

A MODEL FOR OUTFIT No. 7

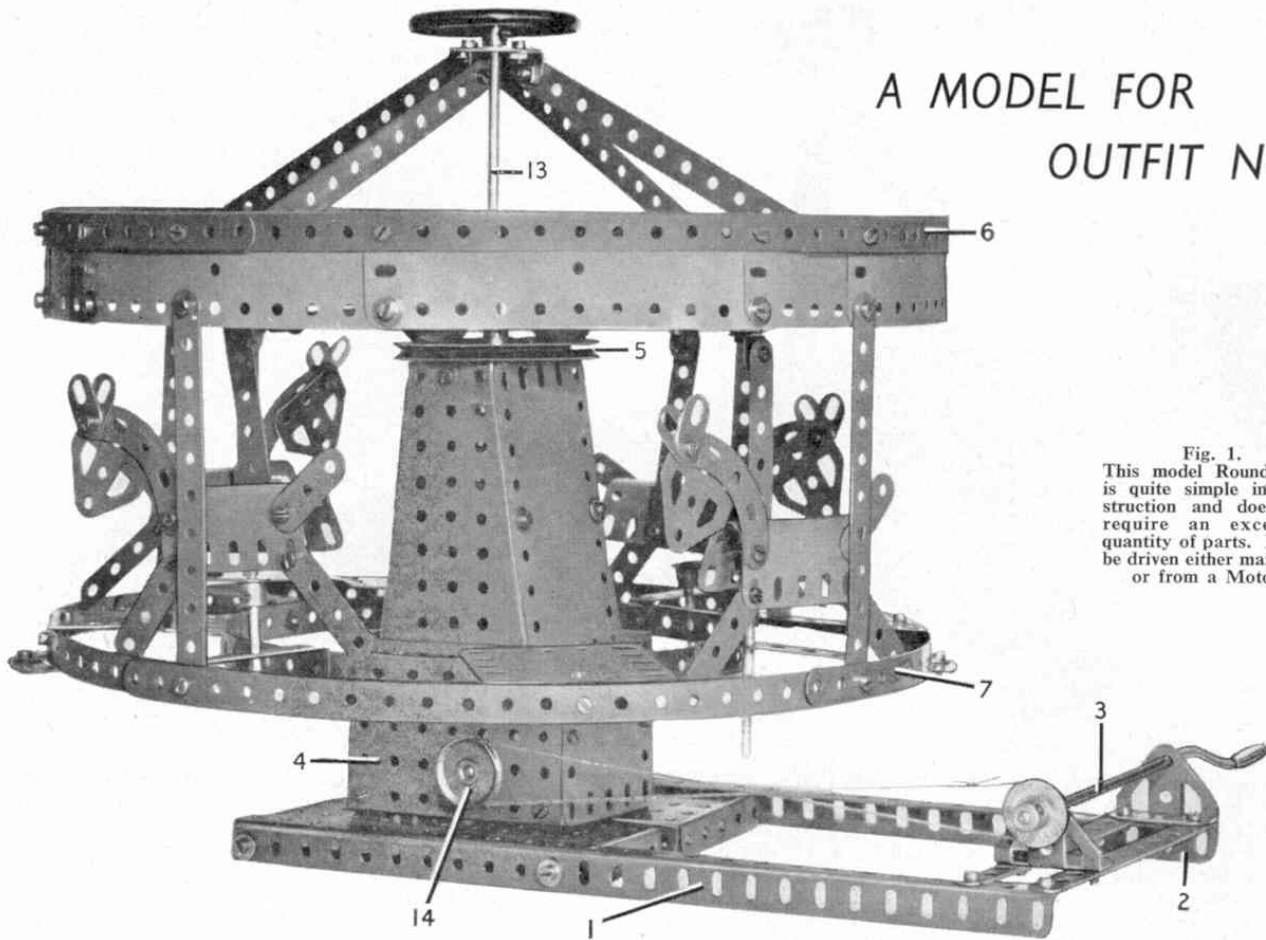


Fig. 1.
This model Roundabout is quite simple in construction and does not require an excessive quantity of parts. It can be driven either manually or from a Motor.

