

COMMUTER CAR IN MECCANO

by Spanner

IN RECENT years the chaotic state of town traffic has led to considerable research into vehicles specially designed for the commuter who, for various reasons, finds it advantageous to use his own form of transport. The resulting vehicles, while often being referred to as "commuter cars," have generally turned out to look nothing like cars as we know them. Whatever they may look like, however, their suitability for the job for which they are intended is undeniable.

What are the requirements for a commuter car? Well, it must be small to prevent it taking up too much room both on the road and when parked, yet it must be sufficiently large to accommodate the driver and preferably a passenger, as well as a fair amount of luggage. It must also have a highly-economical power plant yet one with enough power to give the car sufficient speed to enable it to keep up with other town traffic—say 30 m.p.h.—and, above all, it must be fully manoeuvrable. One prototype commuter car which meets all these requirements is the Colliday Chariot developed by engineer Mr. R. G. Collier. Capable of carrying two adults and two or three children plus a load of luggage at something in excess of 30 m.p.h., it is powered by a small, quiet petrol engine and has the almost unbelievable turning circle of only 7 ft. Simple controls include a starter switch key, a steering wheel and two foot pedals marked "Stop" and "Go"—nothing complicated to worry about there!

The small Meccano model described below was inspired by the Colliday Chariot and it is as equally devoid of complications as the original. The chassis consists of a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flanged Plate 1, to the forward end of each flange of which a $3\frac{1}{2}$ in. Strip is secured. Bolted between these Strips are a second $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flanged Plate 2 and a curved $5\frac{1}{2} \times 1\frac{1}{2}$ Flexible Plate 3. Attached to the lower end of Flanged Plate 2, in the centre, is a $1 \times \frac{1}{2}$ in. Angle Bracket, its longer lug projecting forward. Lock-nutted to the end of this lug is a Single Bent Strip 4 between the lugs of which a $\frac{1}{2}$ in. Pulley without boss is mounted, together with two Washers, on a $\frac{3}{4}$ in. Bolt. If available, a $\frac{1}{8}$ in. Dinky Toy Tyre 5 (Sales No. 096) should be mounted

on this Pulley, then an Angle Bracket 6 is fixed by Nuts on the Bolts, as shown. The steering linkage will later be lock-nutted to the free lug of this Angle Bracket.

Now, however, the front of the model is completed. Two $2\frac{1}{2} \times 1\frac{1}{2}$ in. Triangular Flexible Plates 7, bent to shape, are attached by an Angle Bracket to Flanged Plate 2 to enclose the space above Flexible Plate 3, then a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flexible Plate 8, bent over at the top, is also secured to the Flanged Plate so that it projects a distance of two holes above the Plate. Two $\frac{1}{2}$ in. Pulleys with Boss 9 are mounted one on each of the securing Bolts to represent headlamps. The windscreen is a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Transparent Plastic Plate, edged by two $3\frac{1}{2}$ in. and two $2\frac{1}{2}$ in. Narrow Strips 10, the whole attached to Plate 8 by Obtuse Angle Brackets connected behind the Plate by a $3\frac{1}{2}$ in. Strip. A curved $4\frac{1}{2}$ in. Strip 11 acts as the bumper, being attached to

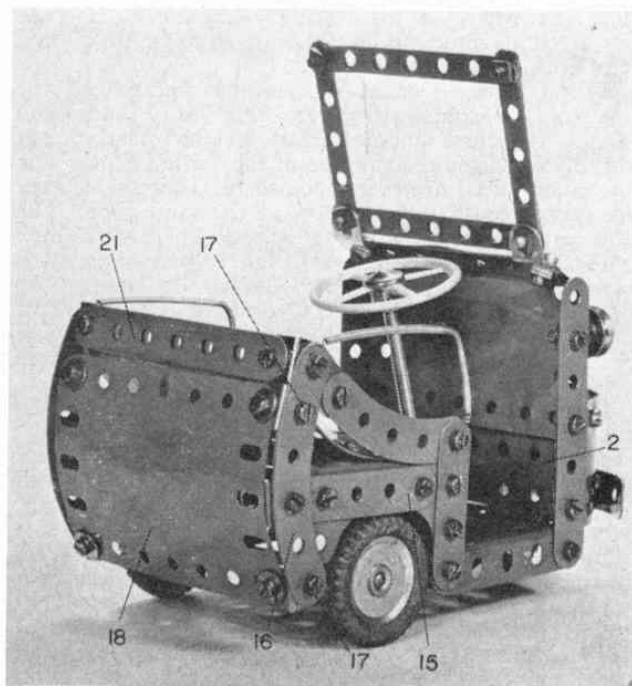


Plate 3 by two $\frac{1}{2}$ in. Bolts, Collars on the shanks of the Bolts acting as spacers.

