

# THE AUTOCAR

A Journal published in the interests of the mechanically propelled road carriage.

EDITED BY H. WALTER STANER.

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## The Autocar.

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## Notes.

### What Does Mr. Lloyd George Mean?

The intentions of the Chancellor of the Exchequer with regard to the revenue which he hopes to derive from the motor car and petrol taxes become more obscure as time goes on. On the one hand he promises to the motorists enormous benefits from the central road authority, which he maintains cannot be established on an income of less than £600,000 per annum, and on the other, when the municipalities complain of the burden he is placing upon them, he explains to them that they really should not grumble, because they will have half the land tax and the £600,000 from the motor taxes. These two statements which appear to be so contradictory were made within one week of each other, as on July 1st the Chancellor made the one to

the motorists' deputation, and on July 8th he made the other to the representatives of the municipalities.

It is true that Mr. Lloyd George, in reminding the municipal representatives of the £600,000 which was to go towards the roads, said that it was not a diminution of the rates but a contribution towards the improvement of the roads, which were a burden upon the rates at the present moment. He said: "Where local authorities were endeavouring to cope with the question of improvements of the roads and adapting their roads to mechanical traction, undoubtedly money would go to the relief of the rates, because the kind of thing which he contemplated would be done by means of the Central Fund was that which was already done by many local authorities."

The point which must be borne in mind is that in making these remarks Mr. Lloyd George was not talking to the county authorities but to municipal authorities—representatives of 295 boroughs in England, Ireland, and Wales. Hitherto some motorists have been consoling themselves with the idea that, unjust and unnecessary as were the proposed increased taxes on cars and petrol, the money would at any rate be spent upon the improvement of the country roads, and now Mr. Lloyd George promises the whole of it to the municipalities who will make their roads fit for motor traffic. What does he really mean? The roads through towns to-day are as fit for motor traffic as for any other traffic—indeed, they are far fitter for motor traffic than for horse traffic from a sanitary point of view—and although it is conceivable that here and there an improvement might be made to urban roads which would fairly come within the scope of the central road authority—such, for instance, as the making of a boulevard or avoiding a route around some great centre of population—this would only be of interest to through traffic, as the great majority of local people who motor towards a town wish to go into it.

There are no towns so badly planned that there is any real necessity for avoiding loops to be made, and therefore it is impossible to avoid the natural conclusion that Mr. Lloyd George was holding out to the municipalities some new development of the central road scheme, of which those who are to supply the money—the motorists—know nothing, as they have been led to believe all along that their money would be devoted to the improvement of the great main country roads, and not wasted in towns. What will the county councils say when they hear that Mr. Lloyd George is going to console the boroughs with the money they hoped to get for road improvement? The only solution we can offer to the matter is that the Chancellor of the Exchequer was trying an experiment on the municipal deputationists to see if they had a good all-round knowledge of the Budget. As the municipal deputation did not protest, we can assume that Mr. Lloyd George satisfied himself that they had not mastered the Budget as a whole, otherwise they would surely have reminded him that the £600,000 had been already promised elsewhere.

### Motor Taxation and the Royal A.C.

In our report of the deputation to the Chancellor of the Exchequer from the Motor Union and the Coventry Chamber of Commerce, which we published last week, it will have been noticed by many that the Chancellor of the Exchequer conveyed the impression to the deputation that the car taxation proposals and the petrol tax were approved by the Royal Automobile Club. To save reference we may quote Mr. Lloyd George's words: "He consulted the Automobile Club—was in constant communication with them—and the proposals incorporated in the Act were those of gentlemen who were members of that Club. There were certain amendments that they wished to make as well, but in the main it was the advice received from them that induced him to put the proposals in this—their present form."

Now there is no doubt that, in making this statement, which, of course, is perfectly true, the Chancellor of the Exchequer unintentionally conveyed an impression which would be very damaging to the Club if it were allowed to go unexplained. Mr. Lloyd George has been in constant communication with certain members of the Royal Automobile Club who are also members of Parliament, but these gentlemen did not represent the Club. They were merely private automobilists who happened also to be members of Parliament and

members of the Club. This matter has been made perfectly clear more than once in our pages, and particularly on page 772, May 29th, when an official statement by the Club was published. This stated that, while numerous meetings had taken place between the Chancellor and members of Parliament who were also members of the Club, these members acted only as individuals, and did not assume in any way to bind the Club, or even to represent it.

Up to the present the Club has not in any way officially approached the Chancellor of the Exchequer. Of course it will do so, but this is a very different thing from the idea which has been prevalent of late that the R.A.C. has to all intents and purposes invented and endorsed the new motor car and petrol taxation as proposed in the Budget. It will, therefore, be seen that, while the Chancellor of the Exchequer confined himself strictly to a plain statement of facts, his words were likely to be misunderstood and to result in further injustice being done to the Royal Automobile Club in this matter. Indeed, the Chancellor himself did not seem to realise that the informal consultations which he had with the Parliamentary members of the R.A.C. were merely consultations between him and them as private motorists, and not between him and them as representatives of the Royal Automobile Club.

## The R.A.C. Midland Meet.

THE provincial meeting of the Royal A.C. and its associates at Leamington promises to rival the great meeting last year at Nottingham; the attractions of the fixture are so numerous. Unquestionably the great reason of the success of the Nottingham meeting was the visit to Welbeck, and in the Midland meeting there is not only the equivalent to the visit to Welbeck but there are other attractions besides. For the mechanically minded there is the opportunity of going through almost any one of the Coventry motor car manufacturers' factories, as well as the factories of those devoted to other branches of the industry, as the list we give later will show. These visits will occupy the morning. In the afternoon there will be the visit to Warwick Castle. This will undoubtedly be a delight to the great majority of those who take part in it; even those who know the castle fairly well will be almost as much interested as those who have not visited it previously, as parts are to be thrown open to the motorists which are not shown in the ordinary way. Last, but not least, there are the attractions of Leamington, and the dinner in the evening for those who revel in such functions. It will be seen, therefore, that almost all tastes are being catered for by this Coventry-Warwick-Leamington meeting, as, in addition to the cut and dried items of the programme, such places as Stratford-on-Avon, Kenilworth, Compton Winyates, Broadway, and Chipping Campden are within a few miles. Below we give a list of the Coventry firms whose premises will be open for inspection on Saturday next from nine until noon

unless otherwise stated. Those who arrive in cars will be directed to any of the particular works to which they wish to go, while those who have no car available will find a fleet of various makes at their disposal close to the railway station marked with the names of the factories from which they issue, so that the visitor can make up his mind to which factory he is going and then board the car which will take him to it.

Britannia Foundry Ltd., Cox Street.  
 Challenge Cycle Co., Ltd., Foleshill Road.  
 Charlesworth Bodies, Ltd., Much Park Street.  
 Coventry Chain Co. (1907), Ltd., Chapel Fields. By appointment; trams pass the works.  
 Coventry Ordnance Works, Foleshill.  
 Daimler Motor Co., Ltd., Sandy Lane.  
 Deasy Motor Car Manufacturing Co., Ltd., Parkside.  
 Forman Motor Co., Ltd., High Street.  
 Alfred Herbert, Ltd., The Butts.  
 Hewer Car Bodies, Ltd., Aldbourne Road.  
 Hillman-Coatalen, Ltd., St. George's Road. From 9.30 a.m.  
 Hollick and Pratt, Cheylesmore.  
 Humber, Ltd., St. George's Road.  
 Maudslay Motor Co., Ltd., Parkside, from 10 a.m.  
 Rotherham and Sons, Spon Street. Both the watch and engineering works will be open.  
 Rover Co., Ltd., Garfield Road.  
 Rudge-Whitworth, Ltd., Crow Lane.  
 Singer Cycle Co., Ltd., Canterbury Street.  
 Standard Motor Co., Ltd., Foleshill Road.  
 Sterling Metals, Ltd., George Street.  
 Swift Motor Co., Ltd., Parkside.  
 Triumph Cycle Co., Ltd., Priory Street. Until 11 a.m.  
 Van Raden and Co., Ltd., Stoney Stanton Road. Trams for Foleshill and Bedworth pass the works.  
 Webster and Bennett, Ltd., Atlas Works.

Owners of private motor houses who do not use catching trays like the Notron, made by Tom Norton, of Llandrindod Wells, have been often much distressed at the nasty oily patches which stain and deface the cement or wood floor. A writer in an American journal advises that the most practical method of removing such spots and stains is the use of a hot

saturated solution of common washing soda. This is prepared by dissolving as much soda as possible in a quantity of hot water, which can then be stored in a barrel. When it is desired to clean the floor so much of the solution as it is desired to use should be heated to as near a boiling point as possible, and applied hot by vigorous sweeping with a stiff broom or brush.

## Useful Hints and Tips.

### Fitting or Removing Studs.

IT is occasionally necessary to fit in a stud or remove it from some part of the motor car mechanism. If pliers be used they either damage the thread or the plain part of the stud. If the stud be tight and has to be removed, it is often impossible to do this by means of pliers.

A better way is to use a pair of lock nuts which are run on the top side of the stud thread and locked up together, two spanners being used for this purpose. If the stud has to be removed the bottom nut is then turned by the spanner in a direction counter clockwise when looking on the top of the stud. If the stud has to be tightened the top nut must be turned in the clockwise direction.

Another method that may be employed when fixing studs in place is to use a rather deep nut with a set screw; run a few threads of the set screw into the nut, and then if the nut be screwed on the top of the stud and held by a spanner while the screw is run down to lock it, the stud may be run into place by operating the set screw in a clockwise direction.

### An Ignition Synchronising Device.

Last week under this heading (page 41) we gave an illustration and particulars of a most interesting, ingenious yet withal simple device for indicating externally the exact position of the flywheel in relation to the ignition spark. Inadvertently, we omitted to mention that this device was the invention of Mr. T. Blackwood Murray, the managing director of the Albion Motor Car Co., Ltd., Scotstoun, Glasgow, the illustration showing it as fitted to a 24 h.p. Albion engine. It is undoubtedly a practical convenience, and we wish all cars were similarly provided, if only to give the advantage of definite markings on the flywheel rim, as the average markings are often most difficult to decipher.

### Loss of Power in Old Cars.

A worry that occasionally occurs with all cars, especially if they be old ones, is loss of power. This indisposition is annoying, but, unlike many of the problems in this life, it admits of cure. As in medical matters, so in automobile maladies, the cause is best arrived at by a process of exclusion, and the investigation can be carried out under four main lines: (a) Compression, (b) mixture, (c) ignition, and (d) cooling.

(a) With engine on full compression, pull starting handle round, and if the compression be defective, it will be at once detected. If so, examine inlet and exhaust valves; if pitted, grind them in, and see that stems and tappets have sufficient clearance. If the valves be healthy and the combustion head not cast solid with the cylinder, see if that joint be gastight. Placing a little soap and water or oil round the joint and running the engine will by the presence of bubbles show whether the fault be there, and if so the joint must be made tight. If the piston rings be worn or the cylinder has become oval, new rings may be needed or the cylinder may require lapping. The latter work had better be given out.

(b) Too rich or too poor a mixture may cause loss of power. Examine carburetter, and see that the needle valve closes, that the gauzes at the air intake and where the petrol pipe enters the float chamber are not blocked, and that the jet is clear. If these parts

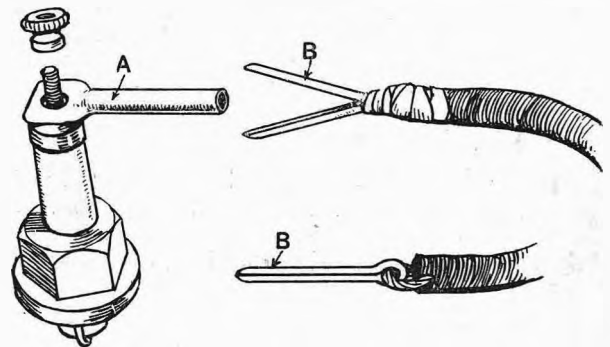
are all right, the fault may still be to a certain extent due to the mixture, or rather to the want of it. In engines with automatic inlet valves the spring may be too stiff, and thus the valve will only open late, and so a not sufficient charge be admitted. Slack back the spring or cut off a coil of it.

(c) A poor spark may cause a poor explosion, and so loss of power. Examine accumulators to see that they give at least four volts. See that all the electric contacts are good, especially at the commutator; also that the platinum points of the coil trembler or at the commutator in a make and break type are neither pitted nor sooted; if they be, dress them with a file, and in the former case adjust so that the trembler gives a good buzz. In case of magneto ignition, see that the platinum points and sparking plugs are clean.

(d) Imperfect water circulation, by allowing overheating, is often a cause. See that the pump works and delivers, that the pipes are free, that there is no air lock, and that the cylinder jacket is not furred up. Using only distilled water will obviate the last named trouble. In friction driven pumps see that the friction wheel presses against the flywheel, and that it has not slipped off the feather which keys it to the spindle.

### An Easily-made Terminal.

The accompanying illustration shows a satisfactory terminal which can be used either for high or low tension wires, accumulator connections, and wires from electric lamps. A is a piece of copper tube flattened



at one end and perforated to fit the sparking plug, commutator, or accumulator terminal. B is a split pin, which fits the tube A closely before being split. This split pin is attached by its loop to the wire (high or low tension), and well secured by adhesive tape. The chief advantages are, ease of detachment, excellent contact, and security from shaking loose.—G. F. A.

### Silencing a Trembler Coil.

Having been annoyed by the noise (ticking) made by the tremblers on my car, I made a silencer, and find it a very great improvement, as I do not notice the ticking at all now. I made a double cover to fit the box containing the trembler, of ordinary glazed lining, with cotton-wool between (similar to a teapot covey), and covered it with white indiarubber sheeting, my car being white.

W. W. B.

**THE AUTOCAR MAP FOR MOTORISTS.**—Invaluable when touring or contemplating a tour. This map is supplied in three styles *i.e.*—(1) varnished and with roads marked in red; (2) on suitable materials for marking in the roads traversed or to be traversed; (3) folded in case, suitable for carrying in car. Size of map, 4ft. 8in. × 3ft. 9in. Price 8s. 10d., carriage paid, in any one of the three styles, obtainable at the offices of *The Autocar*, 20, Tudor Street, London, E.C.

# The 12-14 h.p. Four-cylinder Argyll.

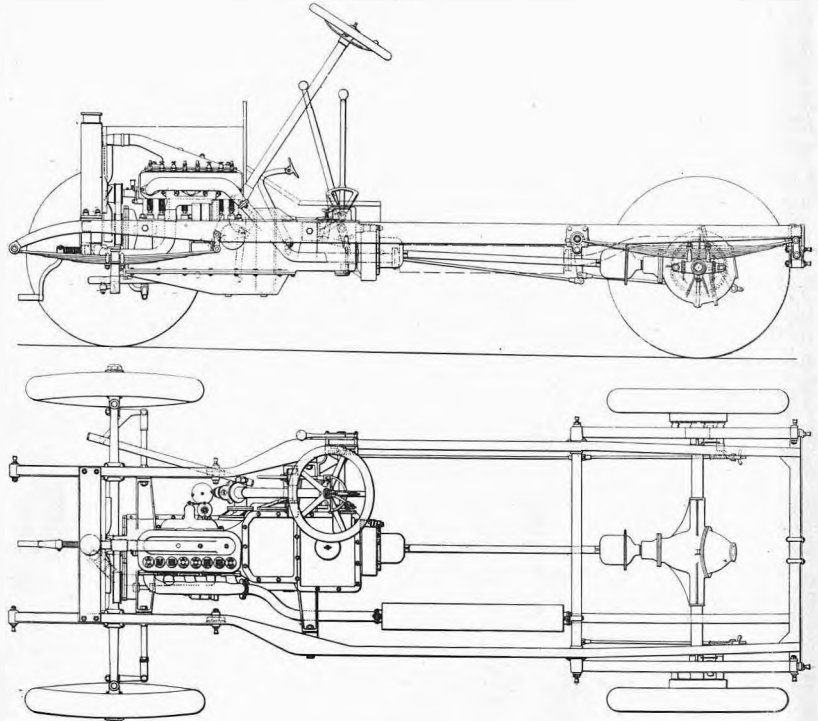
## A Staunch Medium-powered Car.

UNDER the new and energetic management of Mr. J. S. Matthew, Argylls, Ltd., of Alexandria by Glasgow, have lost no time in the design and output of a staunch, medium-powered, and medium-priced car. The latest approved practice has been followed generally, and many detail improvements are introduced. Regarded from all critical points, this is a chassis which will appeal to all students of automobile construction as well as to the practical user.

The frame is, as usual, of pressed cambered channel steel, smartly in-swept well forward of the dashboard, so affording an excellent amount of lock, but running flush back over the back axle, thus giving a completely level table upon which to set the body. The rear cross members are of similar section, suitably splayed, gusseted, and attached to the side members of the frame. The steering rod and distance bar are placed below and behind the axle respectively.

The engine and crank chamber are of the *moteur bloc* order as shown in fig. 2, all the valves being set on the left-hand side, where also the magneto is most accessibly placed, being driven off the single camshaft. The magneto spindle itself is produced forward of the distribution gear case, where it takes the driving fan belt pulley. The exhaust expansion chamber is formed with three outlets, between which the twin branch riser from the radiator makes connection with the water jackets. On the right side of the engine is set the Argyll carburetter, which is shown in detail in fig. 6. The inlet

pipe passes across the cylinder block through the water jacket spacing. The Argyll carburetter, which has already proved itself in public for efficiency and economy, is of somewhat unusual but nevertheless interesting design. Its construction is very easily



Figs. 1 and 2.—Elevation and plan of 12-14 h.p. Argyll chassis.

gleaned by reference to the vertical section, fig. 6.

The induction or inlet branch H is set directly over the tapered jet chamber B, and concludes in a tower projection which accommodates the vertical lifting

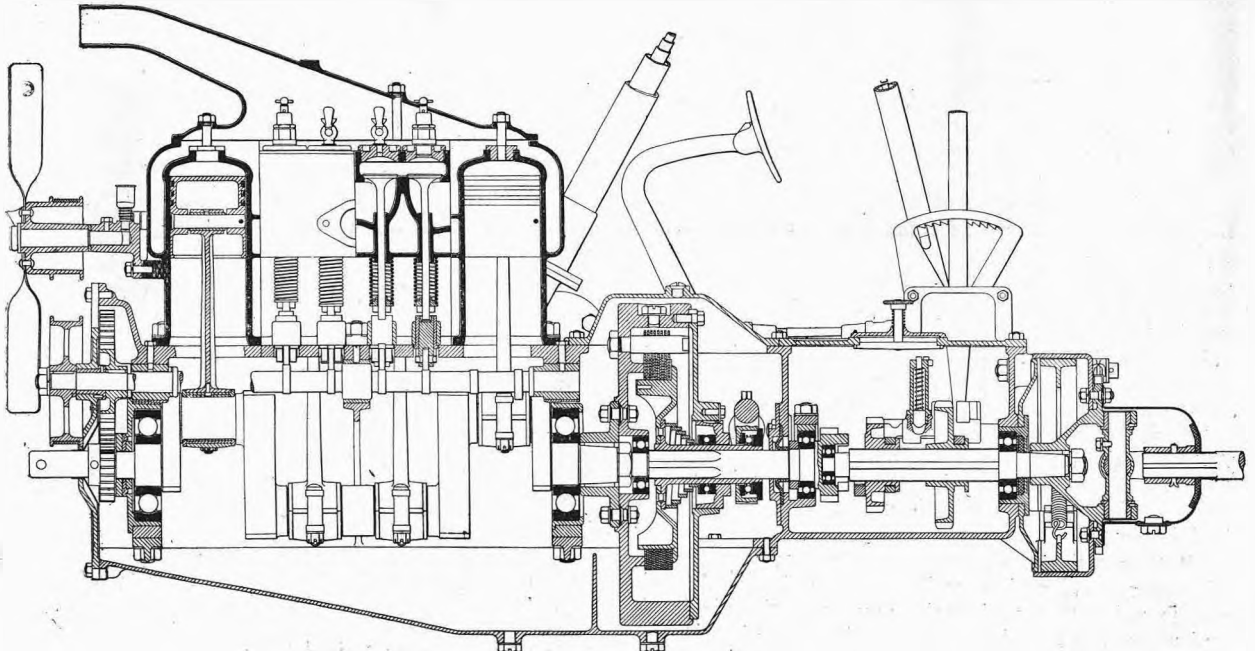


Fig. 3.—A vertical longitudinal section of the engine, clutch, gear-box, and forward propeller-shaft joint, en bloc.

throttle C, and provides the cold air ports G. In the crown of the throttle column is placed the automatic air valve D, which at over certain engine speeds admits fresh air directly upon the mixture as it rises from the jet. In the section the throttle is shown fully closed with the air ports G open so that the engine is acting as a brake upon the car.

To admit mixture to the cylinders the throttle valve column C is raised until the piston ring F moves into the tube immediately above it and cuts off the cold air. To do this the valve is raised through a distance of about  $\frac{9}{16}$  in., when the taper at the lower end of the throttle column is just beginning to open. This taper admits of a very fine range in opening the throttle. To give full opening the throttle column is raised through another  $\frac{9}{16}$  in., making a  $1\frac{1}{8}$  in. lift in all.

The crank chamber, flywheel, and gear casing are in aluminium, are all bolted up together to form a unit, and are supported by stiff cellular brackets directly from the main members of the frame. The water spacing is common to all the cylinders, and the uptake to the radiator is flanged over nearly the whole surface of the combustion chambers. The distribution gear case is apart from the crank chamber proper, and is enclosed by its own cover plate, which is made particularly accessible by reason of the distance between it and the rear face of the radiator. The rotary force feed oil pump B (fig. 4) which is placed on the left of

the crank chamber is skew driven off the magneto driving-shaft, and pumps oil from the sump B<sub>1</sub> in the crank chamber through the suction pipe B<sub>2</sub> to the crank, and camshaft bearings. The crankshaft runs in two ball bearings of very large diameter, this being

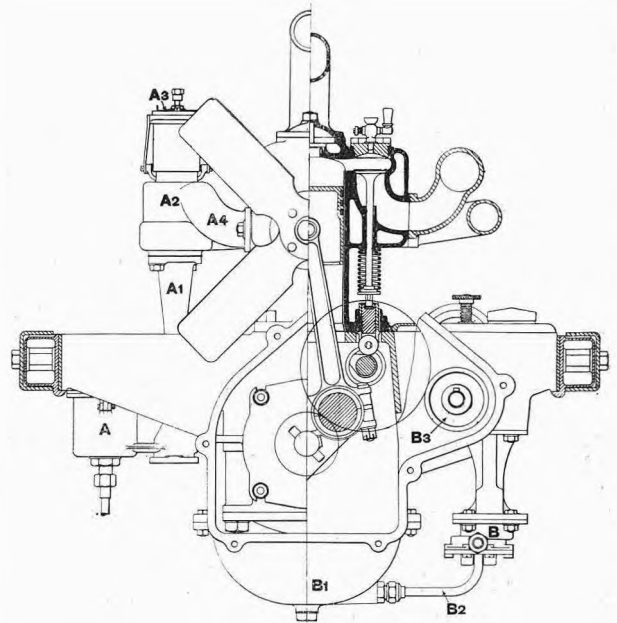


Fig. 4.—End view of engine showing carburetter and oil pump.

- |  |   |
|--|---|
| A, float feed to carburetter               | B <sub>1</sub> , oil well forming part of the base of the crank chamber |
| A <sub>1</sub> , jet tube                  | B <sub>2</sub> , oil suction pipe from B                                |
| A <sub>2</sub> , throttle valve chamber    | B <sub>3</sub> , gear wheel and shaft operating pump and magneto        |
| A <sub>3</sub> , automatic air inlet valve |   |
| A <sub>4</sub> , induction pipe            |   |
| B, oil pump                                |   |

rendered possible by the shortness of the shaft, due to the *moteur bloc* system, and the grouping of the crank throws.

A very neat, sweetly-working, and easy form of diagonally operating change speed gate is provided for the operation of the three speeds. A slight pressure on the knob of the change speed lever, either forward or backward, is sufficient to operate the gears.

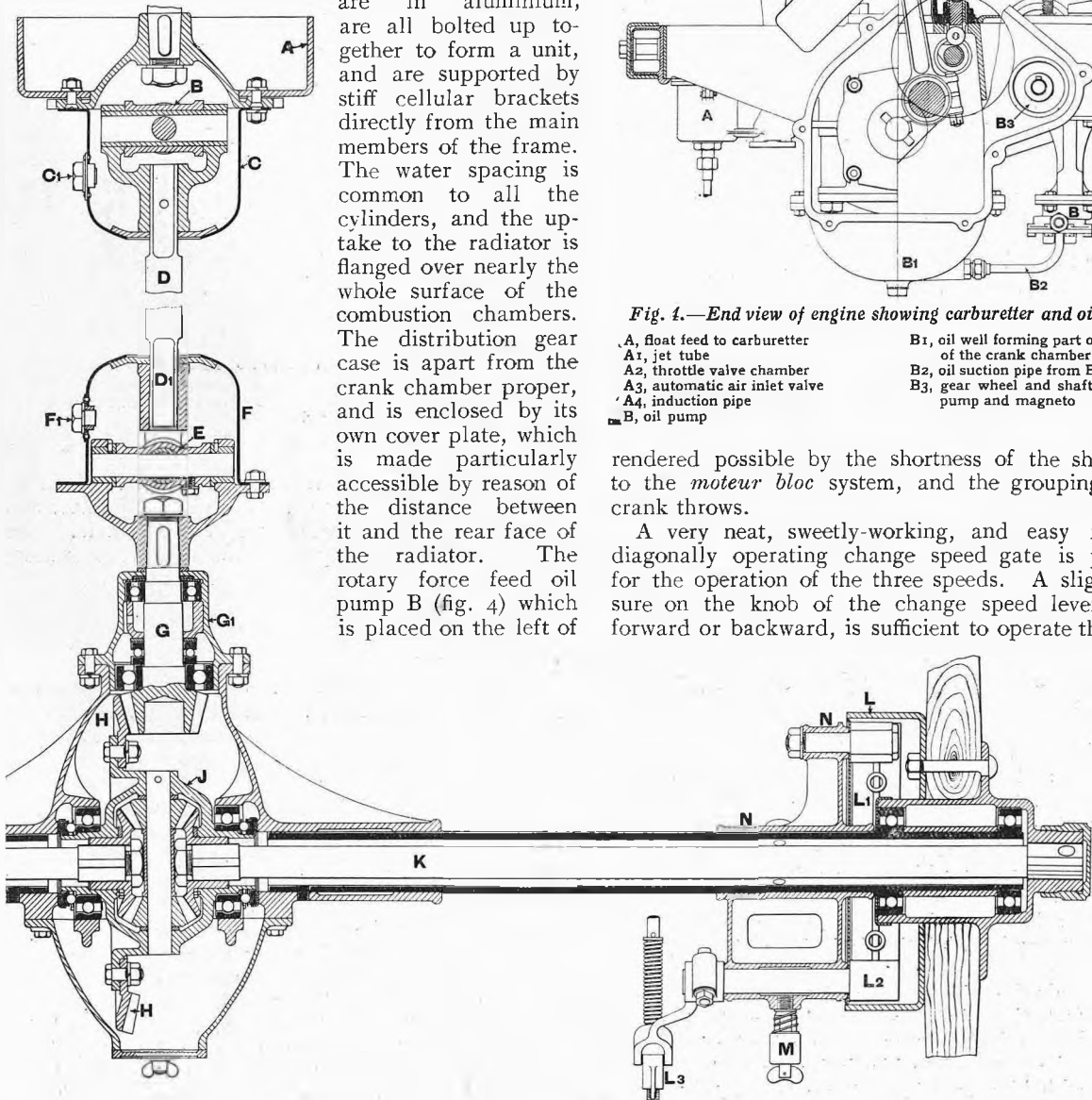


Fig. 5.—Horizontal section of propeller-shaft and back axle.