Fairground Roundabout

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The base of the fine model Roundabout shown in Fig. 1 consists of two $12\frac{1}{2}$ " Angle Girders 1 and 2 bolted to two $5\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flanged Plates at one end. At the other end two $5\frac{1}{2}$ " Strips are bolted to the Angle Girders as shown. Two Trunnions are bolted to the $5\frac{1}{2}$ " Strips and they provide a mounting for a Crank Handle 3. Two Double Angle Strips are bolted to the Flanged Plates $3\frac{1}{2}$ " apart and to these are bolted two $3\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flanged Plates, one of which is marked 4, and two $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates. Two $4\frac{1}{2}$ " Flanged Sector Plates, to which are bolted two $4\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plates, are bolted to the Flanged Plates as shown. A $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip is bolted at the upper ends of the Flanged Sector Plates and to this a $3\frac{1}{2}$ " Pulley 5 is attached.

The top of the revolving structure consists of four $12\frac{1}{2}$ " Strips curved and joined to form a circle 6, and at the bottom four $12\frac{1}{2}$ " Strips are curved and joined together to form another circle 7. The $12\frac{1}{2}$ " Strips overlap five holes in both top and bottom circles, but those at the top are edged with six $5\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates

and with five $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plates. Four $5\frac{1}{2}$ " Strips 8 join the upper circle to the lower one as shown. Two further $12\frac{1}{2}$ " Strips are curved to form an inner ring 9 and this is joined to the outer ring 7 by four $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips.

Two $12\frac{1}{2}$ " Strips attached to the top ring of Strips by Angle Brackets, are bolted to a Bush Wheel 10 at right angles to each other. Four $5\frac{1}{2}$ " Strips acting as bracing stays are bolted to the $12\frac{1}{2}$ " Strips by Angle Brackets and at their other ends are fixed to another Bush Wheel.

Each of the four horses consists of a $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Curved Plate to which are bolted three $2\frac{1}{2}$ " Strips and a Curved Stepped Strip. A Flat Trunnion to form the head and two Fishplates for the ears, are then bolted to the Curved Stepped Strip. A $3\frac{1}{2}$ " Strip is bolted to the Curved Plate and then lock-nutted to an Angle Bracket, which is connected to a Collar 11 attached to a $4\frac{1}{2}$ " Rod 12. The Rod is mounted in two $1"$ \times $1"$ Angle Brackets fixed to the $12\frac{1}{2}$ " Strips bolted to Bush Wheel 10, and a $1"$ Pulley with Tyre attached is also fixed on the Rod. The horses are also retained in place by a $2"$ Rod connected to the body in two cases by a Crank bolted to a Double

Bracket fixed to the $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Curved Plate. The Rod passes through the centre hole of one of the $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips in the lower ring of the superstructure. The other two horses are also held in place by a $2"$ Rod, but in these two cases the Rod is connected to the $3\frac{1}{2}$ " Strip by a Rod and Strip Connector.

The superstructure is mounted on a $11\frac{1}{2}$ " Rod 13, which is fixed in the two Bush Wheels and is then passed through the boss of the $3\frac{1}{2}$ " Pulley 5. It is also passed through the centre hole of a $2\frac{1}{2}$ " Strip bolted across the tops of the Flanged Plates 4. A Road Wheel is mounted on the upper end of the Rod to form a cap. At its lower end the Rod carries a $\frac{1}{2}$ " Pinion and this engages a Worm mounted on a $3\frac{1}{2}$ " Rod passed through the Flanged Plates 4 and held in place at one end by a Collar with screw. At its other end the $3\frac{1}{2}$ " Rod is fitted with a $1"$ Pulley 14. A belt of Cord connects this Pulley with a $\frac{3}{4}$ " diameter Flanged Wheel mounted on the Crank Handle 3.

Parts required to build the model Roundabout: 12 of No. 1; 10 of No. 2; 4 of No. 3; 9 of No. 5; 4 of No. 6a; 2 of No. 8; 10 of No. 10; 4 of No. 11; 16 of

