

# THE MECCANO LIMOUSINE

Full Instructions for Building a Splendid Body for Model 701 (Chassis)

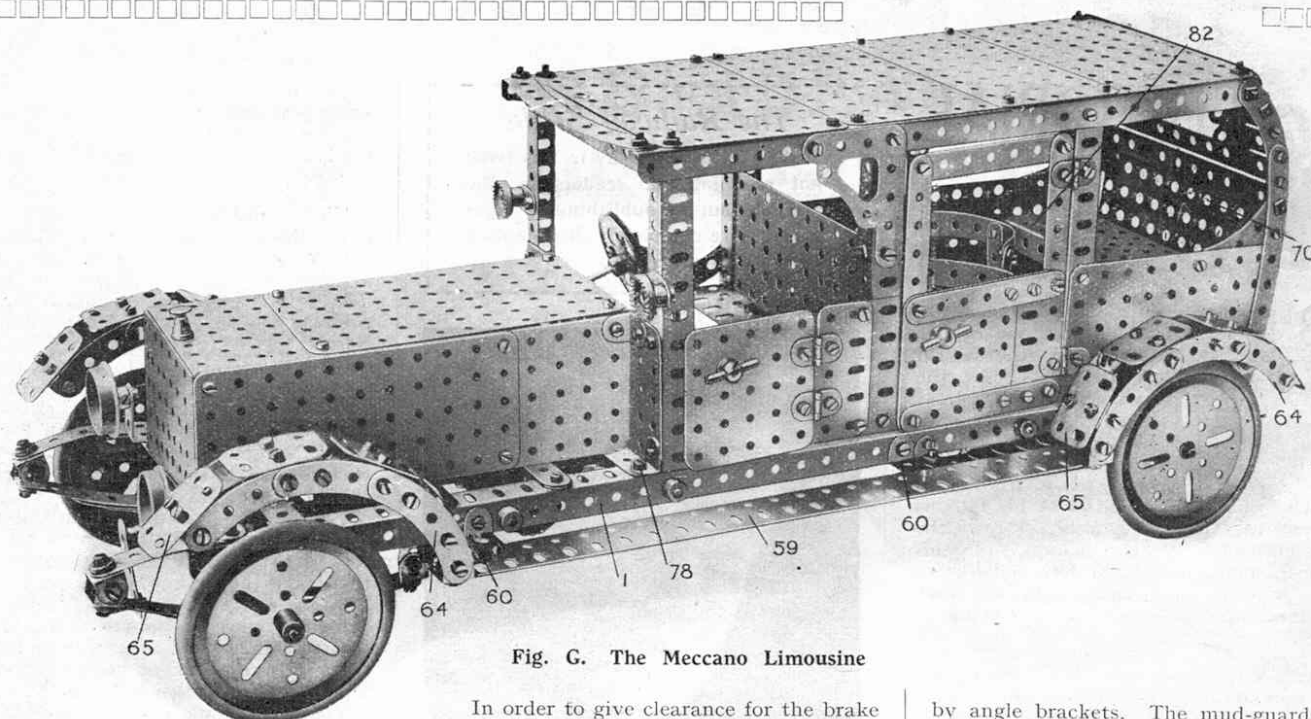


Fig. G. The Meccano Limousine

THOSE of our readers who have built the famous Meccano chassis will be interested to hear of a special limousine body that may be constructed for fitting on to the chassis. This model is shown in the accompanying illustrations, and the following details make clear its construction.

For the addition of this body the chassis is made shorter by replacing the sides of the frame (1 Fig. 701B)\* by 18 in. angle girders. As will be seen from Fig. J these girders are braced by three additional  $5\frac{1}{2}$  in. strips (2a). The rear cantilever springs (33 Fig. J) are reinforced by the addition of  $5\frac{1}{2}$  in. and  $3\frac{1}{2}$  in. strips. This necessitates the cardan shaft (Fig. 701C)\* carrying the driving pinion (27) being replaced by a  $3\frac{1}{2}$  in. rod, to correspond with the shortened frame members.

## Running Boards and Mud-guards

The appearance of the model is considerably improved by the addition of running boards (59 Figs. G and J). The running board on the near-side (59 Fig. G) consists of one  $12\frac{1}{2}$  in. flat girder, attached by two  $1 \times \frac{1}{2}$  in. angle brackets (60 Fig. G) to the 18 in. angle girders (1) forming the frame.

