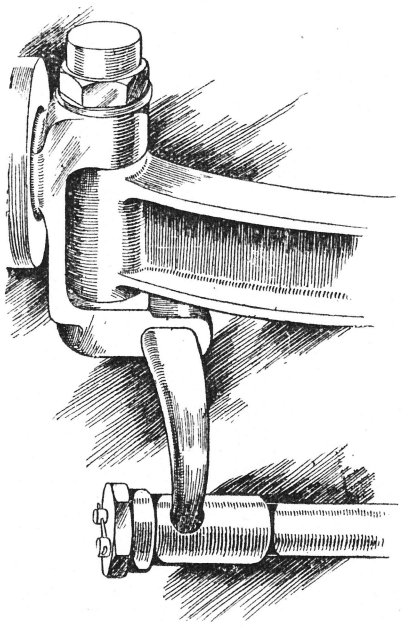
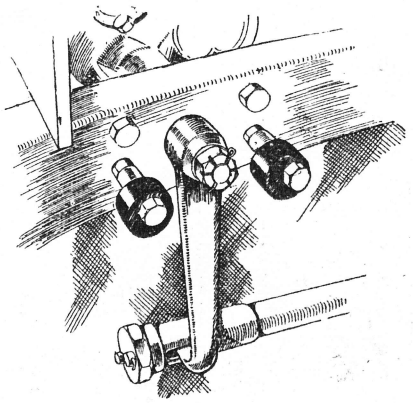
THE VAUXHALL MODELS FOR 1912.

Several Minor Alterations for Enhancing Efficiency and for Refinement in Design.

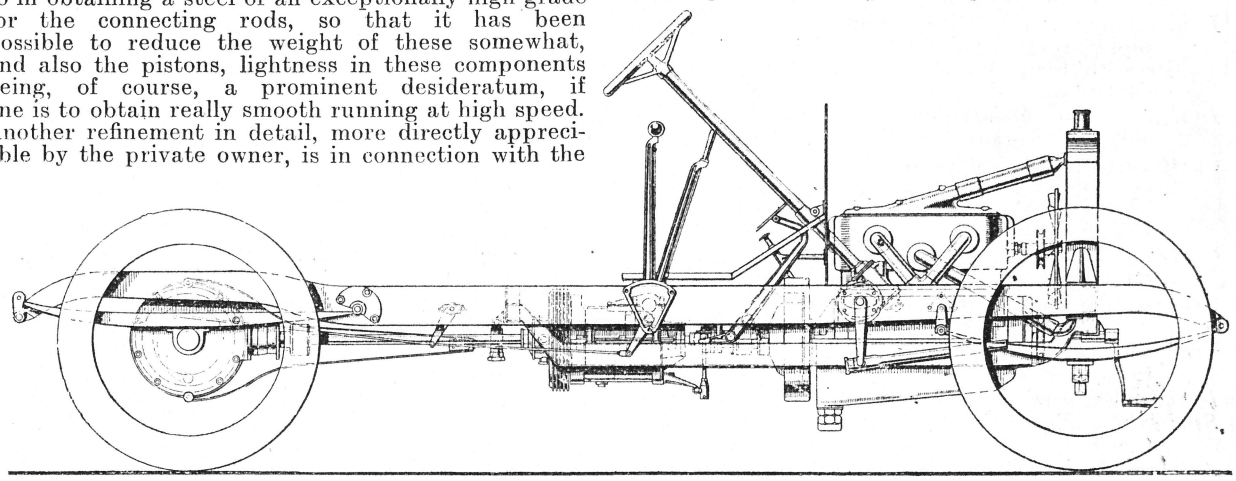
SEVERAL firms of considerable standing in the motor trade are gradually forming the habit of introducing any new features which they intend to incorporate in the next year's models, into a number of their current chassis, so that the alterations in question may be subjected to tests and trials by ordinary users, in addition to the professional testing to which such alterations are subjected at the hands of the employees of the firm. Such a company is the Vauxhall, and although there are several variations in the construction of their chassis, there can be no doubt as to the efficacy of the alterations made, as in each case the cars have been in the hands of private users for some considerable time, so that reliable private owners' opinions have been obtained already, as to the behaviour of the alterations or additions incorporated in the chassis. The 20 h.p. model is seen in the photograph, and in the engine considerable attention has been given to minor points, which, possibly, the private user unversed in the niceties of design, might almost be inclined to think hardly worthy of consideration. As an example, considerable trouble has been gone to in obtaining a steel of an exceptionally high grade for the connecting rods, so that it has been possible to reduce the weight of these somewhat, and also the pistons, lightness in these components being, of course, a prominent desideratum, if one is to obtain really smooth running at high speed. Another refinement in detail, more directly appreciable by the private owner, is in connection with the float for indicating the height of the oil in the crankcase. This float has been brought close to the rear crankcase door, so that whilst one is filling up through the orifice provided in this door, the quantity of oil can readily be ascertained. The carburetter does not appear to have been altered in any way, a similar remark being applicable to the ignition system; but rather a neat addition has been made in connection with the lubricating system, as an air vessel has been brought into the pump delivery pipe circuit, with the object of eliminating the slight knock (an ordinary motorist would hardly ever know it existed) which can at times be detected owing to the reciprocating action of the pump. Generally, however, the experience gathered has not shown the advisability of doing other than adopting the few refinements as quoted. A more pronounced change, however, is to be found in the clutch, as this is of the multiple disc type instead of the metal cone previously used, and although one would hardly be justified in saying that there was anything out of the ordinary in the design of the clutch mechanism, one may, nevertheless, be permitted to say that the external appearance has been kept very neat, which is a feature not always correlative to efficient design. The gearbox has been re-designed, not because it needed to be so treated, but purely to introduce the mechanism which permits the gate and change-speed lever being brought inside the body without necessitating undue width in the latter. The locking device of this gearbox is as pretty a piece of the designers'



