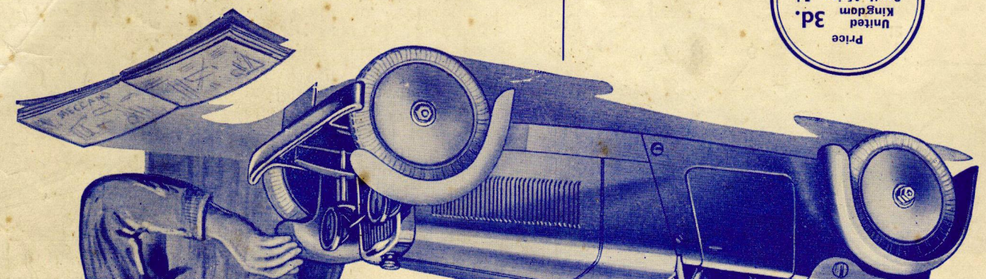


Model No. 1 Sports Tourer with Hood

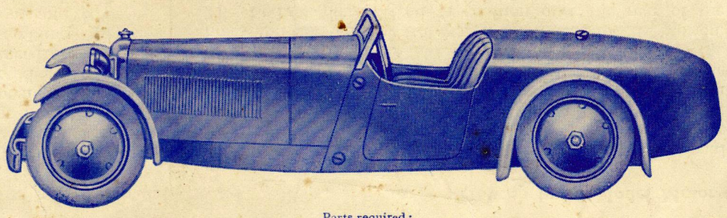
The sports touring car is ideal for high-speed road travel over long distances. The engine fitted is generally of the high compression type with big power output, giving a speed of 70-80 m.p.h., while rapid acceleration is ensured by fitting two or more carburetters, or in certain cases a supercharger. The bodywork provides room for four persons, while the hood gives the car the all-weather utility that is essential for touring. Many British manufacturers produce cars of this type, famous makes being the Talbot, M.G., Invicta, Lagonda, Riley and Alvis.

Parts required

1 of No. A1201	1 of No. A1209	2 of No. A1215	4 of No. A1229
1 „ „ A1204	1 „ „ A1210	1 „ „ A1219	14 „ „ A1076
1 „ „ A1205	1 „ „ A1211	1 „ „ A1220	16 „ „ A1077
1 „ „ A1206	1 „ „ A1212	1 „ „ A1223	1 „ „ A1084
1 „ „ A1207	1 „ „ A1213	4 „ „ A1227	
1 „ „ A1208	1 „ „ A1214		

Model No. 3 Road Racer

A car designed for road racing and competition work differs considerably from the standard touring or sports machine. A very high engine performance coupled with good manœuvrability are here the most important requirements, the comfort of the driver and his mechanic, and their protection from rain and dust, being of secondary importance. Quick acceleration is essential to success in road races, as the winding nature of the circuit necessitates constant changes of speed. Special intake systems using two or more carburetters or a supercharger are therefore fitted to the engines, while the chassis and bodywork are designed so that corners may be taken at high speeds without skidding. Famous British road racing cars are the E.R.A., Talbot, Bentley, M.G., Invicta, Aston-Martin, Lea-Francis, and Lagonda.

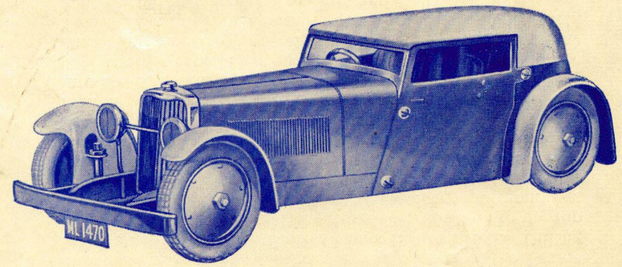


Parts required:

1 of No. A1201	1 of No. A1208	1 of No. A1213	4 of No. A1227
1 „ „ A1204	1 „ „ A1209	1 „ „ A1214	4 „ „ A1229
1 „ „ A1205	1 „ „ A1210	1 „ „ A1215	12 „ „ A1076
1 „ „ A1206	1 „ „ A1211	1 „ „ A1218	15 „ „ A1077
1 „ „ A1207	1 „ „ A1212	1 „ „ A1223	1 „ „ A1084

Model No. 2 Saloon Coupé

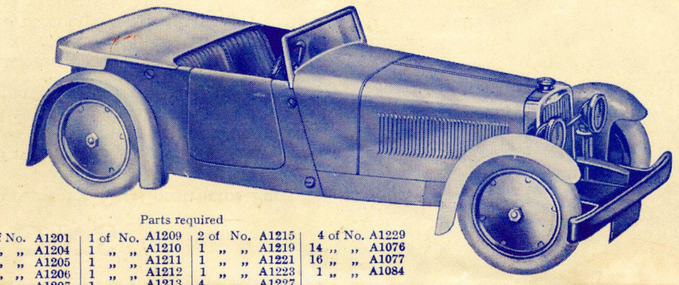
The saloon or sportsman's coupé is particularly adaptable, for it can be used equally well as a town car or as a fast touring machine. A "coupé" is essentially a two-seater car with enclosed drive, but there are many variations on this specification, and Model No. 2 represents the four-seater pattern with fixed head and two large doors. Coupé bodies are fitted to practically every type of sporting chassis, well-known British examples being those produced by the Rolls-Royce, S.S., Rover, M.G. and Armstrong-Siddeley firms.



Parts required

1 of No. A1201	1 of No. A1209	2 of No. A1215	4 of No. A1227
1 „ „ A1204	1 „ „ A1210	1 „ „ A1216	4 „ „ A1229
1 „ „ A1205	1 „ „ A1211	1 „ „ A1217	14 „ „ A1076
1 „ „ A1206	1 „ „ A1212	1 „ „ A1219	16 „ „ A1077
1 „ „ A1207	1 „ „ A1213	1 „ „ A1220	1 „ „ A1084
1 „ „ A1208	1 „ „ A1214	1 „ „ A1223	

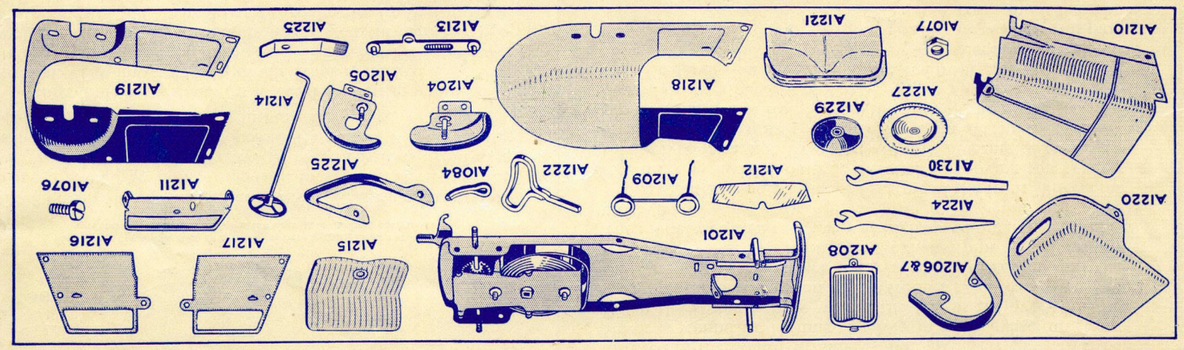
Model No. 4 Sports Tourer



Parts required

1 of No. A1201	1 of No. A1209	2 of No. A1215	4 of No. A1229
1 „ „ A1204	1 „ „ A1210	1 „ „ A1219	14 „ „ A1076
1 „ „ A1205	1 „ „ A1211	1 „ „ A1221	16 „ „ A1077
1 „ „ A1206	1 „ „ A1212	1 „ „ A1223	1 „ „ A1084
1 „ „ A1207	1 „ „ A1213	4 „ „ A1227	
1 „ „ A1208	1 „ „ A1214		