In order to give clearance for the brake lever (53) the running board on the off-side is made up of three flat girders  $4\frac{1}{2}$  in.,  $5\frac{1}{2}$  in. and  $2\frac{1}{2}$  in., the latter overlapping one hole (at 61 Fig. J). The  $4\frac{1}{2}$  in. and  $5\frac{1}{2}$  in. flat girders are connected by a  $1\frac{1}{2}$  in. strip (62), the whole running board being then attached to the main angle girder by four  $1 \times \frac{1}{2}$  in. angle brackets (63).

The mud-guards for the front and rear wheels are all similar, and are constructed of three curved strips (64) on each side. These are overlapped two holes and four  $1\frac{1}{2}$  in. flat girders are attached to them

by angle brackets. The mud-guards are connected to the ends of the running boards (59) by angle brackets.

In constructing the body, begin by bolting together two  $12\frac{1}{2}$  in. angle girders (66 Fig. H) and six  $5\frac{1}{2}$  in. vertical angle girders (67) to form two side frames, connected by a  $5\frac{1}{2} \times 2\frac{1}{2}$  in. flat plate (68) and a  $5\frac{1}{2} \times 3\frac{1}{2}$  in. flat plate (69). Then bolt on the rear  $5\frac{1}{2} \times 3\frac{1}{2}$  in. flat plate (70) by means of a  $5\frac{1}{2} \times \frac{1}{2}$  in. double angle strip (71) and  $5\frac{1}{2}$  in. curved strips (72). The back window is fashioned from two  $5\frac{1}{2} \times \frac{1}{2}$  in. double angle strips, one above and one below, and four  $1\frac{1}{2} \times \frac{1}{2}$  in. double angle strips, two at each side. These are reinforced by two  $2\frac{1}{2}$  in. strips bolted on the inside. The lower side panels (73) consist of two  $4\frac{1}{2} \times 2\frac{1}{2}$  in. flat plates, bolted to the curved strip (72) and to the uprights (67). The driver's seat is a  $5\frac{1}{2}$  in. flat girder (74) fastened to a  $3\frac{1}{2}$  in. angle girder, which in turn is bolted to the plate 69.

The main doors are formed by two  $4\frac{1}{2}$  in. vertical strips and one  $3\frac{1}{2}$  in. strip at the top. The lower panels consist of a  $2\frac{1}{2} \times 2\frac{1}{2}$  in. flat plate and a  $2\frac{1}{2}$  in. flat girder, braced at the top and bottom of the panel by two  $3\frac{1}{2}$  in. strips. The method of attaching the hinges will be plainly seen from the accompanying illustrations.

The base of the body consists of three  $5\frac{1}{2} \times 3\frac{1}{2}$  in. flat plates (75) the front plate overlapping the second by one hole.

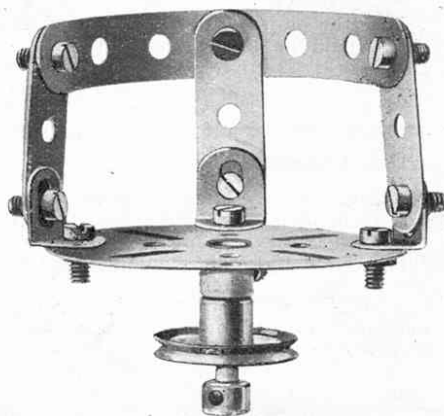


Fig. K. Revolving Seat

\* The figures referred to are those appearing in the Chassis Instruction Leaflet (price 4d. post free). They were also printed in the "M.M." for September and October, 1923.

