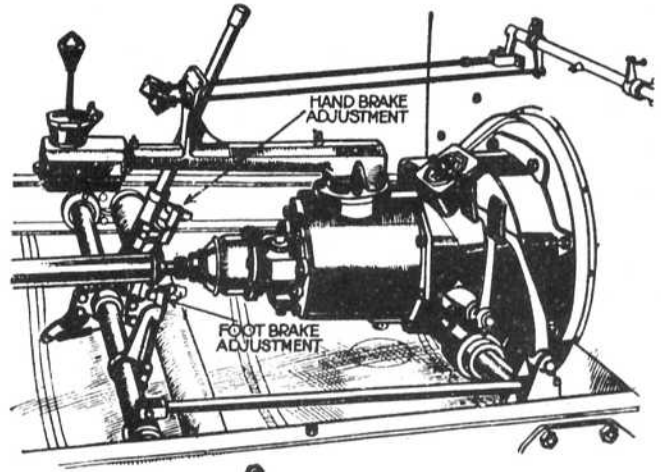


A NEW M.G. MAG

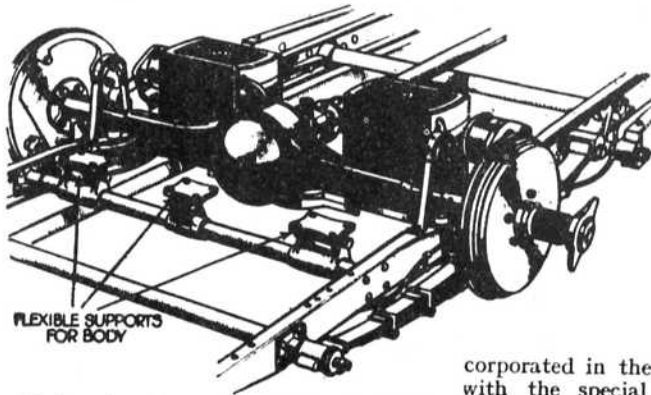
*Very Interesting New Design to Take the Place
Four-seater*

FOLLOWING the introduction just recently of the new "P" type M.G. Midget, the progressive spirit of the M.G. Car Company is now responsible for the production of another new model, a six-cylinder Magnette, which is to fill the gap left by an exhaustion of the supply of the Magna two- and four-seaters. This latest new car, which is to be known as the Magnette N type, is every bit as interesting in design as the P-type Midget, and shows several features of new development.

(Below) The rear end of the chassis, showing the special body supports.



Details of the gear box and propeller-shaft drive. Both butterfly adjustments for the brakes protrude through the floorboards for accessibility.



