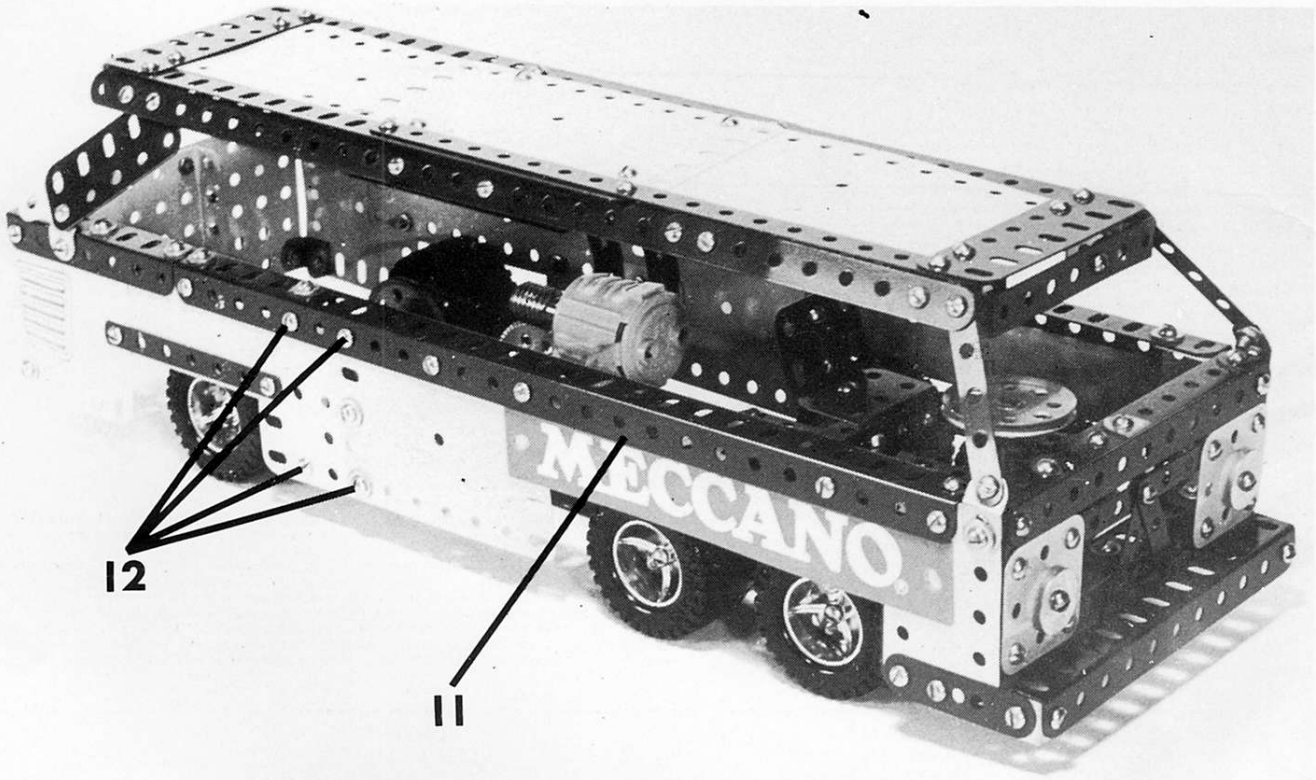
MOTOR COACH

A new model built from the contents of Meccano Outfit No. 5

THIS model follows the four-forward and two-rear wheels configuration found on many heavy motor coaches today. A vehicle of this type, the Vega Major Luxury Coach, was the subject of a Dinky 'Supertoys' model in the early 1960's. Construction of the model requires the slight 'widening-out' of some ½" x ½" Angle Brackets to the Obtuse Angle Bracket configuration. Power for the fitted Junior Power Drive Unit Mk. II is derived from the battery box, not shown. This can be carried 'on board' if so wished.