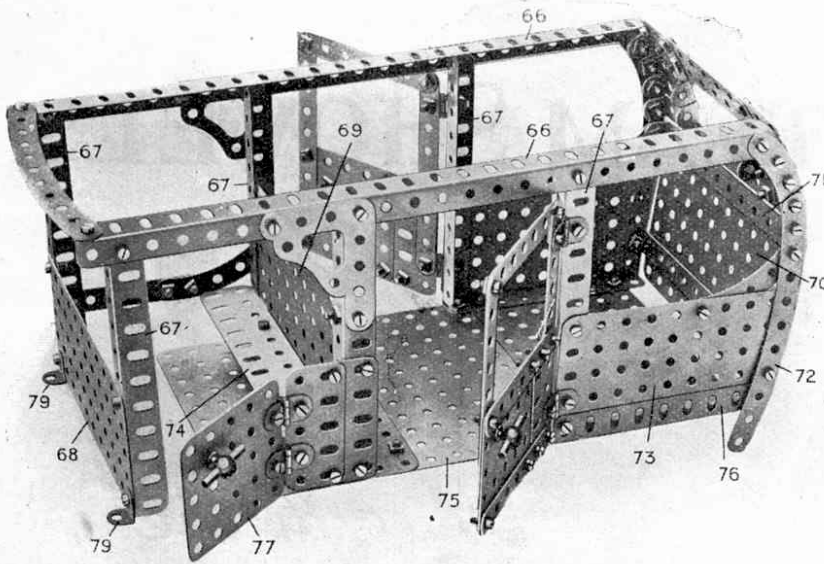


Fig. H. The Limousine Body

The front plate is bolted to a  $4\frac{1}{2}$  in. angle girder, which is also bolted to the lower edge of the front plate (69), the rear plates being bolted to the  $4\frac{1}{2}$  in. angle girders (76). The front door (77) is a  $2\frac{1}{2} \times 2\frac{1}{2}$  in. flat plate, hinged to a  $2\frac{1}{2}$  in. flat girder, which overlaps another  $2\frac{1}{2}$  in. flat girder, bolted to the vertical angle girder (67).

The body is secured to the chassis by four bolts (78 Fig. G), those at the front passing through angle brackets (79 Fig. H) and being secured to the main side girders at 80 Fig. J. The rear bolts pass through holes in the rear plate (75) and through holes (81 Fig. J) in the rear  $5\frac{1}{2}$  in. bracing strip. The top is enclosed by three  $5\frac{1}{2} \times 3\frac{1}{2}$  in. flat plates and one  $5\frac{1}{2} \times 2\frac{1}{2}$  in. flat plate. The back seat (82) is a  $5\frac{1}{2} \times 2\frac{1}{2}$  in. flanged plate bolted to the rear plate (70).

The construction of the two revolving seats will be readily seen from the detail view (Fig. K). They revolve on 1 in. rods running from the face plate boss through a loose 1 in. pulley, a collar and set screw being fitted to the lower end of the rod.

The handles of the doors are made with hand rail supports and one inch rods as shown in the illustration.

No.			
18b	1" Axle Rods	...	5
20	Flanged Wheels	...	2
20a	2" Pulley Wheels	...	1
22	1" " Fast	...	2
29	$\frac{3}{4}$ " Contrate "	...	2
32	Worm	...	1
37	Nuts and Bolts	...	104
37a	Nuts	...	150
48	$1\frac{1}{2} \times 1\frac{1}{2}$ " Double Angle Strips	...	4
48d	$5\frac{1}{2} \times 1\frac{1}{2}$ " "	...	4
52	$5\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plates	...	1
52a	$5\frac{1}{2} \times 3\frac{1}{2}$ " Flat Plates	...	9
53	$3\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plates	...	2
53a	$4\frac{1}{2} \times 2\frac{1}{2}$ " Flat Plates	...	2

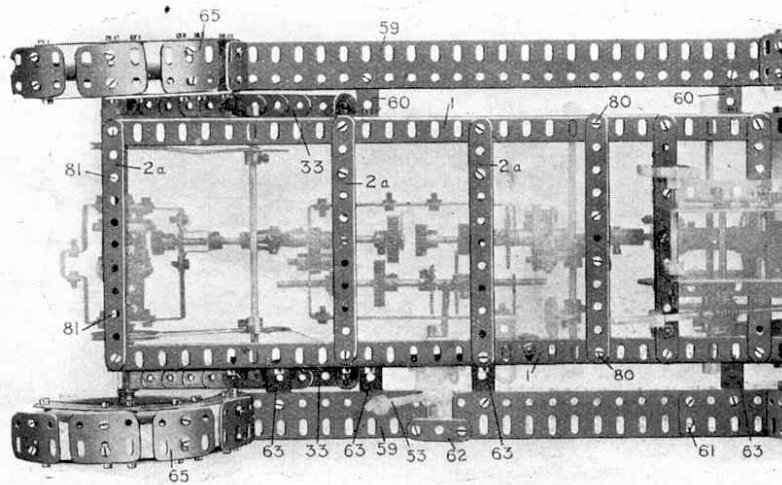


Fig. J. Method of Attachment to Chassis

No.	Parts Required for the Meccano Limousine Body		
2	$5\frac{1}{2}$ " Perf. Strips	...	1
2a	$4\frac{1}{2}$ " " "	...	4
3	$3\frac{1}{2}$ " " "	...	6
4	$3\frac{1}{2}$ " " "	...	1
5	$2\frac{1}{2}$ " " "	...	2
6a	$1\frac{1}{2}$ " " "	...	7
8	$12\frac{1}{2}$ " Angle Girders	...	2
9	$5\frac{1}{2}$ " " "	...	6
9a	$4\frac{1}{2}$ " " "	...	3
9b	$3\frac{1}{2}$ " " "	...	2
10	Flat Brackets	...	2
12	Angle " "	...	52
12a	1" Angle Brackets	...	2
12b	$1 \times \frac{1}{2}$ " Angle Brackets	...	7
14	6" Axle Rods	...	1

