

# 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.

### Practical Tyre Improvements.

From descriptions and reports which we have published recently, it will be seen that some really practical advances are being made in the matter of rendering pneumatic tyres still more reliable. The pneumatic tyre of to-day, as compared with the tyre of only three or four years ago, not to mention any earlier date, is extraordinarily reliable, especially when new. We use the word new advisedly, and do not merely mean that a tyre is reliable for a week or two, but rather that it is very unlikely to go wrong till it has passed through about three-quarters of its active life. From this period and distance it may burst at any time. We do not mean that it will blow a hole in itself six inches long, but rather that some old puncture which has gradually

brought about a local weakness in the cover will suddenly enlarge so that the air tube will fail and blow quite a small hole through the cover. This sort of thing is now being stopped by the reinforced air tube—in other words, a tube which is not entirely dependent upon the support of the cover, but which has some strength of its own.

We believe there is a great deal more in this principle than is at present appreciated, that its virtues are not wholly revealed by the recent successful official trials which have been made, and that the advantages are even greater than would appear at first sight. Strengthened air tubes should unquestionably result in longer life to the covers, because they can be used for much longer distances without fear of bursts, so that a vast number of tyre stops should be abolished. On the other hand, the strengthening of the air tube, although it renders bursts very unlikely, does not make puncturing impossible, and a cover, whether old or new, is always subject to this risk, and it is therefore interesting to note that, simultaneously with the successful attempts to improve the air tube as such, success is also being attained in the direction of protecting it from outside attack by making the cover more nearly invulnerable, while the old idea of interposing an armour between the cover and the air tube is also showing promise. This is, as it were, a middle course. It takes it for granted that the non-puncturable cover can scarcely be made, and that therefore something which is practically invulnerable should be interposed between the cover and the air tube.

### Recent Advances.

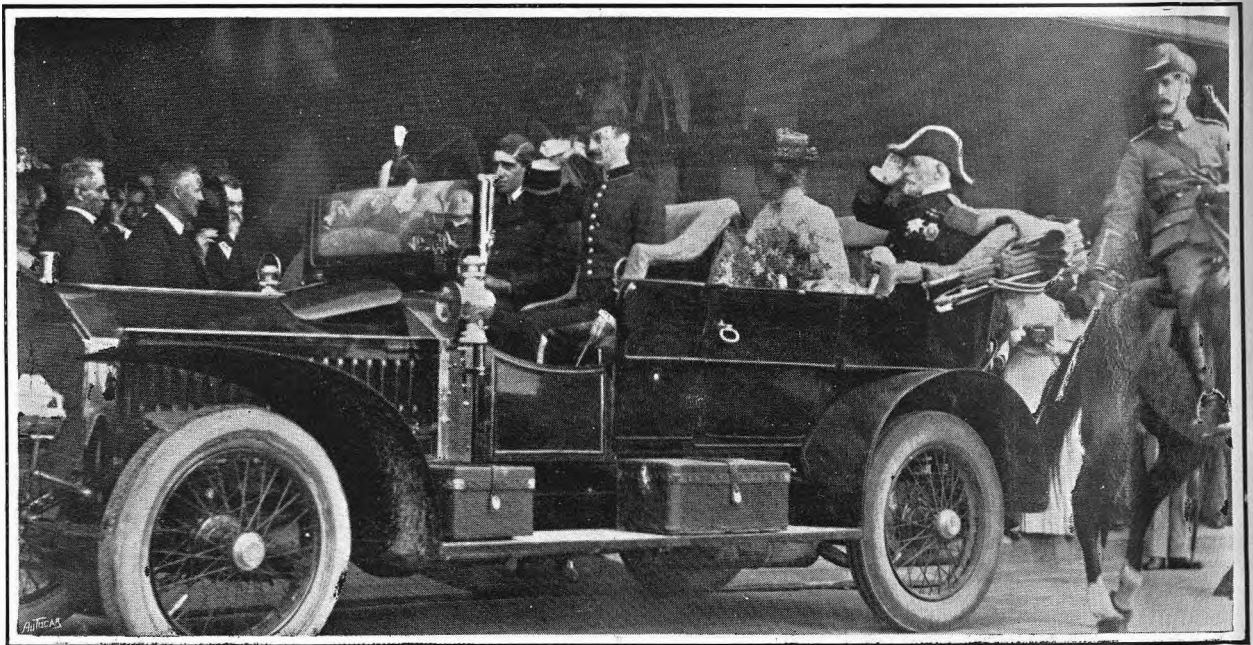
Although it is true that an absolutely non-puncturable and, at the same time, practical pneumatic tyre has not yet been produced, it is well to bear in mind that great advances have been made, and that every advance spells longer life, as if the tread never cuts and scarcely ever punctures it means that its real strength is unimpaired. The main cause of serious tyre trouble is failure of the canvas, caused by cutting and rotting. Only the deep cuts damage the canvas at once, but damp penetrates the holes in the tread of the tyre and sets up rotting of the canvas walls even when the cut is not deep enough to damage the canvas at the moment of the cut occurring. As the strength of the cover depends entirely on the strength of the fabric, it will be seen that, useful as an unpuncturable armour between cover and air tube may be because it protects the air tube, it will not alone conduce to the longevity of the cover. That can only be ensured by protecting it by a tread which is as nearly unpuncturable and uncuttable as may be. If the canvas cannot be cut, it will never rot, as there will be no holes on the tread through which water can penetrate to the canvas.