The steering arms on the Vauxhall 1912 models are provided with ball joints instead of the ordinary fork attachment.



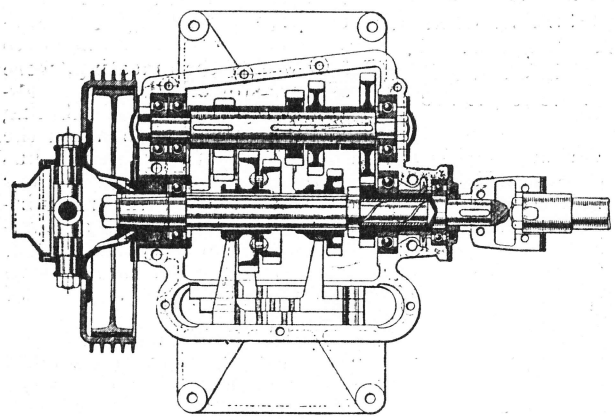
Two easily adjustable eccentric blocks confine the limits of the steering lock to the required dimensions.



The side elevation of the 1912 model 20 h.p. Vauxhall chassis.

THE VAUXHALL MODELS FOR 1912.—Contd.

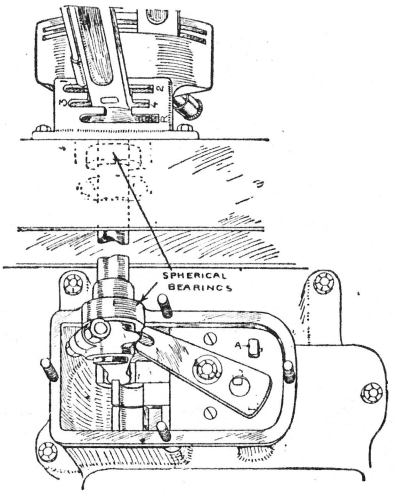
art as anyone could well wish to see, and the sketch which we reproduce of it gives one an impression of its general mode of operation, and we may say that looked at purely from the utilitarian point of view it is as "safe" a safety device as it is possible to obtain. This arrangement appealed to the writer in a very striking way, and throughout the chassis—to one who is at all familiar with the designing of motorcars—quite an exceptionally praiseworthy amount of attention is observable in detail work, or that which is usually termed detail work. Another



