

A SIX-CYLINDER M.G.

Sports Car with Many Interesting Mechanical Features.

THE latest model M.G. is an entire departure from previous practice in a very interesting manner. The engine is the Morris six-cylinder of 69×110 mm., which has a capacity of 2,468 c.c. It has an overhead camshaft, which, by the way, is an interesting point for this type of engine, designed to be produced in considerable quantities, forced lubrication, and an immense crankshaft held by massive bearings in a cast-iron crank case, the whole being just about as stiff as can be imagined; stiffness in these parts is three-quarters of the secret of success of the modern six-cylinder engine.

The clutch, the gear box (with its central control), and the transmission as a unit are also Morris, but—and this is where the interest of the latest M.G. arises—these units are assembled in a new frame of M.G. design.

Now the M.G. is a sports car, and the difficulty hitherto has been to adapt for this special purpose units and details of a chassis designed originally for a totally different purpose. Obviously the high performance necessary for a sports car, as distinct from a touring model, involves a lot of detail alteration, and detail alteration is hampered considerably by the necessity of using already existing parts.

Accordingly, for next year the frame has been designed entirely for sports car work, and, as the illustrations show, the side members are not only massive in themselves, but are very rigidly tied together by cross-members, of which one, near the centre of the frame, is a four-sided box girder—probably the stiffest type known.

Either side of the box girder

SPECIFICATION.

ENGINE: 17.7 h.p., six cylinders, 69 × 110 mm. (2,468 c.c.). Tax £18. Overhead valves and camshaft, detachable head, coil ignition.

TRANSMISSION: Three-speed and reverse gear box in unit with the engine.

SUSPENSION: Half-elliptic springs.

BRAKES: On all four wheels.

WHEELS: Wire detachable. Tyres 28 × 4.95 in.

WHEELBASE: 9 ft. 6 in. Track, 4 ft.

WEIGHT: 24 cwt. 2 qr.

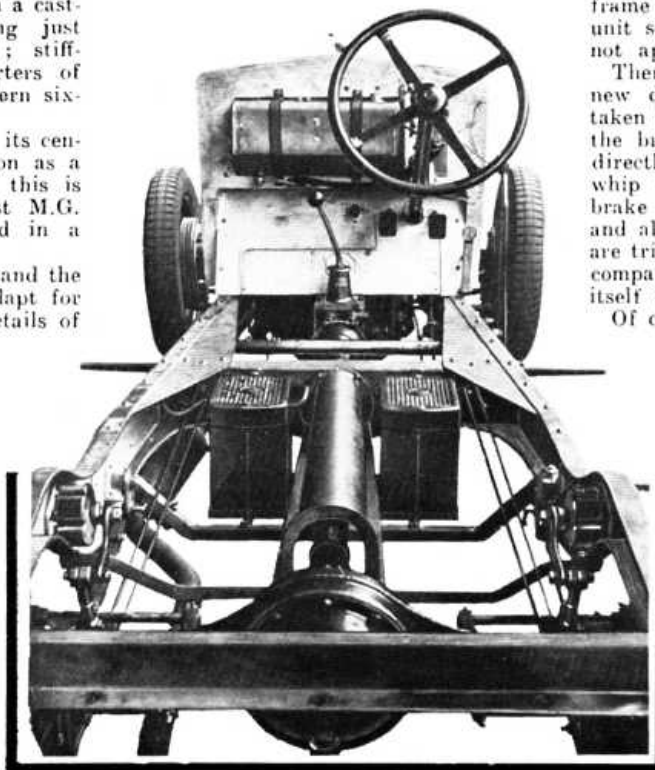
PRICE (provisional): £425, Four-seater.

2½-Litre Model with Special Box Girder Frame.