Front ¾ right hand view of the Motor Coach.

CHASSIS

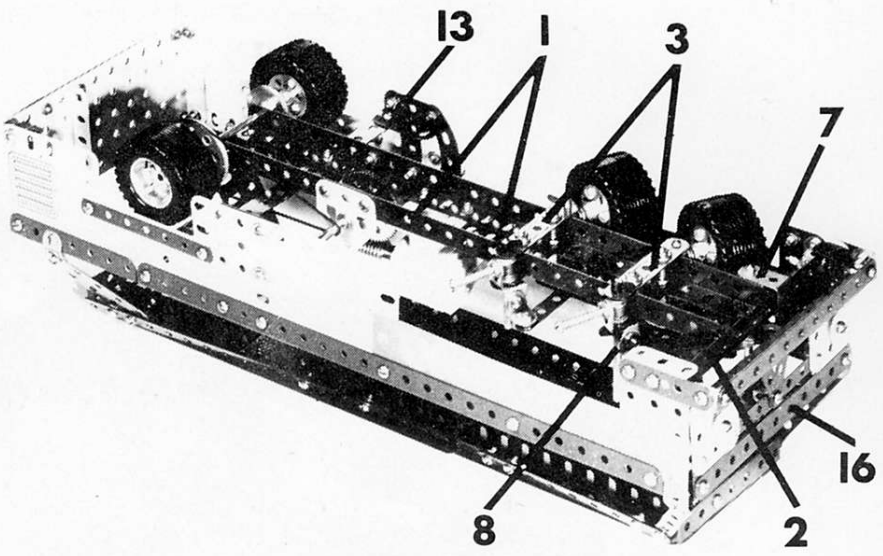
Two 12½" Angle Girders 1 are connected via their elongated holes by, (from the front), a 5½" Angle Girder 2, two pairs of 2½" Strips 3, one pair below and the other above the Girders 1 and held by Nuts on ¾" Bolt shanks, a 11053 motor and a 5½" Strip 4. The rear axle consists of a 4" Axle Rod on which are fixed two Road Wheels, a 1" Pulley and a 1½" Pulley 5. A 2½" Axle Rod 6 is held by a Spring Clip and a Rod Connector in the centre holes of two Flat Trunnions bolted to the Girders 1. A 57t Gear Wheel on the Rod 6 is driven by a Worm Gear on the motor output shaft, and a 6" Driving Band is looped around the Rod Connector on Rod 6, and the 1½" Pulley 5, thus completing the transmission.

The steering mechanism actuates all four of the coach's front wheels, and a steering column is represented by a 3" Axle Rod, held by a 19t Pinion in the lugs of a 1" x ½" Double Bracket 7 bolted to the 5½" Angle Girder 2. This 3" Axle Rod also holds a Double Arm Crank about ½ way up its length, and a 1½" Pulley representing the steering wheel. The right hand front wheel pivots on a vertical 1½" Axle Rod journalled through the end holes of the forward pair of Strips 3. The Rod carries at it's top end an 8-hole Bush Wheel, and a Collar is held on the Rod by the 1⅛" Bolt carrying the right hand front Road Wheel, spaced by Washers.

A 2" Axle Rod 10 forms the pivot for the right hand rear steerable wheel, and this carries a 6-hole Bush Wheel at it's upper end with, again, a Collar spaced by Washers supporting the 1⅛" Bolt carrying the Road Wheel. However, in this case, an arrangement consisting of a Corner Angle Bracket and a ½" x ½" Angle Bracket is built up and slipped over the Rod 10.

When the Road Wheel is secured, the Nut on the shank of it's 1⅛" Bolt grips the lug of the Corner Angle Bracket firmly, thus the assembly becomes a built-up crank.