- |   |   |   |
|---|---|---|
| A, brake drum on rear end of gearshaft                            | F <sub>1</sub> , plug in F for lubricating universal joint  | L, brake drum bolted to road wheels                               |
| B, forward end universal joint                                    | G, bevel pinion driving shaft   | L <sub>1</sub> , brake shoe operating in L                        |
| C, brass casing enclosing B                                       | G <sub>1</sub> , casting carrying ball load and thrust bearings for G, bolted to live axle casing | L <sub>2</sub> , cam operating brake shoes L <sub>1</sub>         |
| C <sub>1</sub> , plug in C for lubricating universal joint        | H, driven bevel wheel bolted to differential gear box J   | L <sub>3</sub> , finger nut for adjusting brake pull-on rod       |
| D, propeller-shaft  | J, differential gear box  | M, greaser for lubricating brake operating cam spindle            |
| D <sub>1</sub> , end of propeller-shaft working in plunging joint | K, live axles driving road wheels   | N, casting carrying brake mechanism and back springs on rear axle |
| E, rear universal joint   |   |   |
| F, brass casing enclosing E                                       |   |   |

The drive passes to the gear in the gear box through a well designed form of multi-disc clutch, the driven member of which is mounted on the hexagonal end of the clutchshaft. This clutchshaft, which is carried in ball bearings, passes into the gear box division, and has set upon its rearward end the driving wheel of the intermediate gear and the driving portion of the third speed direct driving clutch. The gear affording three speeds and reverse is of the well-known Govan type, the gearshafts being in the horizontal plane and running in ball bearings.

On the tapered keyed end of the primary gearshaft outside the gear box is set the forward portion of a well designed universal joint, to the surrounding flange of which is bolted the foot brake drum.

The details of the universal joints at both ends of the propeller-shaft are shown in fig. 5.

The driving bevel pinion shaft G (fig. 5) is very strongly carried in a ball bearing socket bolted to the differential casing. The crown wheel H is bolted to a flange formed on the differential gear box which contains a bevel type of differential gear. The sun wheels of this gear are set on the inner octagonal ends of the driving-shafts K, and are further secured by lock nuts. The sockets of the differential gear box are carried in and furnished with running and ball thrust joints respectively. The outer hexagonal end of the driving-shaft K passes directly into a hole of similar shape formed in the hub end, no independent or solid driving dog being used.

The brakes  $L_1$  and brake expanding gear  $L_2$  and  $L_3$  are carried by a stamping N which also forms the spring table. The car is carried on semi-elliptical springs forward, and side and cross springs behind. All the spring shackles and pivots are lubricated by screw lubricators. A stiff V shaped torque member is provided to prevent the torsion of the back axle. The drive from the road wheels passes through the forward portion of the rear springs.

All frictional parts outside the gear box are provided with screw down lubricators. This is true also of the spring shackle pivots, both fore and aft. The

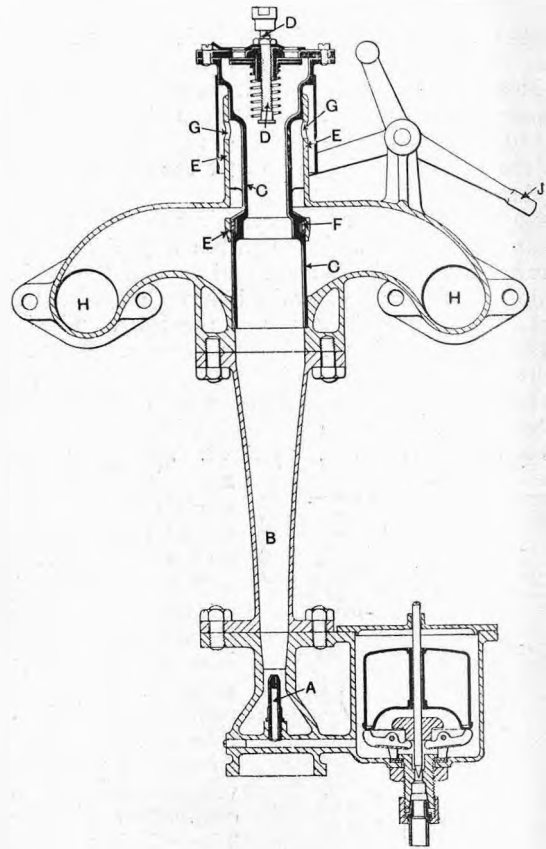


Fig. 6.—Vertical section of carburettor.

- |   |                               |
|---|-------------------------------|
| A, jet  | E, throttle valve guide       |
| B, jet tube   | F, throttle valve piston ring |
| C, vertical lifting throttle carrying automatic air valve | G, cold air ports             |
| D, automatic air valve                                    | H, inlet pipes                |
|   | J, throttle lever connections |

front axle is of neat downswept I section, the steering jaws being formed on the steering wheel spindles, and the steering connections set in rear of the axle. The dashboard is remarkably free from fittings, presenting merely a switch and a tell-tale oil glass.

## Motoring in Nyassaland.

In the blue book on mechanical transport in the colonies, which was recently presented to Parliament, there is a large amount of valuable information as to the conditions in various colonies, the governors, commissioners, and other officials in each colony having reported upon the conditions obtaining within their jurisdiction. These reports are very full, and deal not only with the state of the roads or nearest approaches to roads which may exist, but also with such matters as the capabilities of the natives for running machinery under European supervision, the wages they require, and the facilities which exist for repairs.

In the main the vehicles referred to are used industrially; in fact, the only reference we have noticed to private cars is from the Governor of Nyassaland, who reports that when he returned to his duties from England he brought with him an 8 h.p. Rover to use in the Protectorate. Despite the roughness of the country, he states that the car has been most useful to him, that no part of its mechanism has gone wrong in any detail, and that the only renewals have been two sparking plugs. He has found the springing very good, and it has stood the excessive jolting of the rough tracks of

the Shire Highlands. He sums up in favour of petrol in preference to paraffin, and incidentally mentions the necessity for extra large radiators, as his car was fitted with extra cooling area and has never suffered from overheating.

The Governor recommends the use of wire wheels, as wood wheels will not stand the great variation between the wet and dry seasons, and he has a good word to say for the Dunlop ribbed tyres, no steel-studded or other special kind of tread being necessary; in fact, from this point of view the roads of Nyassaland seem better than our own, as the Governor reports there is practically nothing upon them to cause serious damage or punctures, as they are free from broken bottles, nails, horse-shoes, and flints, their freedom from stones being due to the fact that they are not macadamised.

One fact brought out in the report which it may be interesting to other Rover owners to know is that the Governor is averaging from thirty to thirty-five miles to the gallon, and that the price of petrol delivered to the Government House, Zomba, is 3s. 6d. per gallon. On his little car he can carry four people and luggage up all the hills he encounters, and he has a good word to say for the Rover engine brake.

## Small Car Talk. By Runabout.

### The Voiturette Race.

AS I entered my club the other day, I overheard the exultations of Jones, who drives a 10 h.p. and finds it expensive because he is for ever taking bits of it to pieces and paying a mechanic to replace them. The immediate source of his joy was the abstention of British makers from the Boulogne voiturette race. Jones knows a bit about motor racing because his governor's wife's uncle once entered a handicap at Brooklands, and "did in" a brace of new covers in just failing to finish seventh in his heat. Jones was expatiating on the prodigal waste of tyres connected with motor racing, on £500 entry fees, on the miniature army of mechanics who tune up the car and travel about with it, and generally painting the expense of racing in the most lurid colours. "Who pays the piper?" he finally enquired in a wrathful peroration, and buried his infuriated reply in a gurgling soda. The last time I saw Jones "on the mat" (of the smoking room hearth), his diatribes were aimed at the chuckle-headed people who design and make British voiturettes. Jones, you must understand, is a patriot and a Tariff Reformer to the core.



*A neat little coupe body fitted to a Zedel chassis. As will be noticed it is fitted with a boat-bow dash, and is altogether as snug as a car can well be.*

On that occasion he was howling for our sympathy because he had been idiot enough to invest in a £300 English-made voiturette, whereas his tailor, who lives two doors off, had found the car of his choice in a £200 Frenchy, which is no end of a spanker, and can mop up Jones's Britisher, and leave it toiling helplessly astern in less than a mile. It is rather hard to reconcile the public utterances of many would-be statesmen, and Jones is evidently no exception. I personally should have no objection to paying my shot towards the expense of British competition in the Boulogne race if it resulted in a new breed of all-British voiturette which was as fast and efficient as two or three Continental small cars I could name, all of which owe their excellence to racing experience and experiment. We have got several very reliable and very economical small cars on the British market which are also of British make—in fact, I don't think anyone can beat our home-grown stuff in these two respects. But if the B.A.R.C. held an open voiturette race for single-cylinders of distinctly limited bore probably only two makes of car would compete, and neither of them would be a British production.

### Catering for Duffers.

The battle of control is yet undecided. I went out last week on a famous little 12-14 h.p. four-cylinder which had an absolutely naked dash, a steering wheel as bald as a napkin ring, and a footboard disfigured by no more than three pedals, the centre and most diminutive member of the trio being the sole functionary responsible for engine control. If I wanted to go slow I left it alone; if I wanted to go fast I applied more or less toe-suasion to it. If we added to this a governor which automatically levelled up the pace to a steady legal limit, irrespective of wind or grade, we should have reached the rock bottom of simplicity in control. But, as my schoolboy passenger remarked when we disembarked, "he'd sooner drive a clockwork locomotive round the bathroom!" I believe the majority of second-season small car owners prefer that the handling of their vehicle should make more exacting demands upon their intelligence. The only automatic device I am looking for is an automatic tyre repairer, and it is characteristic of motorophile inventors that this is about the only automatic they refuse to supply. Even as I handled this smooth self-controlled essence of modern mechanism I found myself sighing for the slow, noisy, clattersome cars of 1900, which had perhaps three gear levers, four engine control levers, two switches, two dozen dashboard taps, pumps, meters, etc., all fitted with large clumsy plated levers, sticking out in all directions like a pile of silver spillikins—tiresome, no doubt, but interesting.

### Front Mudshields.

Few small cars are provided by their makers with shields to keep mud off the sides of the bonnet, and in cases where the owner is his own cleaner it pays to have a pair made. I have just provided a small car with a very neat and efficient pair at a cost of a few shillings, whereas the makers quoted me £3 10s. for the extra. I employed a mechanic to make light L-shaped beadings of steel for the edge of the frame on both sides, and for the edge of the wings. These beadings followed the run of the frame and the wing respectively, and one edge of the L was riveted or screwed to the frame and wing, while the upturned edge was perforated with holes  $\frac{3}{4}$ in. apart to take a leather lace. To prevent the edges of the holes in the thin sheet metal chafing the laces through, tiny brass riveted eyelets were fitted in each perforation. Meanwhile I had cut paper templates to serve a saddler as patterns for two shaped shields of patent leather; these shields were perforated and eyeleted in register with the holes along the frame and wing beadings. The shields were then laced into place with leather laces, and the whole was painted to match the colouring of the car. Only a very searching inspection could reveal the fact that the addition is amateur work, and it enables the forward portion of the car to retain a smart appearance whilst travelling through swishy surface mud, besides considerably reducing the amount of cleaning to be done when the car gets home.

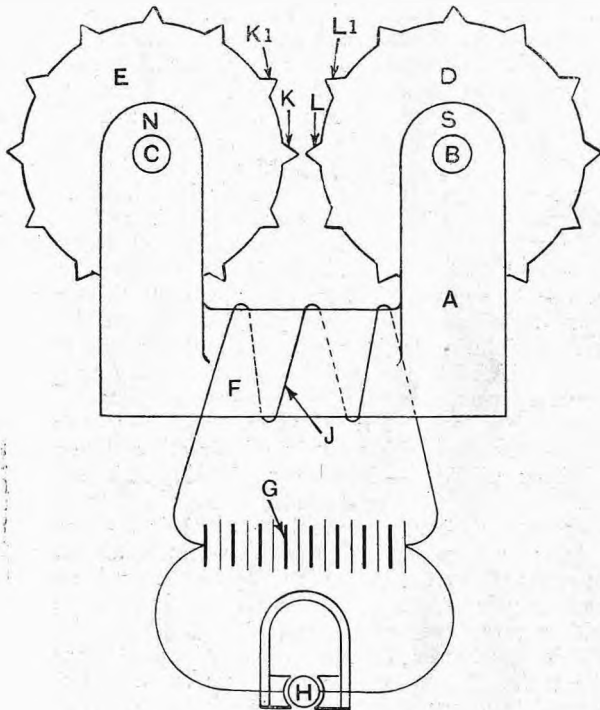
The speedometer scored in a case at Haywards Heath last week. A chauffeur was summoned for driving at excessive speed over the ten miles limit at Handcross. The defendant and the other occupants of the car gave evidence that, according to the speedometer on the car, the speed was just under ten miles per hour. Evidence was given as to the accuracy of the instrument, and the bench dismissed the case.

## Noiseless and Frictionless Gearing.

By Eric W. Walford.

**A**NY system of gearing which is noiseless and also frictionless must be of some interest to students of motor car construction. These advantages are claimed to be obtained by the Lecoche gear, an experimental model of which is now running in London.

The principle on which this gear operates can be grasped from the accompanying diagrammatic view. The frame A carries at B and C shafts with toothed



A diagrammatic arrangement of the system.

wheels D and E. These wheels rotate with a clearance between their teeth, the teeth not meshing, as is usual, with spur gearing. In the diagrammatic view the teeth are represented as large projections for the sake of simplicity, but apparently they could be of any shape. Around the central portion F of the frame is wound a coil of wire J, through which a current is passed either from a battery G or from a dynamo H. The frame A roughly resembles a horse-shoe, and

when a current is passed through the coils J it forms a horse-shoe magnet, with a north and south pole, as shown at N and S. The gear wheels D and E are formed of some magnetic material, and their teeth form the poles proper.

Following the simple laws of magnetism, attraction is set up between the two opposite teeth of the two gear wheels, so that when the shaft C is rotated in the direction of the arrow the tooth K draws downwards the tooth L on the opposite wheel. At the same time the next tooth  $K_1$  attracts the next tooth  $L_1$  on the driven wheel, and so on, setting up rotation of the driven wheel D, the magnetic flux between the two wheels transmitting the power from one wheel to the other. In the actual gear being at present experimented with the teeth of the gear wheels are helical, so that the distance between the opposite teeth of the two wheels remains practically the same. Also the gear can be used for transmission at right angles as well as to a parallel shaft.

Obviously the main advantages of the gear are silence and absence of friction. There are, however, additional advantages in that the gear requires no lubrication, the efficiency is extremely high, and change of gear is rendered very easy, as in place of the two wheels D and E of certain ratio other wheels may be slid laterally into the magnetic field, these other wheels being of different sizes. In this way gear changing can be effected without any noise, as there is no meshing of the gears.

The power required to magnetise the frame A is stated to be about three per cent. of the load. It would probably therefore be necessary to fit a small dynamo to provide this current, but in these days of electric lighting this difficulty does not seem a great one.

It will be seen that when a current through the coil J is cut off the driving wheel can revolve freely without any influence over the driven wheel. Thus the gear can be drawn out of action, and apparently can be brought into action by gradually increasing the current to the coils until the normal current is reached. Thus a form of magnetic clutch can be provided by this means.

A fuller description of this gear, which is being introduced into this country by the Anglo-Foreign Inventions Syndicate, of 10, Camomile Street, London, will be found in *Engineering* of 2nd July last.

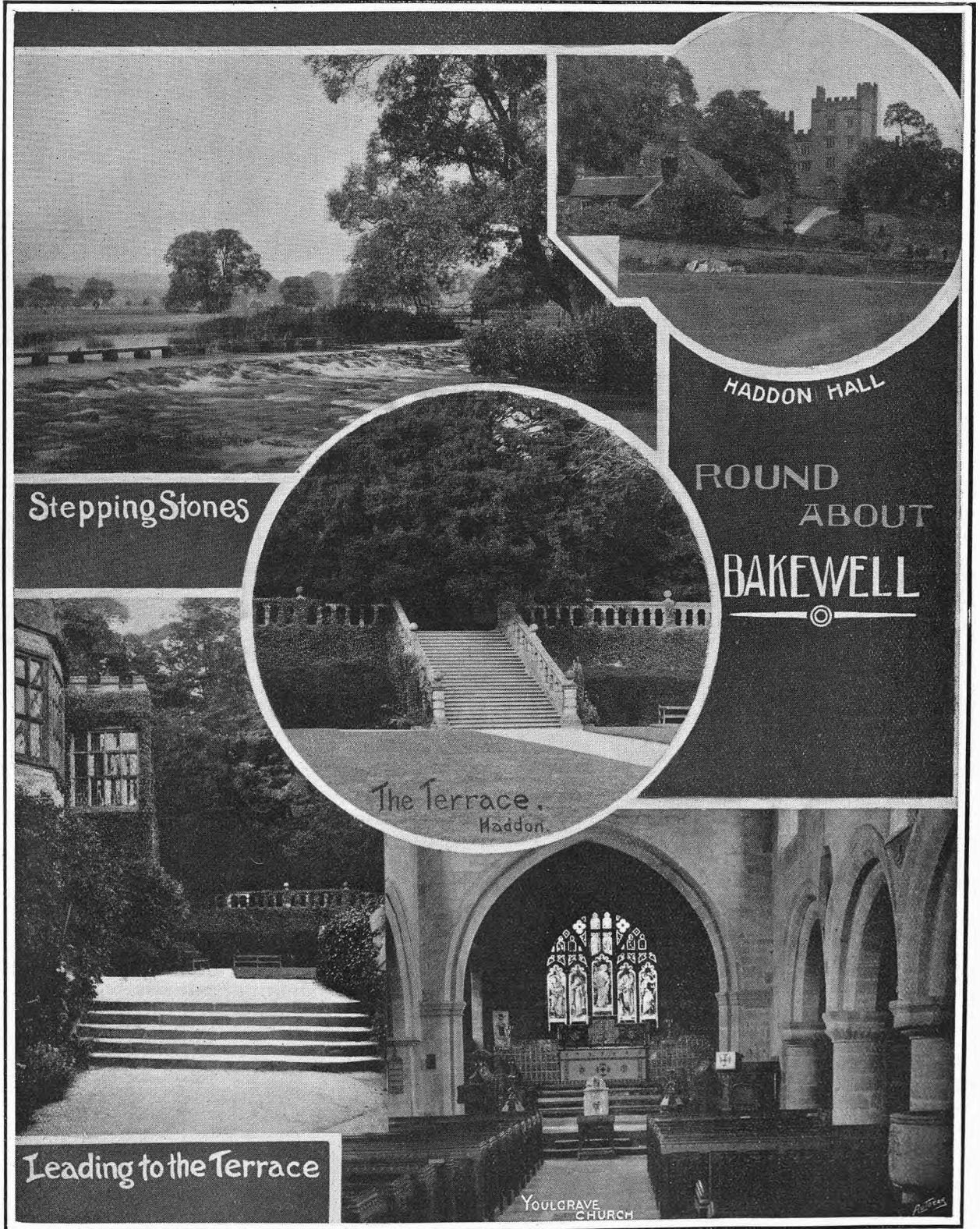
The appointment of Mr. J. D. Siddeley as joint managing director of the Deasy Motor Car Mfg. Co., which we announced a fortnight since, is a matter on which the Deasy Co. is to be sincerely congratulated. Mr. Siddeley is not only a sound man of business of ripe experience, but from the beginning of his connection with the motor industry he has always associated himself with good and sterling cars. Even before he became actively interested in the manufacture and sale of cars he always went in for the good rather than the cheap, and we never remember having met him on a car which it would not be a pleasure to own and drive. He has played a very prominent part in the industry of late years, and he has influenced it for good, very largely because he has realised what motorists have wanted. The cars with which he has been associated have appealed to all classes of users,

from Royalty down to those who could only afford quite a moderate expenditure. He was one of the first to recognise that, in addition to the large and medium sizes of multi-cylinder cars, there was a large class of users who wanted a really good small four-cylinder car which should be as good throughout as its larger brethren. It was not by any means the first car of its class or the cheapest, but it was the first at a moderate price which was not only good in design and workmanship, but was also turned out in large numbers from one of the finest factories devoted to car manufacture in the world. The success which attended his efforts is patent to all who know one make of car from another, and it has incidentally done much to establish the home motor car industry on a sound basis, because it has shown that we can not only make well and cheaply, but in large numbers.



# Round About Bakewell.

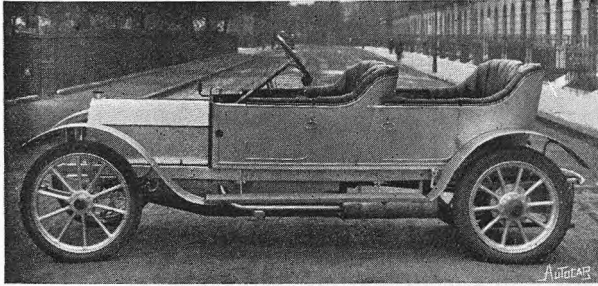
A Brief Itinerary of the District will be found under Week End and Touring Notes, on page 81.



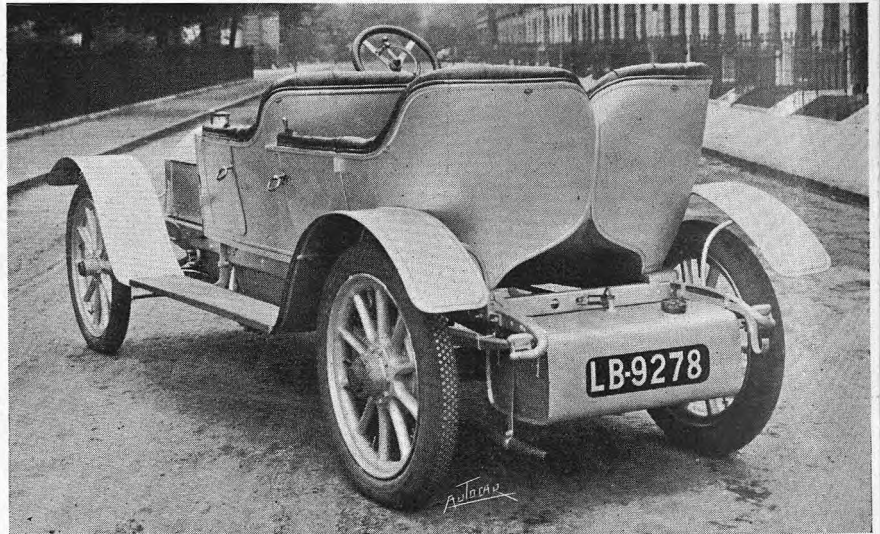
## Body Design and Construction.

### A Hollow Backed Body.

THE two illustrations we give show a very interesting form of body which has been built for Mr. W. Heep Holland, of Alderley Edge. The chassis is a 20-30 h.p. Austrian Daimler, with a



roft. 3in. wheelbase. Extreme length of the body from dashboard is 8ft. 2in. and the extreme width amidships 4ft. 2in. The height of the seat board from the chassis is 6in., and the cushion is 6in. deep, so that the front of the top of the cushion is 12in. above the chassis, and the slope of the seat from front to back is 3in. The doors are 21in. high over the upholstery of the roll, so that the highest part of the cushions are 9in. lower than the doors, and therefore the occupants of the car are thoroughly protected. An unusual amount of room is given in front, as the owner has a very long reach, and there is a full 30in. from the front seat to the dashboard. At the back 2ft. of leg room is given. The side view gives the impression of a slightly modified torpedo or flush sided body, and the great peculiarity is shown in the back view. As a result of his various calculations and experiments Mr. Holland came to the conclusion that the broad back of a body contributed more than the front surfaces to the total wind resistance, owing to the partial vacuum created by the former at high speeds. He therefore instructed Messrs. Max Graddon and Lawson, Ltd., of Mildmay Avenue, Mildmay Park, N., to design and construct a



body as shown in our photographs. The main idea is to provide a clear passage underneath and through the back of the car, so that the air is allowed to fill up the partial vacuum of the back with the least amount of resistance in its path. In addition to the orifice through the back panel giving the free passage from under the floor of the car, it will be noted that the top of the backs of the seats are curved in a peculiar way. This shape has also been found useful in enabling the air displacement to be made good as easily as possible. This special shaped back, combined with the flush sides, has resulted in the minimum of aerial disturbance, and one of the most significant facts concerning the practical success of the idea is found by examining the back panels after a long drive. We are told that these keep perfectly clean, as the current of air rushing in from the back of the car is so small, owing to the way in which the displacement is made good through the hollow back. Of course, it follows as a natural consequence that the car raises very little dust, as the dust trials

have already shown very plainly that, while dust is primarily disturbed by the tyres, it only becomes a serious nuisance when it is caught up into the partial vacuum formed behind the body. We certainly hope the owner will run this car in the next dust trials. We may say that the idea is patented, and the design is also registered.

The idea of forced induction, which has fascinated so many ingenious designers from time to time, has by no means been dropped, though of late we have heard very little about it. The fundamental idea of the principle is that instead of the engine sucking in its charge of combustible mixture this mixture shall be supplied to it under pressure. Offhand this merely looks like changing one's money from one pocket to another, but a reply to this is "Remember the compression stroke." We believe the troubles which have beset previous investigators have been overcome, and we hope very shortly to give some details of an extremely simple though remarkably ingenious system of forced induction. The combination as a whole is claimed to

give such a range of power to the engine that the change speed gear is no longer necessary. We had better say at once that with regard to this claim we are somewhat incredulous. We admit it is possible to make an engine powerful enough to drive a car up a hill of 1 in 5 on the top gear, but if the gear ratio of the car is, say, 3 to 1 it stands to sense that the impulses will necessarily be terribly fierce, and even if the car were geared much lower the same objection would remain, while on the level and downhill the engine would be running at needlessly and troublesomely high speeds. Incredulous though we may be, we shall be pleased to find we are mistaken, as we have no affection for the change speed gear as such.

## Motor Union Notes.

(Communicated by the Secretary.)

### Diary of Summer Tour.

July 16.—Speed Trials on Pendine Sands.  
 „ 17.—Tour of Gower Castles. Garden Party. Gymkhana. Official Dinner.  
 „ 18.—Swansea or Tenby.  
 „ 19.—Cardiff.

The attention of readers is particularly directed to the form of application for membership of the Motor Union, which appears as an inset to this paper. The Motor Union offers unequalled advantages for an annual subscription of one guinea. Subscriptions paid now cover membership till June 30th, 1910. Those who are already members are asked to kindly hand the form to one of their motoring friends who has not yet joined the Union.