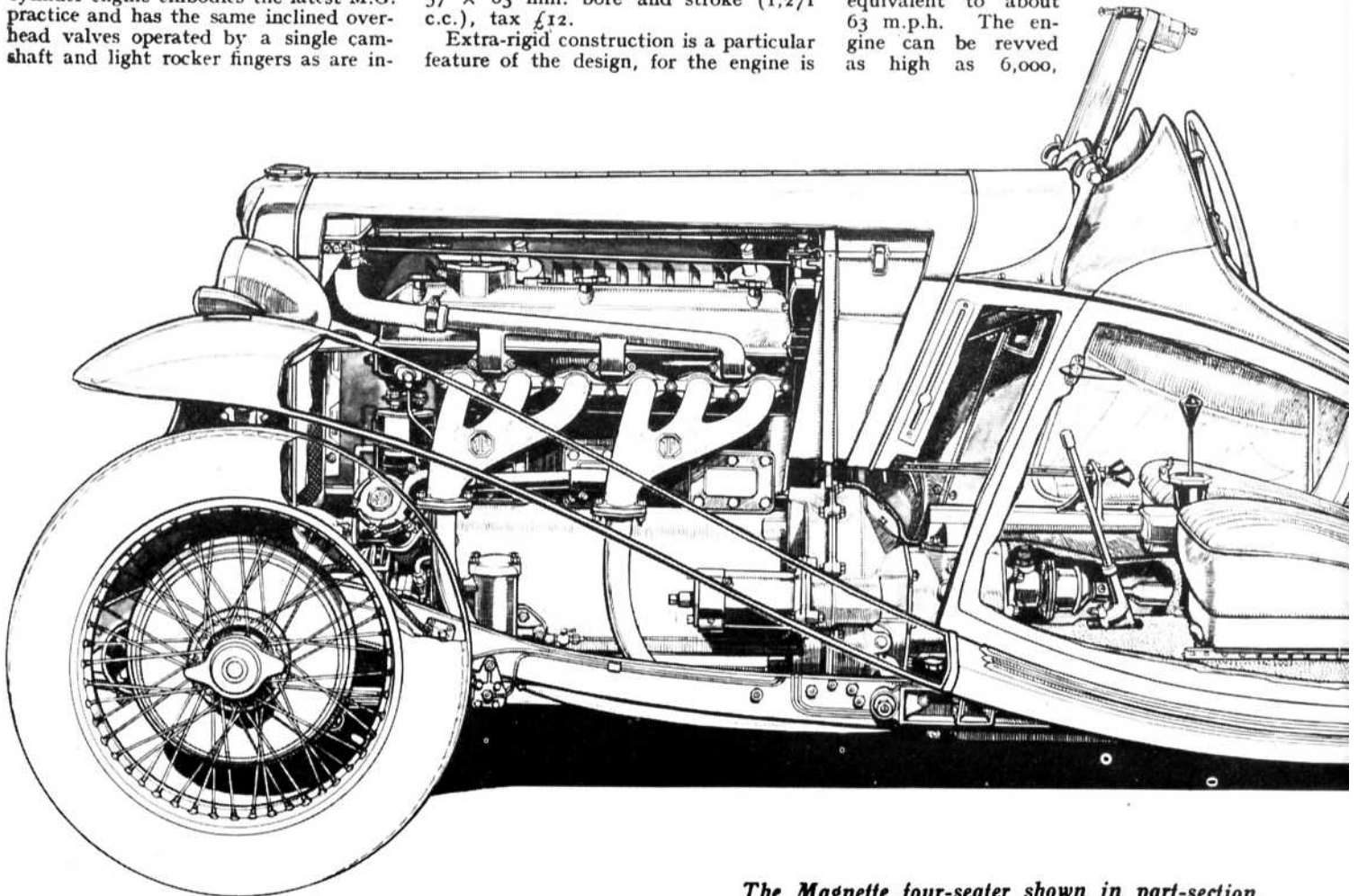
FLEXIBLE SUPPORTS FOR BODY

Designed and constructed in the light of experience gained by continuous racing and competition work, the six-cylinder engine embodies the latest M.G. practice and has the same inclined overhead valves operated by a single camshaft and light rocker fingers as are in-

corporated in the new Midget, together with the special feature of ports on opposite sides of the detachable cylinder head, and of a special shape to give a free gas flow. The six cylinders are of 57 x 83 mm. bore and stroke (1,271 c.c.), tax £12.

Extra-rigid construction is a particular feature of the design, for the engine is

intended to be able to stand up to heavy duty, and the crankshaft is carried in four bearings. The normal maximum to which this engine may be run is 5,500 r.p.m. on third equivalent to about 63 m.p.h. The engine can be revved as high as 6,000,



The Magnette four-seater shown in part-section.

