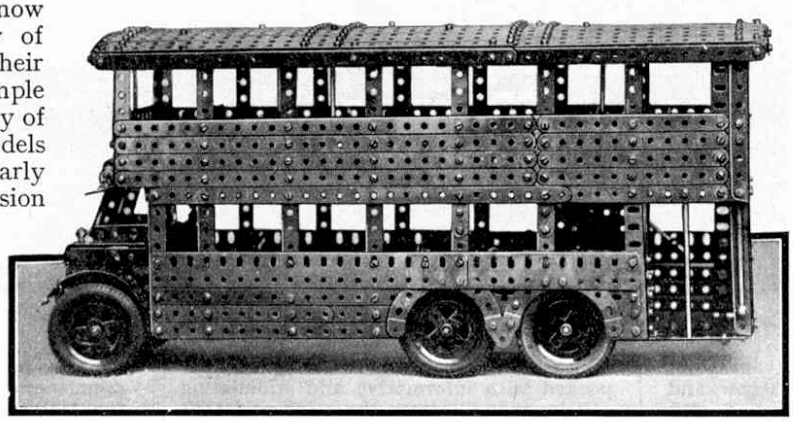

Fig. 1. A well-proportioned model of a double deck motor omnibus, the coachwork of which consists chiefly of Strips and Flat Girders. It is the work of A. Leonard, Blackheath.

One of the oldest public passenger vehicles is the electric tramcar, and owing to the ease with which the outlines and mechanism of these vehicles can be reproduced, they make very suitable subjects for model-builders of limited experience. The earliest tramcars were fitted with four wheels, and were of the single deck open-ended type. They were inclined to sway and vibrate when travelling at speed, however, and in an effort to produce a more silent-running and stable vehicle an improved type fitted with two four-wheeled bogies was introduced. These vehicles are less noisy and run more smoothly than the four-wheeled types, and generally the front and rear are completely enclosed.

Tramcars may be grouped into two main classes, one of which includes all those of the single deck type, and the other those having two decks. The single deck tramcar is very popular in some foreign countries, and has reached a high standard of efficiency. The more interesting forms of this vehicle offer plenty of scope for experiment, and in addition provide opportunities for those who delight in detail work. In this country single deck tramcars have not proved popular. The majority of tramcars in service in the British Isles have two decks, the upper one being reached by spiral stairways at the ends of the vehicle. An excellent model of this kind is shown in Fig. 2. Its realistic appearance and its main constructional details will be evident at a glance.

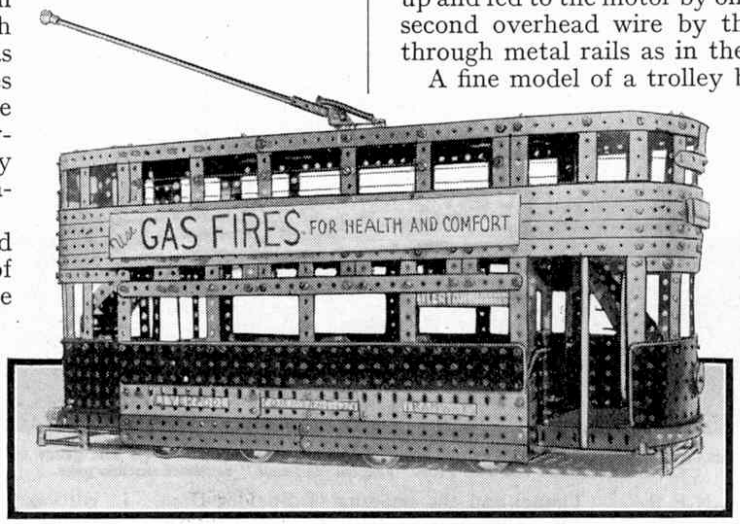

Fig. 2. A fine model tramcar built by P. Giese, Buenos Aires. It is an excellent example of the neat appearance that results from skilful combination of Strips and Flat Plates.

Some of the latest tramcars are elaborately streamlined, and Flexible Plates should always be used in reproducing these. If the design on the Plates is not desired to show in the model, it is a simple matter to turn the plain side of the Plates outward and thus to obtain a plain blue finish. The model should be strengthened by cross braces at suitable points to prevent the Flexible Plates from buckling.

Another type of electrically-propelled passenger transport vehicle that is used in many towns in this country and abroad is the trolley bus, an article on which appears on page 252 of this issue. These vehicles are particularly useful for service in towns where the roads are narrow, for they are more flexible in their movements than tramcars, and as they run on rubber-tyred wheels they are not so noisy in operation. They are propelled by powerful electric motors, which obtain their current supply from overhead conductor wires by means of two long trolley "pick-ups," similar to those fitted to tramcars. The current is picked up and fed to the motor by one trolley and is returned to a second overhead wire by the other trolley, instead of through metal rails as in the case of a tramcar.

A fine model of a trolley bus is shown in Fig. 4. It is simple to build, and the pleasure of operating it when completed will amply repay the labour needed for its construction. One of the two trolleys feeds the current to a 6-volt Electric Motor mounted in front of the model, and the drive is transmitted through a two-speed gear box and a Universal Coupling and Bevel Gear to the back axle. Internal expanding brakes operated by a foot pedal are fitted to the rear wheels, and the worm operated steering is of the Ackermann type. Both the front and the rear axles are mounted on semi-elliptic springs.

The saloon is built mainly from Plates and is roofed with Strips. The trolleys are each mounted on separate Strips that are insulated from the saloon roof by 6 B.A. Bolts and Insulating Bushes and Washers. The Strips are connected by rubber-covered wire to the Motor terminals, and ½″ loose Pulleys mounted in small Fork Pieces at the