◇ ◇ ◇ ◇

The Congress of the International League of Touring Associations was held in London last week under the auspices of the Motor Union. On the motion of the Motor Union changes have been made in the administration of the League with a view to securing increased efficiency. An Executive Committee of five has been elected, with authority to take such steps as may appear to them necessary to carry out the decisions of the Congress. Capt. L. A. Kingston (chairman of the Foreign Touring Committee of the Union) was appointed to this committee. Great satisfaction was expressed by the delegates at the promise given by the Chancellor of the Exchequer to the deputation from the Motor Union, that he will endeavour to arrange that foreign and colonial motorists visiting this country for a short period shall be exempt from payment of the car licence. A petition in support of this matter is being forwarded to the Chancellor of the Exchequer in the name of the League. The matters which were considered by the Congress embraced the whole field of touring, and details connected with the various agencies for travel, from cycles to aeroplanes, were discussed. It is hoped that increased facilities for motor touring will be one result of the Congress.

At the conclusion of the proceedings a vote of thanks was passed to the Motor Union for the manner in which the arrangements for the Congress had been carried out. A resolution was also adopted thanking Mr. Rees Jeffreys (secretary) for his enthusiastic work on behalf of the League.

◇ ◇ ◇ ◇

A banquet in honour of its foreign guests was given by the Motor Union on Thursday, July 8th. Mr. W. Joynson-Hicks, M.P. (chairman), presided, and amongst the guests were the Minister Plenipotentiary for Switzerland, the Consul-General for Denmark, and the delegates to the L.I.A.T. Congress. There was a large and representative gathering of motorists and others interested in touring.

◇ ◇ ◇ ◇

The Summer Tour commenced last Saturday, and by the time these notes appear in the press the Swansea Meet will be nearly over. On July 17th the monthly meeting of the General Committee will be held at the Guildhall, Swansea. The Union will be glad to see those who have been unable to take part in the tour at the Swansea dinner, or the lunch at Cardiff next Monday.

A prominent Lancashire motorist, writing on the result of the Union's deputation to the Chancellor of the Exchequer, says:

“The Union are to be congratulated on the course they have taken with regard to the Budget, and I trust that combined efforts will gain benefits for motorists which will counterbalance high taxation.”

◇ ◇ ◇ ◇

The following is a typical extract from letters received from medical motorists thanking the Union for the action taken on their behalf, with a view to securing a rebate on the petrol tax for medical men using motor cars in the course of their profession:

“I should like to thank the Union for the good work they have done in obtaining the rebate off petrol for medical men. This will be a great advantage to us.”

◇ ◇ ◇ ◇

The second number of the *Motor Union Journal* has called forth many appreciative letters from the membership, of which the following are extracts:

“May I take this opportunity of congratulating you on the production of so useful a journal as ours is? Three months is too long to wait for another copy.”

“Please accept my congratulations on the *Motor Union Journal*. I don't see how it could be improved.”

The Editor will be glad to receive contributions for future issues, and especially short accounts of tours, motoring experiences, and practical hints. A few photographs of the places visited will greatly enhance the value of touring articles.

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In the *Motor Union* notes which appeared in *The Autocar* of June 12th particulars were given of a case in which the Union had decided to support the appeal of a member against a conviction for exceeding the speed limit. The basis of the appeal was the fact that the speedometer on the member's car indicated that the maximum speed attained was nineteen miles per hour, whilst an expert gave evidence as to the accuracy of the speedometer. In spite of this evidence, however, the bench decided to convict. Their decision has now been reversed by the Quarter Sessions. It is obviously important to those members who carry speedometers on their cars that the evidence of the speedometer should be accepted, where questions of speed are involved. The Union granted £10 towards the cost of the present appeal.

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At the meeting of the Legal Cases Committee on July 1st, four grants were made under the Car Badge Scheme. These grants represented half the legal expenses incurred in connection with four cases in which, in the opinion of the Legal Cases Committee, the defendants were not guilty of the offences with which they were charged. Over 6,000 Motor Union car and cycle badges have now been issued to members; 240 were issued during June.

◇ ◇ ◇ ◇

Complaint was recently made to the Union that the only warning given of the existence of a ten-mile speed limit at Carrickfergus (Ireland) was by means of printed notices affixed to hoardings in the town. The Union communicated with the Local Government Board for Ireland on the subject, with the result that adequate signposts are being erected.

◇ ◇ ◇ ◇

## A Tyre Protector Trial.

THE 4,000 miles trial (3,000 on the road and 1,000 on Brooklands Track) of the set of Atlas tyre protectors entered by Messrs. Cloud and Co., Ltd., 124, High Street, Kensington, was concluded on the 28th June. The certificate of performance is as follows:

This is to certify that a set of Atlas tyre protectors was entered by Messrs. Cloud and Co., Ltd., 124, High Street, Kensington, for a 4,000 miles trial—3,000 on the road and 1,000 upon Brooklands Track. The protector consists of a shield inserted between the air tube and the cover. This shield consists of three layers of coppered steel discs  $\frac{1}{4}$  in. diameter and  $\frac{1}{2}$  in. thick, so placed one over the other that there is at least the thickness of one disc between the air tube and the cover. These discs are not in contact with one another, the interstices being filled with Para rubber. The whole protector is covered inside and out with canvas.

The car was a 40 h.p. R.A.C. rating Thomas, the weight of which was 2,807 lbs. (front axle 1,359 lbs., back 1,448). The average passenger weight carried throughout the trial was 698 lbs. The weight of the protector was 8 lbs. 10 ozs. The covers used were Dunlop grooved, 875 mm. by 105 mm.; the air tubes were 870 mm. by 90 mm.

The pressure of the tyres was approximately: Front wheels 65 lbs. per sq. in., and back wheels 70 lbs. per sq. in.

NEAR SIDE BACK WHEEL.—The wheel ran without incident for 2,618 $\frac{1}{2}$  miles, when the cover burst, and another Dunlop 875 mm. by 105 mm. grooved cover was fitted. After running 219 miles the cover was found to have become deflated and to have crept 8 in. causing damage to the protector, which was withdrawn from the trial. The heads of the security bolts in the case of this wheel had become entirely detached from the metal, and the cover was found to be greatly stretched.

OFF SIDE BACK WHEEL.—This ran without incident for 2,674 $\frac{1}{2}$  miles. A  $\frac{3}{4}$  in. flint had penetrated the cover at one

of the grooves at the 707th mile, but did not enter the protector. The hole thus formed gradually enlarged until twenty miles from the motor house it was approximately  $\frac{3}{4}$  in. in diameter. On arrival at the motor house the hole measured 6 $\frac{1}{4}$  in. long by 1 $\frac{1}{2}$  in. mean width. The protector was exposed, the tyre remaining inflated. An 875 mm. by 105 mm. Dunlop grooved tyre was fitted, which completed the trial.

NEAR SIDE FRONT.—This ran without incident.

OFF SIDE FRONT.—This ran without incident.

The 1,001 miles run upon the track were covered at an average speed of 31.23 m.p.h.

A resiliometer test was made of an 875 mm. by 105 mm. Dunlop cover (grooved), fitted first with the protector, and secondly without. In both tests a 40 lb. weight was allowed to drop from a height of twenty-four inches on to the tyre, and the amount of yield and return was measured. The tyre in each case was pumped up to a pressure of 60 lbs. per square inch. The average results of the tests were as follows:

	Yield.	Return.
With Atlas tyre protector ...	1 15-32 in.	14 $\frac{7}{8}$ in.
Without Atlas tyre protector...	1 $\frac{1}{2}$ in.	16 $\frac{1}{2}$ in.

The temperature of the exterior of the covers was estimated by hand from time to time, and was not found to be excessively high.

Throughout the 4,000 miles no puncture of any of the air tubes occurred.

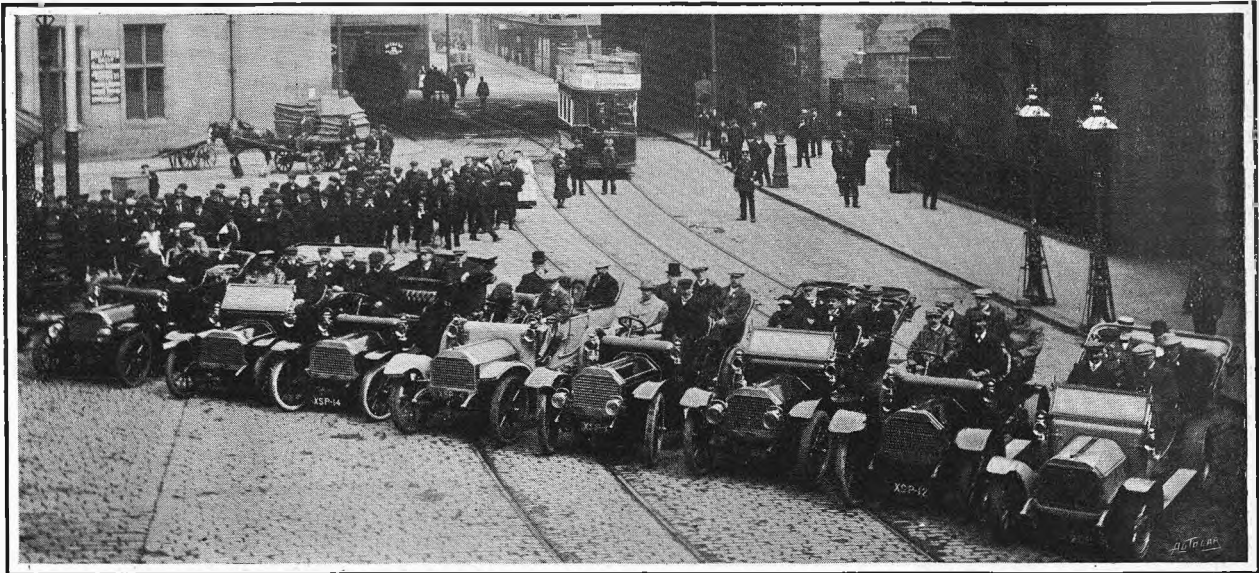
The weather was wet during the whole of the trial, and the roads correspondingly heavy.

FRANCIS OF TECK, Chairman.

MERVYN O'GORMAN, Chairman  
of Technical Committee.

J. W. ORDE, Secretary.

July 5th, 1909.



**THE WATERWORKS INSPECTION.** In most Scottish towns and cities having their own water supply there is an annual inspection of the works by the Town Council. The accompanying photograph shows the Paisley Town Council on eight Arrol-Johnston cars ready to start on the inspection of the town's reservoirs situated among the hills above Largs.

The Daimler Motor Co. advise us that the period of acceptance of their challenge, backed by a stake of £250 against a like amount, to any motor manufacturer, expired on July 5th, and no acceptors have come forward. It will be remembered that the challenge was issued in answer to the various criticisms which had been directed against the introduction of the sliding valve engine which the Daimler Co. have adopted as standard practice. The result of the

recent searching test by the R.A.C. has been thoroughly confirmed by the manner in which the engine has acquitted itself in various hill-climbing competitions since. The announcement which was made some little time ago that the Daimler Co. intended making a 15 h.p. model next season has, we understand, called forth from prospective buyers shoals of enquiries for further particulars, which it is considered fully justify the company in their action.

## On the Track. By H. C. Lafone.

THE Brooklands Club management scored a triumph last Saturday afternoon, when the Berkshire, Kent, and West Surrey Automobile Clubs held a joint meeting on the track. It may seem odd to say that a triumph was scored by people who had practically nothing to do with the afternoon's proceedings, but the statement is true for all that. The fact was that for the first time the arrangements were not in the hands of the B.A.R.C. officials, and their honour and glory were retrospective, for old *habitues* of the course at once appreciated when watching Saturday's events how much patience and practice must have been needed before the home club could have brought its conduct of race meetings to the state of perfection now regarded as a matter of course. The officials of the three visiting clubs worked hard and well, but I expect they were quite ready for bed when the day was done. So smoothly do the big meetings go nowadays that a spectator is beguiled into thinking that their carrying through must be a simple enough matter; it is only when the new hand has a try that he finds out his mistake. I congratulate Mr. Kenyon, of the Kent A.C., on all his hard work and on the success which attended it, but I take off my hat to Major Lloyd and his merry men. Some of the handicapping on Saturday made me rub my eyes a bit. For instance, in the first event on the card I saw: "Mr. O. S. Thompson (6.9 h.p. Austin), scratch; Mr. H. C. Harrison (8 h.p. Rover), 2m. 25s." Well, well, thought I, how careless these printers are; of course, 6.9 h.p. ought to have been 36.9 h.p., Pobble's rating, for that would be something like the right time allowance for the old veteran to give an 8 h.p. Rover in a five miles race. But not at all. Out came the little baby Austin to bring up the tail of a forlorn hope. Naturally, the Rover waltzed home, and the Austin did very well to pass the 8.9 h.p. De Dion engined Dennis before the winning post was reached.

The Kent Club's Cup Handicap (say this fast half a dozen times) finally started from the finishing line. I say finally because it took a long time to persuade Mr. S. A'Court that he really ought not to go from the pond when all the others were patiently waiting opposite the judge's box. However, it was quite immaterial to Mr. A'Court where he started from, and he won easily on his 12.1 h.p. Berliet by 200 yards from Mr. W. B. Secretan's 15.8 h.p. Brooks and Woollan. The same driver and car were successful in the Junior Hill-climb, for cars of under 16 h.p. by R.A.C. rating. In fact, the Berliet, which climbed extremely well, was the only car to tackle successfully the 1 in 4 gradient.

Miss Muriel Thompson, driving "Pobble," performed excellently in the "Tilting at the Ring Competition," and was the only driver to collect five rings.

The race for the Herkomer medal (16 h.p. and over) went to Mr. J. F. C. Kimber's 20.7 h.p. Clément-Talbot, which showed a nice turn of speed in this event, and also won the Senior Hill-climb Handicap, in which Miss Thompson on "Pobble" did fastest time.

The Inter-club Team Trophy Race went easily to the Berkshire A.C., who were represented by Pobble and Mr. A. R. V. Garnett's 18.8 h.p. Straker-Squire, the two fastest cars at the meeting.

In the Appearance Competition Mrs. Florence Hippisley's Alldays and Onions took the palm.

It was a pleasant little meeting, which, despite comparatively low speeds, seemed to give a lot of enjoyment to the competitors and their friends.

Just a word about the Bianchi incident at the last race meeting proper. Last week I studiously refrained from giving my opinion, one way or the other, concerning the rights and wrongs of the case. It will be remembered that the Bianchi in the race for the Montagu Cup, after winning by a mile, turned round on the track and drove back into the paddock by the exit gate. There has been a deal of rather premature criticism of the stewards for not immediately disqualifying the Bianchi's driver. Now let me mention that the rules for a driver's conduct after he has passed the winning post are embodied in the supplementary regulations of the Racing Club. Every entrant subjects himself to be bound by these regulations, and any breach of them renders him liable to disqualification. Mark those words "liable to." For stewards, in the thick of a race meeting, to decide an important point of this kind at a moment's notice, and to inflict the *maximum* penalty without mature consideration, would, in my opinion, be wrong. The stewards were not bound to disqualify; they were *empowered* to do so—quite a different thing. It may interest my readers to know that the stewards are still debating the question both in its bearing on this particular case and as it affects the racing generally. It will be time enough for us to try and teach the stewards their business when we are told exactly what their final decision is. In the meanwhile some people might remember that silence is one of the precious metals!

Entries are beginning to come in for the August meeting, and I am glad to be able to assure my readers that the two points criticised by me last week in connection with the June meeting are to be put right. The official caterers have been "told off" properly for their inadequate service on June 30th, and—more important still—the Byfleet Road entrance arrangements are being duplicated. That is to say, there will in future be two entrances from the Byfleet Road and four entrance gates on to the track. Inside the B.A.R.C.'s grounds there will be, between the two main gates, room for cars to stand without their having to form a *queue* in the public road. Between each race all cars waiting outside will be admitted.



Mr. G. M. Jackson's 15 h.p. Napier climbing the Cataract Hill, a mile from Launceston, Tasmania. It is believed to be the first time a motor car has climbed this hill, which is recognised as one of the worst in point of view of both gradient and surface in the island.

# The International League of Touring Associations.

## The Opening Meeting, the Dinner, and the Commencement of the Tour.

THE eleventh Congress of the Ligue Internationale des Associations Touristes was held at the Hotel Great Central on July 7th, 8th, and 9th. Thirty-seven delegates attended, representing Germany, Austria, Belgium, Denmark, Spain, Finland, France, Luxembourg, Holland, Russia, Sweden, Switzerland, United States, and Great Britain. The League is now one of the largest and most powerful non-political federations in the world, with a steadily increasing membership which already numbers considerably over half a million. Its objects are the safeguarding in all countries of the interests of the tourist, more particularly the users of cycles and motor cars.

The delegates were welcomed by Mr. Joynson-Hicks, M.P. (chairman of the Motor Union), who, together with Earl Russell, Mr. C. H. Dodd, Captain L. A. Kingston, and Mr. Rees Jeffreys, represented the Motor Union. Following the reception, the delegates were entertained at luncheon by the Motor Union.

In proposing the health of the King and of the

The use of similar conventional signs in the guide books of the various associated clubs, which would allow a foreigner not acquainted with the language to understand the references in the handbooks.

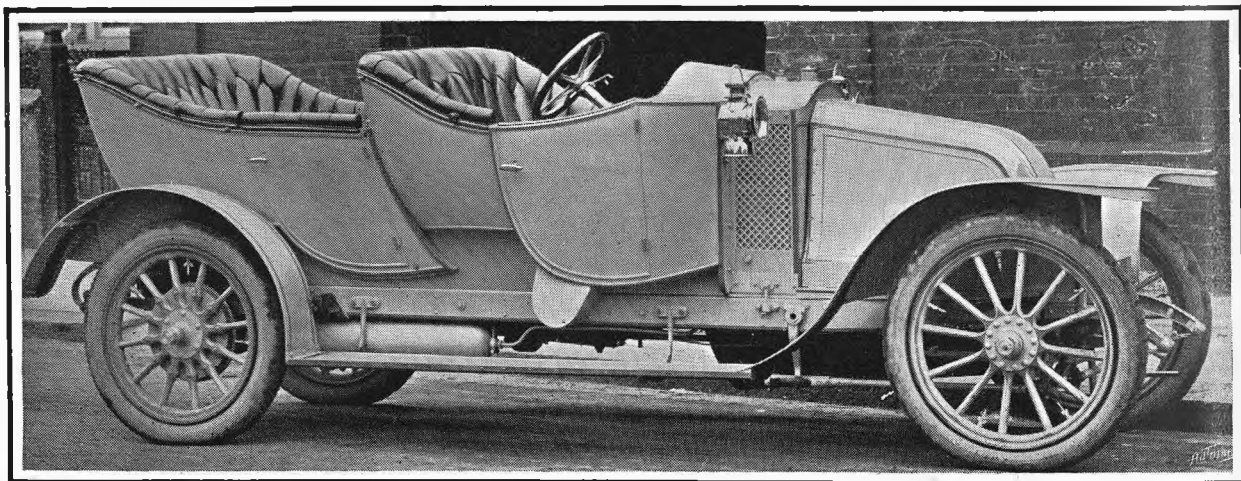
In view of the high customs duties levied on aeronauts who have the misfortune to land in France, representations are to be made by the General Committee to the French Government suggesting that a triptyque system similar to the one at present in use for automobiles should be granted.

Reports on the coming adoption of the customs triptyques for automobiles by Sweden and Norway were received, and steps taken to obtain similar facilities in Portugal.

Representations are to be made by the General Committee to the Swiss Government, strongly objecting to the proposed law rendering it necessary to affix a registering maximum speed indicator to every car used in that country.

The Motor Union reported the steps taken to obtain from the Treasury the right of free entry of cars of foreigners and colonials into England for a limited stay. The Congress decided to forward a letter to the Chancellor of the Exchequer in support of this matter.

Captain L. A. Kingston, chairman of the Foreign Touring Committee of the Motor Union, was elected to the Executive Committee which will administer the



*Mr. J. Keele's low-built 1909 20-30 h.p. Renault, fitted with a slanting steering column, aluminium fittings, and a Renault self-starter. The body fitted was specially built by Messrs. Hewer's Car Bodies Ltd., Coventry, in accordance with Mr. Keele's own ideas. The seats are low, with high side doors. The back part of the body can be easily removed, and a sloping toolbox substituted, transforming the car into a handsome two-seater.*

sovereigns and rulers of the countries represented by the League, Mr. Joynson-Hicks extended a hearty welcome to the delegates. Touring, he said, drew nations together, and if it were desirable that the nations of Europe should live together as one friendly family, it was also desirable that the facilities for foreign travel should be extended. Last week a deputation from the Motor Union waited on the Chancellor of the Exchequer with a view to securing for foreign visitors to this country exemption from the duties payable on their motor cars. He was pleased to say that the Chancellor had promised that he would use his best endeavours to make an arrangement of this character. Mr. Joynson-Hicks hoped that this would bring an increasing number of foreign motorists to this country.

The business of the Congress then proceeded. The chief points considered at this and subsequent sittings were:

The drawing up of a special membership ticket for all members of the League, which should be acceptable to the post offices of all foreign Governments, in order to facilitate the delivery of registered letters or the payment of money orders to members when travelling abroad.

affairs of the League during 1909-10, and M. Pos (Holland) was appointed secretary. Various matters connected with touring by water were discussed. It was resolved that each of the constituent associations should endeavour to secure increased facilities for touring on the rivers and waterways of their respective countries and assist the development of touring by water. It was believed that, with increased facilities, touring by motor boat would become popular.

It was resolved that the Annual Congress for 1910 should be held at Brussels.

At the conclusion of the Congress a vote of thanks was accorded to the Motor Union for the manner in which the arrangements had been carried out. A resolution was also passed thanking Mr. Rees Jeffreys (secretary to the Motor Union) for his enthusiastic work on behalf of the League.

### The Official Tour.

The tour, made in association with the League, began last Saturday (July 10th) with the journey from London to Oxford by rail and road, certain of the party detouring at Taplow for a motor

boat excursion up the Thames. But the tour itself was practically heralded by a banquet offered to the delegates by the Motor Union of Great Britain and Ireland in the Wharncliffe Rooms, Hotel Great Central. A number of the delegates and members of the Union were present, the chair being taken by the automobilists' Parliamentary champion, Mr. W. Joynson-Hicks, M.P. Mr. Hicks was supported by a number of well-known automobilists. After the usual loyal toasts, Mr. Hicks proposed "Success to the League," and coupled with the toast the name of Mons. H. Colard, the president of the Belgian Touring Club. Mr. Joynson-Hicks dwelt at some length upon the excellent and valuable work done by the League in the best interests of motorists and others touring abroad, indicating the freedom from taxation fees enjoyed by those who toured under proper auspices. It was, he said, mainly by the result of the efforts of the leagued organisations that travelling on the Continent had been simplified. On behalf of the membership of the Motor Union he extended a hearty welcome to the delegates visiting England, and hoped that the Motor Union would succeed in making their trip in every way a pleasant one.

M. Colard replied in felicitous and suitable terms.

The toast of "The Delegates to the Congress" was proposed by M. G. A. Pos, the vice-president of the Touring Club of Holland, and president of the Congress, and eloquently responded to by Earl Russell. This was followed by an interesting speech from Mr. Powell Evans, the chairman of the Touring Information Board of the American Association, and president

of the Automobile Club of Philadelphia. Mr. Evans spoke in very high terms of the effect of the work of the League, and of efforts to promote its ends in the States.

Amongst those present were Mr. and Mrs. Staplee Firth, Messrs. Massac Buist, C. S. Freeston, N. Webb, A. A. McCall, C. H. Dodd, W. Ballin Hinde, C. McWhirter, and many others.

On Saturday last, as already suggested, the foreign delegates, with the members of the M.U. as guides, philosophers, and friends, moved on Oxford per train and road, those following the latter course having an opportunity of seeing Buckinghamshire and Oxfordshire scenery at its best. The party descended at the Randolph (headquarters), the Clarendon, and the Roebuck Hotels. At the Randolph in the evening the tourists were received by the Mayor of Oxford (Councillor E. A. Beevors, L.R.C.P., M.R.C.S., etc., etc.), with whom was the Mayoress, and were the guests of the Oxford and District Automobile Club—a staunch Motor Union club. Instrumental and vocal music went towards the pleasure of the evening. The Mayor welcomed the guests in a well-chosen speech, and M. Pos and Earl Russell replied. Mr. Claud Rippon, the hon. secretary, also spoke, and sketched the programme of the morrow, in which members of the Oxford and District A.C. put themselves and their cars at the disposal of their guests, in order that they should visit and appreciate the lions of the ancient university city.

Here we leave them on the threshold of their tour till next week.

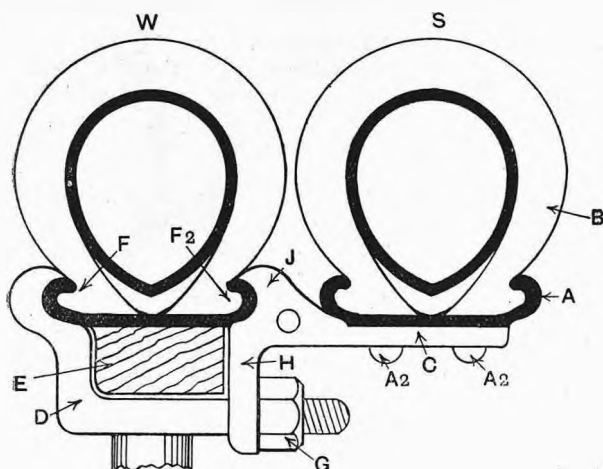
## The Hall Spare Wheel and Non-skid.

THE Stepney spare motor wheel has so completely proved its usefulness and adaptability that it is not surprising to find other Richmonds in the field. One of these—the Hall—was under demonstration before a small gathering of press representatives last week, and greatly impressed all the practical people by its simplicity, and ease and rapidity of attachment. It is, as its name suggests, the invention of Mr. John H. Hall, of South Street, Moor, Sheffield, and was

provoked from that gentleman's inner consciousness by the desire for a readily attachable and detachable non-skid, Mr. Hall jibbing at the costliness of running metal studded non-skidding covers in dry weather. It was only after devising the arrangement as a non-skid that its value and simplicity as a spare wheel dawned upon him. By the accompanying diagrammatic section the device and its method of attachment to the car wheel can be easily grasped.

The ready inflated spare tyre is carried in a rim A, to which are attached four angular brackets at equal distances on the inner periphery of the rim. These brackets are formed with a vertical face to butt up against the flank of the wooden felloe, and a nosed piece or beak to embrace the outer overturned edge of the rim holding the wheel tyre W. The four clips D, which have a similar nosed piece or beak to embrace this inside edge of the car rim, pass under the wooden felloe as shown, and have the angular brackets C bolted to them as shown. The nuts G are Terry's spring lock-nuts, which no amount of vibration will shake loose.