NETTE

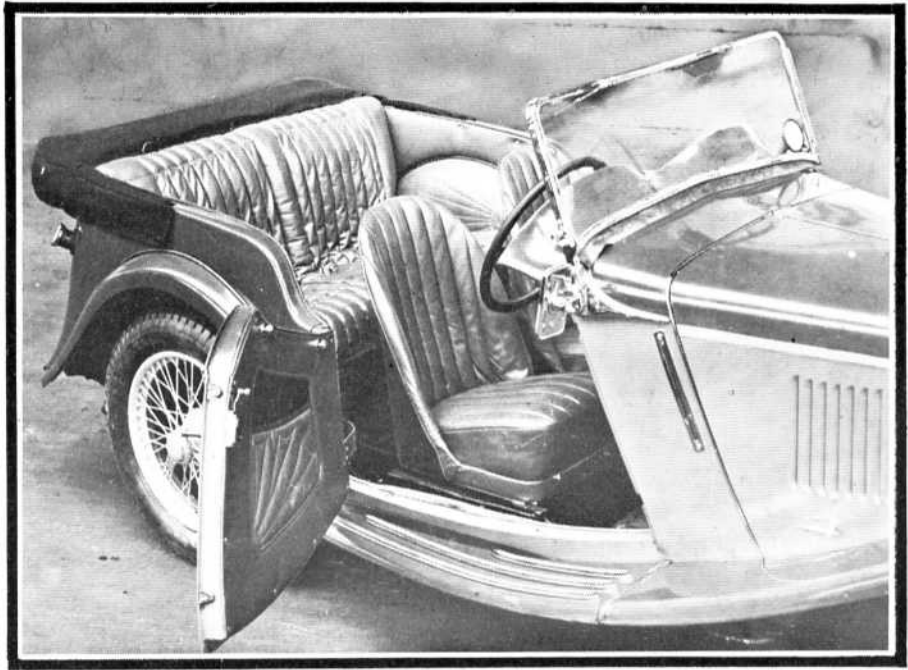
of the Open Two- and Magna Types

but if a regular practice is made of this the life will naturally be lessened.

It is interesting that this latest six-cylinder engine, which conforms to the same general design as the four-cylinder Midget, develops round about 47 per cent. more power than that of the Midget; that is to say, the two extra cylinders are adding nearly one-third more power, and this is distinctly an achievement in small six-cylinder engine design.

The result is secured by attention to many minor points, including valve design and combustion chamber shape, but also by the use of a special form of inlet manifold with twin carburettors. This has an S.U. carburetter, applied not in the middle of each half, but towards the outer end of each, whilst between the two portions is a very special form of balancing port which has been the subject of a considerable amount of research work.

Amongst other minor improvements in the engine design may be mentioned a large oil filler on the top of the valve cover, a breather at the side of the crank case, twin three-branch exhaust manifolds, a large elektron sump containing 1½ gallons of oil, and ribbed underneath for cooling purposes, an improved type of dynamo in the vertical drive to the overhead camshaft, with a neat enclosed junction box for the wires, and a



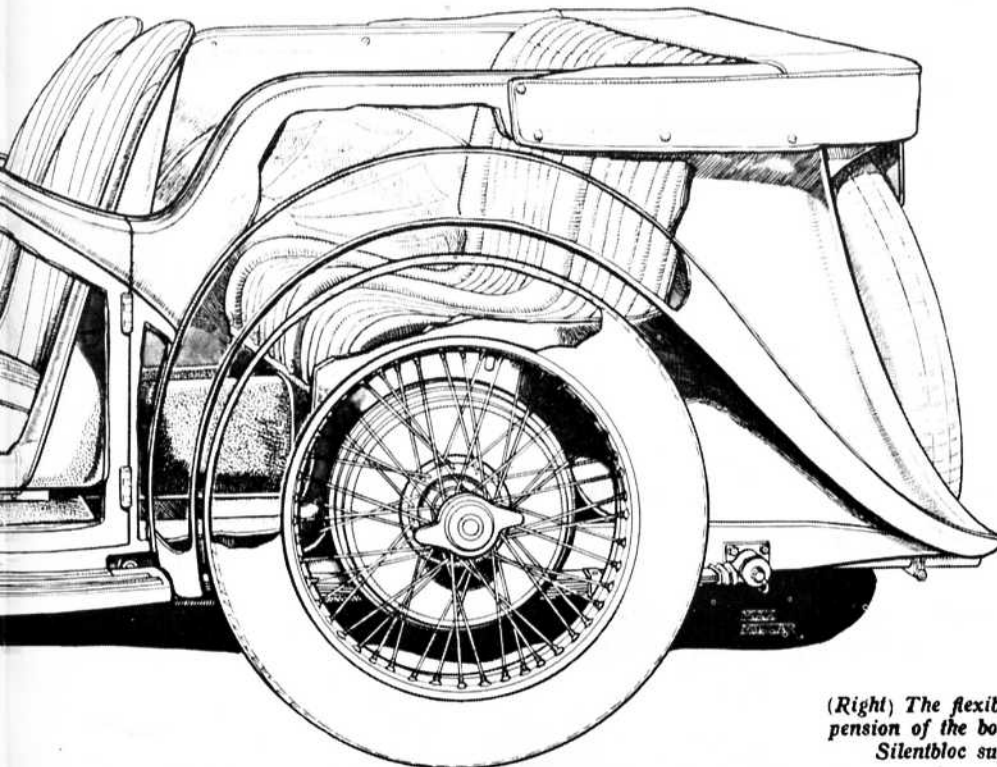
The rear seat of the four-seater has been designed especially for room and comfort.