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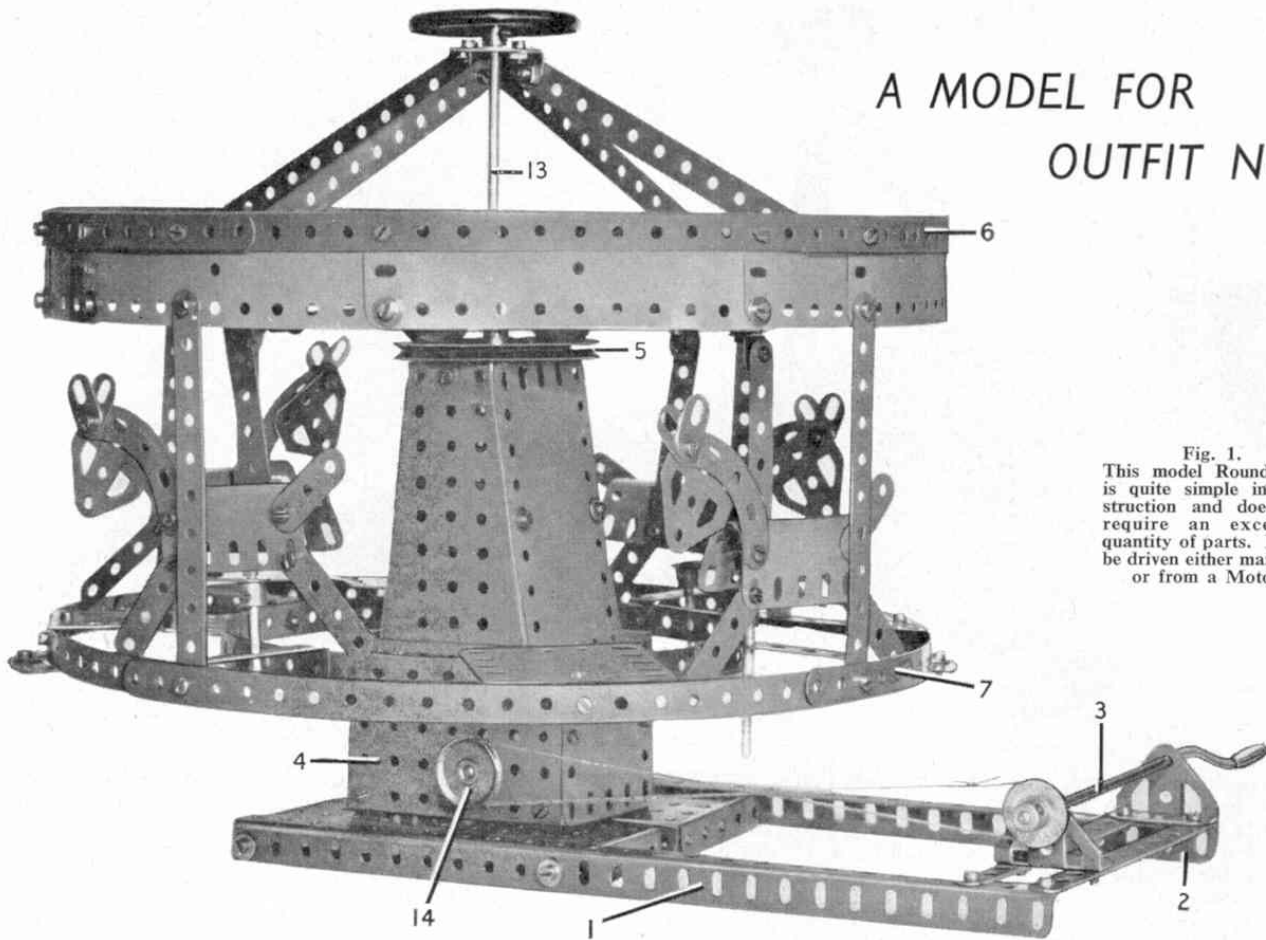