It is not our practice to mention specific articles when dealing with general principles in these notes. Nevertheless, it is sometimes desirable to do so to make our meaning clear. As an illustration of a combination which should give something very near to the present possible maximum of reliability, we may suggest a

cover like the Helsby, Palmer, or Via, among others, which seem almost flint proof and as little subject to puncture as any, an armour under the cover such as the Atlas tyre protector, and the Challenge reinforced air tube. Both the armour and the reinforced air tube have come into prominence quite lately. Their successful behaviour in the Royal A.C. tests which have so recently been described in *The Autocar* first suggested to us the subject of this short article, as we could not fail to recognise that they marked further steps towards the motorist's ideal of an absolutely reliable pneumatic tyre.

Nothing is more interesting than comparing the development of the motor tyre with that of its precursor, the pneumatic cycle tyre. They are both pneumatic tyres, and the car tyre is the direct offspring of the cycle tyre, but here the family connection and resemblance ends. There is no doubt that the development towards perfection of the motor car tyre has been hindered by the experience of tyre makers with cycle tyres. For instance, the idea of the strengthened air tube, the cover which is practically non-puncturable,

or the interposition of armour between the cover and the air tube, have all been tried upon the cycle tyre years ago, and all of them have been dropped, except the interposed armour, which has a very limited vogue indeed. The great difference, which is apt to be forgotten altogether, apart from the tremendous increase of size, is in the fact that the most delicate of all engines drives the bicycle. All attempts to render the bicycle tyres non-puncturable have resulted in deadening the tyres, thus making the work of propulsion harder, and this is the main reason why they have been discarded. Either reinforced air tubes or armour between cover and tube also deaden the tyre and reduce its resiliency. This within small limits does not matter in the least when an engine does the work of propulsion, as the difference need not be enough to affect the comfort of the occupants of a well-sprung car, and the engine should have sufficient reserve of power to overcome any slight retardation due to the invulnerable tyre being somewhat less tractively efficient than the more resilient and consequently less power absorbing though most easily damaged tyre.



*A powerful Napier owned and lent by Mr. Stephen S. Ralli, of Walkerville, Australia, to the reception committee for use of the new Governor of Adelaide, Admiral Sir Day H. Bosanquet, who is seen acknowledging the salute of the Guard of Honour.*

With reference to the recent Local Government Board inquiry into the application made by the town council of Stoke-on-Trent for a ten-mile speed limit for motor cars on part of Stone Road, Stoke, the Local Government Board state that they are not satisfied upon the evidence given at the inquiry that the other provisions of the Act are insufficient for securing the safety of the public or that the road is of such a character as to justify the imposition of a reduced speed limit for motor cars using it, and they are not prepared, therefore, to make the regulation applied for. The Board, at the same time, suggest that as the junction of Stone Road and London Road is regarded by the town council as an especially dangerous point, it should be marked by warning notices set up by the council

In a recent report on the Finances and Resources of Egypt by His Majesty's Agent and Consul-General it appears that during a rising in Gezira (one hundred miles away) an urgent call for officers and stores was made to Khartoum. Four Arrol-Johnston cars and motor lorries were commandeered at a moment's notice for rapid transport. The Consul relates that the four vehicles covered the extremely trying desert tracks at a speed of eight to twelve miles an hour without a hitch. It is curious to notice that, while some portion of the output of the Arrol-Johnston factory at Paisley was thus giving the immediate aid that saved the situation in Egypt—almost the hottest country in the world—another portion of the output was also, by laying food depôts steadily and reliably, proving the salvation of the Shackleton Expedition in the Antarctic.

## Useful Hints and Tips.

### Danger from Loose Bonnets.

**T**HOUGH apparently a trivial thing, neglecting to fasten down a bonnet may lead to a good deal of expense. On two occasions recently I have been a sufferer in consequence of a momentary omission of this sort, once narrowly escaping serious personal injury, and once smashing a valuable screen to atoms. When a motor car is travelling at a speed of twenty miles an hour or more the pressure inside the bonnet—due chiefly to the action of the fan, aided by the rush of air through the radiator—is sufficient in most cases to lift the bonnet if it be not securely fastened down. The modern practice of fitting an undershield from the radiator to a line behind the dashboard accentuates this air pressure, and one should be careful, therefore, to fasten the bonnet securely. In one of the cases I am referring to the bonnet is hinged at the dashboard, opening upwards from the front. The carburetter had been giving trouble, necessitating a dismount every two minutes or so.

