

# New Models for Small Outfits

## Four Novel and Interesting Designs

THE first model described this month is the simple speed boat shown in Fig. 1. This model is quite easy to build and can be built up from the contents of Outfit B. Construction should be commenced by bolting one  $2\frac{1}{2}'' \times 2\frac{1}{2}''$  Flexible Plate, one  $5\frac{1}{2}'' \times 2\frac{1}{2}''$  Strip Plate and one  $5\frac{1}{2}'' \times 1\frac{1}{2}''$  Flexible Plate to a  $12\frac{1}{2}''$  Strip in the positions shown in the illustration to form one side of the hull. Two  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips are next fastened to the  $12\frac{1}{2}''$  Strip by the bolts 1 and 2. The opposite side of the hull is built in a similar manner, and is then bolted to the  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips already mentioned. Two  $2\frac{1}{2}''$  small radius Curved Strips are fastened in the bows by a  $\frac{3}{8}''$  bolt 3.

In the fifth hole from the bows of the  $12\frac{1}{2}''$  Strip a  $4\frac{1}{2}''$  Flanged Sector Plate is fixed, and a  $5\frac{1}{2}''$  Strip is fastened in position by the same bolt, which passes through the sixth hole of the  $5\frac{1}{2}''$  Strip. Two Flat Trunnions complete the bows. The  $2\frac{1}{2}''$  Strip and the  $2\frac{1}{2}''$  small radius Curved Strip are clamped in place by the bolt 4.

Construction of the cabin may next be commenced. For this a Flexible Plate is extended by a further  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flexible Plate, and the compound plate thus formed is bolted to the  $\frac{1}{2}'' \times \frac{1}{2}''$  Angle Brackets 5 by the Bolts and Flat Brackets 6. Angle Brackets connect the front of the cabin to the Trunnions, which are fastened to the  $4\frac{1}{2}''$  Flanged Sector Plate. Two  $2\frac{1}{2}''$  Strips, overlapped three holes, are fastened to the Flat Trunnions to form the side of the cabin.

Parts required to build the model speed boat: 2 of No. 1; 2 of No. 2; 6 of No. 5; 3 of No. 10; 4 of No. 12; 38 of No. 37; 2 of No. 37a; 3 of No. 38; 2 of No. 48a; 1 of No. 52; 1 of No. 54a; 4 of No. 90a; 2 of No. 111; 2 of No. 126; 2 of No. 126a; 2 of No. 188; 2 of No. 189; 2 of No. 190; 2 of No. 195.

Fig. 2 shows a model concrete mixer with a tipping and revolving mixing drum. It represents a type used frequently on road repair work, and in the construction of concrete buildings.

This model requires Outfit E for its construction, and it incorporates a Magic Motor, which is used to rotate the mixing drum. It is best to start building the model by constructing the framework that supports the Magic Motor. This consists of a  $5\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate, to each end of which is bolted a Flat Trunnion. Two 3" Strips 1 are bolted in the centre hole of the Flat Trunnion, as shown. A  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flanged Plate 2 is fastened to the 3" Strip, and is supported at its free end by a  $2\frac{1}{2}''$  Strip fastened by Angle Brackets to the  $3\frac{1}{2}''$  Strips 3.

The mixing drum is next built up. Eight Flat Brackets are bolted around the Bush Wheel 4, and the  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips are fastened to the slotted holes of the Flat Brackets, so that they are spaced as far as possible from the centre of the

Bush Wheel. A 3" Pulley 5 is fixed between the Double Angle Strips, and is held in place by its groove engaging between them. A  $3\frac{1}{2}''$  Rod is pushed through the bosses of the 3" Pulley and the Bush Wheel and it is retained in place by set screws.

The tipping mechanism for the revolving drum consists of a  $5\frac{1}{2}''$  Strip 6 with Angle Brackets bolted to each end. At the centre of the Strip a second 3" Pulley is fixed by two  $\frac{3}{8}''$  Bolts, care being taken to align the boss of the Pulley with the hole in the Strip. This assembly is then mounted in the framework already constructed. Two  $\frac{3}{8}''$  Bolts are locked in position to the Angle Brackets at the ends of the  $5\frac{1}{2}''$  Strip, and are pushed through the top holes in the 3" Strips 1, washers being used for spacing purposes. A Crank 7, fitted with a Threaded Pin is secured to the  $\frac{3}{8}''$  Bolt, and a nut holds the second  $\frac{3}{8}''$  Bolt in position.

The  $3\frac{1}{2}''$  Rod that supports the revolving drum is pushed through the boss of the 3" Pulley on the  $5\frac{1}{2}''$  Strip.

The Magic Motor may now be fitted. To do this two  $1\frac{1}{2}''$  Strips are fastened by  $\frac{3}{8}''$  Bolts to a  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flexible Plate that has been previously bent to the shape shown in Fig. 2. The Plate is then bolted to the lugs of the Magic Motor, which in turn is bolted to the  $2\frac{1}{2}'' \times 1\frac{1}{2}''$  Flanged Plate 2. A Driving Band is fixed over the 1" Pulley on the drum, and round the pulley on the Magic Motor. The  $\frac{1}{2}''$  loose Pulley 8 is fitted over the winding spindle to prevent the Driving Band from rubbing against it.