The Hall spare wheel takes but a few minutes to attach or detach, and a small child can do it. At present we are without practical experience of the Hall wheel, but we are assured that it has been subjected to very severe and lengthy tests, out of which it has emerged triumphantly. We are also informed that it has proved successful before the Controller General of the Patent Office, for the grant of the patent was severely contested before that official last month, without success. The Controller said that he had read all the declarations and examined all the specifications. The applicant had confined his claims to what was new, and he should grant the patent.



Hall's spare wheel in position shown in section.

- |  |  |
|--|--|
| A, spare rim carrying spare tyre                       | G, Terry's spring lock nuts securing spare wheel |
| B, inflated spare tyre                                 | H, cheek of angular bracket                      |
| C, angular brackets riveted to under face of spare rim | J, hook or beak of angular bracket               |
| D, rim clips   | S, tyre  |
| E, felloe  | W, car wheel tyre                                |
| F, car wheel rim                                       |  |

## Testing a 12-14 h.p. Argyll.

### An Officially Observed Run over the Scottish Trials Course.

**A**FTER having completed five days' runs in the recent Scottish Reliability Trial the 12-14 h.p. Argyll was compelled to retire on the last day when there remained but about ninety-six miles to go to finish the course. Up to this point the car had a clean sheet in every respect, and had done well in the hill-climbs. The immediate cause of the car's retirement was a bent connecting rod, which is attributed to one of the spring washers under the connecting rod big end bolts breaking. Thus play was set up in the bearing and sheared the bolt, the connecting rod came adrift and was badly bent.

Common report—ever a lying jade—attributed the failure of the car to all sorts of causes, and so many erroneous reports were current that Argylls, Ltd., determined to settle the matter by sending the same car over the course again under official observation, and arrangements to that end were entered into with the Scottish Automobile Club.

#### The Car.

The car entered for the trial was a standard 12-14 h.p. Argyll, four-cylinder engine, 80 mm. bore and 100 mm. stroke, double system ignition—accumulator coil and magneto—three-speed gear giving speeds of 6.85, 14.3, and 23 miles per hour at an engine speed of 1,100 revolutions per minute direct drive on third speed, road wheels 760 × 90 mm. Dunlop tyres, plain treads on front wheels and steel-studded non-skids on back. The unladen weight with standard side entrance body, having four ample seats, was 19 cwt. 24 lbs.; laden weight (passengers and luggage), 25 cwt. 2 qrs. 24 lbs. A detailed description of the car illustrated by drawings appears on pages 82, 83, and 84, but the above details are given as they bear directly upon the trial.

#### The Trial.

On Monday morning, July 5th, there assembled at the Argyll depot in Mitchell Street, Glasgow, whence the trial started, Messrs. Sibbald (driver), King (mechanic), Major William Reid (official observer and member of the S.A.C. Trials Committee), and J. G. Harper (*The Autocar*), who made up the crew on the car. Mr. Robert J. Smith, the ever careful and conscientious secretary, turned out to give a watchful eye to the start and a few final instructions, whilst Mr. J. S. Mathew, the general manager of Argylls, Ltd., stood by quietly confident as to the result of the trial. After draining the petrol from the car, the tank was refilled—it took fourteen gallons—and a note made of the quantity of lubricating oil, grease, and spare petrol carried.

A start was made just before eight o'clock in very threatening weather, rain falling at frequent intervals. A halt was made to put the car on a corporation weigh-bridge, after which we proceeded for Blairgowrie and

the luncheon stop. The route took us *via* Fintry, the hill being ascended from the untimed side, so that we had an opportunity of studying our last timed hill-climb as we descended. We were soon to test the hill-climbing powers of our car, for the ascent of the famous Amulree Hill had to be negotiated in the morning. Fortunately for us, the weather cleared in the first forty miles, and the sun broke through, and as Amulree came in sight the sun shining on the wet surface gave it more the appearance of a waterfall than a road. Although the surface was worse than it was at the time of the trials proper, the bend having been cut up somewhat, the Argyll made a most excellent ascent. The descent to the Taymouth Road was a most excellent brake test, and the sharp turns both on the climb up and the drop down again served to demonstrate the ample steering lock of the car, and to prove its capa-



The 12-14 h.p. Argyll car which has lately successfully completed the course of the Scottish A.C. Trial under official observation.

bilities on a difficult mountain road.

In the afternoon we made our first timed hill-climb—Cairn-o'-Mount—which was taken in very good time. Here, again, the road surface was very rough, and the long descent kept the springs very busy indeed. In due course Aberdeen was reached, and the car placed in a lock up specially reserved at Hamilton's garage—a very excellent establishment. The thirty minutes' allowance for filling tanks, lubricating, etc., was taken on arrival, and during this time a little water was put into the radiator for the first and last time. Four tins of Shell spirit were put into the tank, and about three pints of Vacuum A oil into the crank chamber. Before leaving the garage the whole crew were weighed individually and with their baggage.

During the early part of the day there was somewhat of a grinding noise proceeding from beneath the front footboard, and this we attributed to a little roughness of the plate clutch, as in the course of our 181 miles journey it had so improved as to have almost eliminated itself.

On Tuesday we left Aberdeen for Inverness by a route having a general westward trend, but making long



tacks north and south, and covering in all 180½ miles according to the route book instructions, but we added to this about ten miles by making an accidental detour. Enquiries of a fine old Highlander—whom one could almost see translating from Gaelic into English—led to retracing our steps by a short cut to the point of our departure from the correct route. We eventually crossed our previous tracks twice, and finally brought up at Foyers, and thereafter followed the south bank of the Caledonian Canal to Inverness. Shortly after leaving Aberdeen a disquieting clanking arose on the offside of the car, and it was discovered that the friction driving mechanism for the speedometer had come adrift. Fortunately it was clear of everything, and by stooping low down whilst going slowly the driver hauled the loose end inboard and secured it in the spare tyres. The hill-climb to-day was on Clash Hill, which was ascended in excellent time, the engine pulling very strongly on second speed. To-day all the noise which we put down to the clutch had disappeared, but towards the end of the day the bevel driving spindle at the back axle was calling for a little oil. This was the only bearing which showed any tendency to run dry, and was easily provided for by a few spots of oil as the driver went round generally with the oilcan. The weather was dreadfully wet and cold—in fact, from this day onward we frequently saw snow up in the mountain crevasses. In spite of the bad weather the Argyll held the road splendidly, and came through in good time. At Inverness we put in at Macrae and Dicks' garage, which is without doubt the largest we have ever been in, and is most admirably managed, efficient service being at call all through the twenty-four hours of the day. Here, again, we were provided with a special lock-up coach house, the keys being in the observer's hands all the time, so that the car was actually in the hands of the Club official, Major Reid, throughout the whole trial, as at each stopping place special accommodation was provided. We can only wish that the hotel service in Inverness was as good as the garage service, and thereby hangs a tale.

We left Inverness on Thursday morning for Pitlochry, and as had now become usual instructed the "boots" to call us at an unusually early hour; that call was never made. Fortunately, the writer awoke about the scheduled time, and awaited the knock which never came until a glance at the watch brought him out in extra quick time. Our observer cut the time very fine that morning; so fine, indeed, that he was subjected to the treatment generally known as "pulling his leg" on the point at intervals during the day. At Kinloch Rannoch, where we had a greatly appreciated tea stop, there was a parrot who took a great interest in our observer, and apparently studied his character in a most professional manner, and as a summing up clearly whistled the opening bars of a popular work entitled "Up in the morning's no for me." We left it at that. But to return to our hurried start from Inverness.

The third day's run was a circular tour from Inverness of 173 miles, most of which were covered in a perfect downpour of rain. The feature of the morning's run was the ascent of Little Gruinard Hill, a precipitous ascent which the Argyll tackled in excellent style though the road conditions were very bad. After the luncheon stop at Gairloch Hotel, we experienced our only stop, which was entirely due to traffic. About 1½ miles after leaving the hotel and ascending a narrow mountain road, we met a shepherd leading his pony down the hill. The animal appeared to be quite quiet, but as the car came up to it it suddenly threw

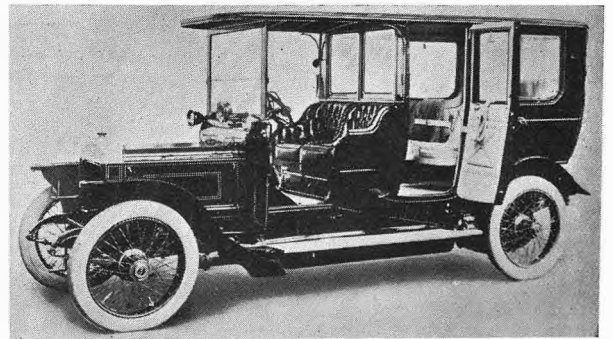
its hindquarters across the front of the car. There was nothing for it but to swing the car to the side of the road, and on doing this the sodden soft soil at the roadside gave way and the car went down into the ditch, its front and back axles resting on ground at the edge of the road. The pony was quiet as a lamb, and stood still after having made its one jump. The shepherd went on, promising to send help. King, the mechanic, went back to the village to procure help, and in the interval the local factor's chief clerk came on the scene. He also went for assistance, and soon returned with half a dozen sturdy men, who, with one mighty lift, put the car back on the road again. As the transverse steering connecting rod had been bent, it was necessary to return to the village blacksmith's to straighten it, and in traversing the mile or so of road the rear front tyre became so strained that it burst within the next thirty miles. This occasioned the first, and only, tyre stop. During the tyre stop at Achnasheen we decided to make that place the tea stop instead of Strathpeffer, but on reaching the latter place the observer ordered the car to go up to the official stopping place, the Ben Wyvis Hotel, and return to the main road again by the route laid down in the book.

The remainder of the journey was covered without incident, and the run successfully concluded at Glasgow on Saturday afternoon.

#### Some Observations on the Trial.

In the first place, we should state that the general running of the car had improved in many respects during the progress of the trial. The general condition, as far as a cursory examination could show, was very good indeed, and the tyres stood up well. The rear brakes were adjusted up one turn each day excepting the last, and beyond this nothing was done, excepting the filling up of the petrol tank and lubricating. The petrol consumption will, we believe, work out at about twenty-three miles per gallon. It is a question for the committee of the S.A.C. to decide whether the incident at Gairloch will militate against the car's non-stop record, but as we are personally convinced that the accident could not possibly have been avoided, we believe this will be allowed.

The official observer, Major W. Reid, carried out his duties in a thorough manner and with perfect fairness, as he allowed nothing to happen which might eventually be brought into question. The car was driven in the ordinary way in which any driver would run it, and the whole has proved a very drastic test for the 12-14 h.p. Argyll car.



*The Daimler car supplied to his Majesty the King of Spain. The car is painted in the Spanish Royal colours, and has the Royal coat of arms emblazoned on each door, the fittings being of brass.*

# The Scottish Trial.

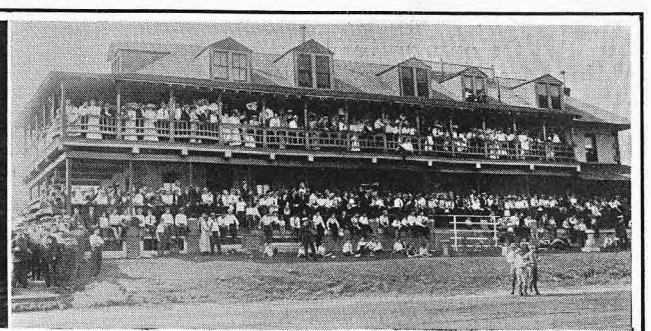
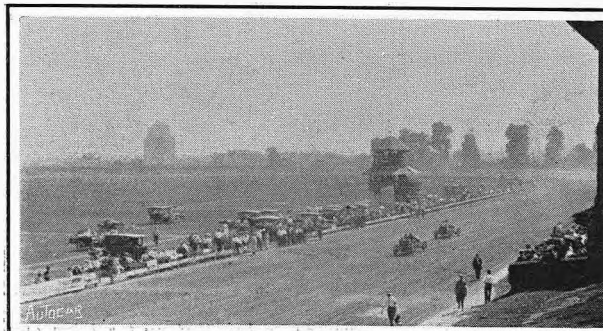
## A Summary of the Marks gained arranged in Order of Merit.

**A**PERUSAL of the following table discloses many interesting points in connection with the markings for the Scottish Trial awards. For instance, the remarkably high efficiency of the small cars is evident from the high percentage of marks gained and their favourable relation to the markings on which the awards in the higher priced classes were made, although the trial was relatively more severe on the little cars than on their larger brethren. Tyre troubles also were significant by their fewness, only four cars exceeding the unpenalised tyre allowance of one hour—the 12 h.p. Clyde 3m., the 10 h.p. Cadillac 20m., the 12 h.p. Chenard-Walcker 28m., and the 20-30 h.p. Austrian Daimler 4m.—an almost negligible amount of time when the aggregate mileage of the fifty-eight cars which figure in the markings list is considered. Starting troubles were nil with two exceptions—the 20 h.p. Bell 3m. and the 20-30 h.p. Austrian Daimler 5m.

In Classes D and E the "runners up" for the gold medal were so close (.4 and .6 of a mark respectively) that special silver medals were awarded them. Incidentally, it may be mentioned that the gold medal is awarded for the highest total of marks in each class, the maximum being 1,000. Bronze medals for best hill-climbing results were also awarded in each class.

The Scottish Cup was awarded to the 38 h.p. Minerva (Knight engine) for the lowest fuel consumption per ton-mile. All the cars qualifying for non-stop certificates are printed in capital letters. G.M., S.M., and B.M. represent respectively gold medal, silver medal, and bronze medal. S.C. signifies Scottish Cup.

Car.	Reliability, Tyres, Starting.	Consump- tion.	Hill- climbs.	Total Marks.	
<b>Class C (£215 to £260).</b>					
10-12 H.P. HUMBER	900	49.7	46.2	995.9	G.M.
14-16 H.P. MIESSE ...	900	43.1	41.6	984.7	
12 h.p. Star	839	50	50	939	B.M.
12-14 h.p. Chambers	772	41.7	19.2	832.9	
10 h.p. Alldays	655	36.9	29.4	721.3	
12 h.p. Chenard- Walcker	573	42.5	16.8	632.3	
10-12 h.p. Martini ...	108	36.8	23.7	168.5	
<b>Class D (£260 to £325).</b>					
14-16 H.P. ARGYLL ...	900	38.8	47.1	985.9	G.M.
15 H.P. STAR	900	36.4	49.1	985.5	S.M. & B.M.
15 H.P. MASS	900	35.2	48.9	984.1	
16 h.p. Bell	894	50	39.5	983.5	
16 H.P. SINGER	900	43.8	39.3	983.1	
20-30 H.P. CADILLAC	900	30.2	45.2	975.4	
15 H.P. STRAKER- SQUIRE	900	32.3	40.5	972.8	
12-14 h.p. Gladiator	890	35.5	29.8	955.3	
14 h.p. Alldays	814	39.1	25.9	879	
12-16 h.p. F.L.	805	36.5	22.1	863.6	
10-14 h.p. Ariès	734	34.7	4.3	773	
16 h.p. Vinot	587	37.4	32.5	656.9	
<b>Class E (£325 to £425).</b>					
16 H.P. HUMBER	900	47.2	47.7	994.9	G.M. & B.M.
20 H.P. VAUXHALL ...	900	50	44.3	994.3	S.M.
12 H.P. TALBOT	900	43	29.5	972.5	
20 H.P. LANCIA	900	32.1	33.5	965.6	
15 H.P. ROVER	900	39.9	24.1	964	
20 h.p. Bell	897	37.4	26.7	961.1	
20 h.p. Standard	885	33.2	34.8	953	
16-20 h.p. Stella	891	35.2	23.5	949.7	
14-18 h.p. Sunbeam	860	39.9	42.6	942.5	
15 h.p. Deasy	810	42.7	29.1	881.8	
18-22 h.p. Armstrong- Whitworth	782	46.7	33.8	862.5	
20 h.p. Coltman	758	34.8	36	828.8	
"4in." Darracq	699	35.5	26.7	762.2	
20 h.p. Rapid	122	30.7	22.6	175.3	
<b>Class F (£425 to £525).</b>					
24 H.P. VAUXHALL ...	898	50	47.1	995.1	G.M. & B.M.
14-20 H.P. SUNBEAM	900	36.7	39.3	976	
18 H.P. DE DION ...	900	39.2	30.1	969.3	
30 h.p. Ariel	867	34.2	36.6	937.8	
20 h.p. Sunbeam	813	32.4	32.1	877.5	
20-30 h.p. Austrian Daimler	253	18.4	40.5	311.9	
<b>Class G (£525 to £650).</b>					
30 H.P. ADLER	900	35.2	41.4	976.6	G.M.
24-30 H.P. ALBION ...	900	38.6	30.2	968.8	
20 h.p. Germain	878	18.5	26.6	923.1	
38 H.P. MINERVA ...	622	50	50	722	S.C. & B.M.
40 h.p. Piccard-Pictet	634	26.7	37.1	697.8	
40 h.p. Gladiator	442	28	31.2	501.2	
<b>Class H (over £650).</b>					
50 h.p. Ariel	—	50	50	—	



The motor races at Point Breeze Track, U.S.A., June 26th. The views give a general idea of the track and the grandstand. Point Breeze track is not a specially built motor track but was laid out for horse racing.

## The New 8 h.p. Two-cylinder Humber.

### An Appreciation.

**A**MONGST the small cars shown at Olympia last November was the new 8 h.p. two-cylinder Humber, which received a large amount of favourable comment chiefly on account of detachable wheels and dual ignition being included in the standard equipment. These are two essentials of the modern car, but the 8 h.p. two-cylinder Humber is one of the few small cars so fitted. It was, however, mainly owing to the fact that the firm has of recent years specialised on four-cylinder machines that I looked forward with particular interest to a trial of the new model which had been promised me.

Before dealing with the behaviour of the car on the road a few mechanical details will be of interest. The engine dimensions are 90 by 120 mm., and the two cylinders are cast in one piece. Cooling is on the thermo-syphon system, the radiator being of the rolled tube type. There are two quite separate ignition systems—high-tension magneto and coil-accumulator. A three-way switch is provided, so that the engine may run on the accumulator alone, on the magneto alone, or on both. Of course, the accumulators are only used for starting purposes, practically all the driving being done on the magneto, as the car will run quite slowly on top speed on the latter. The new system of engine lubrication now common to all Humber models was described and illustrated in *The Autocar* of November 21st, 1908. Its chief points are simplicity and the absence of dashboard fittings and pumps, save a small indicator. This indicator consists of a needle passing through the dash and registering on a scale where the driver can easily see it. As long as there is plenty of oil in the crank case the needle remains at the bottom or safe position, but as the supply of oil gradually runs short the needle gradually rises until it reaches the top or danger position, when obviously it is time that additional oil be supplied through the oil filler conveniently placed on the right-hand side of the engine. At first one is apt to forget that the indicator only works when the engine is running, the normal position being at "danger," and this fact may cause needless alarm. The indicator needle goes to its correct position directly the engine is started. The oil consumption is quite reasonable, and during the 500 miles I drove the car the lubrication worked quite satisfactorily, as did everything else.

Another interesting feature of the engine is the carburetter control. This is worked over a quadrant together with the ignition advance and retard, and placed on the steering wheel, according to usual Humber practice. The control is so arranged that when the throttle lever is pulled right back pure air is admitted to the engine. This has an excellent braking effect, and at the same time materially assists in keeping the engine cool. However, the merit does not rest here. As the throttle is fully opened extra air is admitted to the carburetter, and a slight increase of speed is at once noticeable. On hills it is generally not advisable to have the additional air, and under these circumstances, to make the quickest ascent, the throttle lever should be about one inch from the top or just before the opening of the extra air. Even on the level when travelling at good speed it may occasionally be found that the engine will not take the extra air. It depends upon the adjustment

of the carburetter and on the atmospheric temperature.

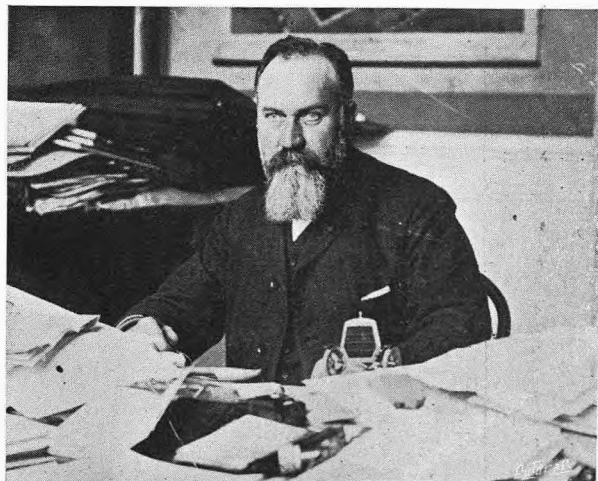
From the engine power is transmitted through a multi-disc metal-to-metal clutch to a three-speed reverse gear, and thence by propeller-shaft to the back axle. Changes of speed are effected by a lever working in a gate. There are the usual two brakes—foot operated propeller-shaft and side lever working bands on the back wheels. Both brakes are very good—in fact, its excellent braking power is a feature of the car. They are both quick and certain in action, and never occasioned the slightest misgiving on any of the long winding hills of North Wales.

The 8 h.p. Humber is only built as a two-seater, and it is to be hoped that it will remain so. There have been many instances of really good small chassis being placed upon the market with two-seated bodies and then shortly afterwards metamorphosed into four-seaters. It does not necessarily follow that a successful two-seated body will prove equally successful with four.

The first week-end the car was jogging about the Warwickshire roads. It proved very easy to handle, and was easily mastered. It possessed an excellent turn of speed and the splendid picking up qualities of a real live small car. From the flexibility point of view it would run a good many four-cylinder cars very close.

The magneto ignition on this particular car was fixed, but the standard arrangement is to have it so that it may be advanced or retarded in the ordinary way. Under these circumstances the control was by one lever only—the throttle on the steering column. The addition of a foot accelerator would be a great improvement that would be appreciated, though, of course, it would add slightly to the cost.

It is quite easy to maintain a 20 m.p.h. average up hill and down dale with the throttle about halfway open. It is, I think, more the exception than the rule to be able to drive a small car of about 8 h.p. at a legal limit gait on a continuous run of 100 miles or more without the throttle being practically full open



*M. Clement, the designer and constructor of the airship which is to be brought to England in August, is a Director of Clement-Talbot Ltd. The "hangar" which "The Daily Mail" is building for this airship is to be situated on Wormwood Scrubbs, hard by the Clement-Talbot Works.*

the whole time. With the 8 h.p. Humber one experiences the satisfaction of having a reserve of power. When really in a hurry and wishing to move, one opens the throttle full and takes in the extra air; the result should satisfy the most critical speed enthusiast.

Being desirous of testing the car's hill-climbing capacities, and generally putting it to a thorough trial, I drove to Holyhead the following week-end. The Holyhead Road *viâ* Shrewsbury, Llangollen, and Bettws affords good opportunities of not only testing a car's behaviour on hills, but also its ability to maintain a high speed without overheating. There are several long flat stretches south of Shrewsbury, and there were never the slightest signs of overheating when travelling fast on top speed on this section or when

ascending long steep hills in North Wales. The hill-climbing powers of the car may be described as excellent. It pulls splendidly on hills on all three speeds, its staying powers on top being very noticeable.

No opportunity occurred of testing the detachable wheels, but I have seen them operated on other cars, and they appear to be quite satisfactory and to give general satisfaction.

With a 7ft. 6in. wheelbase and two comfortable seats, very little fatigue was felt after driving the car continuously for twelve hours. It is undoubtedly easy to drive, rides very well, and from every point of view struck me as being an excellent little car, which will afford the purchaser good value for his money.

C. F. H.



A good idea of the shipping facilities for petrol at Portishead may be obtained from the above illustrations, which show one of the Company's tank steamers at her moorings.

## Importation of Petrol at Portishead.

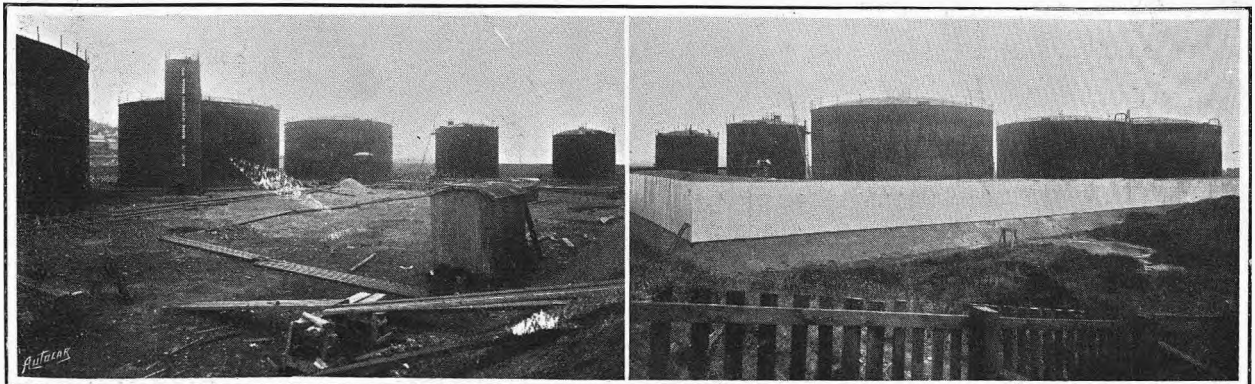
### An Installation for the Accommodation of an Enormous Supply.

**E**LABORATE provision has been made at Portishead for the importation and storage of motor spirit. This is a new enterprise developed at Bristol docks, which are to serve as a centre for the distribution of supplies to the West of England, the Midlands, and South Wales.

The first cargo of motor spirit shipped to the West of England was brought on the 1st June by the ss. *Washington*, from Singapore, with nearly 1½ million gallons; and this has been discharged into the tanks of the British Petroleum Company, an elaborate installation having just been completed at the dock. The Asiatic Petroleum Company sent the shipment, for which the British Petroleum Company are the distributing organisation.

Portishead now has accommodation for upwards of 10,000 tons of Shell spirit, which can be railed in tank cars to depots, or distributed in barrels or two-gallons cans. There are five tanks on the south side of the dock—one with a capacity of 4,500 tons, two with a capacity of 2,000 tons each, another holding 750 tons, and another to hold 250 tons. The tanks are constructed and fitted on the most approved plan, providing for every contingency; and there are only two other similar installations in the country—one at Barrow and another at Thames Haven.

Everyone realises that a very elaborate and complete system of distribution is required before petrol can be put on the market, but few know what special arrangements have to be made for shipment and storage.



Two views of the storage tanks at Portishead.

## Police Traps in North Wales.

Some of the Persecutors ashamed of their Doings. Motorists Timed by the Village Clock.

THE police and magistrates of Merionethshire, as already reported, appear to be making a dead set against motorists. At a recent sitting of the police court at Corwen a large number of motorists were fined for the technical offence of merely exceeding an arbitrary speed limit over a measured distance of six miles. It is not suggested that there is any danger connected with driving over the road upon which the trap is set; indeed one of the members of the Standing Joint Committee appears to be rather ashamed that motorists are trapped on such a safe stretch of road. He thought it would be fairer to set the traps near approaches to urban districts, as it appeared to him that the traps were not set in places which might be considered fair to motorists.