Human nature soon becomes wearied under such circumstances, and finally I thought I would save myself the trouble of fastening the bonnet so often. The result was that it suddenly flew up, dashing with great violence against the wind screen, and damaging it seriously. The latter happened to be one of the folding kind, and was closed at the time. The impact was so great that both sheets of glass were cut clean through to the framework, a piece of the shape of the bonnet being removed from each of them. On another occasion a friend asked me to try his six-cylinder car, which was misfiring slightly, with a view to suggesting a remedy. The bonnet in this case was fastened in the ordinary manner at the side, but, as it turned out, the front end was left unsecured. The car was very fast, and the wind pressure was soon strong enough to lift the bonnet at its front end. Of course, the inevitable followed, and it tore itself away from the rear fastenings, flying close over my head, carrying with it the hat of a lady who was sitting by me. Such incidents give one a shock, and are likely to be attended with serious consequences, and it is imperative that motorists should make certain that everything is secure.

A. J. MCKINNEY.

### A Remedy for a Coil Ailment.

If a coil gives trouble on the road it usually presents a more or less insurmountable difficulty, but a hint worth trying under such circumstances is given in last week's *Motor Traction*. In this instance the driver traced a roadside trouble to the coil, and knowing that in some coils the + terminal was internally directly connected with the bridge piece, he put a wire across between the bridge piece and positive terminal, and found that by these means the missing spark was restored. He accordingly maintained the wire in that position, and, in fact, has done so ever since, as he prefers an accessible external connection to an inaccessible internal one, however neat. The remedy may be fairly obvious, but then it is exactly the obvious that clever people are apt to overlook.

### Reamering Out Petrol Jets.

Very few workmen or private owners of cars know the correct method of reamering out petrol jets when the size of the orifice has to be increased. Even in the testing shop a certain sized watchmaker's broach or reamer is pushed in from the bottom side of the jet,

the hole being enlarged by rotating the jet or the reamer whilst steady pressure is put on the end. By practice the amount which the reamer should protrude through the top of the jet is known, and this amount is usually measured with a rule.

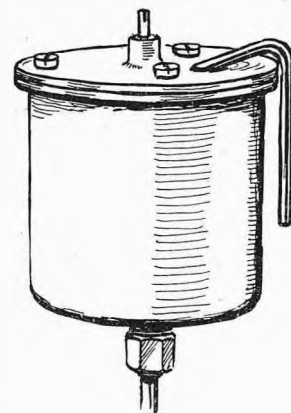
The reamer being tapered, the hole it makes is likewise tapered, and has a larger diameter at the lower than the upper part of the orifice. Hence if any grit or foreign matter should pass from the float chamber to the jet it may be large enough to enter the lower part of the hole but too large to pass out at the top. The suction of the engine has the effect of making the obstruction more solid, and it is then necessary to take out the jet and clear it. If the reamer be worked from the top side of the jet then the largest part of the hole is formed at the top, and if any obstruction should pass into the lower or smaller part of the hole it can pass right through the orifice and so give no trouble.

### To Obtain Petrol.

A good many cars have no vent tap for the petrol system, so that when a little petrol is wanted for cleaning purposes, such as cleaning a filter gauze or for priming the engine to secure an easy start, one can only get it by dipping some vessel into the tank or by opening a tin of petrol. Now the majority of cars have filler caps to the tank which are too small to enable petrol to be withdrawn, and the simplest way to make it easy to get petrol is to have a little tap fitted either in the base of the petrol filter or in the petrol pipe, the tap being so arranged that when it is turned off the handle is down, thus obviating the possibility of it shaking into the open position. A good many cars have an overflow pipe to the float chamber. It consists of a small copper pipe, which is inserted in the cap of the float chamber, so that if the chamber floods the petrol will run on to the ground.

and not upset carburation, and this provides a ready means of obtaining a little petrol, as one only has to lift or press the float needle as the case may be, when petrol will run from the overflow pipe. If a pipe is not fitted it is perfectly easy to have one put on, and it can be done by any tinsmith or coppersmith without disturbing the piping. As we have said,

a good many carburetters have such an overflow pipe, and we give a sketch to show what we mean, which also serves to show how easily a similar pipe can be fitted to the lid of practically any float chamber. If no vessel be handy into which the petrol can be drawn from the float, one can always turn to the screw lid of the filling orifice of the radiator and use that as a makeshift cup into which a small quantity of petrol can be drawn.



## The Aston Hill Climb.

THE sixth annual open hill-climb organised by the Hertfordshire County Automobile Club, held on Saturday afternoon, was a great success in every way. The weather was delightful, and there was a record attendance of spectators and competitors.

Aston Hill is one of the Chilterns, and is situated between Wendover and Tring, the road running through the beautiful estate of Mr. Alfred De Rothschild. The length of the climb was 1,300 yards, with an average gradient of 1 in 13, the steepest being 1 in 8. A stop of thirty seconds in a measured length of 30 yards about half-way up the hill was compulsory in all events—a stipulation made by the R.A.C. to reduce the average speed to below the legal limit of twenty miles per hour.

Class I. was won on formula by Mr. W. Jolley on a 12 h.p. new type single-cylinder De Dion, and Class IIa. by Mr. Victor Riley on his wonderful little 12 h.p. Riley with five up, to say nothing of numerous flywheel castings, etc.

Fastest times in the classes are as follows:

Class I.—Mr. Arthur Cox (9 h.p. Riley).

