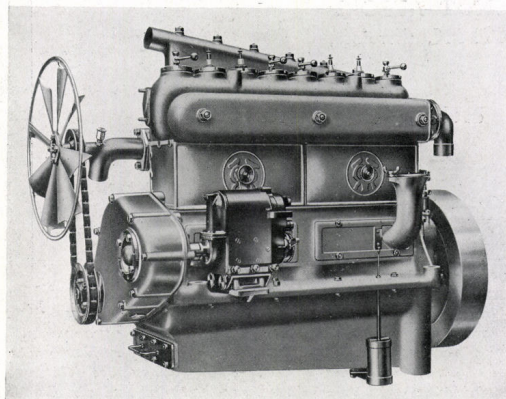


some of the mountain passes, and when one has, as has been our lot, negotiated eleven particularly trying hairpin bends in the course of an afternoon, one feels strongly that the night's rest has been well earned, and, more strongly still that what the motor enables one to see in Japan far more than compensates one for these minor troubles of the road. A. PICKARD SCOTT.

CARS ON THE ROAD.

THE 25 H.P. VAUXHALL.

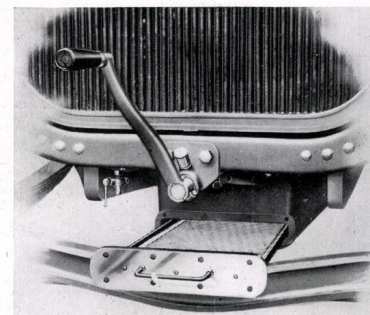
SOME eight or nine years ago we paid a visit to an engineering works on the south side of the Thames in order to inspect the first batch of Vauxhalls in course of construction. The car, which has since become world-famous, was



25 H.P. VAUXHALL ENGINE: NEAR SIDE.

then a little single-cylinder machine, with a horizontal engine placed somewhere beneath the seat and with an empty bonnet in front to comply with the dictates of fashion. We remember being struck with the honesty of the workmanship and the thought bestowed

on what was even then a somewhat old-fashioned design, and predicting a successful future for a car which was born of obvious enthusiasm and sound engineering experience. The original Vauxhall soon gave place to more powerful models on more modern lines, and in 1908 the firm commenced the long series of successes in open competitions which in two or three years gave it an established position in the front rank of British motor manufacturers. In reliability trials and hill-climbing competitions and on the track at Brooklands



THE NEW VAUXHALL OIL FILTER.

a Vauxhall was generally to the fore, and it is doubtless to the vast store of experience gained in such events, where a chassis is often tested almost to destruction, that much of the excellence of this car as a private carriage to-day is due.

For the current year the standard Vauxhall chassis intended for the European market are four in number: the "A" type, 16-20 h.p.; the "D" type, 25 h.p.; the "C" type, "Prince Henry," 25 h.p.; and the six-cylinder "B" type, 35 h.p. A special type of each power is also made for use in the overseas dominions. Probably the most interesting of the four models, as representing the latest development of Vauxhall practice, is the "D" type 25 h.p., and we gladly availed ourselves recently of an opportunity of testing its capabilities on the road. In these days it is seldom that one comes across a car by a maker of repute that calls for criticism, except, perhaps, in minor details. A high level of all-round excellence has been reached, which gives little scope for comment and comparisons. There are, however, in the case of most cars, one or two qualities which stand out

BENZ ESSAYS: *On Steering.*

A point that every potential buyer of a motor car should never lose sight of is the steering. If the movement is coarse and heavy, it will not only add to the fatigue of driving, but to the danger, in that greater judgment will be required in sudden emergencies.

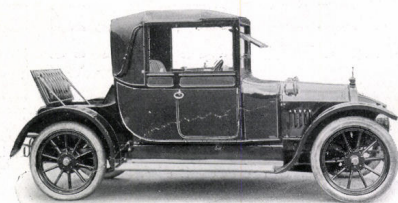
The perfect steering, and the safest, must be so light and subtle in action as to enable the driver to turn the front wheels of a heavy machine from lock to lock without any perceptive effort while the car is standing still.

This is exactly what you can do with any Benz model, from the popular 12/20 h.p., to the monster racer of 200 h.p. The motion is so beautifully light and smooth as to enable the car to be manoeuvred in a small or crowded garage by one hand. It will be realised, of course, that such steering imposes a far greater strain on the mechanism than in actual use on the road, where the movements are largely assisted by the speed of the vehicle.

