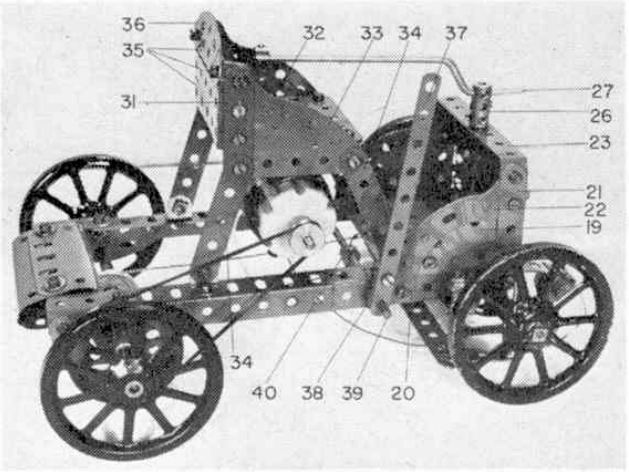


The First and the Famous

by Spanner

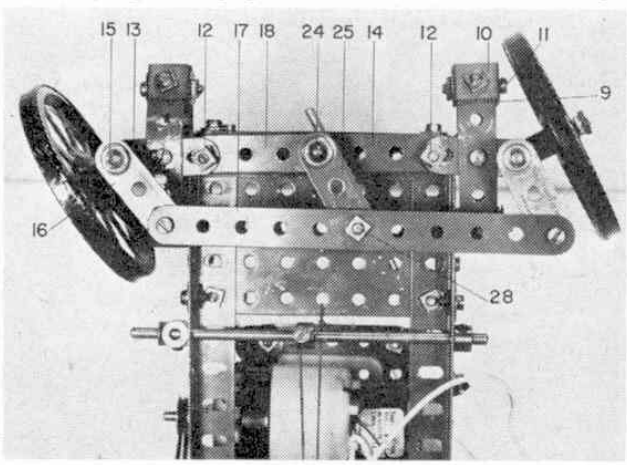
Two of Henry Ford's historic cars reproduced in standard Meccano

HENRY FORD is perhaps the most famous name in the history of the motor car. It was Henry Ford who originated the production line system for motor car manufacture and it was Henry Ford who, from starting with practically nothing, built up the colossal Ford Motor Company into one of the largest automobile manufacturers in the entire world.

The Ford Motor Company was officially incorporated in 1903, but it was some years earlier, in 1898, that Ford, himself, built his first "horseless carriage". This was a weird-looking affair, spindly in appearance and with handle steering: far removed from the later vehicle which really made him famous—the Model T, known affectionately by all as "Tin Lizzy". Our model-builder, ever on the look-out for ideas, came across some illustrations of the two cars in a reference book and was immediately struck by the tremendous difference between the "first Ford and the famous Ford". It was not long, therefore, before I received the two models featured here and, although they are both only simple approximate reproductions, I think you will agree that they admirably illustrate the design differences between the two.

Ford's first car

Following the course of history, we will begin with the 1898 creation which, as you can see, is not at all difficult to build. The chassis consists of two $8\frac{1}{2}$ in. compound angle girders 1, each consisting of a $7\frac{1}{2}$ in. and a $1\frac{1}{2}$ in. Angle Girder, connected together, at the front, by a $3\frac{1}{2}$ in. Angle Girder overlayed by a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flanged Plate 2 and, at the rear, by a $3\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strip 3. Bolted to this Double Angle Strip are two U-section Curved Plates 4 serving as the petrol tank. Two $2\frac{1}{2}$ in. Stepped Curved Strips 5 are next bolted one to each Angle Girder 1 to provide bearings for a $6\frac{1}{2}$ in. Axle Rod 6 carrying a 1 in. fixed Pulley 7 and held in place by a Collar and a 2 in. Pulley 8. A 3 in. Spoke Wheel is mounted on each end of the Rod.