Class IIa.—Mr. G. W. Hands (12-14 h.p. Calthorpe).

Class IIb.—Mr. A. J. Hancock (20 h.p. Vauxhall).

Class III.—Mr. P. C. Kidner (24 h.p. Vauxhall) and Mr. N. Bayliss (14-20 h.p. Sunbeam), equal times.

The cars were weighed in at Boxmoor Station between eleven and two o'clock, under the supervision of Mr. R. V. Beveridge. Mr. V. Young marshalled the cars at the foot of the hill, and Mr. F. W. Shorland kept the course clear at the finish. Mr. A. V. Ebbelwhite was the timekeeper at the start, Mr. F. Straight at the finish, and Mr. F. T. Bidlake at the central stop.

The speed of the Vauxhalls was again very noticeable as at Shelsley Walsh. Mr. Kidner ascended the hill magnificently, winning the handicap prize of Class III., and Mr. Hancock accomplished the fastest time of the day on the 20 h.p. Vauxhall, and the 12 h.p. Talbot driven by Mr. Mills did well in Class IIb. The two new Sunbeam cars entered in the last class made very fast times; in fact, the 14-20 h.p. live axle car was travelling so well at the compulsory stop of thirty yards that, in spite of the powerful brakes which were jammed hard on, it overshot the line by several yards, thus unfortunately losing several seconds. Mr. Kidner also overran the line by a short distance, but, owing to the admirable way in which the reverse gear was engaged, only two or three seconds were lost, and Mr. Hands's Calthorpe also skidded over the line.

Few of the drivers realised that until the car was completely at a standstill the thirty seconds stop did not commence: many cars slowed down, and, creeping into the control, lost many seconds.

The hospitality of Mr. Alfred De Rothschild after

the hill-climb in his beautiful grounds was much appreciated. To Mr. Arthur T. Salmon, the energetic hon. secretary of the club, also much credit is due for the excellent organisation and success of the hill-climb.

The results of the meeting are as follow:

### RESULTS. CLASS I.—UP TO 10 H.P.

Car and Driver.	Bore and Stroke.	No. of Cyls.	Figure of Merit.	Plac-ing.
h.p.	mm.			
12 De Dion (W. Jolley) .....	100×160	1	.653	1
9 Jackson (Dr. J. Warren Davis) .....	100×160	1	.689	2
10 Jackson (J. R. W. Taylor) .....	100×160	1	.697	3
9 Jackson (E. Berkeley Ormerod) .....	100×130	1	.700	4
9 Riley (Arthur Cox) .....	86×89	2	.730	5
8 De Dion (Fred G. Warwick) .....	100×120	1	.911	6
6½ Jackson (E. Hind) .....	90×110	1	.919	7
8 Rover (W. H. Ellison) .....	114×130	1	.998	8
10-12 Phoenix (J. van Hooydonk) ..	90×100	2	1.015	9
8 Phoenix (A. F. Ilsley) .....	80×80	2	1.235	10

### CLASS IIa.—10 H.P. TO 17.5 H.P.

12 Riley (Victor Riley) .....	101×127	2	.674	1
12 Clyde (A. E. Oakley) .....	80×80	3	.776	2
14-16 Motobloc (P. C. B. Parsons) ..	80×100	4	.806	3
10 Alldays (P. S. Lock) .....	95×114	2	.858	4
10 Delage (W. Whittall) .....	62×120	4	.880	5
12 Jackson (R. Reynold Jackson) ..	104×213	1	.900	6
12-14 Calthorpe (G. W. Hands) .....	75×120	4	.908	7
14-16 Miesse (S. Bailey) .....	80×110	4	1.099	8
12 Adler (W. H. Whitehead) .....	75×88	4	1.050	9
10-12 Martini (S. G. Cummings) ..	67×90	4	1.109	10
12 Zedel (H. Rigby) .....	72×110	4	1.271	11
10 Jackson (E. Jackson) .....	75×100	4	1.345	12