It must be remembered, however, that it is wrong for speed to assist the steering—if it does it is a sure indication that the steering is heavy, that the wheel must be held unnecessarily tight all the time and that the steering wheel will oscillate violently when the front wheels strike a bumpy piece of road.

The Benz steering wheel, on the contrary, although so light and perfectly rhythmical in normal action or control, would not be affected if the car ran over a rut or stone, even when the driver's hands were released from their hold altogether.

The Sole Concessionnaires for Benz Cars in the United Kingdom are The Brompton Motor Co., Ltd., of 78/82, Brompton Road, London, S.W. They will be very pleased to demonstrate to intending purchasers the above facts in their showrooms, and later, if desired, by a practical test on the road.



12-20 H.P. BENZ COUPÉ.

above the others and give the model in question a distinctive character.

In the 25 h.p. Vauxhall the characteristics which struck us most forcibly were its excellent springing, the extreme ease with which the change-speed gear could be manipulated, even by one who was unaccustomed to its peculiarities, and the power of rapid acceleration. These are points which appeal both to passenger and driver and go far towards constituting the perfect touring machine. In enumerating these three outstanding qualities we have by no means exhausted the merits of the car. We found the steering light to the hand, the clutch perfectly smooth in action, and the brakes powerful and progressive in operation. The speed



A 25 H.P. VAUXHALL WITH TORPEDO BODY.

on the level and the hill-climbing capabilities are such as to enable a high average pace to be attained in any type of country, even if traffic considerations and cross-roads necessitate constant slowing down. We met with no hill that necessitated a change of gear below third; but, judging from the car's capabilities on that speed, we should imagine that it would make light of almost any gradient on the second of its four gears. Two minor criticisms are perhaps justified. The silencer hardly seemed up to the standard of modern efficiency from the point of view of muffling the exhaust, the beat of the engine, though pleasant to the ear of the practical motorist, being somewhat more audible than is usual in these days, when absolute silence is so often expected. The other point concerns

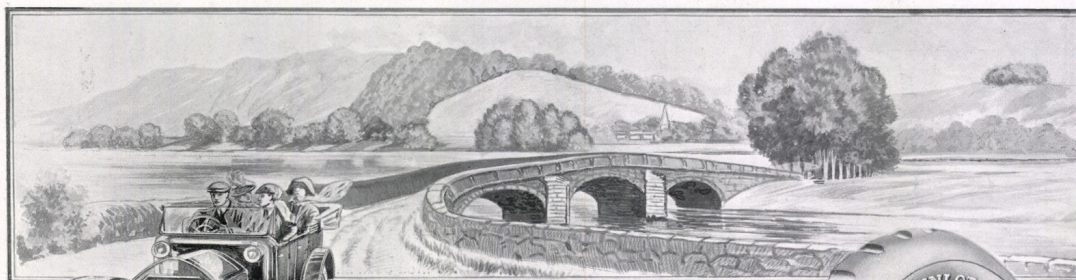
the accelerator, which in the car we drove was controlled by a spring far stronger than is necessary, and was therefore calculated to cause some fatigue of the leg on a long run. These, however, are obviously points of small importance, and hardly detract from the merit of a car which may be described as an excellent specimen of the modern full-powered vehicle for all-round purposes.

Turning to the constructional features of the Vauxhall, one is immediately impressed by the simplicity of the design and the excellence of the workmanship employed. We have often remarked on the former point at the Olympia Show, where the firm's exhibition chassis for several years past has always attracted attention by reason of the contrast which it offers to the complicated looking

machines by which it is generally surrounded. In particular is this characteristic noticeable in the engine, with its clean monobloc casting and almost entire absence of exposed piping. The bore and stroke of the four-cylinder motor are 95m.m. and 140m.m. respectively, the valves being arranged all on the left or near side and the springs and tappets enclosed by two neat cover-plates. On the same side are situated the Bosch high-tension magneto, driven by a dog-coupling mounted on a shaft extending from the timing-gear casing, and a neat oil-filler, with a level indicator placed at its side. The off-side of the engine is occupied by the White and Poppe carburettor. Cooling is effected on what is described as the Vauxhall system of assisted thermo-siphon circulation, the novel feature of which consists of a small

fan arranged in the water inlet pipe from the radiator, and driven by the same spindle which carries the ordinary air fan.