The successful development by British motor engineers of the small high-efficiency engine has enabled a new and fascinating type of sports car to be produced. This is the small sports machine fitted with a "miniature" engine specially tuned to give a very high performance. These cars are produced in both two and four-seater types, the four-seater generally being provided with a canvas cover that can be placed over the rear section or "tonneau" when the rear seats are not being used. A chassis to which sports bodywork of this type is fitted is the Wolseley "Hornet," while other popular sports cars are the M.G. "Midget," Hillman "Minx," Riley "9" and Ford "Minor." Light sports machines are also produced by the Aston-Martin, Crossley, Standard, B.S.A. and Singer companies.



No. 1 Motor Car Outfit Parts List

No.	Description	Quantity in Outfit
A1201	Chassis Frame complete with mechanism	1
A1204	Front Mudguard, Right	1
A1205	„ „ Left	1
A1206	Rear Mudguard, Right	1
A1207	„ „ Left	1
A1208	Radiator	1
A1209	Headlamp Assembly	1
A1210	Bonnet	1
A1211	Dashboard and Windscreen Frame	1
A1212	Windscreen	1

No.	Description	Quantity in Outfit
A1218	Track Rod	1
A1214	Steering Wheel and Column	1
A1215	Seat	2
A1216	Door, Right	1
A1217	„ Left	1
A1219	Saloon Body	1
A1218	Sports Body	1
A1219	Saloon Body	1
A1221	Tonneau Cover	1
A1222	Key	1

No.	Description	Quantity in Outfit
A1223	Spring for Track Rod	1
A1224	Combined Spanner and Drift	1
A1225	Cover for Folded Hood	1
A1226	Manual	1
A1227	Wheel, Bush and Tyre	4
A1229	„ Disc	4
A1230	Spanner	1
A1077	Bolt, 6BA 5/32"	14
A1077	Nut, Hexagon	16
A1084	Split Pin	1

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INSTRUCTIONS

How to build Model Motor Cars with No. 1 Motor Car Constructor Parts

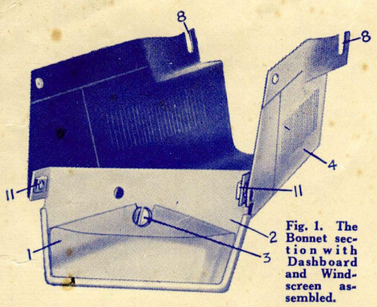

Fig. 1. The Bonnet section with Dashboard and Windscreen assembled.

The assembly of any of the four model Cars shown overleaf should be commenced (after disassembling the Front and Rear Mudguards from the Frame and the Tonneau Cover from the body)—by securing the Dashboard and Windscreen Frame to the Bonnet section (see Fig. 1). The transparent Windscreen 1, is fitted into the Frame 2, and the complete Screen and Dashboard is placed in position at the rear of the Bonnet 4. A 6 B.A. Bolt 3 is then passed through the slotted portion of the Windscreen 1 and through the holes in the Dashboard 2 and the lug on the Bonnet 4. A Nut is then screwed on to the end of the Bolt 3 so as to lock these three parts together rigidly.

The Steering Track Rod and Spring are now assembled to the chassis frame of the Car. These are shown in Figs. 4 and 8. First the Track Rod 15 is placed in position and the bent-up end of the Track Rod Spring 16 is pushed into the slot 32 (see Fig. 8). A Bolt 33 is then passed through the perforation in the Spring and through the hole in the Frame. A Nut is then screwed on to the projecting end of the Bolt. The Nut is screwed up tightly so that the free end of the Track Rod Spring presses against the serrated portion of the Track Rod 15 and thus prevents the Track Rod from moving from side to side unless the wheels are turned by hand.