### CLASS IIb.—OVER 17.5 H.P. AND UP TO 25 H.P.

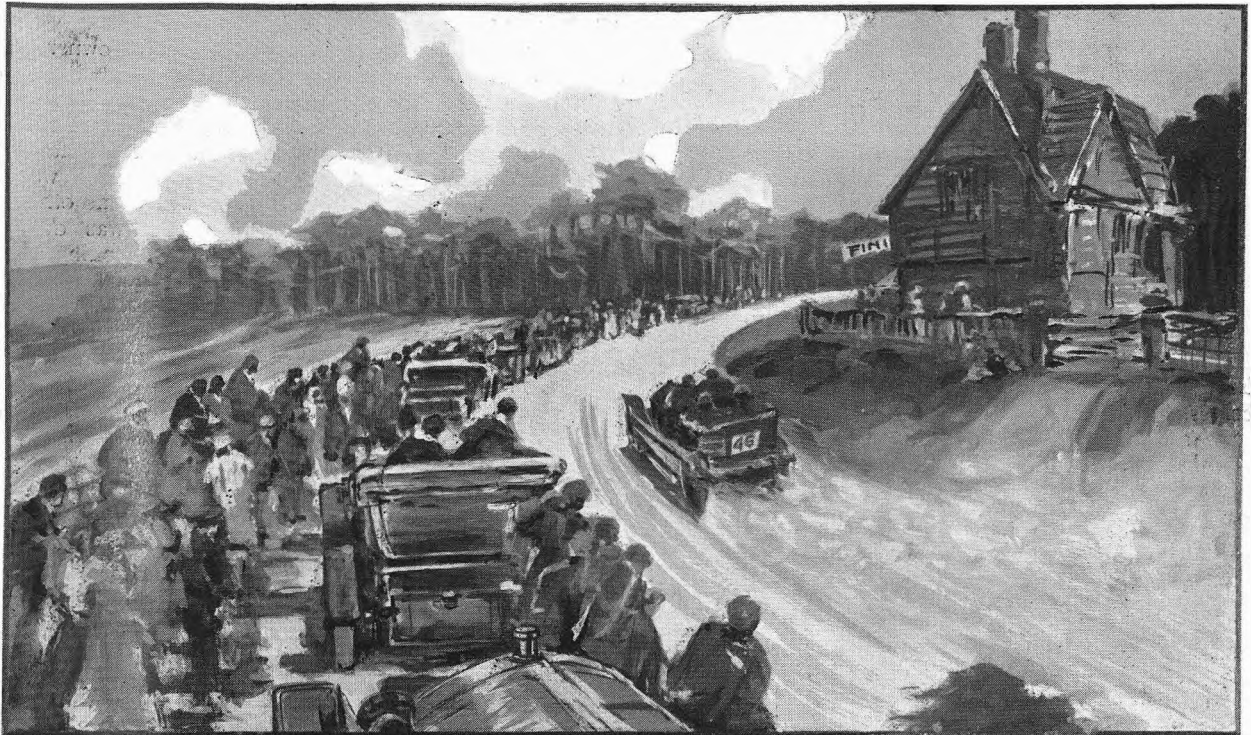
20 Vauxhall (A. J. Hancock) .....	90×120	4	.606	1
12 Talbot (G. P. Mills) .....	80×120	4	.622	2
15 Talbot (T. E. Hedge) .....	90×117	4	.628	3
16 Singer (G. O. Herbert) .....	85×110	4	.732	4
20 Vauxhall (S. G. Carter) .....	90×120	4	.809	5
16 Vauxhall (L. Walton) .....	85×102	4	.820	6
16-20 Calthorpe (G. W. Hands) .....	91×120	4	.846	7
12 Briton (E. Lisle, jun.) .....	82×114	4	.869	8
14 Alldays (N. Tailby) .....	86×108	4	.912	9
18-22 Armstrong-Whitworth (E. Gaseoine) .....	95×120	4	.935	10
15 Talbot (G. Day) .....	90×117	4	.946	11
15 Mass (J. R. Richardson) .....	95×120	4	.946	11
14 Alldays (E. J. Blakemore) .....	86×108	4	.965	12
14-16 F.I.A.T. (H. W. Colliver) .....	90×110	4	1.053	13
12-14 Gladiator (F. C. Baisley) .....	83×110	4	1.125	14
18 Standard (Guy Lewin) .....	89×108	4	1.127	15
15 Zedel (M. Downs) .....	80×120	4	1.145	16

### CLASS III.—OVER 25 H.P. AND UP TO 50 H.P.

24 Vauxhall (P. C. Kidner) .....	91×146	—	.651	1
14-18 Sunbeam (E. Genna) .....	95×135	—	.695	2
14-20 Sunbeam (N. Bayliss) .....	95×135	—	.723	3
20 Coltman (E. Coltman) .....	101×104	—	.970	4
20 Mass (W. M. Horniman) .....	110×130	—	1.005	5
20 Rothwell (F. Rothwell) .....	102×127	—	1.153	6
40 Gladiator (A. Scarff) .....	120×140	—	1.288	7
28-40 Piccard-Pictet (Morgan Donne)	130×130	—	1.318	8
28-36 Daimler (W. Littleton) .....	110×150	—	1.415	9

A young boy threw at a passing motor car a handful of gravel which struck a lady passenger. The Motor Union investigated the matter, with the result that disciplinary action was taken and an apology received from the mother of the boy. In all cases of a similar character reported to the Union immediate action will be taken to suppress such dangerous practices.

At the instance of the West Herts. Centre of the Motor Union arrangements have been made with the urban district council for the erection of a "concealed turning" sign at the entrance to the park in Queen's Road, Hendon. The road is very narrow at this point, and the gates being set back from the road, the entrance is often unnoticed by motorists.



One of the new Sunbeams approaching the finishing post on Aston Hill at high speed.