Tecalemit oil filter. Driven from the timing case at the front of the engine by skew gears is a centrifugal pump which attends to the water circulation.

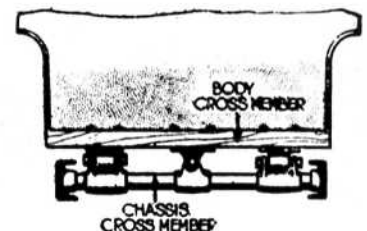
The silencing of the engine is obtained by a Burgess silencer of exceptional length. At the back of the car is a ten-gallon fuel tank which holds two gallons in reserve by means of a special cock and two-level pipes controlled by a handle on the dash in front of the driver. Fuel from this tank is fed by an electric pump through Petroflex tubing to the two carburettors.

In unit with the engine are a four-speed twin top gear box and a new-type single-plate clutch with a laminated centre plate, fabric-faced finger ring, and a new type of grease-retaining thrust race. Mounted on the top of the gear box is the characteristically neat remote gear control with its short lever brought well back within reach of the driver's left hand. This control is of an improved type with a reverse stop on the gate, and a solid bracket formed integrally with the tunnel carries the mixture and slow running controls for the carburetter. The overall gear ratios are: first, 21.94; second, 11.9; third, 6.98; and top, 5.125 to 1. At an engine speed of 1,000 r.p.m. the speed of the car in m.p.h. on each gear is: first, 3.74; second, 6.75; third, 11.5; and top, 15.65.

To carry the engine unit in the frame a special type of mounting is employed which is slightly flexible, but not definitely free. At the front end of the engine a rubber sleeve in a metal housing surrounds the extension of the forward end of the crankshaft centre, whilst passing through the base of the bell housing of the flywheel and clutch, towards the back of the unit, is a stout tubular cross-member which supports the unit through the agency of a rubber bush on each side. The engine unit and the frame, therefore, assist one another as regards general rigidity.



(Right) The flexible rear suspension of the body on three Silentbloc supports.

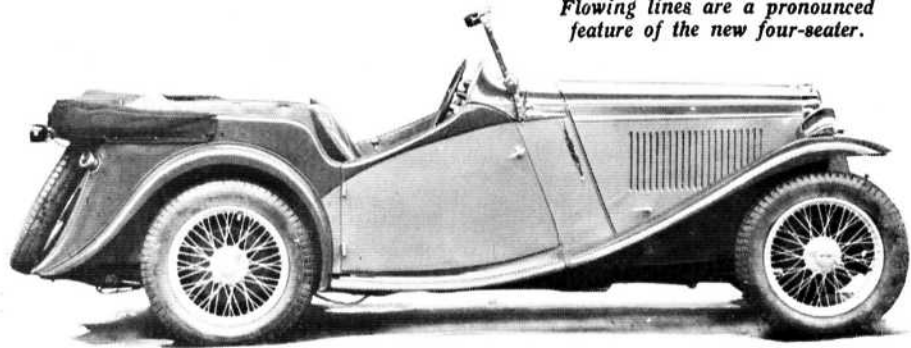


A New M.G. Magnette

This design is further interesting because of the M.G. method of front end assembly, for the radiator is carried as part of the engine unit assembly, and the radiator, front wings, and the head lamps are braced by tie-bars, so that the front end of the frame itself is relieved of the pendulum or inertia effects which the weight of these accessories would otherwise add. In practice, the front end of these new M.G.s remains perfectly steady even whilst travelling at high speed over bad roads.

Final drive is by means of a balanced open propeller-shaft with Hardy Spicer

Flowing lines are a pronounced feature of the new four-seater.



The tool case is in the scuttle under the bonnet. Note the position of the traffic signal.

joints, coupled to a spiral bevel drive with a four-star differential in the centre, all contained within a three-quarter floating type banjo rear axle. There are special oil seals to prevent oil from finding its way on to the brake surfaces, and also there is a dipstick in the rear axle centre to show the oil level.

