Easy Model-Building

Spanner's Special Section for Juniors

ONE of my two new models this month is an attractive Motor Coach that should delight those who have an Outfit No. 2 and a *Magic* Motor. For model-builders with an Outfit No. 3 or one larger, there is a working Windmill, which is also fitted with a *Magic* Motor as the power unit.

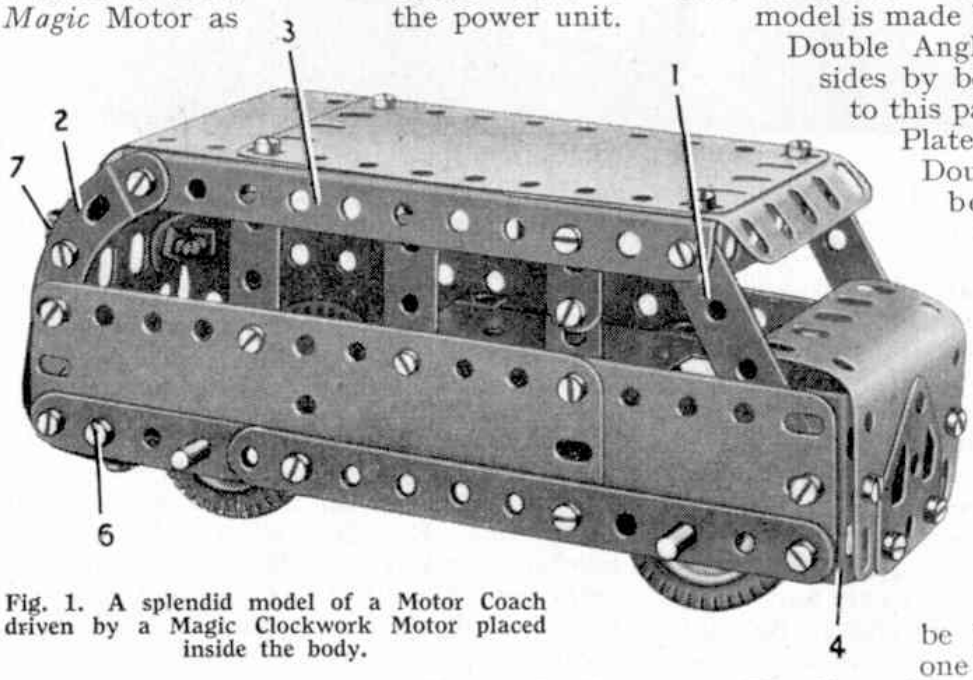

Fig. 1. A splendid model of a Motor Coach driven by a Magic Clockwork Motor placed inside the body.

Let us start with the Motor Coach, which is seen in Figs. 1 and 2 on this page. Each side of the Coach is formed by a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ and a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate. These Plates are strengthened along their lower edges by two $5\frac{1}{2}''$ Strips overlapped seven holes. A $2\frac{1}{2}''$ Strip 1 is fixed at an angle to the front end of each side, and a $2\frac{1}{2}''$ Stepped Curved Strip 2 is bolted to the rear end. A $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 3 is supported by the Strips 1 and the Curved Strips 2 of the sides, and the window frames on each side are represented by two $2\frac{1}{2}''$ Strips and two Fishplates bolted together.

The front of the Coach is made by bolting a Trunnion 4 to each side, and to these Trunnions is fixed a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate curved as shown and fitted with a Flat Trunnion. The rear end of the model is made by attaching a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip between the sides by bolts 6 and then fixing to this part a U-section Curved Plate 5. A further $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 7 is bolted between the Curved Strips 2.

The roof is completed by bolting a $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate, a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and a $1\frac{11}{16}''$ radius Curved Plate to the Flanged Plate 3.

If a *Magic* Clockwork Motor is available it can be bolted by its lugs to one side of the model (see Fig. 2), and its pulley connected by a Driving Band to a $\frac{1}{2}''$ Pulley on the rear axle.

