

## The 11.3 h.p. Morris-Cowley Car.

Introduced by the Makers of the Morris-Oxford Light Car. Suitable for Two or Four-seated Bodies.

THE Morris-Oxford light car has undoubtedly attained an enviable position on account of its smoothness of running, admirable suspension, silence, and reliability. Therefore, any new model produced by the makers at their Cowley works, near Oxford, demands careful attention. When it is realised that the makers are now placing an 11.3 h.p. car on the market, complete with dynamo electric lighting, five steel detachable wheels and five tyres, hood, screen, five lamps and horn, at 158 guineas, it will be seen that they are attempting something exceptional. This, however, is what the makers are offering, and regular deliveries will, it is hoped, begin in June, when it is expected that the cars will come through the works in large numbers.

A four-seated model will be sold at 185 guineas complete, and it is noteworthy that entirely different springs will be used on the four and two-seaters. The systems are identical, but in the four-seater the leaves are more numerous and considerably wider than those on the two-seater.

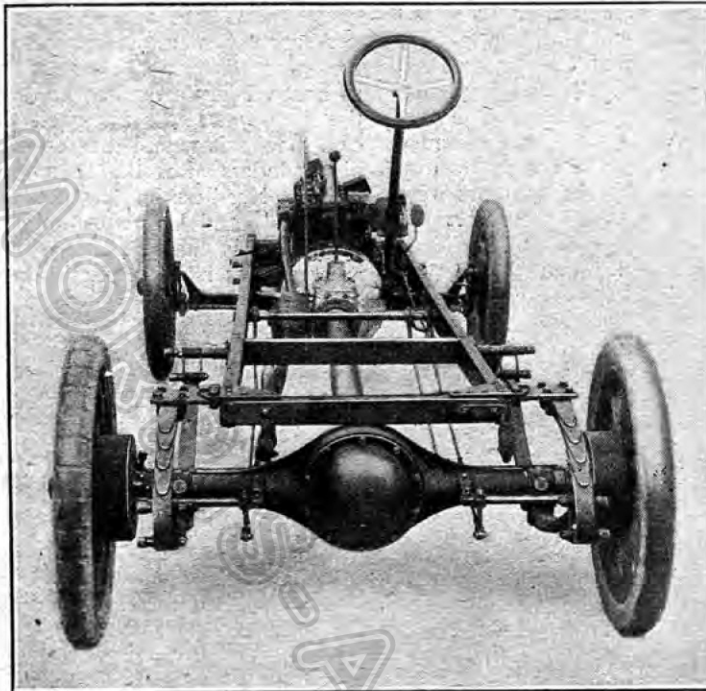
To deal with the chassis. The makers have gone to America for the more important components, the

engine, gear box, and front and back axles hailing from U.S.A. This policy has been dictated by two considerations, those of price and ability to obtain delivery. We learn that it was, unfortunately, found impossible to obtain these components in Great Britain

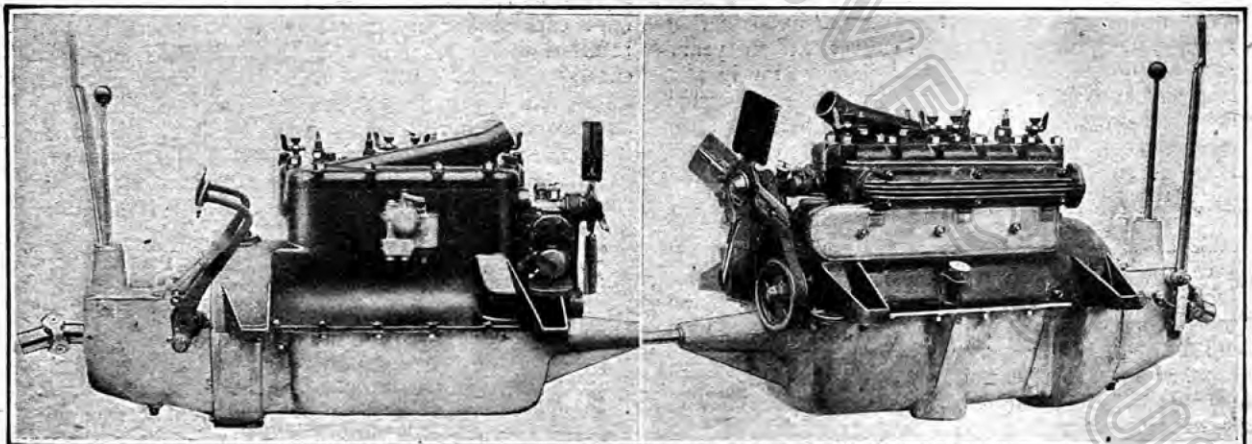
in sufficient quantities, or quickly and cheaply enough, to enable the complete car to be marketed at the prices mentioned. But it should be clearly understood that Mr. W. R. Morris has not simply proceeded to the States and bought a set of standard parts, for the Morris-Cowley power unit and axles have been specially produced to Mr. Morris's designs by the Continental Motor Mfg. Co., Detroit.

The engine is a four-cylinder *monobloc* of 68 x 100 mm. bore and stroke (1,452 c.c.). The cylinder heads, the insides of which are machined all over, are detachable. By this means the removal of carbon

deposit is a comparatively simple matter. The valves are all on the near side of the engine, and are operated by a solid camshaft running, as does the crankshaft, in three large bearings. The timing gears are of the helical type, with, naturally, perfect quietude in running. The cylinders, top half of the



The new Morris-Cowley chassis as seen from behind, this view showing, among other details, the construction of the back axle with its large central inspection plate.