Turning to the opposite end of the chassis, two springs are each produced from a $2\frac{1}{2}$ in. Strip 9 to each end of which a Double Bracket 10 is bolted. A further two Double Brackets are bolted to a second $2\frac{1}{2}$ in. Strip then the two Strips are curved and attached to each other at one end by a $\frac{3}{4}$ in. Bolt 11 passed through the lugs of the Double Brackets and, at the other end, by a $1\frac{1}{8}$ in. Bolt passed through the lugs of the Double Brackets and lock-nutted through the third hole in the vertical flange of compound girder 1.

Two $\frac{3}{4}$ in. Bolts 12 are next fixed in the end holes in the horizontal flanges of the chassis members, are fitted with Compression Springs and are then used to secure two Cranks 13 one to each end of a $3\frac{1}{2}$ in. Strip 14. The Cranks are in turn bolted to Strips 9, as shown. Note that the bosses of the Cranks point downwards. Loose in the boss of each Crank is a $1\frac{1}{2}$ in. Rod 15, on the lower end of which another Crank 16 is fixed. A Washer is mounted on the Rod above Crank 13, to be followed by a Collar, in the threaded bore of which a 1 in. Screwed Rod is fixed, then a $5\frac{1}{2}$ in. Strip 17 is lock-nutted between the arms of Cranks 16.

Bolted to the $3\frac{1}{2}$ in. Angle Girder at the front of the chassis which, incidentally, is numbered 18 in the illustrations, is a $3\frac{1}{2} \times 2\frac{1}{2}$ in. Flexible Plate, then a $2\frac{1}{2} \times 1\frac{1}{2}$ in. Triangular Flexible Plate 19 is secured to each flange of Flanged Plate 2. A $2\frac{1}{2}$ in. Stepped Curved Strip 20 and a $2\frac{1}{2}$ in. Strip 21 are bolted as shown to angle girder 1, one of the securing Bolts also fixing a 1 in. Corner Bracket 22 in place. Bolted between Strips 21 at each side is a $3\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strip 23. Journalled in the centre hole of this Double Angle Strip and in $3\frac{1}{2}$ in. Strip 14 as well as in

PARTS REQUIRED

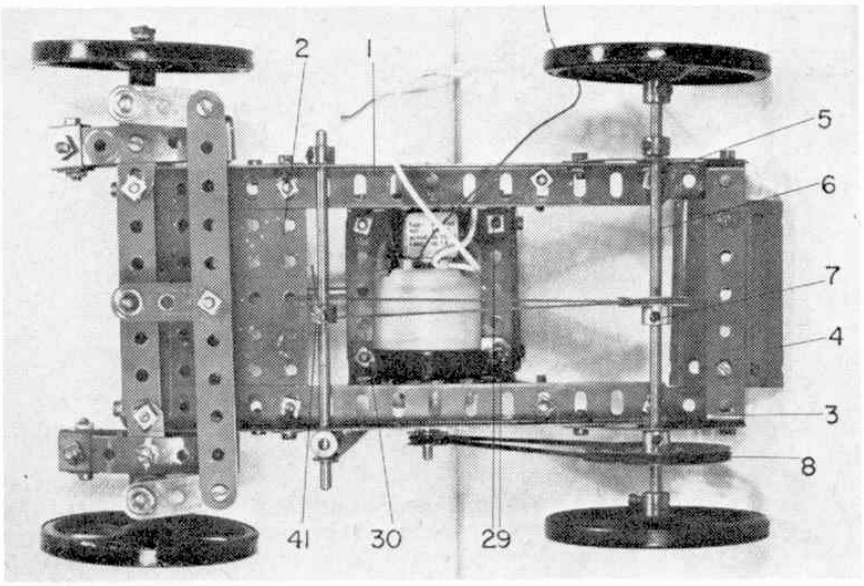
1—2	1—14	67—37b	5—90a
1—3	1—15b	12—38	2—111
10—5	1—15c	3—48a	3—111c
2—6	2—18a	2—48b	2—111d
2—8b	4—19a	1—53	1—115
1—9b	1—19g	7—59	4—133a
2—9d	1—20a	5—62	1—186b
2—9f	1—22	2—63	1—190a
8—11	1—23a	1—72	2—199
6—12	83—37a	2—82	4—221
1—Power Drive Unit		2—90	1—235d

Top left: A simple, but amazingly realistic model in Meccano of the first car produced by Henry Ford in 1898. The petrol engine of the original is replaced in the model by a Power Driven Unit.