Parts required to build the Motor Coach: 4 of No. 2; 6 of No. 5; 4 of No. 10; 2 of No. 12; 2 of No. 16; 4 of No. 22; 43 of No. 37a; 40 of No. 37b; 4 of No. 38; 2 of No. 48a; 1 of No. 52; 2 of No. 90a; 3 of No. 111c; 2 of No. 126; 1 of No. 126a; 4 of No. 142c; 2 of No. 188; 2 of No. 189; 2 of No. 190; 1 of No. 191; 1 of No. 199; 1 of No. 200; 1 *Magic* Clockwork Motor.

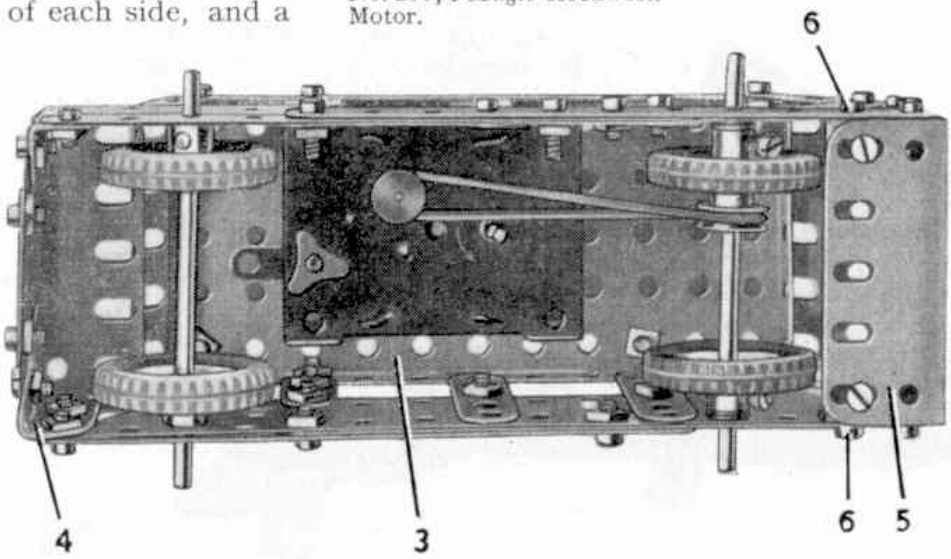

Fig. 2. This picture of the Motor Coach shows how the Magic Motor is connected to the rear wheels.

Now for the Windmill, which is pictured in Figs. 3 and 4. Let us start building the Windmill at the base, which is a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate. The curved $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates that form the supporting column 1 are attached to it by Angle Brackets, and the top edges of the Plates are strengthened by four Formed Slotted Strips.

Each side of the windmill body is a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate, with its upper and lower edges strengthened by $2\frac{1}{2}''$ Strips. The sides are connected at the top by $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips, each of which supports a Semi-Circular Plate 2. The lower edge of each side is attached by a bolt 3 to a $\frac{1}{2}''$ Reversed Angle Bracket that is bolted to the column 1. The top of the body is a curved $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate bolted to the sides.

At the front the sides are connected by Angle Brackets to two $2\frac{1}{2}''$ Strips 4 overlapped three holes, and these Strips are attached to a Fishplate bolted to the column 1. Two $2\frac{1}{2}''$ Stepped Curved Strips 5 at the rear are bolted to the column 1 as shown and are connected to the sides of the body by Angle Brackets.