The rear left hand side steering axle unit is similarly constructed, and the two built-up cranks thus formed are connected, via their ½" x ½" Angle Bracket lugs, by a 2½" Narrow Strip. A 2½" Axle Rod 8 is pressed into service as the 'king pin' for the left hand side forward steering axle unit, but in this case the built-up crank consists of a reversed Angle Bracket 9, and a 'Corner Angle Bracket' built-up from two ½" x ½" Angle Brackets. The forward projecting lug of this built-up unit is connected to the 8-hole Bush Wheel by a 2½" Narrow Strip. Finally, a 4½" compound Narrow Strip built-up from two overlapped 3" Narrow Strips, connects the steering column Double Arm Crank, the 8-hole Bush Wheel and the 6-hole Bush Wheel. Thus, when the 1½" Pulley steering wheel is actuated, all four front wheels turn, steering the model.



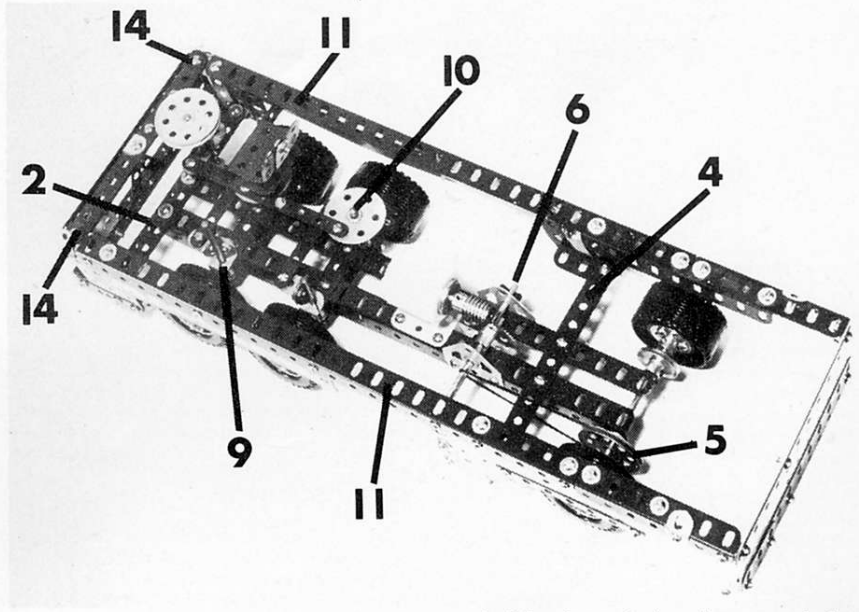
Underside showing arrangement of steering mechanism. The Spring Clips fitted to the nearside king pins shown merely assist in holding the parts in place during construction and do not feature in the finished model.

BODYWORK

The sides are built-up in a similar manner by extending a 12½" Angle Girder 11 a distance of seven holes by butt-joining a 3½" Angle Girder. A 4½" Angle Girder is employed on the inside for bracing purposes. Both sides are then filled in by, (from the rear), a 2½" x 2½" Plastic Flexible Plate, a 5½" x 1½" Flexible Plate, a 2½" x 1½" Plastic Flexible Plate, a 3½" x 2½" Flexible Plate, a Meccano nameplate, (these can be cut from suitable Meccano cartons if no nameplates are to hand), over the front wheels, and on the right hand side, a further 2½" x 1½" Plastic Flexible Plate braced on the inside by a 2½" Flat Girder and extending one hole beyond the 12½" Angle Girder 11. On the left hand side, a 2½" x 1½" Flanged Plate occupies the same relative position, again extending one hole beyond the left hand 12½" Angle Girder 11. Two 2½" Stepped Curved Strips reinforce the inside of both bodywork sides, the fixing Bolts can be seen at 12. The lower holes of these are connected by a 1½" Angle Girder 13. 3½" Narrow Strips edge the rear wheel arches.