Parts required to build the model concrete mixer: 1 of No. 2; 4 of No. 4; 1 of No. 5; 2 of No. 6a; 8 of No. 10; 4 of No. 12; 3 of No. 16; 2 of No. 19b; 4 of No. 20b; 1 of No. 22; 1 of No. 23; 1 of No. 24; 39 of No. 37; 8 of No. 37a; 12 of No. 38; 8 of No. 48a; 1 of No. 51; 1 of No. 52; 1 of No. 62; 4 of No. 111; 1 of No. 115; 2 of No. 126; 2 of No. 126a; 1 of No. 186; 1 of No. 188; 1 Magic Motor (not included in Outfit).

Model-builders who possess Outfit C, or one that is larger, will find the aircraft carrier shown in Fig. 3 a good subject for their attention. The lower part of the hull consists of a  $5\frac{1}{2}'' \times 2\frac{1}{2}''$  Flanged Plate, on each side of which two  $12\frac{1}{2}''$  Strips 1 and two  $5\frac{1}{2}'' \times 2\frac{1}{2}''$  Strip Plates are fastened by means of Bolts 2 and 3. Further  $12\frac{1}{2}''$  Strips are added above these, and the four are bolted together at their free ends by two  $\frac{3}{8}''$  Bolts, a Flat Bracket being used for spacing purposes. Flat Brackets are also bolted on each side by the bolts 4.

The sides of the hull are extended towards the stern by  $4\frac{1}{2}'' \times 2\frac{1}{2}''$  Flexible Plates and  $5\frac{1}{2}''$  Strips 5, two  $2\frac{1}{2}'' \times \frac{1}{2}''$  Double Angle Strips being used to space them apart. The rounded stern is formed by bolting a curved  $5\frac{1}{2}''$  Strip 6 to the  $5\frac{1}{2}''$  Strips 5, the Strip 6 overlapping the Strips 5 by two holes. Angle Brackets are then added, and these support two 3" Pulleys 7 that are held together by a  $1\frac{1}{2}''$  Rod pushed through their bosses. Two  $2\frac{1}{2}''$  Strips are added as

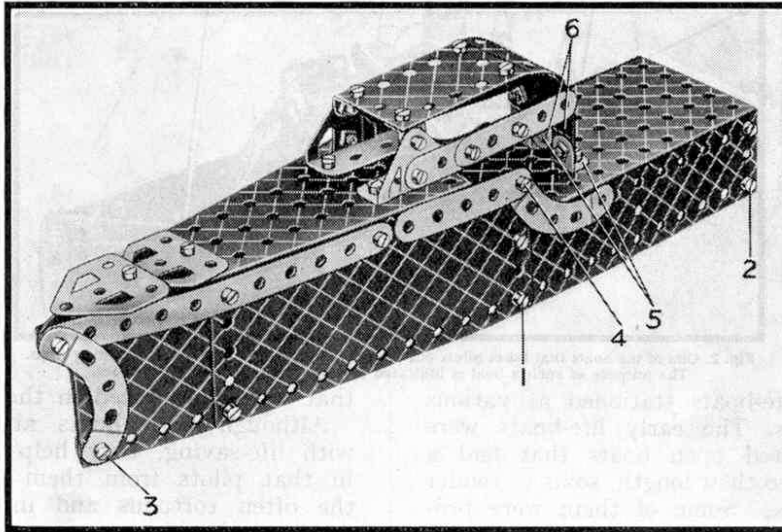


Fig. 1. A neat model speed boat that can be built with the contents of Outfit B.

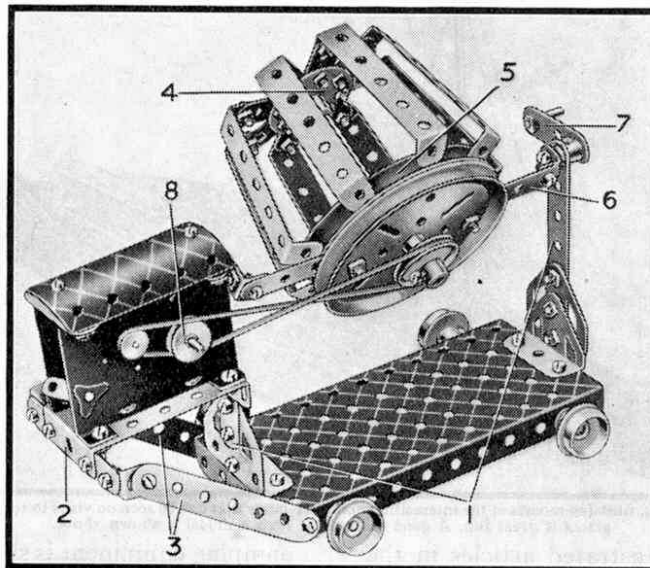


Fig. 2. A concrete mixing machine, built with Outfit E, that incorporates rotating and tipping mechanism operated by a Magic Motor.