### Long Distance Competition in Sweden.

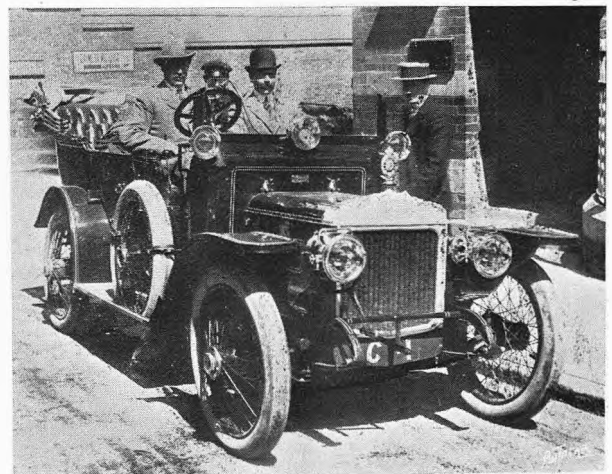
THE motor competition—it can hardly be called a race—from Haparanda, in Lapland, to Stockholm, arranged under the auspices of the Swedish Motor Club, was possessed of considerable interest, although it soon became evident that the regulations might with advantage have been modified in one or two respects. There were nine competing cars, the makes being Piccolo (two), Dürkopp (three), Cadillac, Horch, Frayer-Miller, and Itala. In addition to these, three non-competing cars joined in the trip, which was a very interesting one, owing to the high altitude at which it started and the picturesque country through which the motorists passed, rivers having to be crossed in somewhat fragile ferries, and the route abounding in high mountains and deep valleys. The distance was divided into six daily sections of respectively 159, 289, 134, 182, 254, and 182 kilometres, the entire distance being 1,200 kilometres.

All the competing cars got safely to Stockholm, although most of them had lost some marks, with the exception of the Itala car (Mr. Christiansen, of Copenhagen, who did well in the winter race, Gothenburg-Stockholm), which obtained the first prize, and the Cadillac car (Mr. E. Klund), which received the second prize. One of the Dürkopp cars secured the third and the Horch the fourth prize.

The lessons drawn from this competition point towards a longer total distance and longer daily distances, averaging not less than 300 kilometres for each day. The roads were perhaps also unduly trying over a certain section, but, then, on the other hand, as already mentioned, the distance was not long enough to thoroughly test the cars, none of which, it is surmised, would have had a clean record had the distance been fifty per cent. longer. On the other

hand, the event displayed fine pluck and endurance on the part of some of the competitors, who persevered to the bitter end against hopeless odds as far as the chances of being amongst the first three were concerned. One of the most edifying features in connection with this competition is, perhaps, the brave fight made by the small cars, a 6 h.p. car showing a bold front against competitors ten times its size and power.

The competitors went by train as far as Lulla (thirty hours' railway journey from Stockholm), and the cars, or most of them, were sent by steamer to the same town.



THE ROYAL A.C. IN WARWICKSHIRE. H.S.H. Prince Alexander of Teck arriving at the Daimler Works, driven by Mr. J. W. Orde.

## On the Road.

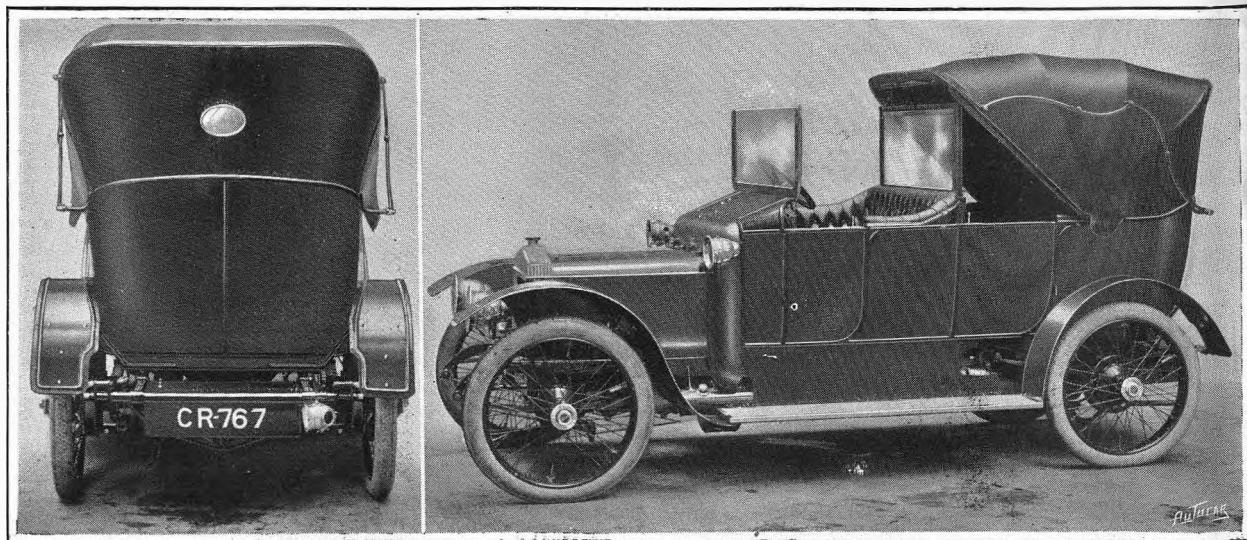
### A Tribute.

