

## Family Party at Binns Road



ONCE again we have a picture of a happy visit to Liverpool by a fortunate member of the Dinky Toys Club whose Collectors' Licence number was picked out by Stirling Moss, this time at the end of October last. The winner was Richard Avery, of Bicton, near Shrewsbury, and with him came Mrs. Avery and his two brothers John and Peter. Of the three boys, Richard is the one on the left. John, the eldest, is

holding up a Dinky Supertoys Blaw-Knox Bulldozer, and watching him on the right is Peter. As usual, the visitors were welcomed by Mrs. U. P. Hornby, and they spent a marvellous day touring the Works at Binns Road and at Speke.

Perhaps your Licence number will be selected next month by Stirling Moss—if you have a Licence. If you haven't, write for one now.

### The Festiniog Railway—(Continued from page 63)

public use again, but will be preserved as a museum piece. This is a "Hearse", which was built many years ago and fitted with a roller stillage to assist the easy movement of coffins into or out of the wagon. Apart from a roof ventilator there were vent holes on each side of the "Hearse", and in keeping with its mournful purpose quite elaborate urns were fitted at each of the four corners of the vehicle.

A museum for small exhibits was started at Portmadoc Station in 1956. Limited space and lack of funds have prevented the development of a permanent museum and explain why the rolling stock to be preserved, such as the "Hearse", is at present stored.

It is greatly to the credit of the Railway, and of the enthusiasts who have given it a new lease of life, that the passengers carried have increased in number each year. In the 1958 season over 60,000 people were taken to Tan-y-Bwlch. Now the Company is consolidating its position before embarking on extending passenger service above Tan-y-Bwlch. Track renewals and the rehabilitation of further passenger rolling stock is essential, while it is understood that the work of restoring *Merddin Emrys*, a second veteran Fairlie, is now in hand in readiness for the summer of this year. The remaining steam locomotives *Princess* and *Welsh Pony*, two sister engines of *Prince*, which were all built about the same time, still lie stored at Portmadoc awaiting overhaul.

What a happy coincidence that Britain's premier narrow gauge line, while remaining a living monument to the narrow gauge railway, should operate its services on the fringe of Snowdonia, which is noted for its unsurpassed beauty, and so give pleasure to countless holidaymakers.

### Electricity Across the Sea—(Continued from page 57)

the electrical world perfected a means of converting direct current to alternating current at sufficiently high voltages.

The two trial cables, slightly more than 3 in. in diameter, were made to slightly different designs so that the final design of cable and accessories could be more easily determined. The insulated core was lead sheathed, the lead again being protected from chemical action by an impervious covering, and from mechanical damage by heavy galvanised steel wires, with an overall covering of impregnated jute.

It is estimated that by integrating the British and French electric power systems, more than £20,000,000 will be saved on new plant alone in the next few years and running costs also will be cut.

### Easy Model-Building—(Continued from page 79)

on the  $3\frac{1}{2}$ " Rod carrying the rotor.

Parts required to build the model Helicopter: 4 of No. 2; 6 of No. 5; 2 of No. 10; 6 of No. 12; 2 of No. 16; 1 of No. 17; 4 of No. 22; 1 of No. 24; 4 of No. 35; 40 of No. 37a; 38 of No. 37b; 8 of No. 38; 1 of No. 40; 2 of No. 48a; 2 of No. 90a; 2 of No. 111c; 1 of No. 125; 2 of No. 126a; 2 of No. 155; 2 of No. 189; 2 of No. 190; 1 of No. 199; 2 of No. 200.

Parts required to build the Mobile Light Crane: 4 of No. 2; 4 of No. 10; 4 of No. 12; 1 of No. 16; 1 of No. 19a; 2 of No. 22; 1 of No. 24; 4 of No. 35; 20 of No. 37a; 18 of No. 37b; 4 of No. 38; 1 of No. 48a; 1 of No. 52; 2 of No. 111c; 2 of No. 126; 2 of No. 126a; 2 of No. 142c; Piece of String.

### Among the Model-Builders—(Continued from page 89)

the various gear ratios are brought into action until top gear is engaged. On application of a load to the output shaft, the gear-box will automatically change down to a suitable ratio with which to tackle the load.

The governor drive can be disengaged by causing Pivot Bolt 1 to raise  $\frac{3}{4}$ " Contrate 2 clear of  $\frac{3}{4}$ " Pinion 3 by means of Crank 4. This enables neutral gear to be engaged at any time.

of the Face Plate, but on the same Rod, a Crank carrying a 2" Slotted Strip is fitted and the slot of the Strip forms an adjustable support for a  $\frac{3}{4}$ " Bolt carrying a  $\frac{1}{2}$ " loose Pulley. This Pulley is free to rotate on the Bolt and is prevented from moving along its shank by means of Washers.

