



# BUILD YOUR OWN ELEVATED CRANE

A No. 4 Meccano  
Outfit model  
by Spanner

This Elevated Crane built from a No. 4 Meccano Outfit, reproduces all the movements of its full-size counterparts.

THE POSSIBILITIES of Meccano as a miniature engineering system are limitless. Almost anything mechanical can be reproduced in Meccano but, at the same time, it is true to say that some full-sized machines lend themselves more readily to reproduction than others. Cranes are a typical example and, for this reason, cranes have been a mainstay of Meccano builders since the invention of the system. It's only right therefore, that a crane should be featured in the first issue of the new M.M., and so a crane we offer. The example illustrated is an Elevated Crane and can be built with Meccano Outfit No. 4.

Construction is quite straightforward. A base is built up from a  $5\frac{1}{2} \times 2\frac{1}{2}$  in Flanged Plate, to each side flange of which a  $5\frac{1}{2} \times 2\frac{1}{2}$  in Flexible Plate 1 is bolted. The side and upper edges of the Plate are overlaid by two  $2\frac{1}{2}$  in and one  $5\frac{1}{2}$  in Strip, respectively, the upper securing Bolts also holding two  $5\frac{1}{2}$  in Strips 2 and two  $2\frac{1}{2}$  in Stepped Curved Strips 3 in place. In addition, the same Bolts fix two  $2\frac{1}{2} \times \frac{1}{2}$  in Double Angle Strips 4 between the Flexible Plates to hold the sides together.

Strips 2 are now brought together at the top and are bolted, along with Curved Strips 3, to a Flanged Sector Plate. The Flanged Sector Plates at each side are then joined by another  $2\frac{1}{2} \times \frac{1}{2}$  in Double Angle Strip 5 and by a 3 in Pulley 6, attached to the Plates by Angle Brackets.

## Cab and Jib

It is best to complete the cab separately and fit it to the base when finished. Bolted to each flange of a  $2\frac{1}{2} \times 1\frac{1}{2}$  in Flanged Plate 7 is a  $2\frac{1}{2} \times 1\frac{1}{2}$  in Triangular Flexible Plate 8, extended rearwards by a  $4\frac{1}{2} \times 2\frac{1}{2}$  in Flat Plate 9. A  $4\frac{1}{2} \times 2\frac{1}{2}$  in Flexible Plate 10 is then curved to shape and fixed to the Flat Plates at each side, the upper securing Bolts holding a  $2\frac{1}{2} \times$

$\frac{1}{2}$  in Double Angle Strip between the sides, and the lower securing Bolts holding Angle Brackets, to which a Semi-circular Plate 11 is bolted, along with a  $2\frac{1}{2} \times 2\frac{1}{2}$  in Flexible Plate 12 edged by a  $2\frac{1}{2}$  in Strip, to the Double Angle Strip. Plate 12 is attached to the sides by Angle Brackets.

Now bolted to each side of the cab, as shown, are a  $3\frac{1}{2}$  in Strip 13 and a  $5\frac{1}{2}$  in Strip 14. These are both brought together at the top and are bent inwards slightly to provide bearings for a 2 in Rod, held in place by Spring Clips and carrying a loose 1 in Pulley with boss 15 together with two 1 in Pulleys without boss 16 and 17.

The jib is easily built up from four  $12\frac{1}{2}$  in Strips arranged in pairs. The Strips in each pair are bolted together at their ends, but are spaced apart at their centres by a Double Bracket 18. The pairs, themselves, are joined at one end by a  $1\frac{1}{2} \times \frac{1}{2}$  in Double Angle Strip 19 and, at their other end, by two Angle Brackets connected by a  $\frac{3}{8}$  in Bolt carrying a  $\frac{1}{2}$  in loose Pulley 20. The finished jib is mounted on a  $3\frac{1}{2}$  in Rod held by Spring Clips in Flanged Plate 7.

Returning to the cab, a  $3\frac{1}{2}$  in Crank Handle 21 is journalled in Flat Plates 9, being held by a 1 in fixed Pulley and a Cord Anchoring Spring. A  $\frac{1}{2}$  in Bolt in the boss of the Pulley engages with a Bolt, held by a Nut in Plate 9, to act as a brake. The Crank Handle must therefore be allowed to slide a little in its bearings to enable the Bolts to disengage. A length of Cord carrying a Hook is tied to the Crank Handle after being passed over Pulleys 20 and 16.

Also journalled in Flat Plates 9 is a  $3\frac{1}{2}$  in Rod 22 held in place by a Spring Clip and an 8-hole Bush Wheel. A  $\frac{3}{8}$  in Bolt held by a Nut in this Bush Wheel acts as a handle, while a brake is provided as in the case of Crank Handle 21. Two identical lengths of Cord are now tied to the end of the jib,