At right: An underside view of the 1898 Ford showing the simple yet extremely strong chassis construction.

Below left: Working " handle " steering is fitted to the model of Ford's first car. The layout of the steering mechanism is clearly shown in this picture.

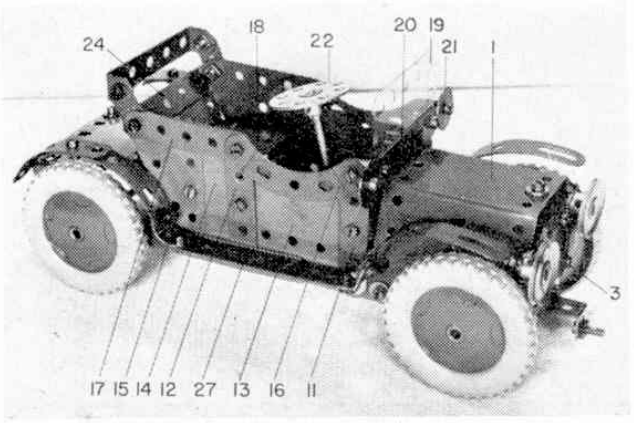
Below: " Tin Lizzie ", perhaps the most famous of all Ford cars. This particular model is based on the 1908 Ford T and is built with Meccano Outfit No. 4.



the chassis is a 3½ in. Rod 24 held in place by a Crank 25 beneath Strip 14 and by a Coupling 26 above the Double Angle Strip. A Crank Handle 27, carrying a Collar on its end, is fixed in one end transverse bore of the Coupling. Secured in the centre hole of Strip 17 is a Threaded Pin 28 engaging with the elongated hole of Crank 25.

In the case of the driver's seat two 2½ in. Angle Girders 29 are bolted to a 2½ × 2½ in. Flat Plate 30. Fixed to the vertical flange of each Girder 29 is a 2½ × 1½ in. Triangular Flexible Plate edged by a 2 in. Strip 31, a 1 in. Corner Bracket 32, a 2½ in. Curved Strip 33 and two supporting 2½ in. Strips 34. The back is enclosed by three 2½ × ½ in. Double Angle Strips 35, the uppermost Strip overlayed by a 2½ in. Stepped Curved Strip 36. A Power Drive Unit is fixed by ⅜ in. Bolts to the underside of Flat Plate 30 and a ½ in. Pulley on its output shaft is connected by a 10 in. Driving Band to Pulley 8. The completed seat is then fixed to Girders 1 by Angle Brackets.

Fitted to the model is a band brake the handle of which consists of a 4½ in. Narrow Strip 37 attached to a Coupling 38, fixed on a 5 in. Rod 39 held in Angle Girders 1 by Collars. A further Collar 40, carrying a Bolt 41 in one transverse tapped bore, is fixed on the Rod and a length of Cord is tied to Bolt 41, is passed around Pulley 7, then brought back and secured to Flanged Plate 2 in such a way that the Cord acts as a brake when the Narrow Strip is moved backwards.



Model T

Before describing our second model I should like to say that the Ford Motor Company began serious production with the Ford Model A and subsequently progressed through a series of models, identified by letters, until, in late 1908, the first Model T emerged from the Ford factory at Dearborn, Michigan, U.S.A. This vehicle was the culmination of years of work and experience obtained from the earlier models and combined lightness with power and durability, while still being comparatively low in price. Although the Model T was made for many years our Meccano version is based on the original 1908 example and can be built with Outfit No. 4.