The cross is made up at its centre of two Double Arm Cranks placed with their bosses pointing in opposite directions on a Rod of suitable

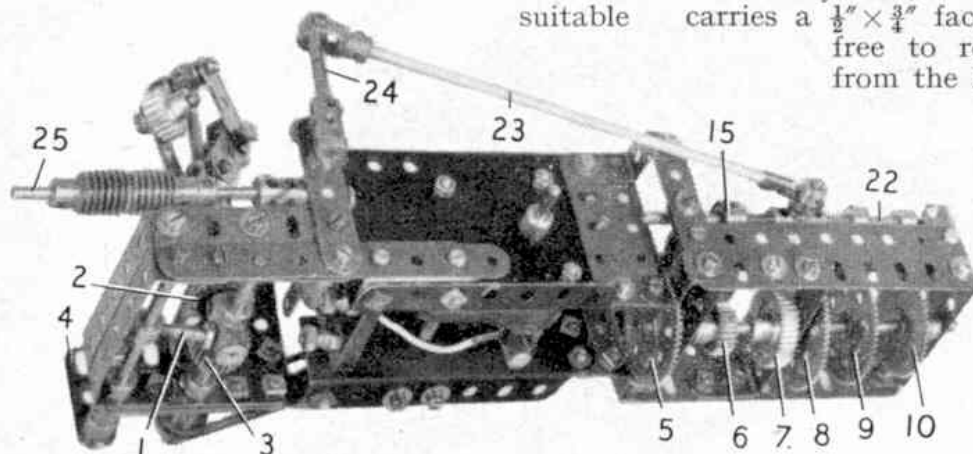


Fig. 3. An automatic transmission mechanism designed by J. F. Sharp, Newsome, Huddersfield.

length. It can be seen in the illustration that the rear Double Arm Crank carries two  $4\frac{1}{2}$ " Strips, placed parallel to the front Double Arm Crank. Two further  $4\frac{1}{2}$ " Strips are bolted to the front Double Arm Crank and also to the first mentioned pair, relative to which they are at right angles. The ends of the Strips are now linked by means of  $2\frac{1}{2}$ " small radius Curved Strips held in place by Flat Brackets.

It will be seen that as the arm on the driving member rotates, the  $\frac{1}{2}$ " loose Pulley 2 engages with the slots in the cross, and during the stationary periods the cross is prevented from turning by the five  $\frac{1}{2}$ " loose Pulleys secured to the Face Plate 1.

### An Automatic Transmission Gear

I have recently obtained details of an ingenious automatic transmission gear designed by Mr. J. F. Sharp, Newsome, Huddersfield, which is of special interest in view of the fact that gear-changing is controlled by a governor mechanism driven by the power Motor. The gear-box provides 4-speeds and the whole unit is very neatly assembled. The complete mechanism is

shown in Figs. 3 and 4, and the construction of the governor, gear-box drive and the housing, should be quite clear from the illustrations.

The gear-box input shaft carries a 57-tooth Gear 5, a Washer, a  $\frac{3}{4}$ " Pinion 6 and a 1" Gear 7. The output shaft protrudes about  $\frac{1}{4}$ " into Gear 7 and carries a 60-tooth Gear 8, 57-tooth Gear 9, 50-tooth Gear 10, and six Washers.

The layshaft, which is a 5" Rod 11, carries a  $\frac{1}{2}$ " x  $\frac{3}{4}$ " face Pinion 12, which is free to revolve and is spaced from the Flanged Plate 13 by a Washer. Also on the layshaft are a 50-tooth Gear 14, a Crank 15, a 1" Gear 16, a  $\frac{7}{16}$ " Pinion 17, a  $\frac{1}{2}$ " Pinion 18 and a  $\frac{3}{4}$ " Pinion 19. The end of the shaft is supported by a  $1\frac{1}{2}$ " Strip 20 spaced by three Washers from Plate 21.

The gear ratios obtainable are as follows: 1st gear is obtained through gears 6 and 14, 17 and 8, and 2nd gear is obtained through gears 6 and 14, 18 and 9, and 3rd gear through gears 16 and 7, 18 and 9. 4th gear is given by meshing gears 16 and 7, 19 and 10.

The layshaft is moved by the selector bar 22. Details of the linkage of Rods 23 and 24 to the governor arm 25 should be clear from the illustrations.

The operation of the mechanism is as follows. When the Motor is at rest, the gear-box is in neutral gear as the layshaft 11 is positioned at its fullest extent. As the Motor speed increases,

(Cont. on page 104)

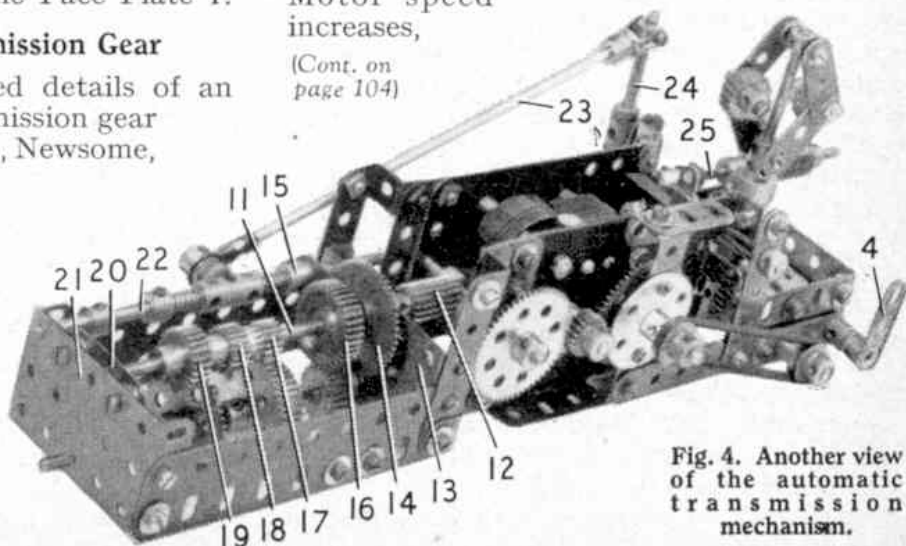


Fig. 4. Another view of the automatic transmission mechanism.