ALL thoughtful motorists have heard, I am sure, of the death of Mr. J. E. Vincent, of *The Times*, with the very greatest regret, and the paper that he so well represented till a few weeks ago will be fortunate if it is ever able to fill his place. Though many writers on motoring looked on his weekly articles rather in the light of sermons, because they set such a lofty standard in these too hurried days, I know the very fact that there was an English scholar and a gentleman bringing polish and thought to bear upon topics not always associated with them had in itself a wonderfully healthy effect, and acted as a check on the exuberant imagination of many of us lesser scribes. We may have sometimes grumbled, and even made a certain amount of fun, at some of Vincent's remarks, but that was in a way the highest form of compliment, and now not only motor journalists, but also motorists, motor dealers, and motor law-makers, are the poorer for his loss. A "straight" man is the truest description I can think of for him, and when one can add that he was kindness itself to those who sought his advice, a good all-round sportsman, and the best of companions, there are very few of us who can hope for a better record. To insist on knowing facts first-hand and taking very little for granted entails hard work, long hours, and constant exposure, and it may be that his death in the fulness of his life came because his determination to be super-honest and honourable would not allow him to take sufficient care of his health and strength. May the turf rest lightly on him, for, had he done nothing else, he has set us an example of good taste, scholarship, and honesty that will never be forgotten, and which must ever be our duty to strive and keep alive.

### Bodywork and Shows.

I have never had much occasion to refer to the Society of Motor Manufacturers and Traders and their doings, because I have always felt that their proceedings belonged to themselves and amateurs had nothing to do with them except to buy their wares. But I have had rather an awakening this week, and

as it concerns me merely as a private motor owner it may be of some interest. Messrs. Vincent, of Reading, built me a body for my Zedel, and, being proud of their realisation of my somewhat vague ideas, asked me if I would allow them to exhibit it on their stand at the local Agricultural Show in June last. I was very glad to spare it, and in company with some other specimens of good English coachwork it was duly admired by visitors who were weary of looking at fat pigs and show-ring horses. Now Messrs. Vincent have exhibited motor bodies at Olympia for some years past, but have signed no bond and have uncomplainingly occupied the space allotted to them by the S.M.M. and T. This year they applied for space as usual, enclosing a cheque as required. Judge of their surprise when they received their cheque back with a letter informing them that, because they exhibited at a local agricultural show, they are refused any representation at Olympia! I fail to understand the Society's reasons at all, though if they had shown cars as motors, the makers of which had signed the bond, or if they had signed the bond themselves, there might possibly have been something in it. But, in my own case, the car was a private one and merely lent to them to display their art and to act as an attraction to their stand and the show generally. I write feelingly in the first place, because I fear I am the unwitting cause of their banishment, and, secondly, because if Olympia is merely going to be a close exhibition of goods belonging to certain firms, its representative character will be lost, and amateurs who wish to see motors and coachwork brought to the highest perfection will not be sure that they will find them at the exhibition. I understand that there is to be no Paris Show, or, indeed, any other on the Continent this year, so Olympia should be more important than ever, but I feel certain that if the idea gains ground that certain firms are debarred from exhibiting much of its universal value will be lost, and, like almost every other motoring club or society, it will be looked on as merely a segment of a much bigger whole. I cannot understand the logic of this policy any more than that of other



This is the first Daimler we have seen fitted with a flush-sided body. The chassis is an ordinary 22 h.p. with 9ft. 6in. wheel-base and the body has been designed and built by Messrs. Cann, of Miller Street, Camden Town, N.W., for Mr. E. R. Moon, of Southampton. A particularly notable feature is the way in which the Daimler dashboard has been extended backward for the screen and the cunning manner in which the wing pieces are blended with the dash extension piece and the main body.

motoring policies, though I have a private idea that many motor manufacturers are not altogether pleased with the enormous development of good carriage work by well-known and expert coachbuilders. The reason is obvious. Though a body built by experts and fitted with every luxury and comfort may cost more to begin with, it is undeniable that not only will the whole turn-out be more agreeable to look upon, but that it will also be taken greater care of, will always be more saleable, and will last much longer than the rattle-trap, shoddy, and cheap apology for a carriage which so often is thrust on purchasers by motor manufacturers.

**Motor Cars' Good Looks.**

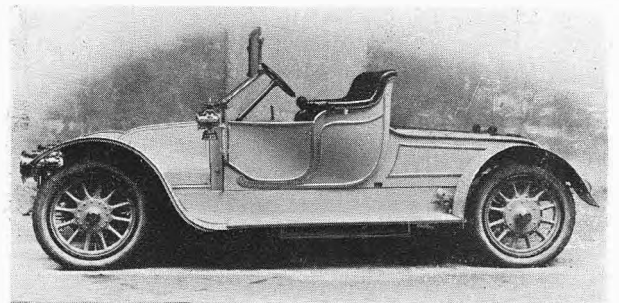
Motorists are not the ignorant folk they once were. A good car is as well advertised by itself as is a bad politician, and I am certain that it is the bodywork that sells a car now, all other things being equal. But good *carrosserie* on a good motor nowadays should last for many years, whereas a cheap "standard" body will start rattling and splitting long before. Therefore the buyer of a poor body will be soon dissatisfied, and, maybe, the very next year will again be a car buyer, while his second-rate contraption has gone to swell the second-hand market. In a certain country it is considered rude to mention, except with a view to praise, cars and their bodies are not made with the idea of lasting, and you are advised to scrap your old one and purchase another each season in order to obtain the fullest satisfaction. But over here there is no need for so doing, and it will be a very startling invention that will make an up-to-date, well-bodied, modern car of 1909 valueless in five years time. But the secret of preservation lies in the body, just as a well-dressed woman looks young and charming when her badly garbed contemporaries look old and unattractive, and it is for this reason I always advise purchasers to spend a little more at the start on handsome and comfortable carriage-work, so that their cars