The lubrication is of the genuine pressure-fed type, a small pump drawing oil from the sump in the base chamber and forcing it to the five main bearings which support the crankshaft, the latter being bored in order to carry the oil to the big ends. The pump itself is of the plunger type, and is driven, together with the air-pump for supplying pressure to the fuel tank, by a ball-bearing eccentric on the rear end of the camshaft. In the sump a novel type of filter is arranged, consisting of a gauze-covered tray which can be easily withdrawn for cleaning when necessary. The clutch is of the multiple disc type, and lubricated by graphite, which gives



TOURING TALKS, No. 5.

Do we who travel along our smooth well-kept highways of to-day in luxuriously appointed cars ever pause to realise what going a journey meant to our forefathers? By travel we mean going from one place to another; our ancestors, however, spelt the word in its original way, and meant it, too, for stage coaches of the early days brought travail of a very sore kind. Two hundred and fifty years ago, Bath was three days' journey from London, and even then only those who could afford to pay the fare demanded by the "Flying Machine" were able to encompass the distance in that incredibly short time. According to old-time stories it usually happened that when the coach was not being dug out of ditches, the passengers were having their purses "lifted" by gentlemen of the road, so we who live in these days have something to be thankful for.

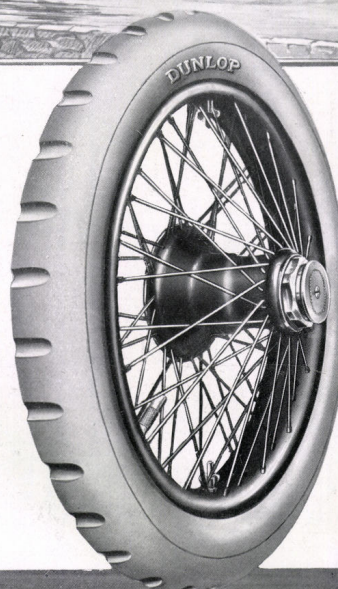
But though we no longer fear the highwaymen on the heath, our journeys are not free from the risk of being "held up" unless the world-famous

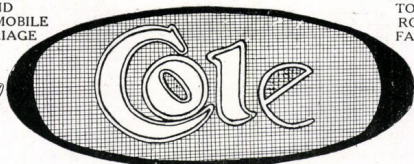
DUNLOP

is fitted. This is the earliest of the practical pneumatics, and has occupied the foremost place in the tyre world for 25 years.

The greatest safeguard for an uninterrupted journey is the Dunlop. A set of Dunlops means an insurance against trouble, whilst their marvellous qualities of endurance free the owner from the constant "toll of the road."

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MODERN and ARTISTIC COACHWORK

The accompanying picture is representative of the handsome type of coachwork supplied by Cole's. The graceful and distinctive lines, the generous front doors which provide plenty of protection and comfort to front-seat passengers; and the admirable blending of the sloping bonnet with the curved dash, all combine to show that the coachwork was specially designed to suit the chassis.

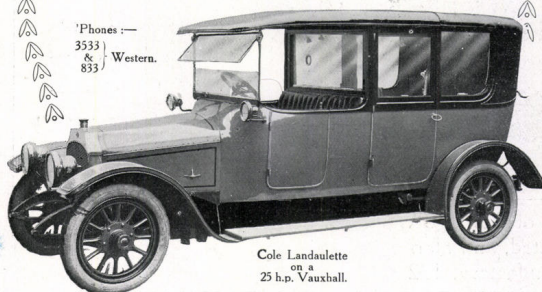
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Cole Landauette
on a
25 h.p. Vauxhall.

"MOST PERFECT SMOOTHNESS"

Writing of the

26 H.P. EIGHT-CYLINDERED

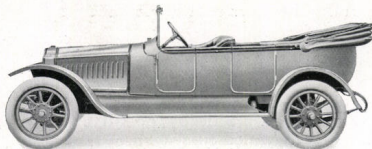
De Dion Bouton

on January 24th, 1913,

MR. WM. WHITALL,

of the "PALL MALL GAZETTE," says:

"On the road it is a most attractive car, and—of course—runs with most perfect smoothness. Indeed it is to the 'six' what the latter is to the 'four.'"