A 2 in. Strip 12 is next bolted through the rearmost hole in each flange of Flanged Plate 1, Strips 12 at each side being connected by two $3\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strips 13. The Bolts securing the Double Angle Strips also hold in place a third $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flanged Plate, 14, serving as the seat, and two 1 in. Corner Brackets, one at each side. A $2\frac{1}{2}$ in. Strip 15 is bolted to each of these Corner Brackets, another similar Corner Bracket being secured to this Strip half an inch from its opposite end.

Bolted to the end of Strip 15, as shown, is a 3 in. compound curved strip 16, built up from two $2\frac{1}{2}$ in. Strips overlapped four holes, the securing Bolt holding an Angle Bracket in place. Another two Angle Brackets are added, being held by Bolts 17, then a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flexible Plate 18, curved to shape, is bolted to all the Angle Brackets to enclose the back of the model. The top of Strip 12 is joined to the top of compound curved strip 16 by a $2\frac{1}{2}$ in. Curved Strip 19, extended by a Fishplate. At the same time, a short length of Spring Cord 20, bent as shown, is trapped in position to serve as a handrail. The Bolts fixing the Fishplates to curved strips 16 also hold in place two Angle Brackets joined by a $3\frac{1}{2}$ in. Strip 21 and a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Plastic Plate 22, the latter being curved and bolted to the centre of Flanged Plate 14.

Fixed to the underside of Flanged Plate 14 by the Bolts securing Plastic Plate 22 is a $2\frac{1}{2} \times 1\frac{1}{2}$ in. Double Angle Strip 23. Mounted in the end holes in the lugs of this Double Angle Strip is a $3\frac{1}{2}$ in. Rod, on each end of which is secured a 1 in. Pulley with Motor Tyre 24, spaced from the adjacent lug by three Washers.

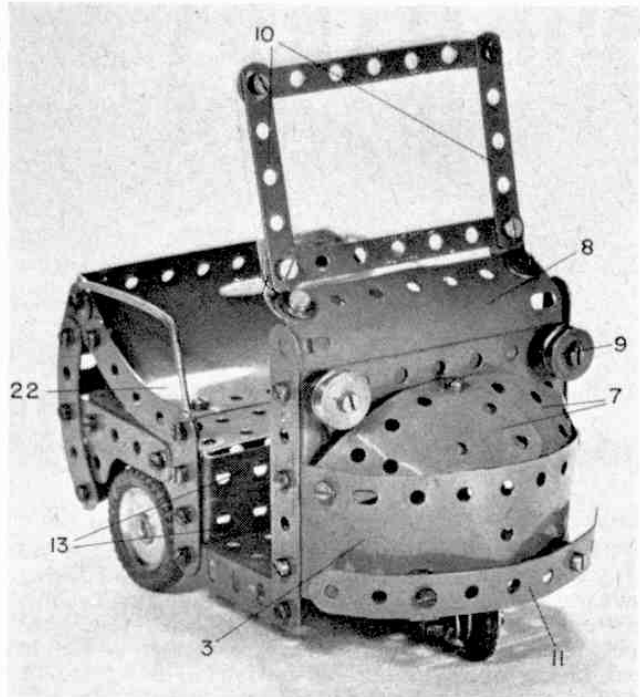
Finally, the steering mechanism is completed, the steering column consisting of a $3\frac{1}{2}$ in. Rod journalled in Flanged Plate 1 and in a Reversed Angle Bracket 25 bolted to the top of the Plate. It is held in position by a Collar situated above the Reversed Angle Bracket and beneath the Plate, by a Double Arm Crank 26, to one arm of which a $2\frac{1}{2}$ in. Strip 27 is lock-nutted. The other end of this Strip is lock-nutted to the free lug of Angle Bracket 6, then, last of all, a $1\frac{1}{2}$ in. Steering Wheel is mounted on the top of the steering column to finish off the model.

Above right: This little Meccano model of a commuter car, based on the Colliday Chariot, is simple in design, but high in realism.

Right: An underside view of the Commuter Car showing the layout of the chassis and the simplicity of the steering mechanism.

Above left: Comparatively few parts are used in the Meccano Commuter Car, yet the builder has managed to catch all the major lines of the original vehicle.

Left: A rear view of the model showing construction of the back and side. Note the use of Spring Cord for handrails.



PARTS REQUIRED

1-2a	1-23	3-59	1-185
3-3	2-23a	1-62b	1-189
3-5	61-37a	6-90	2-190a
2-6	53-37b	1-102	1-193b
2-10	15-38	3-111	1-194b
7-12	1-47	2-111a	2-221
2-12c	2-48b	1-125	2-235
2-16	3-53	4-133a	2-235b
2-22	6-58	2-142a	1-Dinky Toy Tyre