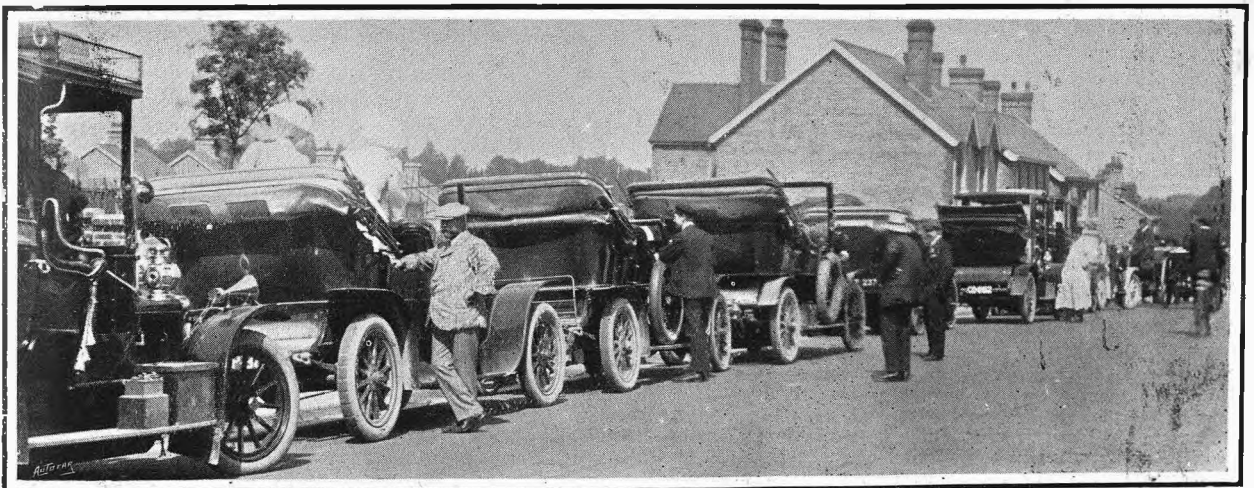
The object of the persecution is plain—to collect fines towards the relief of the local rates. This aspect of the matter was impliedly acknowledged to be the most important one in the eyes of some of the members of the Joint Committee, for in the course of a discussion on the question of purchasing stop watches for the police one of the members stated that as the fines imposed on motorists during the past quarter amounted to £163, and £85 had been imposed in fines and fees at Corwen the previous Friday, he thought the county could well afford to supply the police with stop watches.

There are several elements of unfairness in the methods of the police. The timing is very crude, as it is done by means of the constables' own pocket instruments, which by courtesy are styled watches, and in the police court proceedings mention was made of the village clock, the accuracy of which one of the defendants ventured to question. In one case we are informed by a correspondent who was present in court that a request was made for the production of the policemen's watches, and it was found that one of these instruments was nine minutes slow. Now, assuming that in the timing of motor cars this watch had been put right to agree with the others, it is clear that at the close of a day it would register unfairly

against the motorists, supposing that the watch behaved as erratically on the road as it did in court. The method of timing the motorists appears to have been that the constables at the beginning of the trap noted the time which a car entered the measured distance, and a constable six miles distant noted the time at which the car emerged from the trap. The discrepancy which was noted in the watches in court would account for the fact that those motorists who were caught late in the day were charged with higher speeds than those who were caught earlier.

One of the cases which came before the court had a pathetic interest. It was that of a paid driver named Lewis, who was ordered to pay £6 10s. 6d. He said (according to the report in a local paper) he was only a driver in receipt of 30s. a week, and it was impossible for him to pay. He would rather go to prison. This apparently shamed the chairman of the bench, who advised him to think the matter over, and the magistrates would favourably consider any application for time to pay. The defendant said there was no good further considering the matter; he had decided to go to prison in default. A gentleman in court who did not know Lewis offered to pay half the amount of the fine, but defendant objected. He said if he had done wrong wilfully he would make an effort to get the amount, but he had not, and asked to be sent to prison. We are informed that another gentleman in court offered to contribute a guinea towards the fine, though this fact is not recorded in the local newspaper report referred to. We have no information as to whether the defendant was sent to prison or not.

The bench may well seek to obtain apologists for their high handed administration of justice, for we find in a local paper a column and a half of leading matter devoted to nothing else but an attempt to excuse the magistrates in what they have done and are doing in the persecution of motorists. The only comment we can make upon this is to quote the well-known proverb "He who excuses accuses."



Some of the cars getting into line for the start of the Sussex A.C.'s balloon chase.

## Difficulties of Identification.

### Impossibility of Proving Previous Convictions for Exceeding the Speed Limit.

ON Saturday last at Guildford the adjourned summons against Lionel Walker Birch Martin for driving a motor car at a speed exceeding the legal limit was heard. The summons had from time to time since November last been adjourned by the court, as the defendant, acting under legal advice, declined to personally attend.

In the meanwhile a writ of *certiorari* and prohibition had been obtained against the magistrates sitting at Richmond, who had taken the course of issuing a warrant for the arrest of the defendant, who declined under similar circumstances to attend that court respecting a summons for driving at a speed exceeding twenty miles an hour.

Superintendent Jennings deposed to his seeing the defendant at the time the offence was committed, and also stated that he was present at Richmond when a Mr. Lionel Walker Birch Martin was fined £20 and costs. Station Sergeant Baker proved a conviction at Barnet on 5th June, 1907, against a Mr. Lionel W. B. Martin, and stated that the defendant in that case held a licence similar to the licence held by the present defendant. Henry Boswell, of the Hants Constabulary, also deposed as to a conviction of a Mr. Lionel W. B. Martin. Inspector Bristow also deposed as to two convictions against a person of a similar name.

Lord Tiverton (instructed by Messrs. Kenneth Brown and Co.) objected to the whole of this evidence on the ground that it did not in any way connect the present defendant with the evidence that had been given as to previous convictions. He also objected to the evidence as to what the licence of the person who had been pre-

viously convicted contained in that the police had failed to prove any evidence that the original was not in existence, nor had they in any way been able to establish any identification between the present defendant and the person who had been previously convicted. Counsel supported his arguments by a number of cases and Acts of Parliament. Eventually the bench decided that by a majority they were not satisfied that the former convictions had been proved, and they could only therefore treat the matter as being the first offence against the defendant, upon which a fine of £10 and costs was inflicted.

It should be noted here that this entails no endorsement of the defendant's licence.

Previous references to this case have appeared in *The Autocar* of June 26th (p. 929) and May 22nd (p. 719). The proceedings in connection with the matter have established the difficulty that the police have in proving previous convictions against a defendant for the merely technical offence of exceeding the speed limit, provided the defendant will refrain from putting in a personal appearance in answer to the summons, and will allow himself to be represented in court by his legal adviser. The law does not require a personal attendance in such cases.

We are informed that the costs which have been allowed by the court on taxation against the Richmond magistrates in respect of having issued an illegal warrant against Mr. Martin amount to £99 17s. The only pity is that the money should have to come out of the pockets of the ratepayers and not be paid by the police themselves.

## Brooklands Automobile Racing Club.

### Events for the August Meeting.

The following races will be run on Saturday, July 31st, and August Bank Holiday, August 2nd, 1909:

**THE SECOND GRAND PRIX RACE.** (The entrant of the winner and of the second car to receive cups.)—For cars of R.A.C. rating of 60 or under. Napier "Mercury" barred.

**THE AUGUST JUNIOR HANDICAP.** (The entrant of the winner and of the second and third cars to receive cups.)—For cars of R.A.C. rating of 25 or under.

**THE AUGUST SENIOR HANDICAP.** (The entrant of the winner and of the second and third cars to receive cups.)—For cars of R.A.C. rating of 18 and over.

**THE JULY JUNIOR PRIVATE COMPETITORS' HANDICAP.** (The entrant of the winner and of the second and third cars to receive cups.)—For cars of R.A.C. rating of 25 and under. To be entered and driven by private competitors of the Brooklands Automobile Racing Club.

**THE JULY SENIOR PRIVATE COMPETITORS' HANDICAP.** (The entrant of the winner and of the second and third cars to receive cups.)—For cars of R.A.C. rating of 18 and over. To be entered and driven by private competitors of the Brooklands Automobile Racing Club.

**THE SECOND RACE FOR THE O'GORMAN TROPHY.** A challenge trophy presented by Mr. Mervyn O'Gorman.—(For cars, whatever their country of origin, propelled by means of internal combustion engines only, of R.A.C. rating of not more than 21 and of a stroke not exceeding 121 mm., but without limitation as to the kind of fuel, the method of its delivery to the working parts, or the use of auxiliaries such as compressed oxygen, acetylene, or others. Each vehicle to be fitted with two seats side by side. The holder of the trophy shall have his name and the date of the

victory engraved on the base of the trophy, and shall have the right to house the trophy with the Brooklands Automobile Racing Club or with the Royal Automobile Club. Distance, about 27 miles.

**RELAY RACE.** (The entrants of the winning and of the second team to receive cups.)—For teams of two cars, the combined R.A.C. rating of which does not exceed 60. Two circuits of the course, from finishing line to finishing line, will be made; one car of each team to start for the first circuit. The second car of each team will be stationed on the finishing line, the driver being in his driving seat. The driver of the first car of each team, on completing his circuit, will hand to the driver of the second car of that team a voucher, on receipt of which the second car will start and complete the race—about 5 miles.

**THE SPRINT RACE.** Handicap. (The entrant of the winner and of the second car to receive cups.)—For cars which have been timed to do flying laps at Brooklands race meetings at over 80 miles per hour during 1909. Distance, about 2 miles.

Entries close on July 21st at noon for the whole of the above races.

**AUGUST WINNERS' HANDICAP.** (The entrant of the winner and of the second and third to receive cups.)—This event will be run at the end of the meeting, and winners of all events, except the Second O'Gorman Trophy, will be eligible to compete. Distance, about 5½ miles.

"Motor Trips from London at a Glance." This is a very useful little book for motorists unacquainted with the country surrounding London, and who are desirous of making daily or week-end jaunts by circular routes from the Metropolis. It is published at 1s. by Messrs. T. M. Middleton and Co., 37-39, Essex Street, Strand, London, E.C.

## On the Road.

(Concluded from page 64.)

### East Anglia.

From Thetford to Norwich the road is a famous one, and well deserves its fame, whether it lies between well-kept fields or hedgeless lies open to the winds across the wide Watton Common. But, for all its excellence, it is distinctly dull, save for the curious town and towers of Wymondham, and it was good to reach the crooked tram-ridden streets of Norwich and put away the car in the biggest garage in England that Messrs. Mann and Egerton have built in the centre of the town. I had heard tales of it before, but I had not believed them, so now I take pleasure in recording that not only is it the finest motor place I have seen, but also that it is one of the most sensible and best conducted. It is an ornament to the town, which is more than one can say of most garages, and its very presence ought to improve the amenities of life through Norfolk. Enterprise such as this calls for praise and comment, because so often one sees a much advertised motor depot which is nothing more or less than a disused something else entirely different, hung round with tyre advertisements, and offering no facilities unobtainable in any disused place of worship.

From Norwich I drove across the marsh to Yarmouth by the straight and narrow Acle Road, and I was curious to note the big white and brown sails of yachts and wherries gliding seemingly between the grazing beasts in the rich unfenced pastures. As one approaches Yarmouth from the west, looking across Breydon Water at high tide, the steeples and towers stand up against the sky like pictures of Venice, and the marvellous atmospheric effects and the white and red channel-marking posts help to make the illusion an extraordinarily perfect one. But in Yarmouth the likeness vanishes, though both towns have miles and miles of streets where the sound of horses or wheels can never be heard.

I spent a happy Sunday here playing golf in the wonderful air and the still more penetrating sand, and then I pushed on down the good road past Lowestoft to old-world Beccles, where a regatta was in progress—and if you think you can sail a boat try racing on the Waveney—and then made across country to quiet and crumbling Southwold. Here I put up at the Swan Hotel, and I give my opinion that if one wants rest, sea air, pleasant golf, and excellent food one cannot do better than follow my example. It is a town of perfect peace, and my only regret is that sooner or later it will share the fate of its companion city Dunwich, and slide away into the North Sea. Dunwich once upon a time had fifty-two churches and luxuries to correspond; now it is a little hamlet, and its riches and its walls are miles out under the water. But Southwold is all right for the present, and its suburb Walberswick will last even longer. One gets to Walberswick across a primitive steam ferry, and finds a quaint, odd village—the abode of artists, as you can see by looking at the hats of the inhabitants—and the most delightful old cottages that ever were. Evidently there are not enough of these to go round, so, nothing daunted, its people have set to work to build new ones, which look even older.

Between the crumbling cliffs along this coast the flat meadowlands are protected but by waste endless sand dunes, and here one can wander and realise the magic of the poem of Swinburne's that begins—

"A land that is lonelier than ruin;  
A sea that is stranger than death;  
Far fields that a rose never blew in,  
Wan waste where the winds lack breath;  
Waste endless and boundless and flowerless,  
But of marsh-blossoms fruitless as free;  
Where earth lies exhausted, as powerless  
To strive with the sea."

### Pounds-foolishness.

I ran on between poppy-red fields and dog-rose hedges south through Saxmundham and Woodbridge (where W. W. Jacobs's sailors seem to live) to Ipswich, had my car greased, oiled, and filled, and drove on to Colchester with about a pound of cotton waste wrapping itself around my shaft and innards. Colchester is not an attractive spot, and the London Road is a dull, trammed, and trapped route. Then I struck westwards inland to curious Coggeshall, Braintree, and along the Roman road to Dunmow (where the fitch comes from to amuse Bank Holidayites), and Bishop Stortford. From here to Ware is the twistiest, wickedest, and worst signposted lane I have ever come across, and it was a relief to get on the good road that leads to Hertford, Hatfield, and St. Albans. But ten-mile limits are becoming ridiculously common in this neighbourhood, and often seem to have no *raison d'être* but blind hatred and ignorance, so I do not recommend either motoring or trading in these parts. The tourist from the West of England who wishes to get to East Anglia without touching London cannot get a more direct route than the one I have described, for after St. Albans (going west) the road to Hemel Hempstead is fair, and beyond that through Berkhamstead, Tring, and Aylesbury good, save for children and notice boards, and at the last named place he can turn left and come through Thame to Oxford along the jolly up and down country road with hardly any traffic and no fear of absurd restrictions.

Every ten miles limit post drives motorists away to spend their money in places where such fooleries do not exist, and some day perhaps those responsible for them will realise their pound-foolishness. Thousands and thousands of pounds are being spent in France by English motorists, because touring in England is becoming such a gamble, and—fond of my country as I am—I never hesitate to advise my friends to get quit of silly police persecutions—or, at any rate, suspense—by shipping their cars across the Channel and enjoying freedom abroad until such time when our country shall come to its senses. At present East Anglia is sensible and does not harass tourists; she will be wise to go on attracting them. But if all her gates and entrances are going to be barred and watched it will come to much the same thing, and a business that should increase and pay better each year will linger for lack of support and customers.

The catering for tourists and their motors is a much bigger business than is realised. No one but a fool would elect to live in a district where traps abound, and it does not require a very high order of intelligence to realise that empty houses are not paying things either to local authorities, tradespeople, or to working men. Which things I do not think are sufficiently comprehended by the authorities we are, mostly, unfortunate enough to be ruled by.

OWEN JOHN.

## Six Days on a 10 h.p. Delage.

IT was our good fortune some days ago to have the 10 h.p. Delage car which went through the recently concluded Scottish Trial placed at our disposal for a week. The country through which the car was taken was of the severest possible nature, comprising, as it did, long runs into the hilliest parts of Gloucester and Herefordshire, and several journeys into the heart of the hilliest portion of Wales. The little car ran without a falter during the whole time, and never gave a moment's trouble or anxiety, receiving absolutely no more attention than the ordinary filling and greasing an average car gets, or should get, before the day's run begins.

The car succeeded in climbing Dinas Mawddwy, which is an exceedingly formidable ascent about two miles long, with a maximum gradient of about 1 in 5, without a protest, and allowing the second speed to be used on several occasions on the hill. Immediately after taking this formidable ascent the car was driven towards Aberystwyth, and to save time a short cut was taken through Capel Bangor, avoiding Aberystwyth, so as to reach the high road which brings one to Devil's Bridge. The road was absolutely unknown to the writer, and to his surprise he suddenly found himself at the foot of an extremely formidable acclivity. The gradient soon approached 1 in 6, and not long after it was as bad as 1 in 4, and continued to average about 1 in 6 for what appeared to be over a mile. Though the water in the radiator naturally boiled, the car negotiated the climb in the most surprising manner,

and safely brought two passengers to the summit, though one dismounted at one of the steepest portions to open a gate. Altogether between 700 and 800 miles were traversed. During that time the car received no attention, and the Michelin tyres gave not a moment's trouble, although the rear tyres were by no means new at the start. The car is quite fast enough for the average user of a small car, and is exceedingly well sprung, and there can be absolutely no question of the efficiency of the engine when the excessively hard work to which it was put and the dimensions—only 62 × 110 mm.—are considered.

For those who require a swift, comfortable, and handy little runabout the 10 h.p. Delage should offer special attractions. Not the least important of the many good points the car possesses is the excellent steering, which is unaffected by the unevenness of the road, and at the same time is extremely light, since the car steers without any apparent effort. The brakes are most efficient, but we did not like the foot brake taking out the clutch and acting on the back wheel drums.

In the Scottish Trials, and also during the trip referred to above, the water boiled on steep hills and with a following wind, but provided a cool wind blew down the hill no overheating trouble was experienced. This goes to prove that an efficient fan would render the thermo-syphon arrangement of the cooling entirely satisfactory. In fact, that it works at all without a fan speaks volumes for the design of the water circulation system.

### The Prince of Wales' Tour.

It will be remembered that one of the two motor carriages used by Their Royal Highnesses the Prince and Princess of Wales upon the occasion of their recent tour through the Duchy of Cornwall was a Sheffield-Simplex. As a result of the behaviour of this car throughout the tour a glowing testimonial has been granted, and permission accorded for its publication. The letter is in the following terms:

Marlborough House, Pall Mall.  
23rd June, 1909.

Dear Sir,—I am directed by the Prince of Wales to write and say that His Royal Highness was extremely pleased with the working of the car so kindly lent by your firm during the late tour in the West of England, and His Royal Highness also wishes me to convey to you his thanks for all the trouble you took in the matter.

I drove in the car myself, and I do not ever remember a pleasanter, smoother, or more delightful journey.

The ease with which the car mounted the very steepest hills was most remarkable.

In conclusion, I may mention that there never was the slightest hitch or anything approaching a breakdown during the whole time.

Yours faithfully,

WILLIAM CARRINGTON,

Comptroller and treasurer to H.R.H. the Prince of Wales.

Percy Richardson, Esq.,

Simplex Motor Works,

Tinsley, Sheffield.

Much curiosity has been expressed as to the legislative machinery that will be employed to ensure those who do not use motor spirit for private cars obtaining the rebate, and it looks as if the Government had, like Pharaoh of old, hardened their hearts on the matter. In this week's issue of *Motor Traction* will be found the full regulations issued by the Commissioners of Customs and Excise for obtaining the rebate on motor spirit used solely for industrial work, and that is the impression conveyed.

### The Shelsley Walsh Hill-climb.

The following entries have been received for the Midland A.C. Hill-climb at Shelsley Walsh, which will be held to-day (Saturday), 17th July, in the Court House grounds by the kind permission of Mr. M. C. H. Taylor:

#### OPEN EVENT.

J. T. C. Moore-Brabazon (26 Métallurgique)	W. Allday (10 Alldays)
Humber, Ltd. (8 Humber)	Le R. Soher (14-16 Straker-Squire)
Clément-Talbot, Ltd. (15 Clément-Talbot)	Clément-Talbot, Ltd. (12 Clément-Talbot)
H. W. Fenwick (18-24 Enfield)	Star Co. (15 Star)
P. Kidner (24 Vauxhall)	C. E. Simms (14 Alldays)
Chas. Jarrott (6.2 Sizaire et Naudin)	F. Eastmead (14-18 Sunbeam)
W. Allday (14 Alldays)	H. C. Holder (58 Daimler)
O. S. Thompson (40 Austin)	S. Downing (14 Alldays)
P. Kidner (20 Vauxhall)	L. Costalen (14-20 Sunbeam)
J. L. Kirk (15 Talbot)	R. W. H. Kane (18 Imperia)
Humber, Ltd. (10-12 Humber)	R. M. Wright (12-16 F.L.)
E. Martin (18-23 B.S.A.)	Lloyd Jones (10 Laurin-Klement) (probably)

#### CLOSED EVENT (members of Midland A.C. only).

T. R. Fletcher (25 Calthorpe)	A. J. Clay (14 B.S.A.)
W. Pilkington (12 C.-Talbot)	G. W. Hands (12-14 Calthorpe)
A. Cox (9 Riley)	C. E. Simms (14 Alldays)
G. F. Heath (38 Minerva-Knight)	L. Merryweather (25 Minerva)
J. H. Deykin (14 B.S.A.)	M. C. Blewitt (16-20 Calthorpe)
J. H. Dean (18 Austin)	H. Joyce (25 Calthorpe)
W. Guilding (10 Briton)	V. Riley (12 Riley)
J. A. Holder (25 Calthorpe)	H. C. Holder (58 Daimler)
F. A. Bolton (57 Daimler)	S. Downing (14 Alldays)
G. Bird (40 Métallurgique)	H. C. Ansell (25 Calthorpe)
	L. Meek (18-24 Enfield)

The entries for the Henry Edmunds Hill-climb, which is held on the same date and at the same place, are:

R. W. H. Kane (20.08 Imperia)	The Earl of Shrewsbury and Talbot, K.C.V.O. (20.08 Talbot)
P. C. Kidner (20.5 Vauxhall)	J. L. Kirk (20.08 Talbot)
G. W. Hands (21 Calthorpe)	R. Lisle (19.6 Star)
G. L. Eastes (19.6 Star)	



## Precision in Motor Repair Shops.

**A**S a motor repair shop foreman, it has occurred to me frequently of late that ninety-nine per cent. of motor repair shops labour under a great disadvantage as regards scientific apparatus for dealing with the faults and peculiarities of motor car engines.

Having been trained in steam and gas engine practice, I cannot help feeling that, compared with these, we are helplessly at sea when we start looking for the cause of certain faults in car engines.

We always, or nearly always, find the defect and remedy it, but that is not the point. We often have to do so more or less by the method of trial and error.

Compare this method with that of examining the behaviour of ordinary steam or gas engines. By the indicator we can at once tell exactly how our engine is working. By it we have certain information of the cylinder pressure at every point of the stroke, both outward and return, but, as at present carried out, car engine work appears to be somewhat behind.

Of course, I do not for a moment suggest taking pressure diagrams, etc., of every car engine which enters the repair shop for adjustment. To do so would be ridiculous; but sometimes a good and expensive engine comes along which has developed some mysterious fault, such as a most incurable weakness in one cylinder, overheating, want of its accustomed flexibility, etc. Faults such as these often take days of work and experiment to cure, and I think if we had more scientific tools to tackle such jobs car owners would often be saved considerable expense.

Take the fuel, which everyone will admit is a most important item. Beyond seeing it coming out of a sealed tin, or taking the driver's word for it being such and such, how many shops could test it except by trial in the engine to know whether it is correct or not? We want something, I think, to test our petrol in a simple and quick manner, just as the gas engine

man can open a tap in his gas main and put a light to it to test the quality of the gas.

Going a stage further, when we have passed our petrol through the carburetter we know very little about the gas we make. It may be too strong, or too weak, or too wet; all we can do is to take it on chance and try it. If the engine be otherwise correct, we usually soon find our correct mixture, but if the engine be faulty in other ways it becomes more difficult to do so. Therefore it would help us if we had a good method of sampling the gas supply.

The compression pressure may easily be found by an ordinary pressure gauge, but the majority of repair shops never adopt it. There is always the difficulty of connecting, and an ordinary gauge becomes of no use when the engine is running or for explosion pressure. The spark does not give us much trouble as a rule. We cannot see our plug sparking when in the cylinder, which is a pity, but we can be pretty sure by testing outside. If, after all, we are in doubt, we mulct the car owner to the extent of 4s. or so for a new plug without any compunction.

Then, coming to the explosion, which is always the crucial point of our investigations, we know little about it when we employ the usual crude methods at present in vogue. It would be of the greatest value could we obtain information as to the pressures developed in the cylinder at various points of the stroke. We want to know the pressure effects due to improper ignition timing, pre-ignition, bad carburation, etc., and conversely to spot these faults by knowing the pressure effects.

The same holds good as regards our suction and exhaust pressures, and, although it seems to be a difficult problem to get just the right instrument, something may be brought out to do this and still be simple and handy enough for everyday use.

R. M. LESLIE.

### The Postponed Dust Experiments.

At the meeting of the committee of the Royal A.C., held on July 7th, the minutes of the Dust and Dustless Roads Committee of 2nd July were adopted on the motion of Col. R. E. B. Crompton, C.B. (chairman), who reported that, at the request of the trade, the usual Dust Trials had been converted into Dust Experiments for the present year, but that the trade had not supported them. He pointed out that the Dust and Dustless Roads Committee of the Club had worked very hard in the past to obtain information which would be useful to the trade in the construction of their cars, but that, although the work this year had been arranged to meet the wishes of the trade in every possible way, adequate support had not been forthcoming. After some discussion, in which members of the committee expressed their regret at the present position, Mr. F. P. Armstrong moved, Mr. A. Armitage seconded, and it was unanimously resolved: "That such assistance be given to the Dust and Dustless Roads Committee in the way of obtaining cars as Col. Crompton may require."—*The Royal A.C. Journal.*

There will be no motor traction exhibition at Olympia next year, but probably an industrial vehicle show will be held in 1911. It will be remembered there was no show last March, so that there will be an interval of three years without an industrial vehicle exhibition being held in London.

### In the House of Commons.

#### Motor Car Acts. Convictions at Haywards Heath.

Mr. Joynson-Hicks asked the Secretary of State for the Home Department whether he will state the number of persons convicted of offences under the Motor Car Acts, and the total amount of fines and costs inflicted during the years 1904, 1905, 1906, 1907, 1908, and 1909 respectively, at the Haywards Heath Police Court, and the purposes to which the money so derived has been appropriated?

Mr. Gladstone: I am endeavouring to obtain this information, and, if I succeed, I will communicate it to the hon. member.

Tuesday night.

It has been a matter of considerable comment among members generally that the new road authority will have to be constituted by Act of Parliament. Motoring members are on the whole very satisfied that the new departure of the Government should have to take this course. A Bill will afford opportunities for the full consideration and discussion of the whole scheme. The composition of the authority is, of course, highly important, and it will be to this and to its authority and jurisdiction that the keenest criticism will be directed.

A 35 h.p. Itala car has won the race over the 110 kilometres circuit at Buenos Ayres in 1h. 6m. 30s.