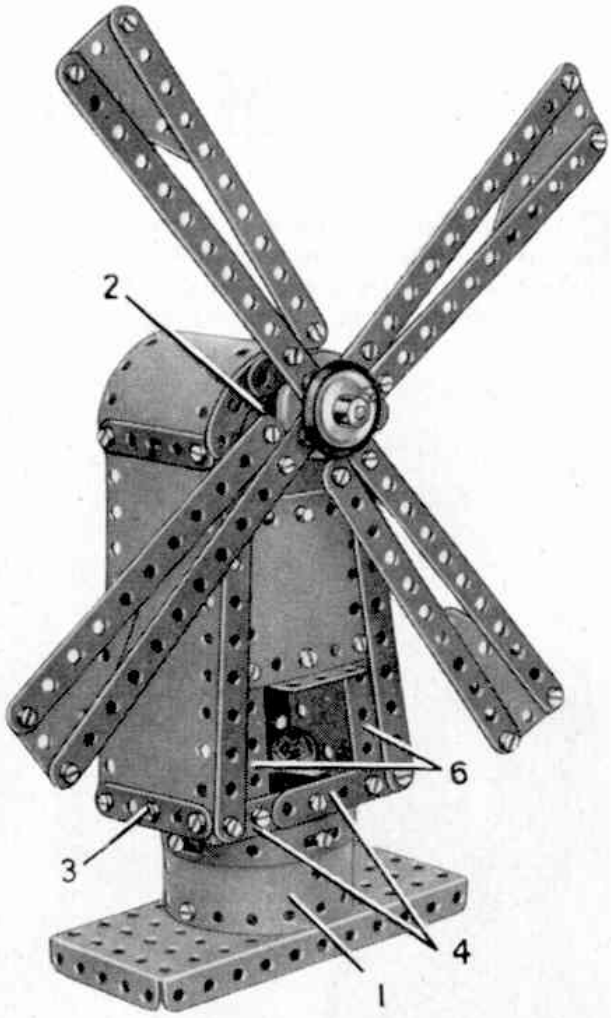

Fig. 3. Another fine model driven by a Magic Clockwork Motor. This Windmill can be built with parts in a No. 3 Outfit.

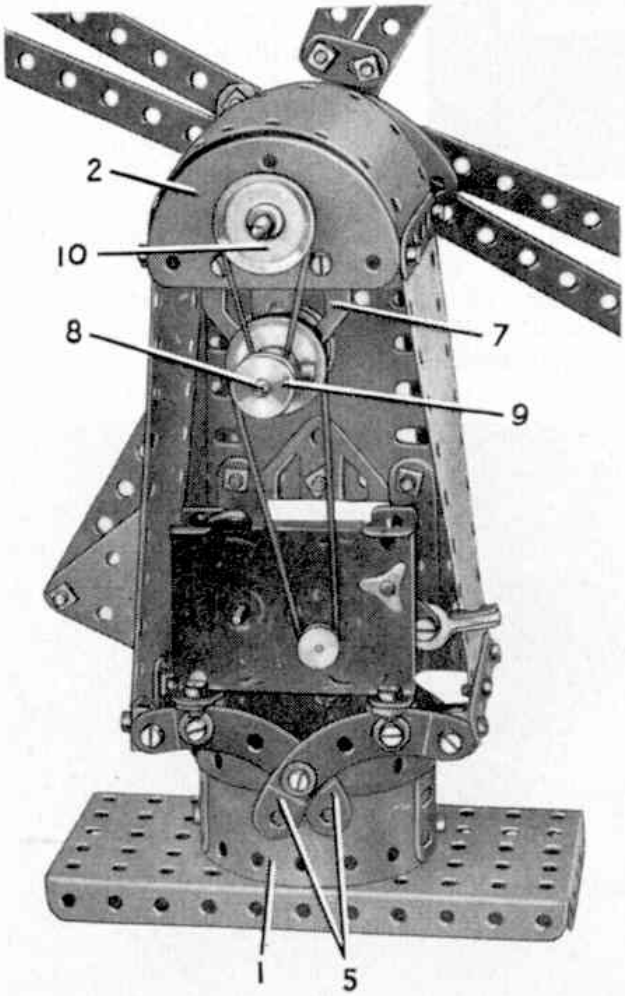

Fig. 4. This view of the Windmill from the back shows the drive to the sails in detail.