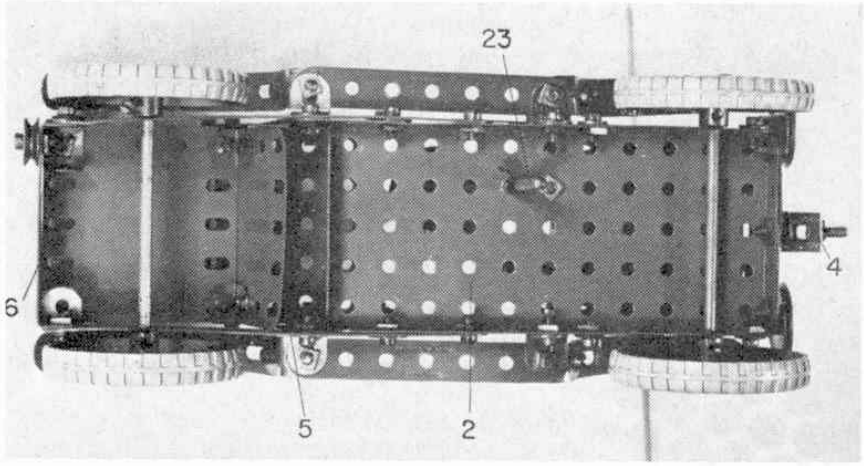
The bonnet is produced from a 5½ × 2½ in. Flexible Plate 1 bent to shape and bolted to the flanges of a 5½ × 2½ in. Flanged Plate 2. Two Flat Trunnions 3, joined together at their apexes by a 1½ × ½ in. Double Angle Strip are bolted to the front flange of Plate 2 then the engine starting handle is supplied by a ½ in. Reversed Angle Bracket 4 loosely lock-nutted on a Bolt fixed in the centre hole of the front flange of Flanged Plate 2. A ⅜ in. Bolt is fixed by a Nut in the free lug of the Reversed Angle Bracket.

Ordinary Angle Brackets are attached to the sides of the bonnet and 1 in. Pulley Wheels are fixed to these with ⅜ in. Bolts to represent what on the original car are acetylene headlamps. A Bolt fitted with a Washer represents the radiator cap.

Flanged Plate 2 is now extended by two 5½ in. Strips 5 joined at the rear by a 2½ × ½ in. Double Angle Strip 6, then Fishplates 7 are used to fix a further 2½ × ½ in. Double Angle Strip 8 to Double Angle Strip 7, the upper securing Bolts also fixing two Double Brackets in place. Bolted to the upper lugs of these Double Brackets is a 2½ × 2½ in. Flexible Plate 9, while a ½ in. Pulley without boss 10 is bolted to Double Angle Strip 6.

Each side of the car is built up from two 2½ in. Strips 11 and 12, a 2½ × 2½ in. Flexible Plate 13, a 2½ × 1½ in. Flexible Plate 14 and a 2½ × 1½ in. Triangular Flexible Plate 15. A 2½ in. Stepped Curved Strip 16 is bolted between the tops of Strips 11 and 12, while a 2½ in. Strip 17 is used to edge the top of Plates 14 and 15, also being bolted to Strip 12.

The seat consists of a 2½ × 1½ in. Flanged Plate 18, bolted as shown between the sides. The windscreen,



At left: The basic chassis of the Meccano Model T is highly simple, as this underside view shows.

Below: Construction of the radiator and bonnet of the Model T is evident from this close-up view of the front of the model.

Below left: A rear view of the Model T showing construction of the boot and rear mudguards. Note the rear "light".

on the other hand, is a $2\frac{1}{2} \times 1\frac{1}{2}$ in. Transparent Plastic Plate 19 held between a $2\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strip and a $2\frac{1}{2}$ in. Strip 20, the Double Angle Strip being bolted to Strips 11 at each side, the securing Bolts also holding Angle Brackets in place. Two $\frac{3}{4}$ in. Washers 21 are attached one to each of these Angle Brackets to represent side lamps. No working steering mechanism is included in this model but an imitation steering wheel is represented by an 8-hole Bush Wheel 22 fixed on a $3\frac{1}{2}$ in. Rod 23 held by Spring Clips in Flanged Plate 2 and in a $\frac{1}{2} \times \frac{1}{2}$ in. Reversed Angle Bracket bolted to the Plate.