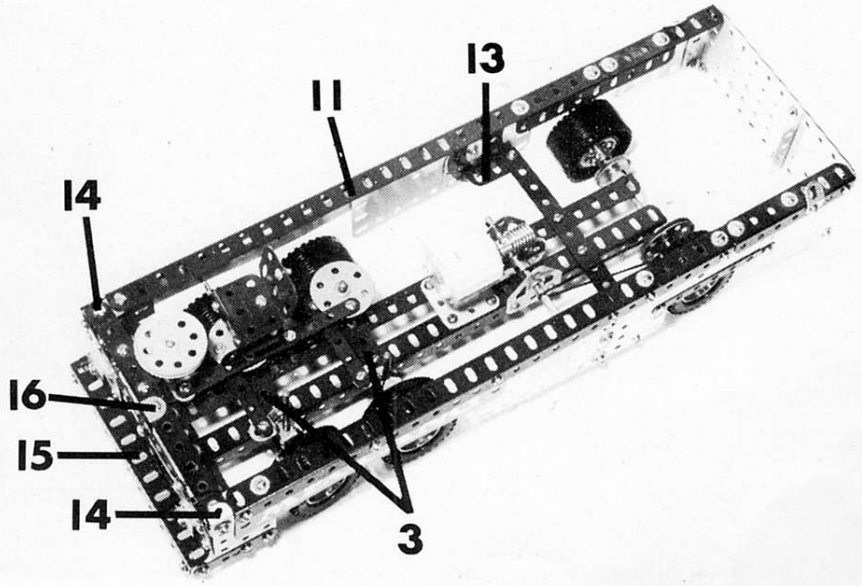
The rear panel is composed of a 5½" x 2½" Flat Plate overlaid on the inside by a 3½" x 2½" Flanged Plate. The panel is attached to the rear of the right hand side utilising the 3½" x 2½" Plate flange, and by two Double Brackets to the rear of the left hand side. Decoration is provided by a 5½" Strip and a composite 5½" Flat Girder built-up from 4½" and 1½" lengths.

The front of the coach consists of two 2½" x ½" Double Angle Strips 14 connected by a 5½" Strip 15 secured to their upper lugs, another 5½" Strip 16, and a radiator grille



Left hand rear ¾ view after removal of roof.

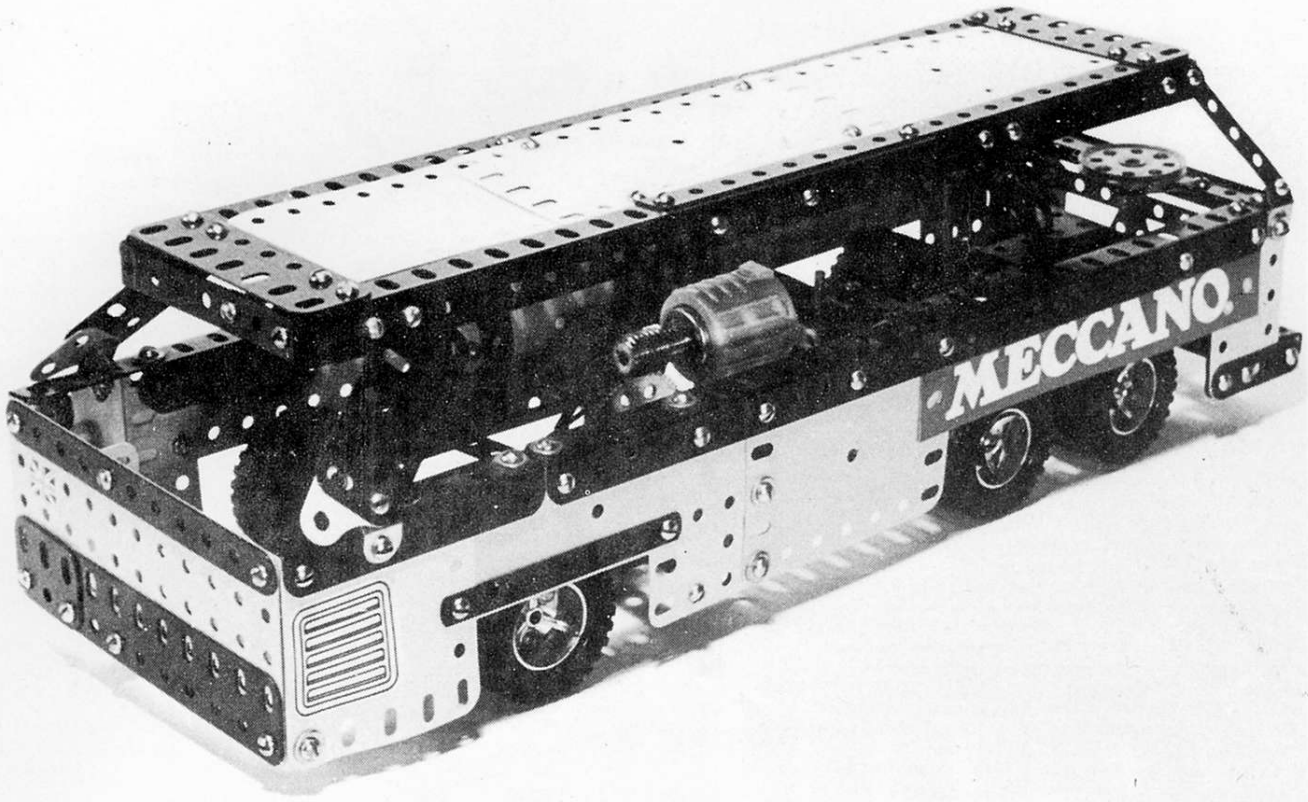
View from above with roof removed, showing steering linkage.