The frame of the N type Magnette is a new one, and is notable for stiff side-members underslung at the rear, and eight tubular cross-members, including one right across the front end of the dumb-irons. One very neat portion of the design is to be found in the brackets which secure the front end of the rear springs to the frame, and which support a very strong tubular member, whilst a continuation of these brackets also carries one end of the special flexibly mounted body frame, which will be referred to later. The tail end of the frame is prolonged some way backwards, in order to give a really stiff support for the back end of the body, especially in the case of the four-seaters.

Wider and longer half-elliptic springs are used throughout and follow the special M.G. practice of having their

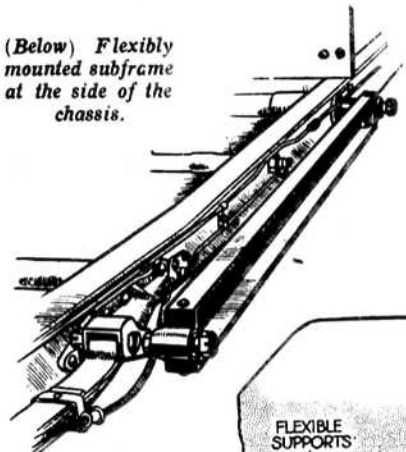
sliding ends arranged in roller trunnions in place of shackles, whereby side play due to wear is reduced to a minimum. The forward ends of the front springs have metal bushes, provided with lubricators, whilst the forward ends of the rear springs have Silentbloc bushes. The front springs are checked in their action by large Duplex Hartford shock absorbers, whilst the back springs are regulated by Luvax hydraulic shock absorbers of a special type, in which there

pletely insulates the floorboards and continues the effectiveness of the seal which is made between the dash structure and the engine unit by means of a circular rubber ring round the bell housing. In this way special precautions are taken to keep heat and fumes out of the driving compartment.

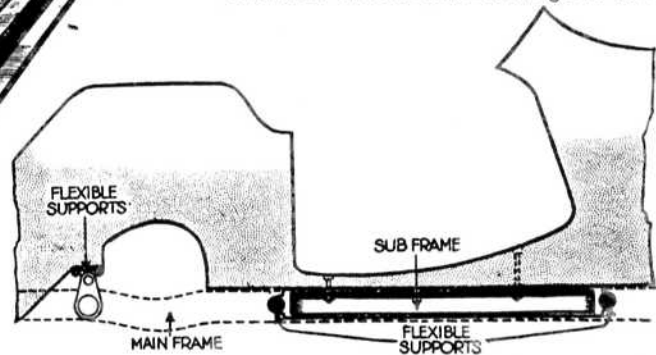
Another point is that the batteries are divided into two, and are mounted on each side of the propeller-shaft, close to the rear axle. The system of grouped oil nipples on each side of the forward face of the dashboard attends to the greater part of the chassis lubrication, but the front axle and steering joints, the propeller-shaft, and the clutch thrust race have separate nipples.

A great deal of thought has been given to the electrical equipment on the new car, and the wires are carried in flexible metal tubes wherever desirable. The electrical circuits have been given more

(Below) Flexibly mounted subframe at the side of the chassis.



(Right) A diagram showing the principle of the body suspension on the new Magnette.



is not only a thermostat control, but also a spring-loaded ball valve control which enables the shock absorber to deal equally well with slow movements as with quick ones. An entirely new Bishop type cam steering gear is employed.

Another interesting feature of the chassis design is that a long undershield protects the underneath part of the car from damage, and at the same time com-

uses than before, there being a separate fuse for each head lamp, a fuse for the side and tail lamps, a fuse for the horn, and a fuse for the auxiliaries, such as the instrument board lamp, and the plug-in socket. These are in addition to the dynamo field fuse.

Other points in the electrical equipment are a twin electric screenwiper, concealed traffic indicators which are mounted in the scuttle sides, and a stop light. Incidentally, the fog light is a standard fitting, and is carried on a special bar, in front of the radiator, which also carries a horn, and provides a proper anchorage for badges. The wind-screen is of Triplex Toughened glass.

The wheelbase of the N type Magnette is 8ft., and the track 3ft. 9in., which figures are slightly increased compared with the Magna, with the intention of giving more body space. Rudge-Whitworth racing-type wheels are fitted, and their 18in. rims carry 4.75in. tyres. The brakes are operated by means of cables enclosed in armoured casings.

The very smart and business-like Magnette two-seater.