## The Warwickshire Police.

We can hardly congratulate the Warwickshire Standing Joint Committee (which regulates the police affairs of the county) on their method of dealing with a representation from the Leamington Advertising Committee pointing out that their interests were suffering by the attitude of the county police towards motorists. The Warwickshire authorities state that they have referred the matter to the Chief Constable, and would point out that the county council have requested the police to enforce the law as to the speed of motor cars, and have directed them to take steps to see that all drivers of cars carry out the law and proceed at a safe pace through villages—a very reasonable attitude, to which no exception can be taken, but so far as we know there has not been a single police trap in a single Warwickshire village; they have all been upon the open road. If police traps were to be set in villages, and if the timing were accurate, we should have nothing whatever to say against them; indeed, we should support them, as they would catch the inconsiderate driver and nobody else, and he is the man we want to see caught, whereas police trapping in the open more often than not brings the wrong man into the net. However, it is only fair to say that the attitude of the Warwickshire police has been very much more reasonable within the last few weeks, and we hope it will continue so. When we say their attitude has been more reasonable, we have reason to believe they have not taken proceedings in their open road traps when the speed has not materially exceeded the legal limit, whereas last year and until quite recently motorists were fined for speeds just over twenty miles an hour, and this on police timing alone, which, with the very best intentions, cannot be accurate.

The Leicestershire A.C. advises us that a steam roller will be at work from July 19th to August 15th on the Hinckley and Leicester Road, *via* Earl Shilton, between Desford cross-roads and Hinckley (alternative route *via* Narborough and Sapcote), and from August 1st to August 15th on the Hinckley and Ashby-de-la-Zouch Road, between Hinckley and Market Bosworth.

\* \* \*

The balloting to ascertain what forty firms among those eligible should occupy the forty most prominent spaces at the Olympia Show next November took place last week. At present the names of the forty have not been officially published, but from what we hear considerable surprise has been felt by certain prominent firms that their names should have been omitted from the ballot.

\* \* \*

The Maudslay Motor Co., Coventry, are now putting to a very rigorous test an ingenious type of spring wheel which is principally intended for heavy car work—that is, for waggonettes, shooting brakes, and such-like vehicles. The wheel is composed of two parts—the centre with its felloe complete and the outer rim carrying a solid tyre. On the periphery of the centre part and on the inner face of the outer rim are fixed on alternate sides brackets having at their extremities ball bearing joints. The connection between the two parts is established by a series of tension springs, whose ends are secured in the ball joints. The wheel, which is known as the Seaton, is ingeniously designed, and from observations on the road it would appear to work very well, though this awaits confirmation from the heavy testing and careful observation it will undergo.

## A Creditable Power Curve.

The Sunbeam has always been a most reliable car, and now it is scoring on the point of efficiency in relation to engine dimensions. Indications of this have been given on several occasions lately by its hill-climbing prowess. The makers have now sent us a diagram of a power curve of one of the 95 mm. bore engines, showing very excellent results. Beginning at 900 revolutions per minute the curve shows 22½ h.p., at 1,000 r.p.m. 27 h.p., at 1,100 30½ h.p., at 1,200 33½ h.p., at 1,300 36½ h.p., at 1,400 38½ h.p., at 1,500 40¼ h.p., at 1,600 42 h.p., at 1,700 44¼ h.p., at 1,800 47 h.p., at 1,900 48¼ h.p., at 2,000 50½ h.p., at 2,100 53 h.p., and thence up to 2,300 the h.p. readings remain practically the same, with a slight upward tendency. However, we need not concern ourselves with the speeds above 1,900 r.p.m. except so far as they show the ability of the engine to pull as well as to run.

## A Gratifying Increase in Membership.

Last week we announced that the membership of the Automobile Association was 10,000. It is now nearer 11,000, as at the monthly committee meeting 851 new members were elected, and among the more prominent were:

The Right Hon. Walter Runciman, M.P.; Katharine Duchess of Westminster; Lord Northcliffe, Lord Burghclere, Lady Emily Mark, Lady James Douglas, Lady Davey, Lady Brickwood, the Countess of Gosford, the Hon. Mrs. Alwyne-Greville, Viscount Southwell, Sir Robert Moncrieff, Bart., the Earl of Durham, the Hon. Cyril Russell, Mr. Pethick Lawrence, Count Alired Tysskiewicz, the Hon. Sir George Shenton, Bart., the Hon. F. Thellusson, Mr. B. de Siebert (secretary to the Russian Embassy), the Earl of Strathmore, Viscount Esher, K.C.B., G.C.V.O., the Marquis of Graham, Sir Henry Samuelson, Bart., Sir Edgar Vincent, Bart., the Marquis of Zetland, Lord St. Oswald, Viscount Boyne, Sir Matthew Arthur, Bart., M. le Comte d'Epimesnie, Viscount Selby, Sir George Farrar, D.S.O., Lord Harris, Sir Charles Fremantle, K.C.B., Sir Alfred J. Newton, Bart., Admiral Sir John Fullerton, Bart., Major-General Sir Charles Haddon, Bart., K.C.B., Sir Edward Tennant, Bart., M.P., the Hon. R. Bellew, and Sir John Roger, Bart., K.C., M.G.

## The Horseless Sunday Committee.

Reference has already been made to the suggestion of excluding horse traffic from a large portion of the city of Westminster area on one Sunday in the late summer or early autumn of the present year, in order to give an unalloyed demonstration of various kinds of traffic of the self-propelled variety. A special committee has now been drawn up for the purpose of organising the arrangements, which consist of: The originator of the scheme (Mr. H. Thomson Lyon, M.I.E.E., chairman of Westminster City Council Highways Committee); the Mayor of Westminster (Alderman R. Woolley Walden, J.P.); representing the Commercial Motor Users' Association—Col. R. E. Crompton, C.B., Capt. R. K. Bagnall-Wild, R.E. (secretary, Mechanical Transport Committee, War Department), Mr. F. R. De Bertodano (managing director, F.I.A.T. Motor Cab Co., Ltd.), and Mr. W. G. Lobjoit, J.P. (Hounslow); representing the London Omnibus Owners' Federation—Mr. Willing Tibbs and Mr. Laurence G. Oldfield; representing the Society of Motor Manufacturers and Traders—Mr. H. G. Burford, M.I.Mech.E. (Milnes-Daimler, Ltd.), and Mr. E. Gascoine (Sir W. G. Armstrong, Whitworth, and Co., Ltd.); general representation—Mr. W. Joynson-Hicks, M.P., Mr. Alpheus C. Morton, M.P., Mr. Julian A. Halford, Mr. Deputy-Alderman George Heilbath (City of London), and Mr. Charles Alfred Teuten (chairman of the City of London Streets Committee); secretary, Mr. Shrapnell Smith. The Royal Automobile Club has not yet appointed its delegates.

# Correspondence.

## EDITORIAL NOTICES.

No letters from members of the motor industry will be published when they deal with subjects which may be regarded as advertisements for the writers' or their business interests. At the same time as many of the most practical suggestions come from those engaged in the motor industry, their letters will be inserted when possible, though the names of the firms they represent may be expunged, and the initials of the writers substituted.

Letters of a personal nature will be withheld.

The Editor, although accepting no responsibility for the opinions expressed by correspondents, reserves the right to publish a portion of a letter, and to omit any part which he does not consider interesting or essential.

All communications under a *nom de plume* should be accompanied by the name and address of the writer, not necessarily for publication, but to assure the Editor as to good faith.

Readers who ask for the experiences of private owners with specified cars, parts, or accessories, are requested to enclose a stamped addressed envelope, so that replies which space will not permit us to publish may be forwarded to them. Circulars or letters from interested parties will not be forwarded.

### SMALL CARS AS HILL CLIMBERS.

[14431].—It has been urged by various writers that the Scottish Trial hills were unduly severe. But such tests are required to show that cooling arrangements (a very important point) and transmission systems are satisfactory. A hill test is a much better means of finding out weaknesses in cars than the old and absurd ordeal of racing. This test, it appears, showed that many much-discussed cars are really not fit for the business of serious Continental touring. The show was not impressive at all.

But Scotch hill-climbs are not, I presume, such very formidable affairs after all. Success does not suffice to show that a car is "equal to anything," but simply that it will run respectably well. You smile. Well, let me indicate a pleasant sort of mountain road—not a mule path—which suits you here—that is to say, in Savoy. It has a gradient varying between 1 in 5 and 1 in 3, and it is certainly over 100 miles in length. I refer to the Grand Arvey Road, near Sallanches. It is fairly broad, though the surface is bad in places, and cannot, a De Dion small car having climbed it, be regarded as "impracticable." It is a stiff customer, no doubt. But there are many like roads elsewhere offering superb experiences to the tourist whose car will not break down—or "overheat."

Most touring cars, I fear, cannot tour "everywhere and anywhere" even when roads are good; hence their owners are unable to enjoy difficult mountain excursions—experiences which must be lived through to be appreciated. Do you dismiss the Savoy road-climb as too "freaky," or dangerous? Well, the regulation touring car fails quite frequently on ordinary passes in the Tyrol and elsewhere. Horses, it is notorious, are frequently requisitioned in the Tyrol. And even on mild French passes, like the Faucille or Lautaret, where gradients are easy, but long, "overheating" is very common. Everyone who has knocked about the Alps knows this well. Clearly then the modern "all-round" touring car is too often a fraud—not up to its work. It cannot tackle the more difficult climbs, and it overheats frequently on the easily graded, but long, ones. So long as such defective cars cumber the roads, so long the need for severe hill-climbing trials will remain urgent.

It is not merely a question of gears. A low emergency gear is useless, if "overheating" during open throttle climbs is to result. A better cooling system is wanted for most cars. How many existing four-cylinder cars, I wonder, could mount for an hour on their first speed, if the throttle had to be fully opened under load?

It deserves note that the best modern single-cylinder cars (to which class of vehicle the most difficult climbs yet achieved are to be credited) show a great superiority over four-cylinder cars in the matter of negotiating precipitous inclines at a slow rate. And it has been proved, moreover, that splash lubrication amply suffices for the single-cylinder even under the most exacting circumstances, *e.g.*, in the case of ascents of 1 in 3 under full load with throttle open. I refer to long ascents, not to Brooklands trips of a few dozen yards up a favourably surfaced incline. Beware of rough surfaces! Rough surfaces, of course, count for much—very much. The triumphant 1 in 4 Brooklands car might find a rough and stony 1 in 6 in the Alps quite impracticable.

For leisurely touring in the Alps, a small single-cylinder car is very satisfactory. In the case of my various small cars overheating and allied mountain sicknesses have been unknown.

The modern single-cylinder car is now so comfortable, sweet running, quiet, and reliable, that it furnishes, for those who tour in couples, an "all-round" vehicle which really could "go anywhere." But I am of opinion that

even this vehicle should have four speeds. Take, as an example, the wonderfully efficient little B.N. model car which the De Dion people have put on the market this year. At Chamonix mine has been taken for a four-cylinder car by various folk; and it is certainly one of the quietest cars up here now. It is admirable in its present form, but if it had four gears, giving thirty, twenty, fourteen, and four miles per hour, I should possess the ideal little vehicle of which I dream—the car of cars, on which to undertake, at need, a tour of the world!

I allow that the B.N. with its existing three speeds suffices for folk who have no desire both to travel at thirty miles per hour and also to be able to climb precipitous mule paths at need. Still, purchasers might well be given the option of buying a three or four-speed car, and the extra speed, I take it, would be well worth the additional cost—to those who want it.

I should like, after some 1,500 miles of running, to express my admiration of the design and general excellence of this B.N. model. A wail was raised some time back in your columns to the effect that the old 6 h.p. De Dion had disappeared. It disappeared, of course, to make room for something vastly better. I myself owned a 6 h.p. of 1904 make, and in no respect could it stand comparison with the B.N., save in respect of workmanship. The B.N. leaves all the old single-cylinder models far behind. It is superior in point of silence and comfort to many "fours."

I find the leather clutch excellent. Gear changing easy. There are no notches in the quadrant, the wheels meshing accurately by the working of a device within the gear box. Petrol consumption (in the only open road test I have undertaken) comes out at thirty-eight and a half miles to five litres, or 1.10 gallon. Two of us were in the car, plus baggage and the inevitable dog.

E. D. FAWCETT.

Chamonix.

### SMALL CAR RACES.

[14432].—Your correspondent "Monte Cristo" [14384] certainly hits the right nail on the head in the letter appearing in the issue of *The Autocar* for July 3rd.

Undoubtedly a large percentage of the public are being absolutely gulled by the sensational (?) performances put up by certain freak cars that, owing to lack of judgment on the part of some clubs, are allowed to compete against standard cars as used by the public.

As a manufacturer of small cars, and one who realises the value of competitions and their effect on design, I have always maintained that both the automobile press and club officials should take every possible step calculated to prevent the inclusion of freak cars in competitions which are advertised as being open to genuine touring cars.

While racing and similar competitions have assisted considerably in the rapid development of the modern motor vehicle, a point has now been reached when it becomes imperative that organising clubs should so draft their regulations (and, what is of perhaps greater importance, appoint officials who are strong enough to uphold them) that it would be impossible for freak cars to compete alongside honestly standard cars.

As is now generally known, the Voiturette Race referred to by "Monte Cristo" has developed into a competition for racing cars—cars designed specially for racing, and differing entirely from the touring vehicles supplied to the public.

With the design of these racing cars having reached such freakish proportions, it is to be deplored that these same cars should be allowed to compete in this country in speed events open to standard touring cars.

This obviously deserves the attention of the automobile press and every club organising competitions.

VICTOR RILEY.

[14433].—We are particularly pleased to read letter No. 14384 by "Monte Cristo" under the above heading, because it follows, after twelve months' interval, a correspondence in which we had the pleasure of taking a small part (see "Utility of Racing," letters Nos. 13262, 13313, 13333, 13368, 13379, 13380, and 13381). In this correspondence we took the part that voiturette racing, in which your correspondent "H" chided English manufacturers of light cars for not competing,

## Correspondence.

served no useful purpose, in the existing conditions, in the advancement of the type, and we could not wish for a better confirmation of our views than those set out by "Monte Cristo," written as a result of his personal observation at the Grand Prix des Voiturettes Race just concluded.

As your correspondent points out, the race proves nothing, but we venture to suggest that, on the other hand, it has encouraged the production of a type of voiturette which cannot be regarded as contributing to the forward movement of the light two-seater car, unless anyone considers that a voiturette fitted with a single-cylinder engine of 100 mm. bore by 250 mm. stroke, with no less than three inlets and three exhausts in the single cylinder, makes for the useful development of the type. It is only by keeping the voiturette within its natural limitations that the perfect vehicle can be evolved, and we are not without hope that one of these days the standard or stock car voiturette race will be held, in which event only such standard vehicles as are genuinely supplied to the public compete. These would be vehicles in which due regard must have been given, otherwise they would not be in existence to any appreciable extent, to those points of comfort and convenience which the public demand. These cars may not average up to 50 m.p.h., but we think they would give a much more useful and educative result, and when such a race is held the 8 h.p. Phoenix will compete. At present the public only sees what a special car, on which money must have been lavished wholesale, can do, and which, generally speaking, is quite different from the car they purchase.

We trust that this further development of this interesting matter will meet the eye of your correspondent "H," with whom we had the pleasure, thanks to the hospitality of your pages, of discussion twelve months back, and we would particularly like to read his observations on "Monte Cristo's" letter.

PHOENIX MOTORS, LTD.

[14434].—Although it is not my intention to enter into a lengthy correspondence with Mr. Letts on the above subject, I shall with your permission make *one* reply to his letter, and propose to deal with his statements one by one in the order they have been written.

First, I did not expect the Coupe des Voiturettes to prove anything more than such races usually prove under existing rules and conditions, viz., that the winning car is totally unlike the standard article sold by the maker for the purpose of touring and general use. Your correspondent has missed the point I intended to convey, probably because I was not sufficiently lucid. However, he supports my argument when he writes "that the maker secures an advertisement which results in his selling a large number of his *ordinary* touring cars." (The italics are mine.) The above is the crux of the thing, viz., that the race is for the purpose of advertisement of a name of a firm or person, not a competition to improve the efficiency of a motor vehicle.

Your correspondent says he has never heard of a manufacturer receiving orders for many duplicates of the winning car. Why, then, do we read so many advertisements on the following lines, "Standard chassis used in this race," or "No special chassis made for this event," etc.?

I do not see what the Sizaire et Naudin cars have to do with the question; they were not competing in the race held at Boulogne this year.

I did my best to explain that a racing car, or, to be more explicit, many of the racing cars, used in the Coupe des Voiturettes race at Boulogne were totally different from touring cars of the same make, but Mr. Letts appears to think I am unaware of the fact.

I am aware that the firm whose car won the race this year has built and delivered some hundreds of small cars. I am also aware that there is little similarity between the engine fitted to the winning car and those fitted to the hundreds of small cars built and delivered.

Regarding the Humber, Rover, Swift, and other firms making small cars, I stated they had too much sense to compete against "speed irons" with standard makes of small cars, and I repeat my statement. British buyers would probably want to see the Humber, Rover, Swift, or other British small car which won the race, and then they might, if they were sufficiently wide awake, express a desire to inspect the article they were permitted to purchase; and if the Humber, Rover, Swift, or other British firm were foolish enough to build a projectile purely for the purpose of advertisement and as a means of selling their touring small cars, then the prospective purchaser might (I say might) go and

purchase a small car which had done well in, say, the Scottish Trials or some other competition in which speed combined with reliability had proved the suitability of that small car for general use.

"Monte Cristo," like M. Dumas's hero, whose name he has appropriated, prefers to remain incognito. Although, perhaps, not so fully acquainted with Continental ideas of racing as your correspondent, he has the courage of his convictions, and prefers to think that races for small cars, if they are to be of any value to the purchaser, should be confined to such modifications of the touring vehicle as tend to greater efficiency combined with comfort, not efficiency minus comfort.

Far from belittling the foreign racing small car, I praised the car, in referring to its speed as that of a projectile and the adroitness of its driver as that of an expert. That point, however, in my opinion, is not the argument. As a possible purchaser of a small car, I want to see a race between standard types which are purchasable, not a race between bounding kangaroos which are only fit to be admired, much as one admires a Derby winner, but without the least intention of placing him between a pair of traces.

I quite agree that the honour and glory of winning the race have gone to the manufacturer of the car that covered the course fastest, and thought I said so, but the conditions for the race are such that no real lesson has been learned from it by those who want to buy a small car. For those who merely wished to see a race, and have no intention of purchasing a replica of the victorious vehicle—why it was a race, that's all.

Is it not a fact that many makers of foreign small cars refused to enter for the race owing to the conditions? I understand this to be so, but am open to correction.

MONTE CRISTO.

## AMERICAN CARS.

[14435].—Having seen in the correspondence columns of *The Autocar* some queries as to the wearing qualities of American cars, I think it might interest your correspondents to hear of the following facts as regards the extraordinary durability of my 10 h.p. Cadillac. I have just stripped the car down to the last nut for the fourth year in succession, and find that, with the exception of slight wear in the rollers of the back axle, there is an almost entire absence of wear in either the engine or the transmission. The epicyclic gears are as true and in as good condition as the day I bought the car, and the engine pulls better than ever. The car has now done well over 30,000 miles, and I think your correspondents will agree with me that the material put into the car and the workmanship must have been of excellent quality.

LC 3152.

Simla.

## "A MAN OF MODERATE MEANS."

[14436].—I have just read the letter of the gentleman who signs himself a "Gilded Pauper," and as I have purchased and am running daily a car costing over £280, I think I can show him a way out of his troubles, as I myself have an income of under £500 a year. Let "A Gilded Pauper" look out for a nice cottage (not in Surrey, of course), and not too far from town, but some distance from a railway station. Many such cottages are to be found, and a good one could be secured for £40 per annum. If married, and with a wife who is fond of motoring, there is no need to keep any servants except a man or an intelligent boy to help with the car and the garden. In this way one can live comfortably on £200 to £250 a year, and the rest of the income can be devoted to running a good 12 h.p., 15 h.p., or 20 h.p. One is never dull, for people are always glad to spend week-ends with the owner of a good car, and when one is not on the car there is always plenty to do in looking after a four-cylinder; at least three happy hours a day should be spent in the garage. Then there is the record of the car to make up, *The Autocar* to study, and rides and tours to plan, and finally there is the delight of rides in the neighbourhood and visits to distant friends. I only preach what I practise, and I know others who run quite decent sized cars on far less than £700 a year. Motoring is an immense pleasure, and is worth considerable sacrifices. However, if one attends to the car one's self £70 a year ought to account for a lot of running. As to any difficulty in running a 15 or 20 h.p. on £700 a year only a man with a large family should worry about it.

A MAN OF MODERATE MEANS.

## A POINT IN INSURANCE.

[14437].—Your correspondent who signs "Lex" [No. 14590] perhaps may not have a recent policy issued by offices transacting motor car insurance. It would be immaterial whether he or his uncle drove each other's car provided both were competent and licensed drivers, and provided the owner of the car which caused the damage or injury was insured against third party claims. He also overlooks one other fact, and that is this. The third party indemnity rate is based upon the horse-power of car, and to grant a person without regard to the car he was driving an indemnity for third party damage would destroy at once the basis on which rates are made. He may drive an 8 h.p. car to-day and a 60 h.p. one to-morrow. You will see, therefore, the difficulty of covering liability for a given person without regard to horse-power. I trust this may clear the points raised.

FRED G. ISAACSON.

## THE STAR CARS IN COMPETITION.

[14438].—I note on page 918 of *The Autocar* of June 20th that you refer to the Star cars being envied through their success in recent open competitions.

I must say that I personally have been rather disappointed until recently with the results and hard lines that they have seemed to attain in various open competitions. Having owned and driven cars of the Star Engineering Co.'s manufacture for the past six years, I must say that for reliability and hill-climbing they cannot be beaten.

My last car I had from them was a 12 h.p. four-cylinder which has now run 7,399 miles, and last week I experienced my first misfire, and discovered it was only a loose wire on the commutator, which was soon rectified.

I can now do 29½ miles per gallon, which is a good deal better than the cars have ever done in the competition. Also with regard to speed, I can give their competition cars, I should think, another ten miles per hour.

As to hill-climbing, my friends are simply astonished at the speed the car climbs severe gradients on top gear. Not only is my present car a success, but its predecessor was also.

I am writing this to verify that their standard cars prove highly successful in the hands of private owners.

I have no financial interest whatsoever in the Star Engineering Co.

A. GORDON SMITH.

## PECULIAR REQUIREMENTS FOR PECULIAR COUNTRIES.

[14439].—Letter No. 14358 from "An Englishman" opens up another aspect of the charge laid against our British manufacturers of being unwilling to meet customers' requirements.

The writer waxes wroth because the makers, when asked, refused to deviate from their standard pattern by altering the design of the hinges on their head lamps to suit his idea. It does not seem to have occurred to "An Englishman" that, as he was willing to pay £14 14s. for a pair of lamps, and therefore, presumably, they were designed and made by a first-class firm, it is a reasonable supposition that the makers knew more about the best type of lamp hinge and lamp design generally than the average purchaser, since these and other details are very carefully tested before being put on the market.

But, quite apart from this material side of the question, we will assume that "An Englishman's" objection to the hinges under discussion is purely an æsthetic one. He can hardly expect any manufacturer to alter his details without charging extra for them, and I infer from his letter that he expected these alterations to be included in the price. I take it that "An Englishman" is, *ipso facto*, a commercial man (for has not Napoleon referred to us as "a nation of shopkeepers"?), in which case I would point out to him that he has failed to realise that prices of goods of this description, and in fact most things, are based on larger quantities and not on single sets, and directly interference is begun with standard design the price rises with a jump, and therefore it is not reasonable to expect alteration of any sort to be made unless one is willing to pay the extra cost entailed, which "An Englishman" does not appear willing to do.

By the way, it would be interesting to know if those lamps were English, made by English labour, and not a foreign article imported into this country and sold by English agents.

ALAN R. FENN.

[14440].—A few months ago I was interested to read in your columns M. Henri de Malglaive's letter [No. 14170] concerning the different requirements of certain countries in the matter of touring cars, and particularly six-cylinder

## Correspondence.

cars, in which he says that British sixes are far superior to French or German cars—a point on which I entirely agree. Now that every maker of repute builds at least one model of six-cylinders, including Panhard, Daimler, and Renault, and some makers devote their attention almost exclusively to their production, the most notable of these being Napier, Standard, Hotchkiss, Rolls-Royce, Daimler-Mercédès, Maudslay, and Delaunay-Belleville, I think the superiority of the six-cylinder car has not only been demonstrated but proved.

In addition, I may say that with the greatly increased engine flexibility attainable there is no need for change-speed gear, or at least one reverse speed is quite sufficient, but as this has not been attempted yet as a commercial possibility in the pioneer Napier, we may have to wait some time before the gearbox is totally abolished.

In conclusion, I must add a few words of praise for Mr. S. F. Edge, who has done so much for the British motor industry by winning the Gordon-Bennett Cup in 1902, and almost retaining it the following year, and also by consistently upholding the six-cylinder.

G. THOMAS ATTWYNNE GORE.

## RESILIENT FILLINGS FOR TYRES.

[14441].—Were it not that tyres were of such vital importance to the motor car owner, I would not again trespass on your space, and would allow the Equatorial Trading Co.'s free advertisement to pass unnoticed.

Rubberine being an oxidised oil is not a desirable substance to be in contact with indiarubber. Most of us like to keep oil of any description as far from our tyres as possible. Gelatinous compounds do not suffer from this disadvantage.

Further, it being a solid filling, the makers require the car at their disposal for filling the tyres. This, of course, can be overcome by using a detachable rim, but the extra weight and cost render this system prohibitive.

As for the 10,000 miles run on Rubberine-Resileon, Elastes, Frankon, etc., have each accomplished greater runs than 10,000, yet still they are far from ideal substitutes for air.

Like Mr. McKinney, I have after years of experiments with substitutes emerged a wiser and distinctly sadder man, fully convinced that air, and air alone, is the correct thing for motor tyres. It must, however, be contained in something more stable than a rubber tube.

NORTHUMBERLAND.

## COST OF TYRES.

[14442].—Referring to letter 14350 in your issue of the 19th ult., which offers to guarantee tyres on Sunbeam cars for 5,000 miles without charge, I should be glad to hear whether the same guarantee will be extended to the six-cylinder Lancheater.

If owners of light cars can put themselves in a position of absolute safety by transferring their tyre risks to other shoulders without cost, as your correspondent suggests, surely owners of the heavier cars should stand to reap substantial advantage. It will, for instance, make all the difference to me if I can get the guarantee extended to a six-cylinder Lancheater.

A. H. MULFORD.

[14443].—I think your correspondent [14350] shows a real sporting spirit when he backs his opinion upon the wear of tyres of the Sunbeam car by guaranteeing them for 5,000 miles. If he is really in earnest, and his prices are those ordinarily charged for such standard makes as Dunlop, Michelin, Spencer Moulton, or other first-class makes, I am sure he will not lack for buyers on his terms. I, for one, will give him my whole-hearted support.

J.R.B.

## TWO SIMULTANEOUS SPARKS IN A CYLINDER.

[14444].—In case any of your readers take Mr. Ayton's letter [14371] too seriously, we would say that our letter [14351] was carefully written and is technically correct. We do not wish to doubt Mr. Ayton's knowledge on such a simple matter as connecting two sparking plugs in series, and we suspect he intentionally misunderstands.