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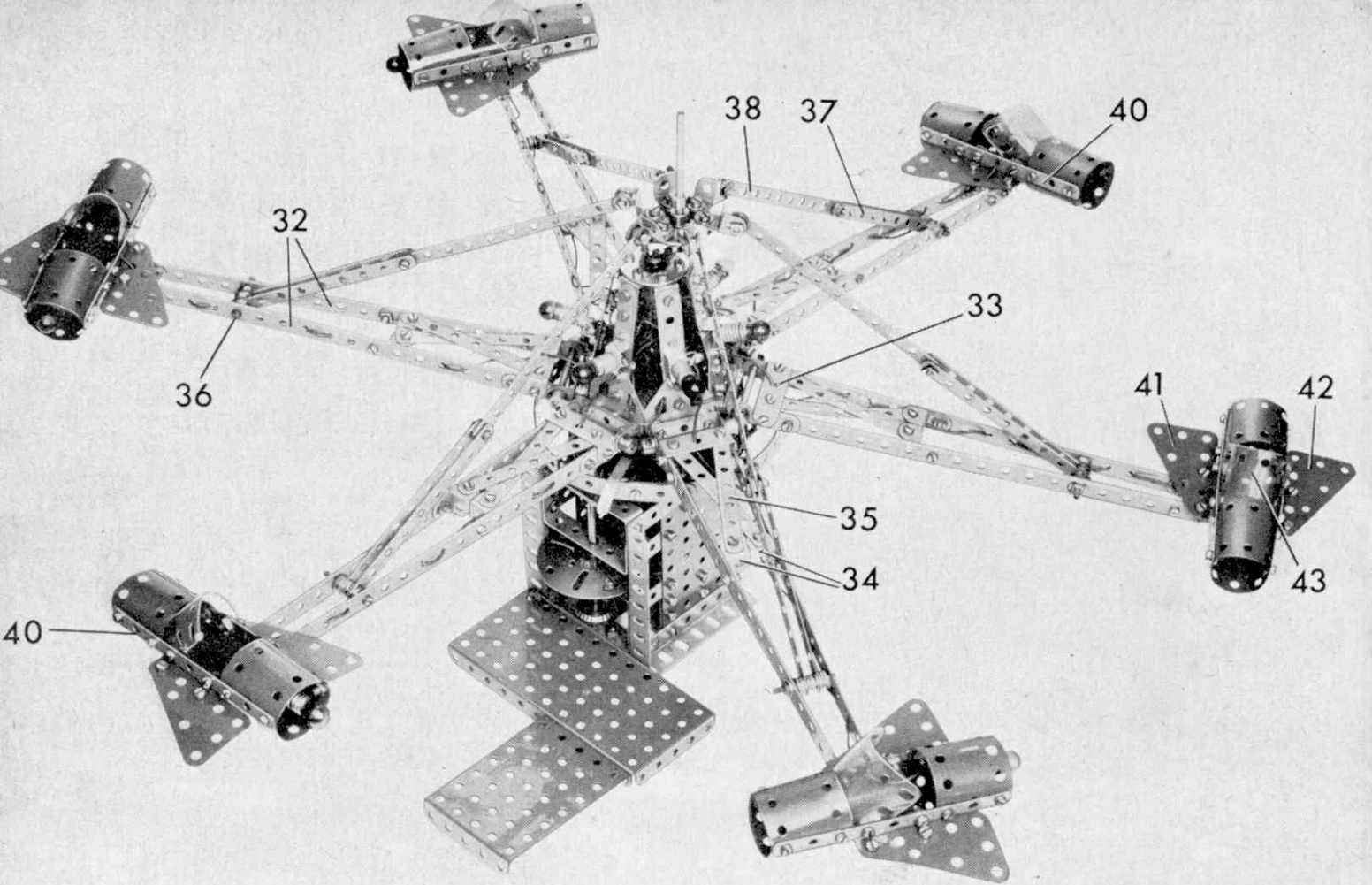
Two $12\frac{1}{2}$ " Strips attached to the top ring of Strips by Angle Brackets, are bolted to a Bush Wheel 10 at right angles to each other. Four $5\frac{1}{2}$ " Strips acting as bracing stays are bolted to the $12\frac{1}{2}$ " Strips by Angle Brackets and at their other ends are fixed to another Bush Wheel.