Before securing the Bonnet assembly to the Frame, the Bolts 9 should be mounted in position, but they must not at this stage be fastened tightly. The Steering Column (see Fig. 8) is next pushed through the hole in the Dash 2 (see Fig. 1) and the Bonnet 4, complete with Windscreen, Dashboard and Steering Column, is placed over the Frame in a tilted position as shown in Fig. 8. The bent-up end 6 of the Steering Column is then pushed through the hole in the lug 7, and the complete Bonnet assembly is lowered on to the Frame so that the slots 8 in the Bonnet fit over the shanks of the Bolts 9. The Steering Wheel is then rotated to the left so that the end 6 of the Steering Column moves down and slips into the hole in the Track Rod 15 (see Fig. 4).

The rear portion of the Bodywork may now be fitted to the Frame of the Car, but before doing this the front Seat 28 should be mounted in place. This is secured in position by placing it on the motor frame so that one of the threaded Studs 29 projects through the hole in the Seat, thus enabling a Nut to be screwed on to it so that the Seat may be locked rigidly. The Seat is prevented from swivelling from side to side by the upturned lugs on the motor frame.

In the case of a four-seater Car the second Seat is bolted in position on the motor frame, the second threaded stud 29 being used.

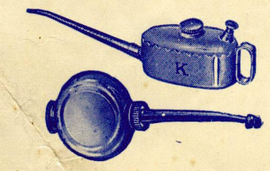

Fig. 3. The Meccano Oil Cans. The upper one is the No. 2 "K" pattern, and below it is the No. 1 Can.

The rear portion of the bodywork may now be attached to the Frame of the Car. If either a saloon or tourer type of body is to be fitted to the model, the Saloon Body section No. A1219 is used; while if a road racing or two-seat sports body is required, the Sports-type Body No. A1218 is used.

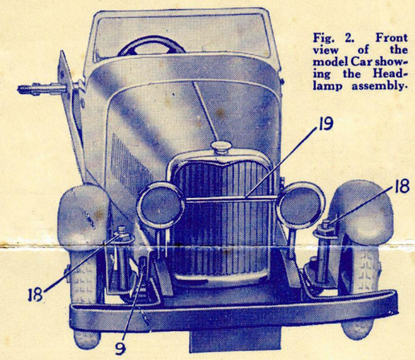

Fig. 2. Front view of the model Car showing the Headlamp assembly.

The model shown under construction in these sectional illustrations is the Saloon Coupé, and as the model includes the two large Doors Nos. A1216 and A1217 (see Fig. 5) these must be secured in position at the same time as the Body section itself, using the Combined Spanner and Drift for the purpose of lining up the holes. The tapered end is inserted into the holes and pressed forward with a slight side-to-side motion. The Body is first placed in position over the rear of the Frame so that the front edges overlap the rear edges of the Bonnet section. The Doors 30 are at the same time placed over the Body, and Bolts 10 are then passed through the perforations in the Doors and Body section and through the holes in the Bonnet. These Bolts finally pass into the threaded bosses 11 of the Dashboard section 2 (see Figs. 1 and 8).

The Bolts 12 are next passed through the lower holes in the Door and Body sections (see Fig. 5) and through the flanged portion of the Frame of the Car. Nuts are then inserted through the D-shaped openings in the Frame and are screwed on to the projecting shanks of the Bolts 12, these Nuts being finally screwed up tightly by inserting the Spanner in the "D" openings.

The front portion of the Car, together with the steering assembly, should now be completed. The Radiator is placed over the front of the Bonnet so that the stud projecting inside the Radiator, below the filler cap, fits into the centre hole in the top of the Bonnet. At the same time the projecting lug 14 at the base of the Radiator (see Fig. 4) is guided into the slot in the Frame; and the Radiator is pushed down so that the perforated lug 14 projects on the underside of the Frame. The Split Pin (No. A1084) is then pushed through the hole in the lug 14 and the split end of the Pin is opened out slightly, so that the Pin is prevented from slipping out of the hole.