As we stated, the Lodge coils are made so that they can give simultaneous sparks at two ordinary standard sparking plugs in series in the same cylinder, in the case of four and six-cylinder engines by the employment of a double-pole distributor, but in the case of single-cylinder engines without any addition, this method of firing giving an increase in power.

Correspondence.

By using one double-pole plug and one ordinary plug in each cylinder, the double-pole distributor would not be required, and this would be the simplest plan, provided a reliable double-pole plug could be made to fit the standard plug hole, and having the sparking points brought well out into the combustion chambers. A good plug of this type is rather difficult to design, but we are interested to know that some will shortly be on the market to Mr. Ayton's design. We also shall be having some ready soon, and of their success we feel hopeful.

This subject is quite interesting, but is not a new discovery, as sparking plugs have been fired in series for four or five years to our knowledge, and while not wishing to belittle any work which Mr. Ayton has carried out on this subject we think he is inclined to assume too much credit.

LODGE BROS. AND CO.

VALVELESS ENGINES.

[14445.]—I have read the letter from "Uitlander" in answer to "South African," and his enquiries as to the valveless engine, and it is very much to the point. Mr. Lucas is the Luther of the motor car Reformation, and has the Pope and all the hierarchy of the four-cylinder construction creed—represented by Mr. Edge and the heads of the leading manufacturers of that school—in opposition to him. The Pope and his cardinals objected to the overthrow of their special appellation—so do they, and small blame to them. The Pope said (in ecclesiastical language) that Luther's creed was no good at all; so probably do they speak of the "valveless." The Pope intimated that Luther had a "bee in his bonnet," and Luther couldn't open his bonnet and prove he hadn't. Here Mr. Lucas has a pull over Luther. He can open his bonnet and show that there is never a sign of a bee. Also he has another pull. He can give trial runs. Luther couldn't, at any rate without the risk of the enquirer being burnt for his curiosity. If Luther had had a capital of, say, £100,000 behind him, he could have advertised his special brand of heterodoxy, and "got there sooner." But he hadn't. Nor has Mr. Lucas. All the same, Luther did "get there," at any rate, in England. So will Mr. Lucas. Then will the four-cylinder hierarchy curse him with bell and with book, as Luther was cursed, and with equally ineffectual results, and will retire from the field to work among the heathen who understand not cars.

I think if "South African" and other enquirers with open minds go and look for the bee in Mr. Lucas's bonnet, and, finding it not, take a run in his trial car, they will become, unless they are of no understanding in motor matters, converts to the simplest and most efficient car on the market, as has

FREDK. MARRYAT.

RECORDS AT FLORIDA.

[14446.]—In reference to your correspondent's letter [14269] signed F. E. Moskovic re the timing of records at Florida, I cannot do otherwise than uphold his statement that these records and races are timed with every reasonable accuracy. The season 1905 in which the car I was driving (a 90 h.p. six-cylinder Napier) secured several records and trophies, six watches manipulated by electricity and three independent hand watches were used with what was considered extraordinary unanimity by all present at this meeting, and I cannot think otherwise than that the Daytona A.C. will have improved even these excellent methods as time has gone by at each succeeding meeting.

As regards the distances, these were marked out mile by mile by permanent landmarks well above sea-level, and I was assured of their accuracy by prominent members of the racing committee. The question of superior speed powers of the Daytona Beach in comparison with Brooklands is doubtless due to the straightaway run devoid of all curves (and bumps when the sea recedes in calm weather), besides which the direction of the course is changed daily if necessary to ensure the wind being at the competitors' backs. This is an advantage of immense moment when record breaking, as will be appreciated.

The measurement of Brooklands track is no doubt carried out very accurately indeed, and perhaps a 60 h.p. car would approximate the schedule distance of the race, but would a 90 h.p. car which skirts the top of the banking cover so accurate a distance, as all cars must travel on the Daytona Beach between starting and finishing lines?

My experience in America was one of absolute fairness to all and sundry, and therefore I deplore any aspersions cast upon our American friends and their methods.

ARTHUR E. MACDONALD.

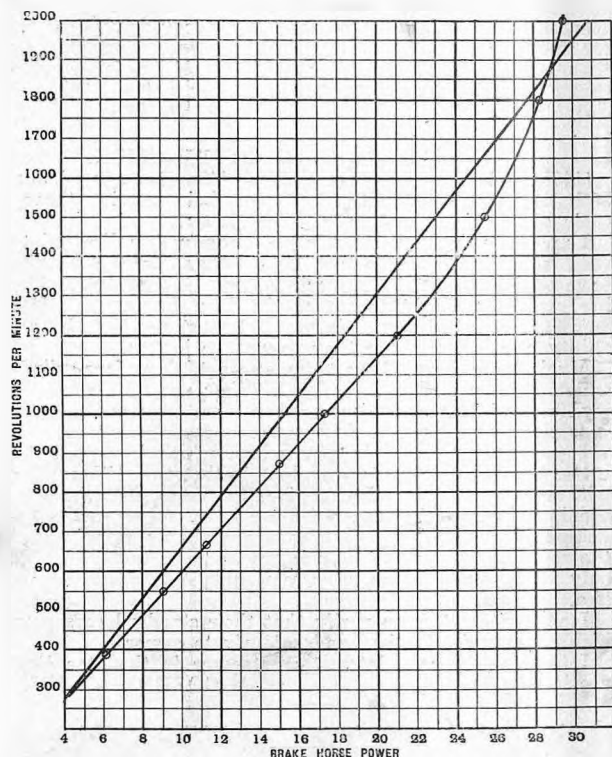
HORSE-POWER RATING.

[14447.]—With reference to Mr. Ide's letter [No. 14392], I do not suppose we are the only two people who have

D<sup>2</sup>SN

thought of the  $\frac{12}{D^2SN}$  formula. His claim to be the

originator is merely based on his statement that he devised it in December, 1906. The fact that I published it on January 3rd, 1907 (*Automobile Club Journal*) is positive evidence that I also must have produced it in December,



or earlier. But if the formula is to be ascribed to any one person, it should surely attach to the man who first published it, and Mr. Ide's suggestion that you were in error is unfounded.

I am extremely sorry to say that the diagram published with my letter [No. 14391] was incorrect. The enclosed one shows the true line given by my formula, which is better still.

C. F. DENDY MARSHALL.

[14448.]—In my previous letter I was anxious to compare the relative value of different formulæ irrespective of the divisor, which as in the R.A.C. formula would and should be varied for different purposes.

Mr. Dendy Marshall [letter 14391] evidently does not like the liberty I took of altering the divisor in the D<sup>2</sup>SN formula from his figure of 196634 to 96800. Whatever the divisor, however, the ratio is the same.

I gave on D<sup>2</sup>SN a 60 x 60 cylinder as 2.23, and a 120 x 180 as 26.77, or twelve times the power.

Mr. Marshall gives a 60 x 60 as 1.08, and the 120 x 180 as 12.96, which is again twelve times the power of the 60 x 60.

The R.A.C. formula gives the 60 x 60 as 2.23, and the 120 x 180 as 8.92, or exactly four times the power of the smaller. It is this excessive and I maintain unreasonable difference that I wish to be clearly realised.

The formula  $D^2 \sqrt{\frac{S}{D}}$  is the R.A.C. formula with a correction introduced for engines of different proportion as regards stroke to bore.

EDWARD H. FRYER.

THE POLICE IN MERIONETHSHIRE.

[14449.]—It was refreshing to peruse the inspired communication from "J.P.," and I trust that after absorbing additional wisdom on his travels, through the "narrow ways" of Wales, your broad-minded correspondent will again favour the motoring community with another instalment of his cosmopolitan views.

At the same time, your esteemed subscriber, Sir Osmond Williams, might favour fellow motorists with an expression of opinion as to the correctness or otherwise of his statement in your columns that there are no short-distance traps throughout Merionethshire—only the five-mile control at Corwen, which we are to understand was instituted “solely in deference to the wishes of motorists themselves.”

Would it be relevant to enquire whether these said motorists contributed any portion of the £85, which sum represents fines collected from motorists on Friday week at Corwen? Part of this money has already been utilised in purchasing additional stop-watches for the police, so that further hostile demonstrations against visitors are now being vigorously carried out. When you gave prominence to the announcement that, apart from the action taken “in deference to the expressed wishes of motorists,” the county was clear of despicable police trapping, I took the intimation, as a delicate hint from one occupying a high official position, to imply that motorists driving with due care and consideration to other users of the road would be warmly welcomed to the Principality, but was very considerably alarmed to find that police officers were stationed on all sections of the main roads to the sea coast, with the obvious intention of securing convictions against motorists. Some of the officers were partially hidden behind walls and buildings, others were dressed in plain clothes, and several were concealed in hedges. The men I spoke to were all engaged on short-distance traps, and openly admitted their sole object was to secure a conviction against English tourists, either for driving to the common danger or for exceeding the speed limit—the first charge for slow speeds and the second when the legal limit was exceeded.

I do not write as one of the victims, as our party had the sense to turn back and spend their money in a district less persecuting and vindictive than North Wales.

I fear that on the face of my experience Sir Osmond Williams has unintentionally misled his fellow motorists as to the true official attitude against motorists sufficiently foolish to tour this trap-infested district. PATIENCE.

[14450].—As Wales produced the present Chancellor of the Exchequer, we need not be astonished that it also produces “J.P.’s” such as your correspondent [letter 14393] in *The Autocar* of July 3rd.

I reside near London, and assist “to bear the expense of maintaining the roads” in my county, which are used by English, Scotch, Irish, Welsh, and other motorists. I don’t grumble, or dub such persons “intruders” because I have in my turn used the roads in three of the four countries named.

One can understand an ignorant yokel talking about “our own roads.” I have been told by such a one that I “don’t pay no rates”—though I have good reason to know I do—but a “J.P.!” What crass stupidity!

The King’s Highway is open to all, whether it be in England, Scotland, Ireland, or Wales, nor can it be shut to any user even by “somewhat harsher methods” for long.

The persecution of motorists and cyclists by the despicable and un-English trap is the outcome of the encouragement given in certain notorious districts by those pigheaded unpaid persons facetiously designated “Justices (?) of the Peace,” and, as your columns show, the proper duties of the police are neglected. AN OLD ROAD USER.

[14451].—It is amusing to see the various writers of the letters on the question of traps in Merioneth jumping at the often used cry, “Socialism.” “J.P.’s” letter was no doubt “wrote sarcastic,” but with plenty of underlying truth in his statements. When a landlord owns the land on both sides of a road for ten or fifteen miles or more at a stretch, and lives on that land, and keeps motor cars, “J.P.’s” letter is more easily understood.

However, my object in writing this letter is to try and dispel the idea that Merionethshire people are averse to the visits of motorists from other places. If motorists would only travel at respectable rates of speed on the roads—one calls them lanes, in which case speed is dangerous—there would be no traps, no persecution, nor prosecutions.

The Hon. C. H. Wynn is evidently anxious to give motorists a fair chance by buying good watches. Is he not a motorist himself? Of course he is. Some of the writers of the letters should live on the roadside—or lanesides. They would then appreciate the complaints of the bulk of the people against fast travelling. To average twenty-eight to thirty miles an hour on the Welsh portion of the Ho’head Road means very high speeds on straight portions. Have I not seen it done? Llangollen to Bettws-y-Coed—one hour.

All very well for people in the car. But, oh! of course, the other users of the road do not count.

There are motorists on the bench at Corwen as elsewhere, but when people openly break the law they must expect to pay the penalty. It is almost incredible that people who shout so much about law-breaking in other spheres should be the first to break the law when they buy a motor car.

No one need be afraid of visiting Merioneth if he only keeps to the law. I happened to have occasion to pass over the Llangollen-Corwen road the other day, and travelled the ten miles in thirty-five minutes by the help of the speedometer, and all was well. There is no place as nice as Barmouth in the whole of North Wales, and an extra half-hour or so in reaching there is well worth it.

“One Who Knows” evidently knows but little of the Police Committee, or the magistrates of Merioneth, or he would not call them fanatical socialistic anti-motorists.

The writer who signs himself “Y Gwylliad Cochion” amply proves his lawlessness by his signature, and if he be a descendant of that ilk, the sooner he is confined the better for the community.

MEIRIONFAB.

#### A POINT IN INSURANCE.

[14452].—In continuation of my letter 14390, my insurance agent wrote to Lloyds for me, and they very kindly offered to cover me in the particular case mentioned in my last letter. I then asked how much they would charge to extend my existing policy as regards third party claims no matter what car I drove, and for this they quoted an extra 10s., which I at once accepted, as I considered it well worth while to pay this amount and be relieved of a possible liability. LEX.

#### BROOKLANDS RULES.

[14453].—I have just seen your last issue containing a letter from Mr. S. F. Edge [14410] re my driving the winning car in the Montagu Cup. I may say that, irrespective of this gentleman’s letter, I have received quite an amount of criticism from many quarters already. In fact, I have received advertisement enough to make even Mr. Edge himself jealous.

In explanation of my terrible conduct I beg to say:

- (1.) That I am a common paid mechanic-driver.
- (2.) That it was the first race meeting I had attended at Brooklands.
- (3.) That during my few days practice the previous week I had repeatedly entered the paddock through the gate entered on that fateful day, and that the other gate was not open.
- (4.) That I have never received any instructions whatever from the B.A.R.C.

I beg to say that I did not go up to any line, and looked round before returning with the car and saw all was clear, and, as I said before, not knowing the actual rules I made a mistake, but at the same time I do consider it unfair of Mr. Edge to get advertisement at the expense of a fellow who admittedly made a mistake, and who Mr. Edge knew well was only a paid driver of the car itself.

I noted two particularly dangerous things done by another competitor, but I did not write to the papers.

SYDNEY R. HARBERT.

#### SUMMARY OF OTHER CORRESPONDENCE.

THE BROOKLANDS ACCIDENT.—Mr. Godfrey Wigglesworth, one of the gentlemen concerned in the accident which occurred at Brooklands as reported in *The Autocar* last week (pages 54-55) writes that (1) he is not a Cambridge man, and (2) he never made the statement that he lost his head, as that was not the case; those aware of the true circumstances of the accident knew full well that he did not, and that if he had the result would have been far more serious than it was.

THE BROOKLANDS MEETING.—Mr. R. W. A. Brewer asks us to state that in the Motor Club race at the last Brooklands meeting he finished third on his 24.8 h.p. Decauville short stroke engine ordinary touring chassis, after having led for nearly the whole of the two laps. He is particularly anxious that this matter should be noted, as another car has been credited with this position in some reports.

FOUND on the road near Milngavie, N.B., a lady’s leather gauntlet glove, lined with white fur, which had been dropped from a large car. The owner can have same on application to Miss Higginbotham, Craigmaddie, Milngavie, N.B.

## The C.A.V. System of Car Lighting.

Another contribution towards the Solution of the Electric Lighting Problem.

**J**UST at the present time interest in electric lighting on motor vehicles by dynamo is becoming exceedingly keen. Its advantages are so obviously manifest that it is needless to comment further on them, so that we shall endeavour to explain clearly the details of the system under consideration. In the first place, as Mr. Leitner is responsible for its production, it is bound to be successful, as his system is now almost universal on all the great railways. As far as motor cars are concerned, however, the handling of the device is in the hands of the well-known ignition experts, Messrs. C. A. Vandervell and Co., Warple Way, Acton Vale, W., who for several years have given their attention to electric headlights, side lights, tail lights, and interior lamps.

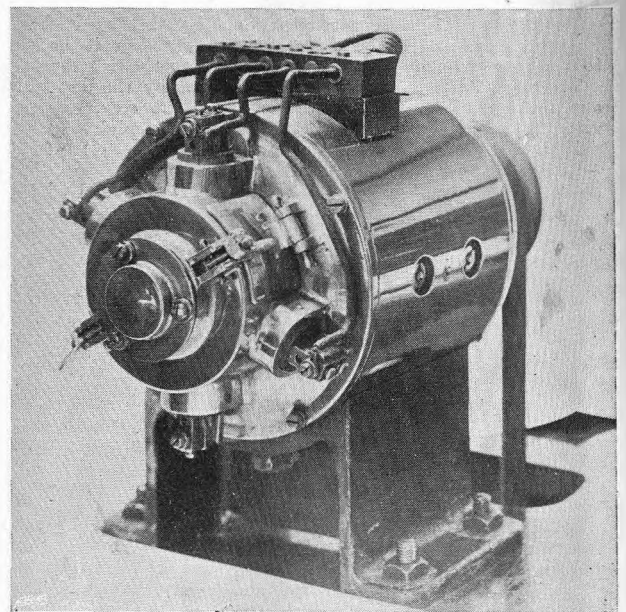
The outfit which we are about to describe consists of a variable speed dynamo and automatic switch, made under Leitner patents, and an eight-volt accumulator. The dynamo, which is of small dimensions, and weighs about 26 lbs., is driven from any convenient shaft by means of belt, chain, or gearing, and, as is usual with similar systems, charges the accumulators when not lighting the lamps. It is absolutely unaffected in its output by any alteration in the speed of the engine, and in the matter of regulation it works differently from any other motor car lighting dynamo on the market. The control is effected electrically. A simple shunt winding only is used, but there are two subsidiary brushes between which and the main brushes the field windings are connected, introducing one of the armature coils into the field circuit. These brushes are so placed that at low speeds this coil acts in conjunction with the current running through the shunt field coils and increases the excitation. When the speed increases to a point at which in the case of an ordinary dynamo an excess of current would be generated, and the distortion of the field takes effect, the two subsidiary brushes come to the zero point and the armature coil

no longer assists the field. A further increase of current brings the brushes to the other side of the zero position, and the coil between them acts in opposition to the field, and so by opposing the field the voltage in the latter is kept down to the required amount, and the current delivered by the dynamo so remains constant. This arrangement naturally simplifies the construction of the apparatus, as there is only one moving part, namely, the armature, which runs on Hoffmann ball bearings. The output is six ampères, but this can be increased if necessary.

The machine under normal conditions is self-exciting, but if through inattention the commutator be not clean, an exciting switch button is provided, so that the accumulator current may be used for this purpose. The brushes are of the radial box type, and the commutator, which is completely enclosed, may be reached through an inspection door. The minimum useful speed of the dynamo is about 580 r.p.m., and the maximum output is reached at approximately 1,250 r.p.m. It is therefore geared down to about 2 to 1. A slot is provided in the driving end of the casting to take an intermediate gear wheel if required. A numbered terminal board is fixed to the body to facilitate the wiring. The automatic switch forms a separate unit, and works electrically, connecting or disconnecting the battery to or from the dynamo according as to whether the voltage of the latter exceeds or falls below that of the latter, while means are provided whereby sparking at the switch is avoided. The switch is also so designed that in the event of the dynamo failing the battery would not be brought into circuit and burn out the armature. There are in addition two hand controlled switches, one of which controls the lights, the other the output, the function of the latter being to avoid sending the maximum amount of current into the accumulator when the latter is fully charged. The normal position for run-



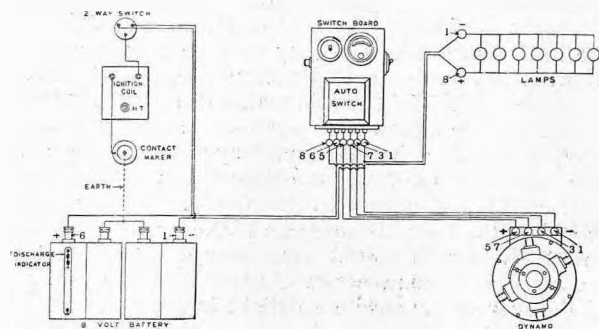
The C.A.V. switch-board with cover removed, showing cut-out.



The cylindrical C.A.V. dynamo shown mounted upon a temporary stand. The driving belt and pulley are plainly visible behind.



ning is at reduced output, but the fact of turning on the lights automatically causes the dynamo to give out its full amount of energy irrespective of the position of the adjuster. The steadiness of the lamp voltage is attained by a resistance in the auto-switch, which is



A diagram showing the connections of the C.A.V. lighting system.

automatically placed in series with the lamp circuit whenever the battery is being charged. The accumulators themselves are not without interest. The positive plates are of an improved Planté type, no paste being employed, as the active material is electrolytically formed out of the lead. Glass bead indicators are also fitted, so that the state of the cells may be easily seen according to the specific gravity of the acid.

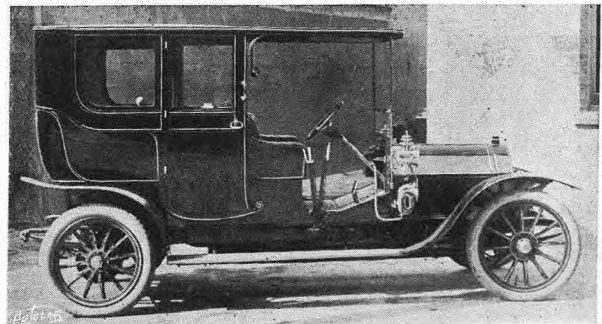
The system was demonstrated to members of the press at Messrs. G. Peters and Co.'s premises, Moor-gate House, Moorfields, E.C., and the outfit consisted of a board on which two headlights, two side lights, a tail lamp, an interior lamp, a steering column lamp, a voltmeter, and a Cape cart hood lamp were mounted, while in the centre was the switchboard with lamp switch, output switch, and ampèremeter, while the door was open showing the details of the auto-switch. The dynamo was mounted on a table and was driven by means of an electric motor. No matter how fast or how slowly the motor ran the lamps burned with equal brightness and the utmost steadiness, and no appreciable variation of the voltmeter could be noticed. If the motor ceased to work the batteries took up their duty as the auto-switch automatically changed over, and not a flicker was noticeable. Outside the premises was a car fitted up with the installation, aptly showing the dynamo under its normal working conditions.

The C.A.V. lamps are fitted with bulbs with filaments specially made for Messrs. Vandervell, and the light they give should be ample for all ordinary night driving. There is no doubt that the system is among the best that can be bought. Mr. Leitner's patents and Messrs. Vandervell's knowledge of motorists' requirements render success assured, while the latter firm's confidence in their latest production is demonstrated by the two years' guarantee which they issue with each equipment.

## Motoring and Linens.

**M**OTORING, besides having revolutionised travel, bids fair to bring about important changes in the linen manufacturing industry. Although its influence on the linen trade is only partially developed, there are not wanting signs that this influence will be of a most beneficial character. Up to the beginning of this year the use of flax fabrics in connection with motoring was of such unimportant dimensions that it attracted little, if any, attention, save perhaps the attention of those whose business it is to watch constantly the trend of popularity in matters of clothing or seek new outlets for their productions. That the demand was coming some had courage enough to predict; that it is here now to grow and flourish most manufacturers are agreed. Flax fabrics are now being extensively utilised for making motor cloaks, overalls, costumes, etc. Besides being largely patronised by motorists for personal wear, linen cloths are popular as material for making detachable linings for the interior of automobiles, cushion covers, head rests, etc. The advantage of these detachable linings is that, after the dust and grime of a day's travelling, the covers can with but little labour be taken off and washed, and the car turned out next day cool, clean, and comfortable looking. In the manufacture of motoring costumes, although coloured materials enjoy a certain amount of patronage, the prime favourites are cream and natural shade cloths. The weight of material varies according to individual tastes, but there is a decided preference for light-weight with a close texture. The fact that linen can be woven so close in texture is one of the chief reasons why it stands unique as an article for making motoring garments. An essential is to get something wind and dustproof, and with a compactly made flax fabric this end is accomplished better than with any other

textile, excepting, of course, material subjected to a waterproofing process. Another reason why linen cloth is growing in popularity with motorists is that overalls and such like garments can be slipped off and on in an easy way without disarranging one's attire. While thousands of pieces have already been shipped this year to the United States for making motor costumes, the new business arranged with manufacturers for spring trade for 1910 is of unusual dimensions. Most of the materials utilised have been of a plain texture, but there is a growing demand for a moderate priced twill cloth, which is said to be a better protection against wind, though if twill be too coarse it serves only to hold dust and dirt. However this may be, there is no doubt that manufacturers will be able to make materials that experience may from time to time prove to be best adapted for whatever part of the world they are required.



The fourth Darracq car which has been supplied to the London County Council. This car is for the use of the Parks Committee, and is a 25-35 h.p. limousine.

## Flashes.

The Hon. Arthur Stanley did not vote in favour of the petrol tax. We published a division list on June 5th, and among those who voted in favour of the tax were two Mr. Stanleys. Neither of them was the Hon. Arthur Stanley, the ex-chairman of the Royal Automobile Club. In publishing the division lists we pointed out that some members of the Royal Automobile Club had voted in favour of the tax, but we did not say how many, and it was assumed quite wrongly that Mr. Arthur Stanley was among the number. As a matter of fact, the three members of the committee who voted for the tax were Mr. T. H. D. Berridge, Sir Henry Norman, and Sir Charles Rose. We have no wish to introduce politics into our pages, but it is perhaps only fair to the three gentlemen referred to to point out that in voting as they did they voted with their party.

\* \* \*

It has now been definitely arranged that the race between the Duke of Westminster's powerful racing boat *Ursula* and Lord Howard de Walden's *Amazon* will take place from the *Enchantress* on Friday, July 30th, at 4.30 p.m., over a course of about thirty sea miles. Both the Duke of Westminster and Lord Howard de Walden have signified their intention of being present and steering their respective craft.

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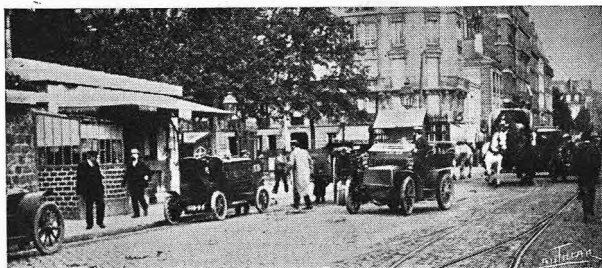
The New Engine Co., Ltd., are now most sumptuously installed in the West End at 9, Grafton Street, Bond Street, W., where at least three examples of the well-known and luxurious New Engine car are to be inspected. Considering the appeal which the ultra-luxury of the New Engine car makes to those who place comfort and reliability before anything else, a *piéd-à-terre* in the West End was all that was necessary for the further success of this well-known motor car.

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Messrs. Rossleigh, Ltd., of Edinburgh, have been asked by the Postmaster-General to tender for carrying out a motor mail service between Edinburgh and Glasgow on the lines of similar services which are in successful operation in various parts of England.

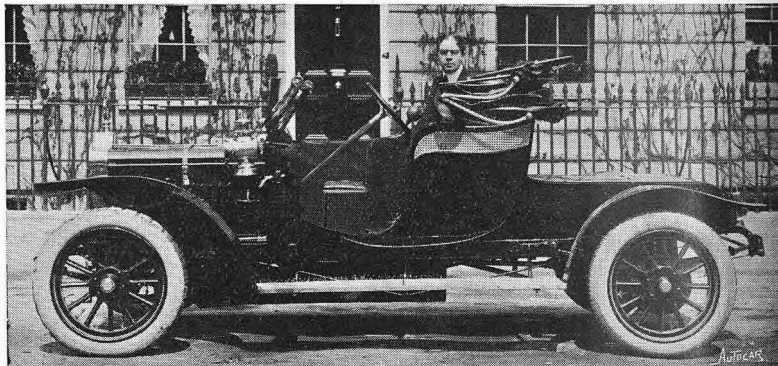
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Intending candidates for the Daimler Works scholarships are reminded that the last day of entry is July 31st. Applications must be addressed to Professor W. Morgan, Daimler Works, Coventry.