An ingenious way of casting circular ribs on the brake drum so that any oil which escapes from the gearbox is led to the universal joint instead of getting on to the brake.

example is to be seen in the case of the spherical bearings provided for carrying the rod and tube connecting between the gate and the gearbox, so that any slight and momentary lack of alignment which might occur between these two points owing to excessively bad road conditions, is allowed for and the usual freedom of movement of the change-speed lever would not be interfered with under even the worst road conditions. Other slight improvements are to be found on this chassis, and the steering gear instead of being a worm-segment has a complete worm mounted on roller bearings, so that this worm can be moved round, if necessary, to take up any wear which might take place. A simple and quick adjustment has also been provided for the brake at the rear of the gearbox, this adjustment being readily accessible and easily operated.

In the 30 h.p. chassis, perhaps the most noticeable feature is the slight modification in the design of the radiator; the corners being rounded off to a nice radius and as the effective area of the radiator is reduced, a pump has been incorporated for the water-circulating system. The alterations previously quoted in reference to the 20 h.p. chassis, that is to say, in regard to the clutch, the gearbox, and the foot-brake tackle, are also found to obtain in the 30 h.p. model. The material comfort of the user is also considered in the springing of the chassis, and it has been found that the small addition of four inches to the length of the rear springs in each model improves the suspension to quite a large extent.



The "safe" safety mechanism for locking the gears against accidental engagement. The change-speed lever is shown in the neutral position for clearness.

Another interesting model, and, to the mind of the writer, one which is both neat and sporting in appearance, is the new Prince Henry type, which is intended to be (and we doubt it not, is) a very fast touring car. The engine is of standard design in the main, having a bore and stroke respectively of 90 mm by 120 mm., but the valve gear is similar to that used on the 100 m.p.h. record-breaking Vauxhall at Brooklands track; in fact we are under the impression that the firm are prepared to guarantee a speed of — well, perhaps it is hardly necessary to dilate on the speed of Vauxhall cars, particularly when fitted with special valve gear! The front axle has also been altered a little on this model, as the whole chassis is slung lower down than on the standard cars, the height from the ground to the top of the frame being only 22 inches. A stream-line radiator and bonnet are fitted, and the design of these, and the clever moulding of the one to the other, in conjunction with the shape of the dashboard, have the distinct approbation of the writer, and altogether the car with the doorless body (this of course is purely a matter of recommendation) certainly looks a strikingly handsome and speedy model. The chassis price is £485, which price includes the special light type Rudge-Whitworth wheels, which are strongly recommended for use with this car. If one is seeking for novelty—novelty pure and simple—it is not to be found on the Vauxhall chassis, but if one is looking for, and has a keen appreciation for quite an exceptional amount of refinement in the design and production of a high-class car, then both these features are found to be much in evidence in the products under consideration.

THE DIFFERENTIAL AND SIDESLIP.

Efforts are again being made to demonstrate theoretically that the differential axle is largely responsible for the production of sideslip, and, whilst not attempting to dispute the theory, which, I believe, has a great deal in it, I am led to ask what has become of the Hedgeland axle, of which we heard such a lot of talk three or four years ago?

At that time, if I remember rightly, this device was put forward as a panacea for the sideslip problem, and we were told by its enthusiastic backers that it was simply going to wipe out the differential axle and annex the market. And some of those who were interested in it financially here—for it was an American invention—were amongst the cleverest and most reliable of our engineering cognoscenti, so that it would be very interesting indeed to learn why nothing more has been heard of it. I am quite prepared to learn that the syndicate which carried out the experiments to perfect its construction failed altogether to meet with any encouragement from the trade, or from the public either for the matter of that—which is a way both trade and public have when new departures from conventional practice are introduced.

Whether in this case the exercise of ultra conservatism was justified or no, of course cannot be stated, but it is quite as likely as not that the Hedgeland axle in practice fulfilled all the claims that were made for it, yet because it was different from the usual thing, and "nobody used it," nobody cared to make a start and "try the experiment."

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