No.			
59	Collars	...	4
70	$5\frac{1}{2} \times 2\frac{1}{2}$ " Flat Plates	...	4
72	$2\frac{1}{2} \times 2\frac{1}{2}$ " " "	...	5
89	$5\frac{1}{2}$ " Curved Strips	...	3
90	$2\frac{1}{2}$ " " "	...	29
103	$5\frac{1}{2}$ " Flat Girders	...	2
103b	$12\frac{1}{2}$ " " "	...	1
103c	$4\frac{1}{2}$ " " "	...	1
103f	$2\frac{1}{2}$ " " "	...	5
103h	$1\frac{1}{2}$ " " "	...	16
108	Architraves	...	2
109	Face Plates	...	2
111b	$7/32$ " Bolts	...	150
114	Hinges	...	6
120	Buffer	...	1
136	Handrail Supports	...	3

## OUR MAIL BAG



In this column the Editor replies to letters from his readers, from whom he is always pleased to hear. He receives hundreds of letters each day, but only those that deal with matters of general interest can be dealt with here. Correspondents will help the Editor if they will write neatly in ink and on one side of the paper only.

**P. Short (Derby).**—Your poem commencing "Yes! we have no Meccanos" is very good, but we seem to have heard something of the kind before in connection with the fruit business! We read your cheery letter with much pleasure.

**Sidney Miles (Woodford Green).**—You are quite right in surmising that this is the happiest and best time of the year for us. Hundreds of bright cheery letters arrive every day from boys living in all corners of the earth. We work early and late, Sydney, but we enjoy every minute of it.

**A. Ferruccio (Turin).**—We think you write English very well, and it was a pleasure to read your letter. We wish you success in your engineering career, and we thank you for your kind expressions towards Meccano and the Editor of the "M.M."

**F. E. R. Nunn (Colchester).**—You get extraordinarily good results on your Crystal Set, and we congratulate you on possessing such an efficient piece of apparatus. Telephonic reception at 350 miles is most unusual. We note you prefer Guild Badges in the form of pendants or tie pins.

**L. K. Thompson (Bath).**—Publishing the "M.M." once a month keeps us very busy, but it looks as though we might have to go to press more frequently. There are many articles of the greatest interest for boys now being prepared for our future numbers. We much appreciate your good wishes.

**A. G. Johnson (Northwich).**—All Meccano Clubs actively take up sports and games of all kinds, both Winter and Summer, but it is difficult to find room in the "M.M." to deal with their exploits and prowess in this direction.

**J. Spiegelhalter (Malton).**—We were interested to see the photographs of the three-valve set you have made, and we congratulate you on a very efficient and workmanlike job. We were also interested to know that you get Bournemouth clearly on the loud speaker, and this is our experience here. We hope you will spend many pleasant evenings "listening in."

**W. Penman (Partick, N.B.).**—We were pleased to hear of the wide interest being shown in your club, and we hope this will result in more Meccano clubs being established in Glasgow.

**E. Drafern (Southampton).**—At present we fear that there are too many difficulties in the way to enable us to publish the "M.M." weekly. The suggestion will not be lost sight of, however, and you may be sure that if we are able to see our way to do so, we shall certainly publish more frequently.

**F. Padgett (Newark).**—We quite agree with you, Frank, when you say that Meccano is "something more than a toy." We are sorry not to be able to print your verses, but these are scarcely up to our usual standard.

**R. L. Uphill (Ryde, I.O.W.).**—The subscription rates in Australia are the same as in England. Most Australian dealers stock the "M.M." We wish you all good fortune in your new home.

**A. E. Bebb (Redditch).**—Now that we know that you will be confined to your room during the whole of the winter through sickness, we are more pleased than ever that you carried off the prize in our Tom Sawyer competition. We trust that you will derive much pleasure from your wireless outfit. Under the circumstances you could not take up a finer hobby.

**B. Mitchell (Stockton).**—Send us a copy of your Magazine by all means, Bernard. Nothing pleases us so much as to see boys with literary tastes taking a keen interest in amateur journalism.

**G. Winward (Burnley).**—You will be more than delighted with the heavy Hornby Tank Loco. It is a beauty! We are sorry to hear of your trouble with your eyes, but if the doctor says that wearing the bandage for some days will cure you, you should be thankful it is no worse.