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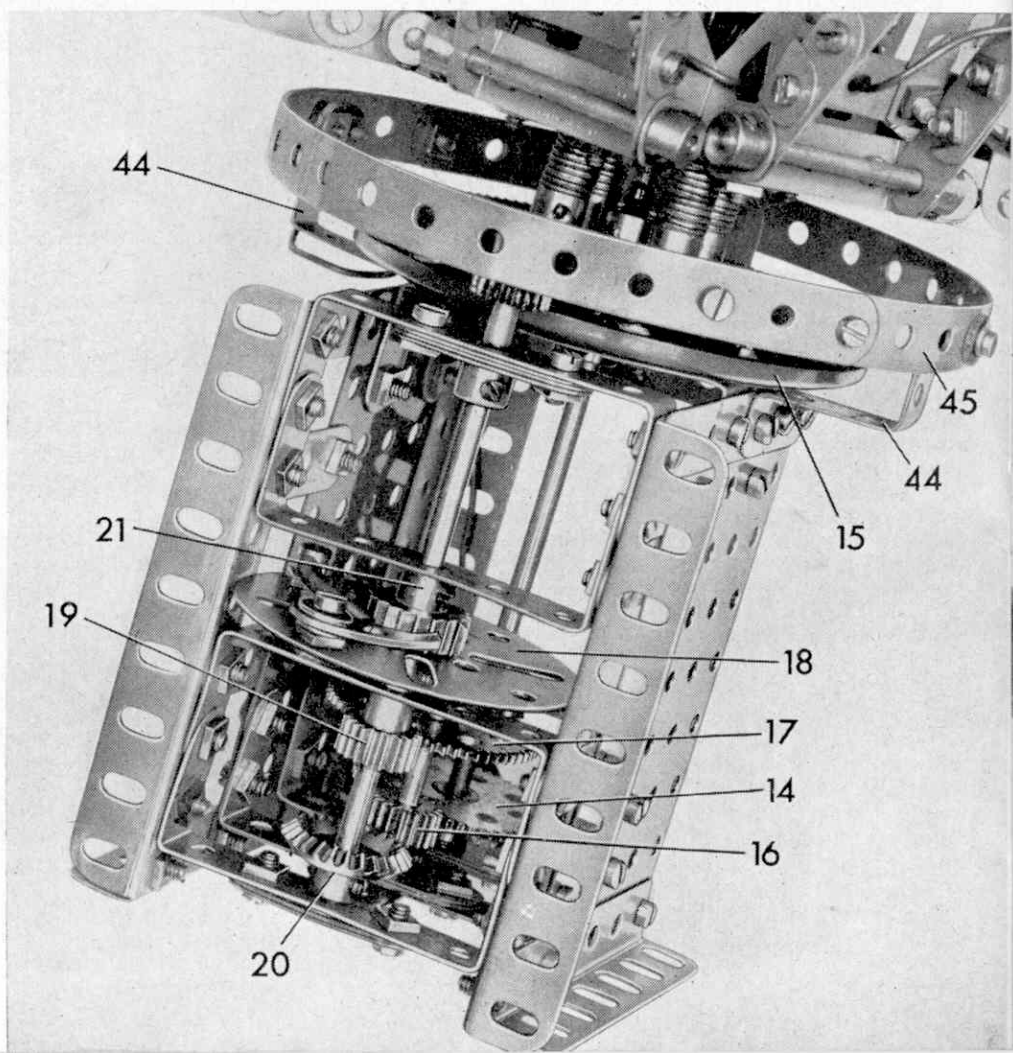


FAIRGROUND OCTOPUS IN MECCANO

BY SPANNER

MECCANO LIMITED'S stand at last year's National Model Show in London featured an attraction that drew and captivated visitors of all ages. On show was a striking miniature fairground, consisting of three specially-designed, large display models—a Dive-bomber, an Octopus Roundabout and a Big Wheel. Since the exhibition, Meccano Magazine has been inundated with requests from readers, asking for building instructions for these models, and in response to these requests we described the Big Wheel in last December's issue. This month it's the turn of the Octopus Roundabout.

It must be stressed that the Roundabout is a special model, designed for display at exhibitions or in shop windows, where it is required to operate continuously for several



A new model using the contents of
Meccano Outfit No. 4,

OCTOPUS FAIRGROUND RIDE

THIS is a fully operational model of the popular fair-ground machine with a set of chairs pivoted at the ends of arms that rise and fall as they revolve. If the meaning of 'octopus' (Greek = eight-legged) is strictly followed, this model should be a Tetrapus (four-legged). Those who wish to add four legs to their model can easily do so with a little extra expenditure. The basic mechanism using a 11053 'Crane' motor powered by a Battery Box will drive the chairs fast enough to provide any imaginery 'occupants' with adequate vertigo! The mechanism is adapted from a description in the Meccano Magazine for January 1953. In the constructional account, 'front' refers to the part of the model toward the elevated platform. 'Right' and 'left' are as viewed from the front as in fig. 1.