The front of the mill is filled in by two $5\frac{1}{2}''$ Strips, a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate, a $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and two $2\frac{1}{2}''$ Strips 6. The $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate is bolted to the Semi-Circular Plate 2 at the front, and the Strips 6 are fixed between the $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate and the Strips 4. Two $2\frac{1}{2}''$ Stepped Curved Strips are fixed to the front Semi-Circular Plate as shown, and a Trunnion is bolted to the lower edge of the $2\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate. A Flat Trunnion 7 is attached to the Semi-Circular Plate at the rear.

A *Magic* Clockwork Motor is supported by two Angle Brackets bolted to the Curved Strips 5. The Motor pulley is connected by a Driving Band to a 1″ Pulley on a 4″ Rod 8, which is mounted in the front of the mill and in the Flat Trunnion 7. A $2\frac{1}{2}''$ Driving Band is passed over Rod 8, and is held on the Rod by a $\frac{1}{2}''$ Pulley 9, which is supplied with the *Magic* Clockwork Motor. The $2\frac{1}{2}''$ Driving Band is passed round a 1″ Pulley 10 that is

(Continued on page 278)

Speed Across a Continent—(*Continued from page 229*)

course very different from that on the shorter distance trains of a country such as Great Britain, where the longest runs are measured in hundreds of miles rather than thousands. The normal way to travel in Canada is by open car, with a passage way down the centre. In the sleeping cars there are upper and lower berths, provided with individual lights, ventilation and luggage space, and a handy folding ladder is permanently attached to each upper berth, so that the occupant can climb up or descend without having to call a porter.

There are more comfortable and luxurious ways of travelling long distances than by using open cars and "sections," as this sleeping accommodation is called. The C.N.R. have recently modernised all their main line passenger trains, bringing into service a large number of new passenger cars presenting many amenities. Passengers can get complete privacy in special compartments distinguished by such names as Duplex Roomette, Roomette, Bedroom, Compartment and Drawing Room, a list in which the degree of luxury increases towards the Drawing Room, described as rail travel at its luxurious best.

The World's Biggest Bangs!—(*Cont. from page 231*)

postcards. Her worst display took place in August of the year 79, when tremendous explosions rocked the countryside for miles around and the volcano belched forth ashes, lava and hot cinders burying houses and countryside twenty feet deep! Out of one town of 20,000 inhabitants over two thousand died, either buried or trapped by torrents of hot volcanic mud. The cities of Herculaneum, Pompeii and Stabiac were all overwhelmed by molten lava, in some places to a depth of over 30 ft. According to one onlooker a white-hot column of lava boiled over the volcano's sides, gradually widening as it flowed. Altogether over 200,000 people were killed by this, one of Nature's most vicious rages.

The Story of Glenn L. Martin—(*Cont. from page 237*)

Pacific; the Maryland, Marauder and Baltimore bombers of World War II; the great Mars flying boat and smaller Mariner and Marlin; the 2-0-2 and 4-0-4 air liners; the U.S. version of the Canberra; the 600 m.p.h. Seamaster flying boat, and the Matador, first of the U.S.A.F.'s radio-controlled pilotless bombers.

As the firm grew, it became less personal; but Glenn Martin remained a director until his death. Nor will he be remembered only for this, because in 1944-5, with his fellow-directors, he made a gift of 2½ million dollars to the University of Maryland to establish the Glenn L. Martin College for Engineering and Aeronautical Sciences. Some of the young men trained there are now working for his company on one of the most exciting developments in engineering history—Project Vanguard—the programme that will launch into space the first artificial moons next year. It will be a major step forward in a great adventure that would surely have delighted the heart of Glenn Martin, engineer, adventurer and pioneer of progress in the air.

Road and Track—(*Continued from page 239*)

This month is an important one in the motor racing world. On 5th May we have Silverstone, always one of the best international meetings of the year and, on 13th May, Round 2 of the 1956 World Championship For Drivers takes place at Monaco.