**HOW PARIS COLLECTS ITS PETROL TAX.** All cars are stopped at the gates of Paris, and the amount of spirit taken into the city is gauged and charged for. A rebate is afterwards made on the quantity taken out.

Even motorists themselves do not realise to the full the change which has come over the customs of the country since the introduction of the motor car. As an instance of this we only have to mention the review at Chatsworth Park a few days since. Messrs. A. R. Atkey and Co., of Becket Street, Derby, have sent us a photograph showing seven out of the nine cars which were hired from them that day to take people to the review. They make a most imposing fleet, and include two or three of the best known makes of the day. None of them hold less than four people, in addition to the driver, and although the event may not be regarded as a great one in itself it is an evidence of what is going on all over the country. In the pre-motor days in all probability the bulk of those who hired the cars for the trip to Chatsworth would have stayed at home, as Chatsworth is some twenty-two hilly miles from Derby, and the drive there, while a delight in a motor car, is more or less of a penance in a horse-drawn carriage, even if the horses were good enough to take the hills without the occupants of the carriage feeling that they were imposing undue work upon the animals.



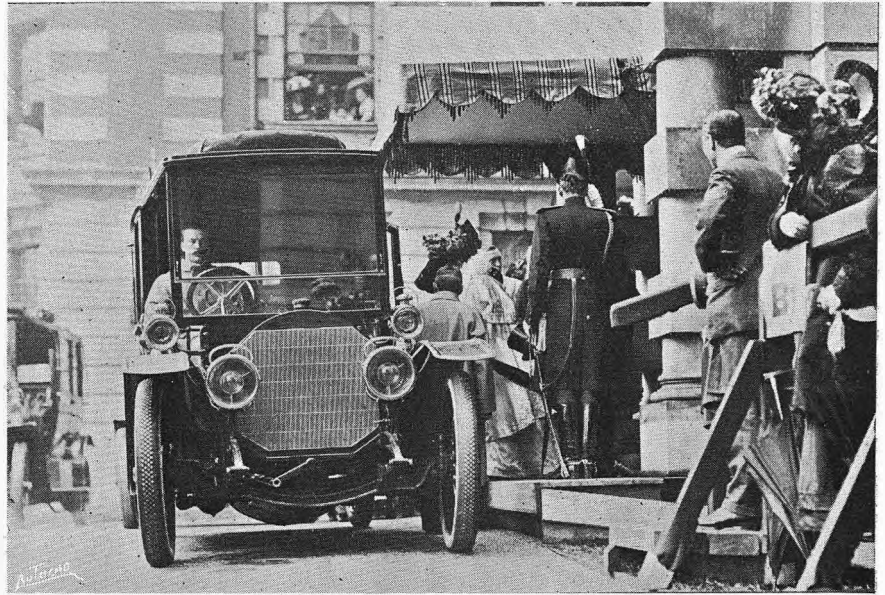
**Mr. Guy Lewin's 20 h.p. six-cylinder Standard, fitted with a Victoria body. It will be noticed that a small seat has been fitted in front of the driver to accommodate Mr. Lewin's little son. There is also a folding seat in the rear portion of the body.**

The members of the Automobile Association certainly cannot complain that their subscriptions are not being used to the full. The balance sheet for the year ending April 30th last is to hand, and it shows that out of an income of approximately £17,000 the whole of it was spent in the work of the Association, the great bulk going in the one item of road expenses and salaries of scouts. Indeed the expenditure slightly exceeded the revenue, the balance to the bad being £134 odd. This undoubtedly is the right policy. People join the A.A. for certain definite benefits, and if it did not spend its income upon providing these advantages they would have just cause for complaint. As it is the larger the membership the greater the activities and usefulness of the Association, which now has over 10,000 members. This means that its income will be over £20,000 next year—a considerable increase on that of last year, and every halfpenny of it will be needed for the road patrols, not to mention the new free legal defence scheme, which has already proved itself successful. The following gentlemen retire from the committee by rotation: Colonel W. J. Bosworth, Mr. D'Arcy Baker, Captain Bennett-Stanford, Messrs. Charles Cordingley, S. F. Edge, Walter Gibbons, Alfred Harris, and Charles Jarrott. No doubt they will all be re-elected, as no men have deserved better of their fellows than the chairman and committeemen of the A.A.

*Flashes.*

On June 29th a local inquiry was held at Weybridge into the application by the Surrey County Council for a ten-mile speed limit over certain roads at that place. The solicitor in charge of the Legal Department represented the R.A.C. and West Surrey A.C. It was considered by the R.A.C. that a limit over certain parts of the roads was not unreasonable, but over other lengths it was unnecessary, and the opposition was therefore confined to the last-named lengths of road. The lengths agreed to comprised Baker Street, Church Street, and Bridge Street, and the opposed portion consisted of Monument Hill, High Street, Portmore Park Road, and certain roads which converge at the railway station. A similar inquiry was held at Richmond on the 1st inst. This application, which emanated from the Richmond Town Council, was of a comprehensive nature, and included the whole length of every main road in the borough. It was obvious that the application in that form could not be acceded to, and the Local Government Board suggested a conference between the Town Council and the R.A.C., which was duly held, but without coming to any arrangement, so that a local inquiry became necessary. Mr. W. R. Lenanton, J.P., Mr. Granville Smith, and other local motorists assisted in the opposition. It is anticipated that as the result of the inquiry the Local Government Board will not consider it necessary to impose a limit over any greater

lengths of road than, even if as much as, those in respect of which the R.A.C. at the conference with the Town Council intimated it considered necessary. An inquiry is to be held on the 19th inst. at Robertsbridge, Sussex (between Tonbridge and Battle). and



*THE ROYAL VISIT TO MANCHESTER. Her Majesty the Queen leaving the Royal Infirmary after the opening ceremony.*

the R.A.C. solicitor will be glad if any motorist acquainted with the roads there will communicate with him at the earliest possible moment.

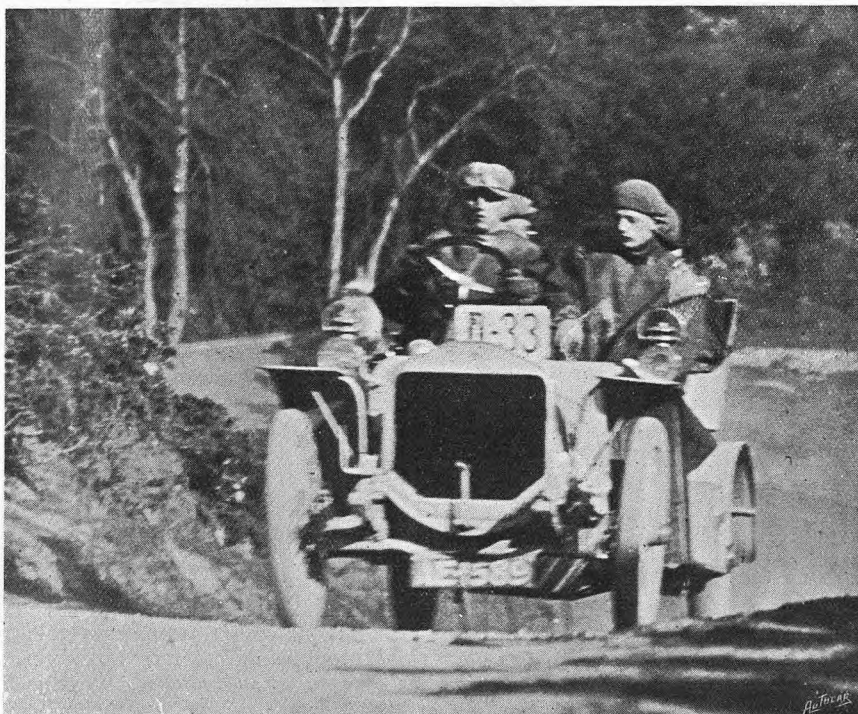
\* \* \*

One error often breeds another. Last week, in dealing with the Scottish Trials awards, we referred

to the fact that an official error had been made with regard to the total number of marks earned by the 12-18 h.p. Riley car which won the gold medal in Class B. The actual number of marks gained was 976 out of a possible 1,000, and was, of course, the highest score that was made in the particular class in which the car was entered.

\* \* \*

The largest deposit of duty made with the Automobile Association Touring Department was that of a member who last week deposited £815 4s. 10d. preparatory to making a tour of France, Germany, Belgium, Austria, Switzerland, Italy, and Spain. It is extremely probable that this amount constitutes a record for a single deposit for such a purpose. It also illustrates incidentally the ease with which foreign Customs difficulties can be overcome through the medium of the Touring Department of the Automobile Association.



*The 15 h.p. Straker-Squire car climbing Cairn-o'-Mount in the recent Scottish Trial. This car made absolute non-stop runs throughout both the Irish and Scottish Trials.*

## Road Warnings.

Will readers kindly advise us of all Police Traps which they discover, in addition to those included in the complete list given last week, and to those given below. It will considerably lessen the work of classification if correspondents will give the names of the two towns between which a trap occurs and the county in which it is situated, stating also, if possible, whether the trap is worked by the County or the Borough authorities, as well as the name of the Chief Constable, also to notify us of the cessation of a trap, so that the list may be kept correct up to date. The thanks of our readers and ourselves are due to those who have gone to the trouble of making us acquainted with the location of the traps.

### CAMBRIDGESHIRE.

Cambridgeshire motorists object, and rightly so, to the Newmarket traps being put down to their county when the trapping is all done in West Suffolk. Newmarket lying on the border of the counties led to our unwittingly falling into an error which we are only too glad to correct. A correspondent points out that there is not a single ten miles limit in the whole of Cambridgeshire.

### CHESHIRE.

Warrington-Chester road, between Stockton Heath and Frodsham, *i.e.*, for the first eight or nine miles out of Warrington. Trap is continually moved, and is worked in both directions.

### CUMBERLAND.

We are glad to be able to announce that Cumberland, as well as the sister county of Westmoreland, is entirely free from police traps.

### DEVONSHIRE.

A trap extends from Whipton to Poltimore on the road to Exeter over a distance of about two miles.

Traps are in evidence on most of the roads running into Exeter. Motorists have been caught between Stoke Canon and Rewe, also between Woodbury and St. George's Clyst. There is another trap between Whipton and Pinhoe, past the county surveyor's house.

### HAMPSHIRE.

Between Cosham and Fareham.

### KENT.

A trap is in operation over a measured furlong at the Blackheath end of Shooters Hill Road.

### LANCASHIRE.

Preston-Clitheroe road.  
Preston-Chorley, to and from the seventh milestone.  
Preston to Blackpool and Kirkham.  
Blackpool-St. Anne's.

Lytham-St. Anne's.

A ten miles an hour limit has been put up in Skipton.

### NORTHUMBERLAND.

Newcastle-on-Tyne-Tynemouth road, near Wallsend, where there is a gradient of 1 in 14 known as Rosehill. Timing is carried on both up and down this.

### SURREY.

Farnham-Alton road, a few miles west of Farnham. There are sometimes traps a few miles east of Alton.

Between Godstone and Croydon, terminating at Caterham Valley Police Station.

A trap is in operation in Richmond, which is moved from time to time. Sometimes it is worked on the Upper Richmond Road, between Richmond and Mortlake, and at other times on the Kew Road, between Richmond and Kew. The trap is worked by the Metropolitan Police, and a number of motorists attend the court every day as a result.

An occasional trap is worked on the Godalming-Haslemere road at any point between Milford and Haslemere, but is chiefly laid between the station and railway bridge. There is also a trap being worked on the King's Road, Haslemere, at times.

Croydon to Titsey, Limpsfield, and Westerham. Drive with caution in and around Warlingham village.

### SUSSEX.

On the south coast road from Portsmouth to Chichester, between Bosham and Chichester.

Chichester to Westhampnell, where road divides to Petworth and Arundel. A two miles trap.

### WARWICKSHIRE.

A trap is in operation between Allesley village and half a mile from the railway bridge crossing the road on the outskirts of Coventry on the Birmingham-Coventry road.

There is a trap on Sunrising Hill, and a motor cyclist was fined at Kington for driving a motor cycle at a speed of 28 miles 200 yards per hour up Sunrising, including the dangerous corner called Mad Hill.

### YORKSHIRE.

There is a trap four and a half miles from Malton on the York Road coming into Malton. The police stand at cross roads on a down grade.

A trap exists on the main Leeds-Bradford road, beginning at Bramley Station, and extending for 440 yards. The gradient is favourable for speed. The police are usually out on Tuesdays and Thursdays, and the practice is for one man to walk along as the car passes him and wave a handkerchief as a signal to another to begin timing. This is obviously very inexact, and liable to give false results.

### SCOTLAND.

Glasgow - Kilmarnock road. The police are very active at Newlands.

Paisley-Beith road, at Howwood.

Perth - Dundee road. There are movable concealed traps likely to be encountered at any point.

Glasgow-Tarbet road. A control is established for half a mile each side of the fourth milestone at Arden, going north from Balloch.

At Rossdan, two miles from Luss, for half a mile on each side of the second milestone.

Tarbet, from the third milestone entering the village.

Helensburgh. All cars are timed through the ten miles an hour limit, particularly at week ends.

Annan-Dumfries road. The police are very active in the village of Closeburn.

At Dunbar cars are closely observed in the ten miles an hour limit area.

The police "trapping" of motorists in Cornwall has given rise to a strong feeling of indignation amongst motorists of all classes, and while we should be the last to encourage motorists in any sort of ill-doing, yet it can scarcely be questioned that they have a good deal to complain of in the way they have been treated. The traps are specially made for the catching of motorists who exceed the legal speed limit, quite irrespective of the consideration which led Parliament to impose that speed limit, *viz.*, the securing the safety of the public. Traps have been arranged, too, in places where a sufficient distance to afford a real test cannot be secured, while the extreme shortness of the distance magnifies greatly any fractional error of the policemen in timing the vehicles. The West Penwith Bench at Penzance have recognised the justice of the motorists' complaints by expressing the opinion that the trap in connection with which several motorists

were brought before them was too short to be effective, and that it was hardly fair to test the speed over a short distance on a decline, and suggested that action should be taken by preference under the "danger to the public" section of the Act. It is in this direction, we hold, that the solution of the difficulty ought to be sought. Drivers who are punished because they are driving obviously "to the danger of the public," whether at twelve miles an hour or twenty-four, deserve no sympathy, and are likely to get none; but clumsy and unfairly worked police traps do not commend themselves to the general sense of justice, and cause an amount of irritation out of all proportion to any good they effect. It would be a calamity to Cornwall to drive motoring visitors away from it, yet this is undoubtedly what the Cornish police have been doing by their recent action in regard to traps.—*Western Morning News.*

## Club Doings.

### Motor Club.

On the 6th inst. Mr. Harvey duCros, jun., by way of spending the taxicab sweep money which he won at Brooklands, entertained some twenty-five guests to dinner in the "Indian Room" at the club. Speeches and musical items were the order of the evening, and all present thoroughly enjoyed themselves.

### Manchester Motorists.

On Saturday last, following the custom of previous years, the motorists of Manchester and district lent their cars in the cause of charity by taking crippled children a run into Cheshire. 140 cars ranging in horse-power from the little 4½ h.p. to the lordly 60 h.p., many of them being beautifully decorated left Albert Square between 1.30 and 2 p.m. Lord



A gay scene at the Manchester A.C.'s cripples' outing

Sheffield had kindly lent his park at Nether Alderley for the occasion, and on arrival all the cars were lined up. Tea was served in two large marquees, but afterwards rain fell heavily, although during the outward and homeward journeys it was quite fine. Messrs. Cotsworth, Holmes, and Hyde are the leading spirits in this outing, assisted by a large band of helpers, including several prominent doctors and the Chief Constable of Manchester.

### North-eastern Automobile Association.

"The 1909 Year Book" of this association, by reason of the vast amount of interesting information contained therein, should be in the hands of every motorist in the North of England. This book is a decided step in advance of any other provincial year book yet to hand, and should commend membership of the N.E.A.A. to all motorists within the sphere of its jurisdiction.

### Clyde Motor Boat Club.

On Saturday last a race was held at Gourrock for the Cardwell Bay Cup, a trophy presented by the sailing club of that name. The course covered a distance of sixteen nautical miles. A hard north-west wind driving before it a big tumbling sea made wet travelling, and rendered the racing somewhat uncomfortable. Six boats were entered, but *Fairbanks Minor*, the new Fairbanks engined speed boat, did not turn up. Of the five starters four finished. *Vielvin II.*, the champion boat of Scotland, was the outstanding unit, and, despite unfavourable conditions, she covered the course in 1h. 50m. Owing to the boats not having yet been measured for the new M.M.A. rules the race remains undecided.

### Midland A.C.

The Midland A.C. took a large number of crippled children for a run on Saturday, the 3rd inst., through Stoneleigh Park, and spent a very enjoyable afternoon. The members and their friends were entertained by Mr. and Mrs. Clayton to tea. The children afterwards witnessed a punch and judy show and all the children were given fruit and sweets on leaving.

The following owners lent their cars: C. E. Simms, 14 h.p. Alldays; H. J. Bourne, 12 h.p. Star; H. Lucas, 25-30 h.p. Austin; Dr. Moore, 6 h.p. Jackson; F. H. Sabin, 28 h.p. Lanchester; A. B. Blakemore, 8-10 h.p. Humber; H. B. Sorriggs, 28 h.p. Ariel; M. Allday, 20 h.p. Alldays; E. L. Jacobs, 30 h.p. B. Humber; M. C. Blewitt, 20 h.p. Calthorpe; R. S. Todd, 20 h.p. Alldays; J. A. Harper, 18 h.p. Enfield; P. S. Foster, 35-45 h.p. Maudslay; S. Vernon, 8 h.p. De Dion; Ballin Hinde, Humber; L. Meek (hon. sec.), 24 h.p. Enfield.

### Meet of Sussex Motorists To-day.

Following the establishment of the Sussex Motor Yacht Club as the representative automobile club for the county of Sussex, and as the county branch of the R.A.C., a meet of the motorists of the county will be held under the auspices of the club to-day (Saturday, 17th inst.) This meeting is being held in fulfilment of the object of the club to foster the interests of the movement in Sussex, and the club extends an invitation to members and non-members with equal cordiality. The meet will take place at one o'clock at the Beacon Hotel, Crowborough, where luncheon will be taken, and the motorists will subsequently visit Eridge Castle by kind invitation of the Marquis of Abergavenny.

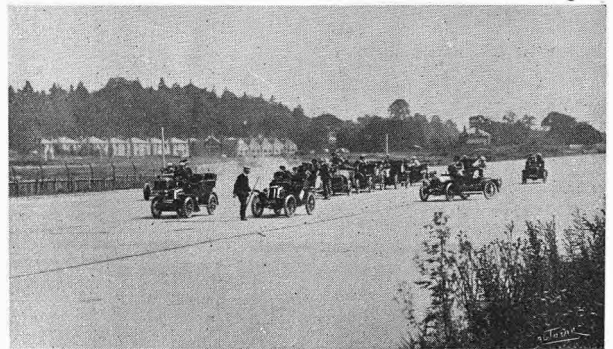
### Motor Yacht Club.

On Saturday last in Southampton Water a most interesting and successful afternoon's sport was held. There were six entries in the flexibility race, the boats finishing in the following order: 1, *Euphrates* (Mr. T. Sopwith), observer Mr. H. H. Duden; 2, *Camilla II.* (Mr. R. N. Fairbanks), observer Mr. E. H. Clift; 3, *Christine* (Mr. F. C. Blak.) observer Capt. Wyley; 4, *Phæbe* (Mr. W. Summers), observer Capt. Bignall; 5, *Commander* (Capt. Cumming, R.N.), steered and driven by Miss Larkins, observer Mr. R. Hill; *Lotus* (Mr. H. Western Hutchinson), observer Mr. G. J. F. Knowles, gave up. *Commander* was actually second, but the observer reported that the engine had stopped once, which gave the second prize to *Camilla II.*

The tilting competition brought out four competitors and resulted as follows: 1, *Euphrates* (Mr. T. Sopwith), spearman Mr. H. H. Duden; 2, *Phæbe* (Mr. W. Summers), spearman Capt. Bignall; 3, *Camilla II.* (Mr. R. N. Fairbanks), spearman Mr. E. H. Clift; 4, *Commander* (Capt. Cumming, R.N.), spearwoman Miss Larkins.

The stern first race resulted as follows: 1, *Phæbe* (Mr. W. Summers); 2, *Commander* (Mr. Alaister Cumming).

During the afternoon between thirty and forty members of the Hampshire Automobile Club visited the *Enchantress* at the invitation of the Motor Yacht Club, the majority being conveyed from and to Hythe Pier in the club launch. They were interested spectators of the gymkhana, and had the weather been kinder, no doubt many more would have put in an appearance.



The start of the Kent Automobile Club Race at the Inter-club Meet at Brooklands on Saturday.

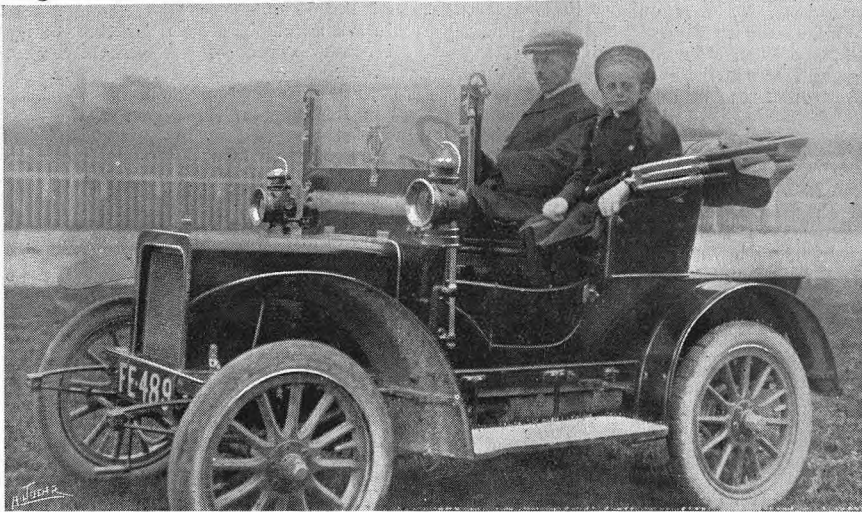
## Brooklands Automobile Racing Club.

### Result of Monthly Roving Bogey Competition for June, 1909.

Entrant.	Weight, lbs.	Time in Seconds.		Nett.
		Gross.	Handicap.	
Mr. A. G. Fentiman's 30 h.p. M.P. car	3,640	232.2	163.2	69.0
Mr. B. Ormerod's 6 h.p. Jackson	1,796	263.35	127.7	135.65
	1,796	266.0	127.7	138.3
Mr. J. C. Madeley's 15 h.p. Minerva	2,688	232.65	52.0	180.65
Mr. H. W. Inglis's 14-20 h.p. Siddeley	2,772	264.25	44.2	220.05
Major Lubbock's 12-14 h.p. Singer	2,688	293.6	60.4	253.2

**Dutch A.C.**

The first prize in the Dutch Automobile Club Reliability Trials has been won by Herr W. Aertnigs, of Amsterdam,



The smart 8 h.p. Rover car which the members of the Lincolnshire A.C. presented to Dr. Godfrey Lowe, who is seen at the wheel.

on a 15 h.p. Darracq car. An interesting feature of this event is that the winning car was built in 1904, and had already covered over 60,000 miles.

**Lancashire A.C.**

The annual balance sheet of this club shows a balance in hand of £134. A reliability run has been fixed for to-day (July 17th), when a run of 120 miles will be taken from Blackburn to Whalley, Hellifield, Penrith, and Windermere. On Saturday, July 3rd, the crippled children of Blackburn, Accrington, and Darwen, to the number of 188, had their annual motor trip to Lytham, organised by the club. They were conveyed in thirty-two cars and two motor chais-a-bancs, and provided with tea at the Clifton Arms Hotel, Lytham. Subsequently a pierrot entertainment was given. Mrs. Crook, of Hoghton, presented sixpence to each child, and other acts of generosity contributed to the unbounded delight of the little guests.

**Manchester A.C.**

A meeting of the committee was held on the 5th July at which the resolutions passed by the special Budget Committee of the Royal A.C. were considered. The principle of graduating the tax by horse-power, and also of taxing the car rather than the individual, was approved. The action of the police in forbidding motor cars to stand in certain portions of the streets of Manchester came up for consideration, and the president reported the satisfactory result of an interview with the authorities. The attitude of the Society of Motor Manufacturers and Traders in refusing the request from local agents to hold a show in Manchester came up for consideration, and as representing a large number of owners of cars the committee felt justified in supporting the application for a show, and the secretary was requested to write the Chairman of the Local Committee of the Society to that effect. A cordial vote of thanks was passed to Mr. and Mrs. Dronsfield for their kind hospitality on the 3rd inst., when they entertained at Sandiway Lodge, Cuddington, the members of the Manchester A.C. and their friends, to the number of about 180, at their residence.

**Sussex County A.C.**

The meet of the Sussex County Automobile Club at Haywards Heath on July 3rd was marked by a balloon hunt.

The weather was most favourable, and the event was very successful. The Hon. C. S. Rolls, who kindly brought his balloon "The Imp" (of 11,700ft. capacity) from London for the occasion, made the ascent. The great amount of interest taken by the members in the event was shown by the large number of cars which entered for it. These were drawn up in line in the Queen's Road, adjoining the Gas Works. The breeze was blowing rather stiffly from the south-west, and Mr. Rolls, who made the ascent alone, rose rapidly to about 5,000ft., and sped quickly away in a north-easterly direction. Directly the balloon rose, all the cars entered for the chase started in pursuit, their drivers taking any road which, in their opinion, would bring them to the balloon when it descended. Mr. Rolls brought his balloon to earth near Paddock Wood, at 4.15 p.m., a distance in a direct line from Haywards Heath of about twenty-five miles. The first competitor to reach the balloon on its descending was Mr. Hugh Moore, with his 15 h.p. Coventry Humber, and he was declared the winner of the prize, a handsome silver bowl, kindly presented by Mr. W. James, president of the club. Mr. J. Godwin-King, on his 20-30 h.p. Renault, who appeared quickly after Mr. Moore, was awarded a silver cup, while Mr. S. M. Townsend, on his 30 h.p. Thornycroft, won third prize. Owing to the wind being somewhat strong, Mr. Rolls made rather a rough landing.

**Lincolnshire A.C.**

A meeting of the committee was held at Sleaford on July 8th. There was a good attendance. The regulations for the Syston Hill-climb to-day (Saturday) were revised and officials appointed. It was decided to have a test of the Lincolnshire motor mobilisation scheme during the month of August. This will be of a novel and highly practical nature, and will also be free from any risk of damage to cars. Names of motorists residing in the county are still required for the motor mobilisation list, and should be sent to the hon. sec., Dr. Godfrey Lowe, St. Catherine's, Lincoln.



Mrs. Dronsfield's "At Home" to the members of the Manchester Automobile Club on July 3rd.