THE BASE, Figs 3 & 4

A parallel pair of $9\frac{1}{2}$ " Angle Girders 1 are bolted front and rear to another pair of $9\frac{1}{2}$ " Angle Girders 2 and 2A. The rear Girder 2 is fixed with its slotted hole flange down and braced by diagonally placed $4\frac{1}{2}$ " Narrow Strips. The front $9\frac{1}{2}$ " Angle Girder 2A is bolted with its slotted hole flange facing upward and with eight free holes to the left. Four $2\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strips bolted to the first pair of $9\frac{1}{2}$ " Angle Girders 1 support a $3\frac{1}{2}$ " x $2\frac{1}{2}$ " Flanged Plate 3, (fig 7). Note the positioning of these Double Angle Strips. A Flat Trunnion is affixed to each $9\frac{1}{2}$ " Girder 1, a $2\frac{1}{2}$ " Perforated Strip 5 is bolted across the Girders 1, and another $2\frac{1}{2}$ " Strip 4 is bolted to the top face of the right hand $9\frac{1}{2}$ " Girder 1 as shown, (fig. 5). This converts the elongated holes into round ones which allow the rotation of Rods used later in construction. A Channel Bearing supporting a 11053 'Crane' motor is also fixed to the right hand Girder 1.

THE MECHANISM Fig. 7

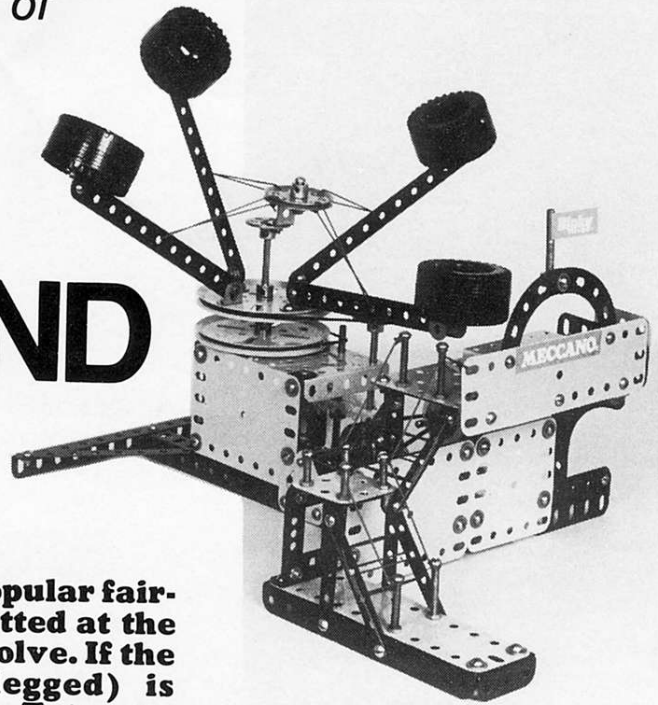
The main shaft is a 4" Axle Rod 6 journalled in the $3\frac{1}{2}$ " x $2\frac{1}{2}$ " Flanged Plate 3 and lengthened below by a Long Threaded Pin attached by a Rod Connector. A Nut is secured on the threaded portion of the Pin, this plus a Washer bear against the $2\frac{1}{2}$ " Strip 5 in its centre hole. On the portion of the Rod 6 above the Flanged Plate 3, the following are placed: Three Washers, a 3" Pulley boss upward and fixed to the Rod, two more Washers, another 3" Pulley boss downward and loose on the Rod 6, yet another Washer and a Collar. The upper 3"

Pulley before being fixed in place should have $\frac{1}{2}$ " x $\frac{1}{2}$ " Angle Brackets bolted to the four outer round holes, the lugs directed as shown. The top of the Rod 6 carries a 1" Bush Wheel to which is bolted a $\frac{1}{2}$ " Reversed Angle Bracket. A $1\frac{1}{2}$ " Pulley 7 rotates freely between Washers on a $\frac{1}{2}$ " Bolt lock-nutted in the top hole of the Reversed Angle Bracket. $5\frac{1}{2}$ " Strips lock-nutted at one end to the Angle Brackets carry at their other ends, $\frac{1}{2}$ " x $\frac{1}{2}$ " Angle Brackets in the case of two, and Double Brackets in the case of

the other two. The Brackets support the 'chairs' which are represented by hard Plastic Tyres free to rotate on $\frac{1}{2}$ " Bolts that pass through one of their holes to be lock-nutted to the Brackets at the outer ends of the $5\frac{1}{2}$ " Strips.

THE GEAR AND PULLEY DRIVES Figs. 5 & 6

A 6" Driving Band on the motor output shaft drives a 1" Pulley on a 3" Rod 8 journalled in the apex holes of the Flat Trunnions bolted to Girders 1. The Rod 8 also carries a Worm gear,



*designed and
described by
Dr. Keith Cameron*

Fig. 1.
Above: A general view of the Octopus Fair-ground Ride described by Dr. Cameron.

Fig. 2.
Below: The right/front/side of the model.