comprising two 4½" Narrow Strips connecting two 1½" x 1½" Flat Plates. Two 1½" Narrow Strips and a 1" x ½" Angle Bracket 16A are arranged as shown to complete the front assembly, which is then attached to the main bodywork by means of Bolts securing the lugs of the left hand 2½" x 1½" Flanged Plate; and the top lug of the right hand 2½" x ½" Double Angle Strip is fixed, via a Fishplate, to the right hand 12½" Angle Girder 11. A bumper, represented by a 5½" Angle Girder, is fixed by ½" x ½" Angle Brackets to two forward-projecting 2" Strips lining the lower front edges of the bodywork. The two headlights are formed by ¾" Washers spaced by ½" Pulleys on the shanks of ½" Bolts.

THE ROOF

Two 14½" compound Angle Girders are built up from four 9½" Angle Girders 17 overlapped in pairs by nine holes. The two compound girders are connected at each end by 3½" Flat Girders, and filling-in is provided by a compound 13½" x 2½" Plastic Flexible Plate composed of three suitably overlapped 5½" x 2½" Plastic Flexible Plates. Each end of the



Rear ¾ view of the completed model.

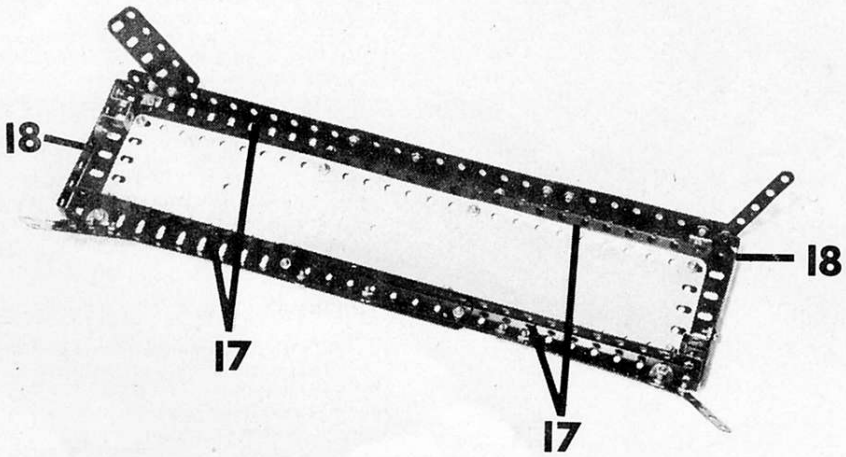
compound Plastic Plate is secured to the 3½" Flat Girders. Roof side edgings are formed by two 14½" compound Strips, each comprising 4½", 5½" and 7½" lengths, bolted via Obtuse Angle Brackets to the Girders 17. Front and rear edgings consist of 3½" x ½" Double Angle Strips 18, each held in place by a Double Bent Strip secured to one of the Girders 17.