Chassis, with 880 x 120 m.m. standard Tyres, £506.10.0.
Worm drive, £25 extra.

Write for leaflet describing the 1913 eight-cylindered
De Dion Bouton models.

DEFERRED PAYMENT PURCHASES ARRANGED.

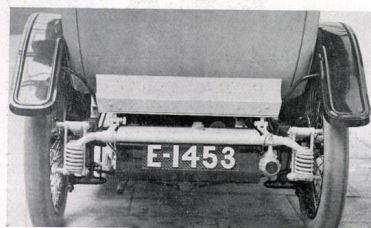
City 3151 DE DION BOUTON (1907), LIMITED "Andesite Reg.—
(3 Lines) 100, GT. MARLBOROUGH ST., LONDON, W. London."

a very smooth engagement. Four speeds and a reverse, actuated through a gate change are provided by the gear-box, the standard axle gearing giving a speed of twenty-nine miles an hour, with the engine running at one thousand revolutions per minute. The rear axle is of substantial design, the rear wheels being carried on tapered steel tubes projecting from the cast-steel casing, which contains the bevel gear and differential. An excellent feature of the transmission system is the fitting of a stout torque stay between the rear axle and the gear-box.

Both brakes are of the internal expanding type, the foot brake acting on the drum enclosing the foremost of the two universal joints with which the propeller shaft is provided. The steering is of the worm and wheel type, and an ample lock is provided. The worm and wheel shafts are carried on roller-bearings, and the worm wheel is arranged so that it can be mounted in three successive positions, each at an angle of 120 deg. with the previous one, thus enabling any wear to be easily and cheaply taken up without expensive replacements. Vauxhall detachable artillery wheels, shod with Dunlop tires 820 m.m. by 120 m.m., are fitted as standard; but other makes of covers and wire wheels may be substituted if desired. The chassis has a wheel-base of 10 ft. 10 in. and a space available for bodywork of 8 ft. 8 in. The price is £465 without coachwork, of which the purchaser has a wide selection ranging from a two-seater up to a luxurious saloon limousine.

A NOVEL NUMBER PLATE.

Judging from the number of cars seen on the road with badly placed and almost illegible number plates, there seems to be ample scope for the new type of plate which has been placed on the market by Messrs. Taylors of Green Lane, Wolverhampton. The ground-work consists of copper wire mesh painted black, and on this are fixed the letters and number, which are of polished aluminium.



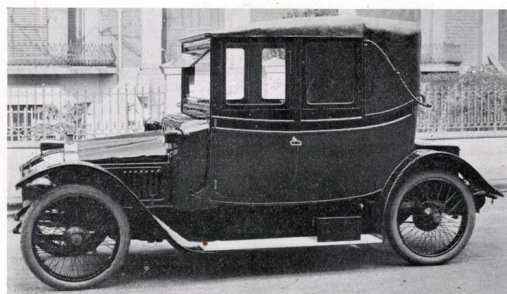
A NEW TYPE OF NUMBER PLATE.

As a result the figures stand out well, and are always neat in appearance. The front plate can be attached either to the front axle or to the radiator, and in the latter position it has the great advantage of

not diminishing to any appreciable extent the efficiency of the cooling surface.

DRIVING IN RAIN.

The ordinary wind-screen, as everyone knows, has many defects. Not the least of these is the fact that in heavy rain or in fog it has to be lowered in order to allow the driver to see over it, in which position it also allows the rain and wind to enter the car. If the driver wears glasses these will be covered with moisture, making driving very difficult in the daytime and nearly impossible at night, when every light is reflected a thousand times in the drops of water. In the "Imperial Year Book," recently published by the Autocar, a very practical arrangement for overcoming this difficulty is described, under the title of "Keeping out the Rain." Recognising that the only effective means of doing this is by the use of a double screen of the "Visor" type, where the driver looks through an opening between the upper and lower portions of the screen when these are both inclined forwards, it shows how the same result can be arrived at in a much more convenient manner.



A COUPE CABRIOLET BY COLE AND SONS.