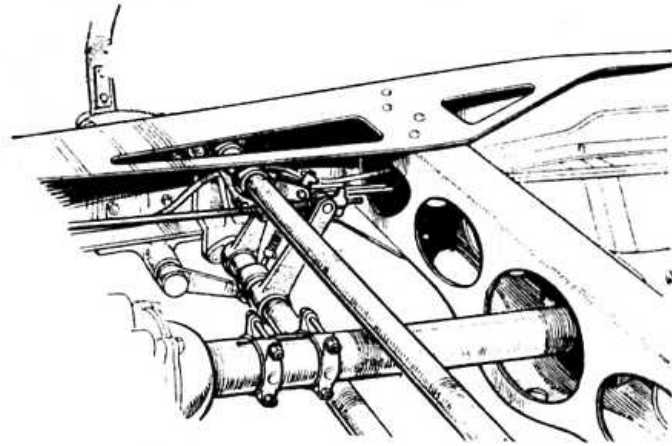
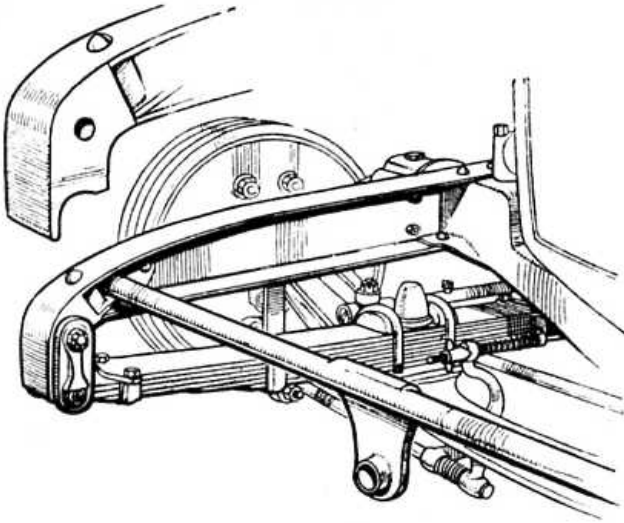
the frame is extended by wide webs, and there are additional webs also on either side of the front cross-member just below the radiator, while the forward cross tube between the dumbiron is splined at each end into bosses. Thus the frame has been made rigid, and by its rigidity prevents movement between the components, the other method of dealing with the same problem being to allow the frame to whip, but to isolate the power unit so that the effect of such whip is not apparent.

Then the brake mechanism is also of new design, and every care has been taken to prevent lost motion and to make the brake pedal feel as though it were directly attached to the cams without whip or delay. To do this the two brake cross tubes are of large diameter, and all the levers in the brake actuation are triangular, instead of being the usual comparatively thin stamping, which in itself is liable to whip.

Of compensation there is none, the designers believing that the most effective form of brakes has the minimum number of parts, and an independent adjustment for each pair of shoes, as well as a single adjustment below the floorboards to take up all four sets of shoes simultaneously. Servo shoes—that is, shoes which tend to put themselves on further when applied to the brake drum, are used for the front axle, the axle beam being really stiff and strong. Extra shoes in the rear drums are operated by a lever on the right-hand side of the driver; this lever stays in position only if the trigger is depressed, an idea that has come from racing practice, and possesses great advantages.



The chassis, showing the box girder construction.



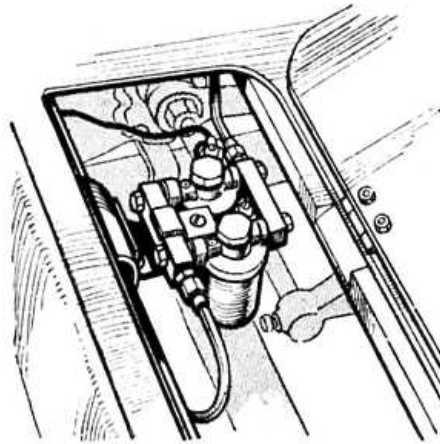
Brake cross-shafts and box section cross-members of the frame.

The method of steadying the spring shackle on the dumbirons.

Marles steering gear is standard, the steering gear box being held on the frame by two bronze blocks, of which the upper is rigid and the lower can be adjusted by two bolts, so as to grip the steering gear effectively at the frame end, the upper end being secured by a bracket from the dashboard a little below the spring-spoked steering wheel. Castor action for the steering, which is an important point in a sports car, is obtained by canting the front axle through the medium of adjustable wedges.

The springs are wide, and in front are canted to slope from the front dumbirons towards the rear, another interesting feature being that the dumbirons act as guides to the side plates of the shackle, the shackle being in front of the spring, thus assisting greatly in preventing side sway. The shackle in front brings the centre of movement of the front axle, which is the rear anchorage of the front spring, nearer to the drop arm, and therefore reduces the automatic movement of the steering wheel as the tyres pass over inequalities in the road.