The steering gear and stub axle assembly may now be dealt with, as shown in Figs. 4 and 7. The Right and Left-hand Front Mudguards are first of all placed on the stub axle pivots 18. The perforated lugs of each Mudguard are pushed down on the pivots 18 until the projecting stubs 17 on the Track Rod 15 engage with the holes on the lower lugs of each Mudguard (see Fig. 7). Nuts are then screwed on to the threaded ends of the pivots 18 to keep the Mudguards in position.

The Headlamp assembly 19 (see Fig. 2) is now mounted in place at the front of the Frame. The vertical supports for the lamps are first of all placed in the holes 20 (see Fig. 7) in the upper portion of the Frame, and the supports are then pushed downward so that the ends pass through similar holes in the lower portion of the Frame. Each vertical support is "cranked" so that it remains rigid when pushed into position, but a steady upward pressure will enable the Headlamp assembly to be removed when required.

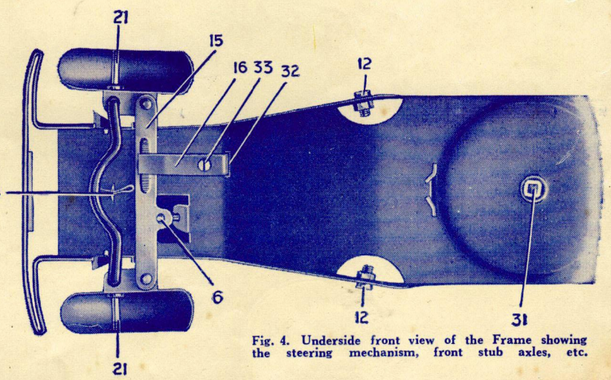

Fig. 4. Underside front view of the Frame showing the steering mechanism, front stub axles, etc.

The next step is to mount the front road Wheels on their respective stub axles. In each case the solid rubber Wheel and Tyre, complete with bush, is fitted on the stub axle and the Wheel Disc is then fitted and a Nut 22 (Fig. 5) screwed on the threaded end of the axle to retain the complete Wheel in place. Care should be taken to see that the Wheels are quite free to rotate as any stiffness here will affect the performance of the completed Car.

After the assembly of the front portion of the Car has been completed, the rear Mudguards and Wheels are secured in position. Each rear Mudguard is held in place by passing Bolts 23 through the perforated lugs of the Mudguards and through the holes in the Body section into the threaded holes 34 in the rear portion of the Frame (these can be seen in Fig. 8).

Each rear Wheel is locked to the rear axle in the following manner. The Wheel 25, with bush, is fitted on the rear axle 24, the projections on which engage the slots in the Wheel bush and thus key the Wheel rigidly to the axle. The Wheel

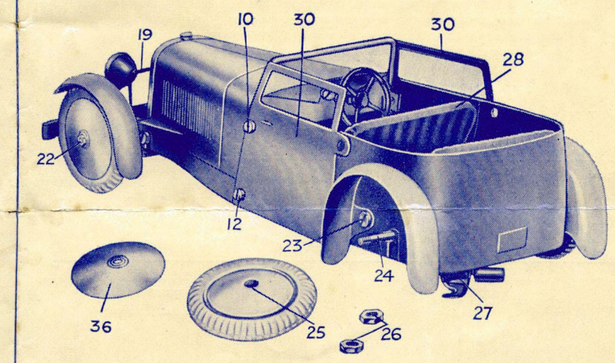

Fig. 5. Three-quarter rear view of partly-completed car with one road Wheel removed from the rear axle to show assembly.

Disc 36 is placed on the axle and a Nut 26 is then screwed on to the threaded portion of the axle, that projects outside the Wheel, and screwed up tightly. A second Nut is fitted as a lock-nut, so that there is no possibility of the Wheel working loose when the model Car is in motion.

To complete the model, the Roof section is mounted in position. The lower portion of the Roof is flanged so that it fits neatly inside the top of the Body. The Roof is fitted with two threaded bosses, and Bolts are passed through the perforated lugs of the Doors 30 and through the Body into these threaded bosses, in order to fasten the Roof securely to the bodywork of the Car.