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The All British
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STANDARD STANDARD

This is done by having a simple form of single screen fixed to the car, which is quite sufficient in ordinary weather and is considerably neater in appearance than the double wind-screen, besides having the additional advantage of costing less. The top portion of the "Visor" is formed by an extension of the hood, and consists of a light wooden frame panelled with celluloid. This frame is fastened to the front of the hood by straps; when the hood is folded back, the frame lies flat on the top of it; when the hood is up, the frame projects out in front, lying on the straps of the hood, which are fastened down to the front wings, and occupying just the same position as the top half of a double screen, except that it has the advantage of joining on to the hood. As there is no question of looking through this part, it is not necessary that it should be transparent, celluloid only being preferred to canvas in order to prevent the interior of the car being darkened. In this way the top half of the "Visor" is only brought into action when required.

SOME OFFICIAL TRIALS.

A batch of certificates relating to recent official trials has been issued by the R.A.C. Two give the results of top-gear tests of a 6-8 h.p. Globe, a single-cylinder car of English manufacture, save the engine, which is of French origin. The bore and stroke are 105m.m. and 120m.m. respectively, and the gear ratio on top-speed is 4 to 1. The route followed included the most crowded streets of the City and West End, and the car was started and driven on top-gear only. The first trial came to a premature conclusion, as the engine could not be restarted after the luncheon stop owing to the sticking of the exhaust valve. The trial was renewed a week later and was perfectly successful. A total distance of 79 miles was covered on top-speed at an average of 10.7 miles an hour for the running time, the number of traffic stops being 112.

The other two certificates relate to tests of a "Favorit" carburettor, the peculiarity of which is that it is provided with two sources of fuel supply to the engine, a central jet and a by-pass entering the induction pipe at the butterfly throttle. The carburettor was fitted to a 28-35 h.p. Benz. The first trial was conducted at Brooklands. With benzol as fuel the consumption varied in the early tests from 19.5 miles per gallon at 13.17 miles per hour to 15.59 miles per gallon at 48.79 miles an hour. These results, however, obviously did not reveal the real capabilities of the carburettor, as, after adjustment and grinding in the valves, 33.4 miles per gallon was achieved at 13.35 miles per hour, the consumption falling as the speed was increased, till at 37.17 miles per hour 21.67 miles per gallon was recorded. At the lower speed named the ton miles per gallon worked out at the high figure of 62.34. Without altering the adjustment of the carburettor, petrol was then used in place of the benzol, when results ranging from 26.57 to 20.68 miles to the gallon were shown according to the speed. The second trial was held on the road at an average speed of 19.3 miles an hour. Benzol was used and the consumption worked out at 27.38 road miles or 54.94 ton miles per gallon.

ITEMS.

The Brooklands programme for Whit Monday consists of no fewer than ten motor-car and motor-cycle events and an aeroplane handicap. Racing commences at noon.

Among English makers taking part in the St. Petersburg Automobile Exhibition, which opens on May 18th, are the Austin, Napier and Vauxhall firms. The Austin exhibit will consist of a 20 h.p. with "Defiance" stream-line body, a 10 h.p. "Clifton" coupé and a 20 h.p. chassis.

The Royal Motor Yacht Club has received a notification from the Automobile Club de France that in addition to the three boats which have already been built to represent France as challengers for the British International Trophy this year, two new boats, 7 metres and 9 metres in length respectively, have been recently entered. The French club is therefore arranging to hold eliminating trials to select a team of three boats for the contest, which will take place under the auspices of the Royal Motor Yacht Club early in August.

An English motor-cycle, a 3½ h.p. Rudge, won the Italian motor-cycle race, known as the Circuito del Po, on April 26th and 27th last. The total distance was 640 miles, and the Rudge covered the circuit in 15h. 9min. 44sec., or over an hour less than was occupied by the second machine. A Rudge also made the fastest time in the hill-climb.

The May number of the "Austin Advocate" contains the usual excellent miscellany of practical information, humour and descriptive matter. The article on tackling a refractory car which declines to start is the best and clearest of the many which have been written on this subject, and should prove of value to a wider circle than of those to whom it is addressed. The diary of a motor tour undertaken by three ladies and two amateur chauffeurs makes more than usually interesting reading.

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THE PERSISTENT HILL CLIMBING SUCCESSES OF CROSSLEY CARS, achieved during the past three years against all comers, is the surest criterion of value and unfailing reliability that can be submitted to the motor buying public.

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