Off side and near side views of the Morris-Cowley power unit, consisting of engine, clutch pit, and gear box; the latter has a central lever and carries the brake lever and quadrant.

crank chamber, flywheel casing, and timing gear casing are cast in one.

Lubrication is effected by a pump driven off the end of the camshaft. An oil level indicator is provided, as well as a tell-tale gauge on the dashboard. Ignition is by an American made Bosch magneto with hand control, and mixture is supplied by a horizontal type Zenith carburetter.

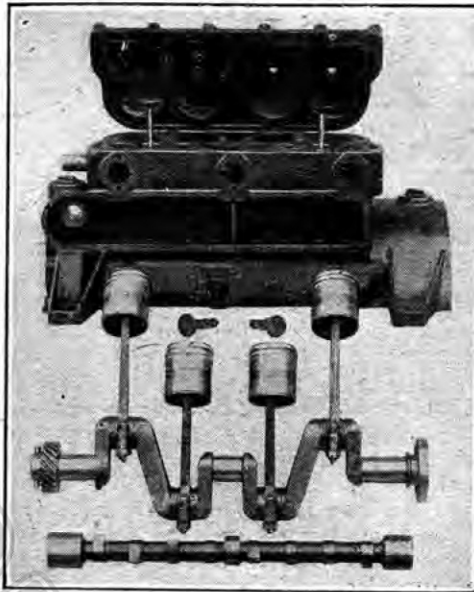
The pistons are of good length and reasonably light, and are fitted with three rings above the gudgeon pins. The valves are unusually large, viewed in the light of American practice, but this is one of the points in which the British designer has made his influence felt.

Cooling is on the thermosyphon principle, and, in view of the recent controversy in *The Autocar* on this matter, it may be noted that the return flow is absolutely horizontal.

The radiator is a larger edition of that fitted to the Morris-Oxford. The Lucas electric lighting dynamo is carried high up on the near side of the engine just behind the radiator, and is driven by the same belt as drives the fan, although it does not appear in the accompanying illustrations.

Behind the engine is a Ferodo-faced flat plate non-lubricated clutch, and bolted up to the clutch housing is a remarkably compact three-speed and reverse gear box. The shafts are very short and stiff, and run on ball bearings. The change speed lever and brake lever are placed centrally on top of the gear box, and are arranged so far forward that they do not in the least incommode either occupants of the seat or interfere with the use of a rug. The change speed lever works on a ball pivot on the gate principle. It is one of the most easily operated gear changes we have ever tried.

Aft of the gear box the drive is taken by an encased propeller-shaft to a helical bevel driven rear axle, the



*Some details of the Morris-Cowley engine; the detachable cylinder head is seen raised. It will be noticed that the crankshaft has three main bearings, and that helical timing gear is used for the distribution.*

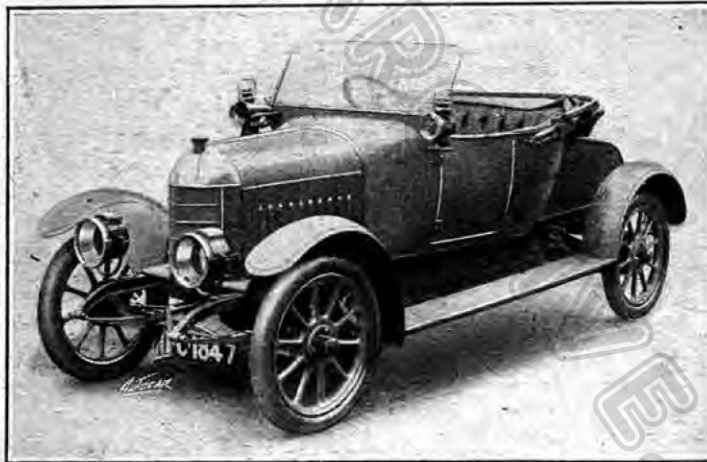
fore end of the torque tube containing a star type universal joint. The back axle is a fine piece of work. The casing is of pressed steel, and is so arranged that by removing the rear cover plate the differential may be inspected, while the driving shafts may be withdrawn through the sleeves, after the wheels have been detached, by removing three large grub screws, which allow the plate holding the studs by which the rear wheels are driven to be detached from the brake drums. The wheels, as already stated, are of the hollow spoked steel type, and carry 700 x 80 mm. plain Dunlop tyres.

Suspension is by semi-elliptic springs fore and threequarter-elliptics aft, the rear springs being suspended from the axle, and the spring pads allowing a certain amount of oscillating movement thereon. A stud is provided to prevent movement beyond a certain point.

The front axle is an I section steel stamping with jawed ends to receive the swivelling stub axles. Both sets of brakes act on the drums on the rear wheels, and both are of the expanding type, the shoes being 1 1/2 in. diameter. These are operated through stout adjustable rods. All moving parts and shackle pins are lubricated by large grease cups. The gear ratio

on the top gear (third) direct drive is 4.4 to 1.

We have been afforded an opportunity of taking the car for a short run, and the impressions formed by a careful inspection of the chassis and details were confirmed. The car is beautifully sprung and very lively. The worm and sector steering is easy. The car is capable of approximately forty miles an hour with a four-seated body, and at twenty-five



*The Morris-Cowley chassis with a two-seated body.*

to thirty miles an hour runs very quietly, practically in silence, while at no speed at which we drove was there any sign of periodic engine vibration. It is a powerful hill-climber so far as we could judge in a short test.