Returning to the seat, a $2\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strip 24 is bolted between Triangular Flexible Plates 15, the securing Bolts also holding in position two Fishplates which are themselves joined by another $2\frac{1}{2} \times \frac{1}{2}$ in. Double Angle Strip 25, the latter representing a folded hood. A $2\frac{1}{2} \times 2\frac{1}{2}$ in. Flexible Plate 26 is bolted to Double Angle Strip 24 to act as the seat back, also being attached by Angle Brackets to Flexible Plate 9.

At each side of the model, combined running board and mudguards are supplied by a $3\frac{1}{2}$ in. Strip 27, to each end of which a Formed Slotted Strip is attached by an Obtuse Angle Bracket, Strip 27 itself being attached to the side of the model by ordinary Angle Brackets. The rear Formed Slotted Strip is extended by a $2\frac{1}{2}$ in. Strip 28, then the model is completed by four $2\frac{1}{2}$ in. Road Wheels mounted on $3\frac{1}{2}$ in. Rods journalled as shown in the chassis members.

As a matter of interest, the Road Wheels can be given a more realistic appearance by painting in a number of spokes the original "Tin Lizzie" being fitted, as it was, with spoked wheels.

HAVE YOUR MODELS PUBLISHED

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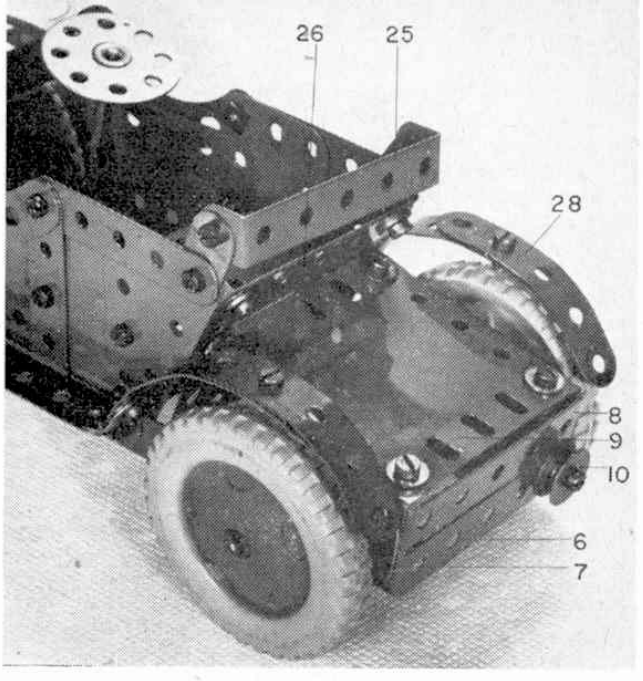

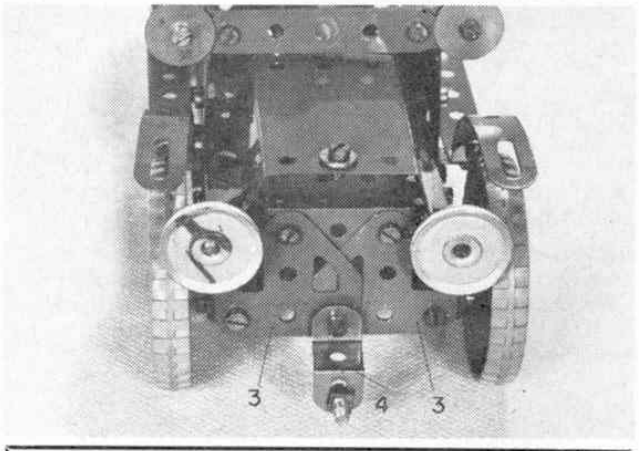

PARTS REQUIRED

2—2	2—22	1—48	4—187
2—3	1—23	5—48a	2—188
9—5	1—24	1—51	2—190
4—10	2—35	1—52	1—192
2—11	65—37a	2—90a	1—193
10—12	59—37b	5—111c	2—194
4—12c	10—38	2—125	4—215
3—16	2—38d	2—126a	2—221