The assembly of Model No. 1 Sports Tourer with Hood is similar to the Saloon Coupé just described, but the large Doors (Nos. A1216 and A1217) are not included. In assembling the bodywork, therefore, the Bolts 10 are passed through the Body and Bonnet sections only before being screwed into the threaded bosses 11 of the Dashboard 2. Similarly the Bolts 12 hold the Body, Bonnet and Frame sections together.

In the case of Model No. 3, Road Racer, the Sports-type Body section No. A1218 is used, and, of course, only one Seat is employed. In this instance the Bolts 23 are passed through the Mudguards and Body and screwed loosely

Fig. 6. The Special Meccano Lubricating Oil.

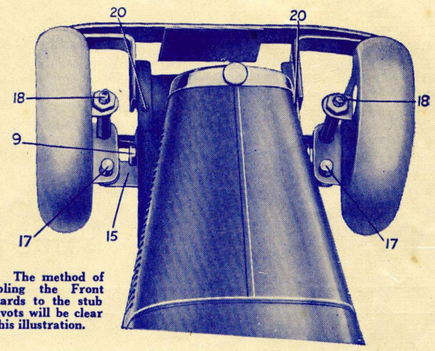

Fig. 7. The method of assembling the Front Mudguards to the stub axle pivots will be clear from this illustration.

into the threaded holes 34 in the rear portion of the Frame (see Fig. 8) before the Bolts 10 and 12 are fitted. During assembly, the Body should be pressed well down on to the top of the Seat while the Bolts 10 are screwed into position.

Model No. 4, Sports Tourer, represents an open four-seater sports car with cover for the rear seats. The Tonneau Cover No. A1221 is therefore fitted in place of the Saloon head. This Cover is provided with lugs that carry threaded bosses, and is held in position by passing Bolts through the body of the Car into these threaded portions.

Another type of car, illustrated on the front page, can be made by using the Cover for Folded Hood in place of the Tonneau Cover. This represents a collapsible hood folded back, and is fitted in place by two Nuts and Bolts.

Operating the Model Car

After completing any of the four model Cars shown overleaf in accordance with these Instructions, the Clockwork Motor should be wound up so that the model may be tested. First the combined brake and exhaust pipe 27 (see Fig. 5) is moved to the left (looking from above), so that the brake portion engages the tread of the Tyre of the left-hand rear Wheel and thus prevents the rear axle from rotating. Next the Key is inserted in the hollow winding spindle 31 (see Fig. 4) and the Motor is wound by turning the Key in a clockwise direction. When the spring is fully wound the Key is removed and the model placed on the ground. The front Wheels are then set so that the model will travel in the required direction, and the brake is released by moving the "exhaust pipe" to the right. The model will then race away at high speed until the spring is unwound.

It should be noted that the setting of the front Wheels for steering the model should be effected by moving the Wheels themselves, and not by means of the Steering Wheel. In order to ensure that the Wheels remain set in the desired position the Track Rod Spring 16 (Fig. 4) should be screwed down fairly tightly.

The model Car should be lubricated from time to time. The Meccano Oil should be used for this purpose, and it may be applied by means of either a No. 1 or No. 2 Meccano Oil Can.

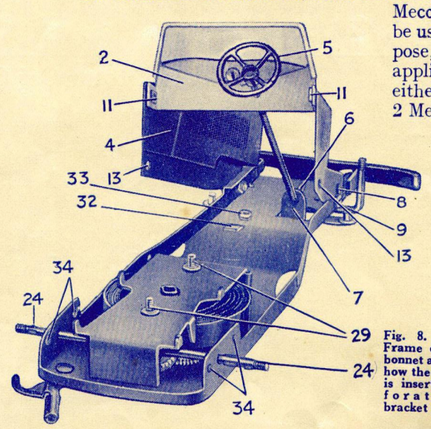

Fig. 8. The Chassis Frame of the Car with bonnet assembly, showing how the Steering Column is inserted in the perforated bearing bracket 7.