It will be interesting to see how the British cars shape up in this gruelling "round the houses" race, of full Grand Prix distance—300 miles or 3 hours' duration—as compared to the 180-mile Formula 1 race at Silverstone, which should finish in under one hour 50 minutes.

Of the three British contestants for championship honours this season I rate the B.R.M. as the best looking car of the three. The Bourne organisation is sensibly taking things quietly and making no claims. Do not be disappointed if the B.R.M. does not do well at Monaco—but do not be surprised by its performance either.

Mike Hawthorn told me earlier this season "The B.R.M. has more power coming out of corners than the works Maserati I tried at Modena before Christmas, and the disc brakes are superb." He went on to say, of the Oulton Park Meeting last year when the green car, driven by Collins, amazed everyone by its performance before retiring, "I was never more surprised in my life when the B.R.M. went by the Lancia."

American England—(*Continued from page 243*)

heydays of Duxbury Hall the Standishes attended the services *en masse*, together with some of their servants.

Such noted Americans as George Washington and the poet H. W. Longfellow have given tourist interest to a number of other places. Sulgrave Manor, near Banbury, has the Washington coat-of-arms carved on its doorway, for this house was the home of the direct ancestors of the first American President.

The Pilgrim Fathers were followed by many other emigrants in the 17th and 18th centuries, and among them were the ancestors of H. W. Longfellow, who left the Guiseley district, eight miles from Leeds, to seek better conditions in the New World.

Guiseley is still a village community and the church there has not altered greatly since the poet's forefathers attended the services. The charming Elizabethan rectory stands nearby. Other members of the family worshipped at Otley, Wharfedale, and the name Longfellow occurs several times in the parish church registers.

Easy Model-Building—(*Continued from page 255*)

fixed on the shaft supporting the windmill sails. This shaft consists of a 1½" and a 3½" Rod joined by a Rod Connector, and it is mounted in the Semi-Circular Plates 2.

The sails are made by bolting two 12½" Strips across a Bush Wheel. A 5½" Strip is then connected to the outer end of each 12½" Strip by a 2½"×1½" Triangular Flexible Plate, and the inner ends of the 5½" Strips are attached to Fishplates bolted to the 12½" Strips. The Bush Wheel is spaced from the front of the mill by a Washer and a ½" loose Pulley, and a 1" Pulley with Rubber Ring is fixed on the shaft in front of the sails.

Parts required to build the Windmill: 2 of No. 1; 6 of No. 2; 9 of No. 5; 5 of No. 10; 8 of No. 12; 1 of No. 15b; 1 of No. 16; 1 of No. 18a; 4 of No. 22; 1 of No. 23; 1 of No. 24; 56 of No. 37a; 50 of No. 37b; 8 of No. 38; 2 of No. 48a; 1 of No. 52; 4 of No. 90a; 6 of No. 111c; 2 of No. 125; 1 of No. 126; 1 of No. 126a; 1 of No. 155; 1 of No. 188; 2 of No. 189; 1 of No. 190; 1 of No. 191; 2 of No. 192; 1 of No. 212; 1 of No. 213; 2 of No. 214; 4 of No. 215; 4 of No. 221; 1 *Magic* Clockwork Motor.

Stamp Collectors' Corner—(*Continued from page 273*)

printings we may get the new St. Edward's Crown watermark, about which there is so much talk at the moment. If we do, then the new stamps will become obsolete as the values are reprinted. In any event, the stamps will never be cheaper.

And just one more point, which will please everybody. Don't forget that the currency of the Solomons is linked to that of Australia. Thus the 10/- stamp has a sterling value of 8/-, and of course all the other values have the same discount of 20 per cent. Quite nice, eh?

This may change one day. For a long time it was believed that Australia would bring its pound up to sterling, as did New Zealand, and if there were a change this would also affect the Solomons. Yes, better get your set, as soon as that pocket money allows.