At this stage the roof can be attached to the main bodywork by means of the four roof pillars. These are represented at the rear by two 2½" Flat Girders extended by 1" Corner Brackets and fixed as shown. The forward roof pillars consist of 2½" Narrow Strips held in the end holes of the 14½" compound roof edging Strips, at their upper ends; and by Obtuse Angle Brackets (formed by widening-out ½" x ½" Angle Brackets), at their lower ends.

These in turn are bolted to the main bodywork as shown, but note that the 2½" x 1½" Plastic Flexible Plate on the front right hand side has this fixing hole reinforced from behind by a Fishplate secured to the right hand 12½" Angle Girder 11. A representation of the driver's seat is made by fixing a Channel Bearing to a 2½" x ½" Double Angle Strip and securing to the right hand Girder 11 as shown. A 1½" Flat Girder forms the seat back, secured to the Channel Bearing by a 1" x ½" Angle Bracket.

FINAL ASSEMBLY

The bodywork is attached at it's front end by two ½" x ½" Angle Brackets secured to 5½" Angle Girder 2, and at a point rear of centre where the Strip 4 meets the 1½" Angle Girders 13. The upper portion of the steering column 3" Rod is further held by two 1½" Narrow Strips bolted to 5½" Strip 15.



Underside of roof after separation. The rear of the roof is to the left of the photograph.

PARTS REQUIRED

No. Req.	Part No.	No. Req.	Part No.
2 of	No. 1b	1 of	No. 53
6 of	No. 2	4 of	No. 59
2 of	No. 2a	1 of	No. 62b
4 of	No. 5	8 of	No. 69a
2 of	No. 6	1 of	No. 70
4 of	No. 8	2 of	No. 74
4 of	No. 8a	4 of	No. 90a
2 of	No. 9	1 of	No. 103c
2 of	No. 9a	2 of	No. 103d
2 of	No. 9f	3 of	No. 103f
2 of	No. 10	2 of	No. 103h
2 of	No. 11	4 of	No. 111
1 of	No. 11a	9 of	No. 111a
8 of	No. 12	4 of	No. 111d
2 of	No. 12b	1 of	No. 125
4 of	No. 12c	2 of	No. 126a
1 of	No. 15	2 of	No. 133a
2 of	No. 16a	1 of	No. 154a
1 of	No. 16b	1 of	No. 154b
2 of	No. 17	1 of	No. 160
1 of	No. 18a	1 of	No. 186a
2 of	No. 21	6 of	No. 187c
1 of	No. 22	2 of	No. 189
2 of	No. 23	2 of	No. 190a
1 of	No. 24	3 of	No. 194
1 of	No. 24b	2 of	No. 194a
1 of	No. 26	3 of	No. 194e
1 of	No. 27a	1 of	No. 213
1 of	No. 32	4 of	No. 235
1 of	No. 35	2 of	No. 235a
150 of	No. 37b	2 of	No. 235b
172 of	No. 37c	2 of	No. 235d
43 of	No. 38	4 of	No. 235g
2 of	No. 38d	4 of	No. 611
2 of	No. 45	1 of	No. 618
3 of	No. 48a	1 of	No. 11053
2 of	No. 48b	Electric Motor.	
1 of	No. 51		