A new radiator of unusual design is mounted on trunnions in front of the frame, and between the rear cross-members



Auto-pulse fuel feed pump located under the rear seat.

is a big fuel tank with two vent pipes and its filler on the right-hand side, free from interference from luggage, and at the same time out of the way of the exhaust pipe running along the left side

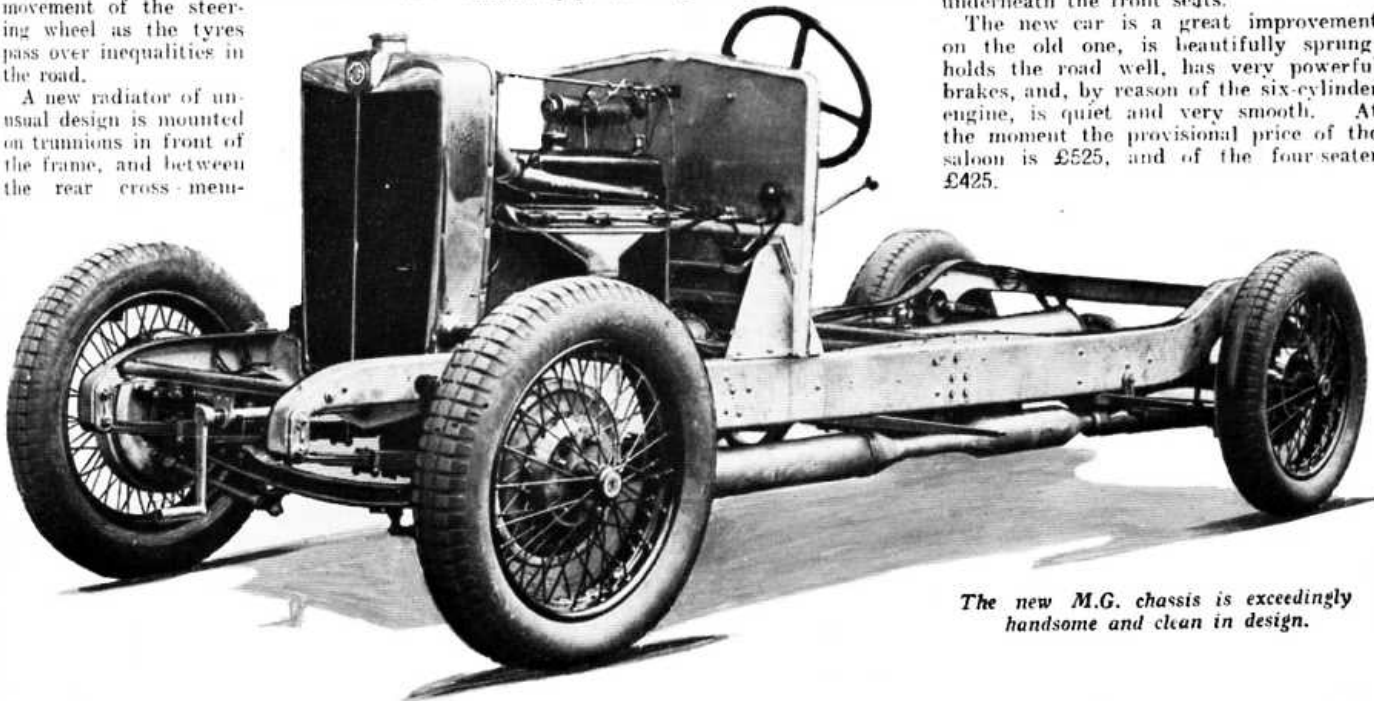
of the chassis. Above the tank is a tool box, and over that again on the finished car, either open or closed, is the fabric suitcase carrier.

Fuel is fed to the two S.U. carburetters by an electrically operated diaphragm pump combined with a glass bowl filter, and placed near the fuel tank itself, so as to deaden the clicking noise noticeable when the pump is operating. Both pump and filter can be reached after raising the rear seat cushion.

On the dashboard is a two-gallon spare fuel tank feeding by gravity when required, together with a tank for spare oil and the apparatus for upper cylinder lubrication, that feeds oil through the carburetters to the combustion space. In the latest engines the two carburetters are mounted on the left side, just above the exhaust branches.

There are two standard bodies, a fabric saloon and an open four-seater. The saloon has adjustable front seats, a one-piece windscreen that opens entirely, and an armrest between the two rear seats, sufficient leg room for the rear passengers being provided by sinking wells in the floorboards, which pass slightly underneath the front seats.

The new car is a great improvement on the old one, is beautifully sprung, holds the road well, has very powerful brakes, and, by reason of the six-cylinder engine, is quiet and very smooth. At the moment the provisional price of the saloon is £525, and of the four-seater £425.



The new M.G. chassis is exceedingly handsome and clean in design.