The 20 h.p. Standard which competed in the Scottish Trials, driven by Mr. W. Paddon, who refused the offer of a mechanic to accompany him on the Trial. The car (which appeared for the first time in the Scottish Trials) made four non-stop runs, and had two stops, one of 1 min., and one of 4 mins.

shall not only be a lasting delight to the eye, but also more negotiable when the time comes to sell them.

Foreign "stock" bodies are the greatest offenders, and many a gem of purest ray serene has been passed over by buyers because it was concealed in such an unattractive exterior. There is no reason why the same firm should turn out body and chassis any more



A smart two-seated 20 h.p. Ariel car, built by the Coventry Ordnance Works, Ltd., to the order of Mr. H. G. Johnston, of Liverpool. The body is by Mulliner, Birmingham.

than that carriage-builders should sell horses, and if the horse dealers were to put obstacles in the way of coach-makers I think we should very soon find that the latter folk would hold their own exhibition, and make a very successful job of it. As years roll on and motors have become more and more perfect, get-at-able, automatic, and reliable, the chief attention of motorists has turned to the other parts of the machines, and it would be well for the S.M.M.T. to realise that if the idea becomes prevalent its annual exhibition does not necessarily include the best of everything, not only will purchasers refrain from ordering at the show, but will score in economy and workmanship by purchasing outside in a bigger, freer, and more enlightened market.

For revenue purposes and for the continued welfare of British commerce and labour let us tax foreign goods that come from countries where ours are taxed, but inside let us realise that we want no close rings and combinations to shut out competition and give an erroneous notion as to the extent of our capabilities.

We have always looked on the Olympia Exhibition of motors and their appurtenances as inclusive and world wide. Let the Society that runs it, allots positions, and, I hope, makes a success of it, see to it that by no underhand or dubious methods it manages to convey the impression that it is sectarian, incomplete, and unrepresentative. OWEN JOHN.

*The Autocar*

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## The R.A.C. Warwickshire Meeting.

On Saturday last the Royal Automobile Club, in conjunction with the Coventry and Warwickshire Motor Club, held its second provincial meeting of the year. Coventry, Warwick, and Leamington were the favoured places on this occasion. The meeting was a great success and was remarkable for its diversified attractions, and for the fact that the automobilists were officially received by three Mayors in one day.

THE great feature of the R.A.C. second provincial meeting of the year was the diversity of attractions which it offered. Held, as it was, in the centre of England, it included Coventry with its motor factories and churches, Warwick with its castle, and Leamington with all the attractions of a Royal spa. Warwick is only ten miles from Coventry, and Leamington barely two from Warwick, while there are many interesting and beautiful places within a thirty miles radius.

### The Morning in Coventry.

The morning from nine until noon was devoted to visits to various motor car and other factories, a list of which was given in our issue of July 17th. For the convenience of any visitors who attended the meet without their cars, most of the makers sent cars to Greyfriars' Green, an open space close to the station. Each car was marked with the make of its factory, so that any one who desired to go to any particular works had only to present his credentials, whereupon he was at once driven with his party to the factory he wished to inspect. Those whose tastes did not lead them to take an interest in the making of cars and their parts, devoted the morning to drives in the district or to visiting the famous Coventry churches and inspecting other ancient buildings for which the city is celebrated. At midday the R.A.C. General Committee, that is the committee which represents the associated clubs, met and were most cordially received by the Mayor in the Mayoress's Parlour, one of the apartments of the old guildhall known as St. Mary's Hall, and built very early in the fifteenth century by the three chief trade guilds of Coventry. Prince Francis of Teck, the chairman of the R.A.C., had arranged to attend the meeting, but he was unexpectedly called abroad, and his brother, H.S.H. Prince Alexander of Teck undertook the duties of president for the day. He came at very short notice and at considerable personal inconvenience, and was met at Coventry Station by Mr. A. E. W. Mason, M.P., the local member, Mr. J. W. Orde, and Mr. Eric Walford, the hon. secretary of the Coventry and Warwickshire Club, the entertaining club. The Mayor's speech at the reception in St. Mary's Hall was very much to the point, and most interesting, as in a few words he sketched the history of his old city, which in mediæval times was the architectural gem of the Midlands. He briefly sketched the various industries for which it had been famous, and naturally devoted special attention to its motor cycle and motor car manufactures so prominent to-day. Prince Alexander suitably replied, and a meeting of the Club delegates under the chairmanship of Mr. A. Armitage was held. This meeting was brief, brisk, and businesslike. After lunch the motorists drove to Warwick by the beautiful park-like road *via* Kenilworth.

### Warwick Castle.

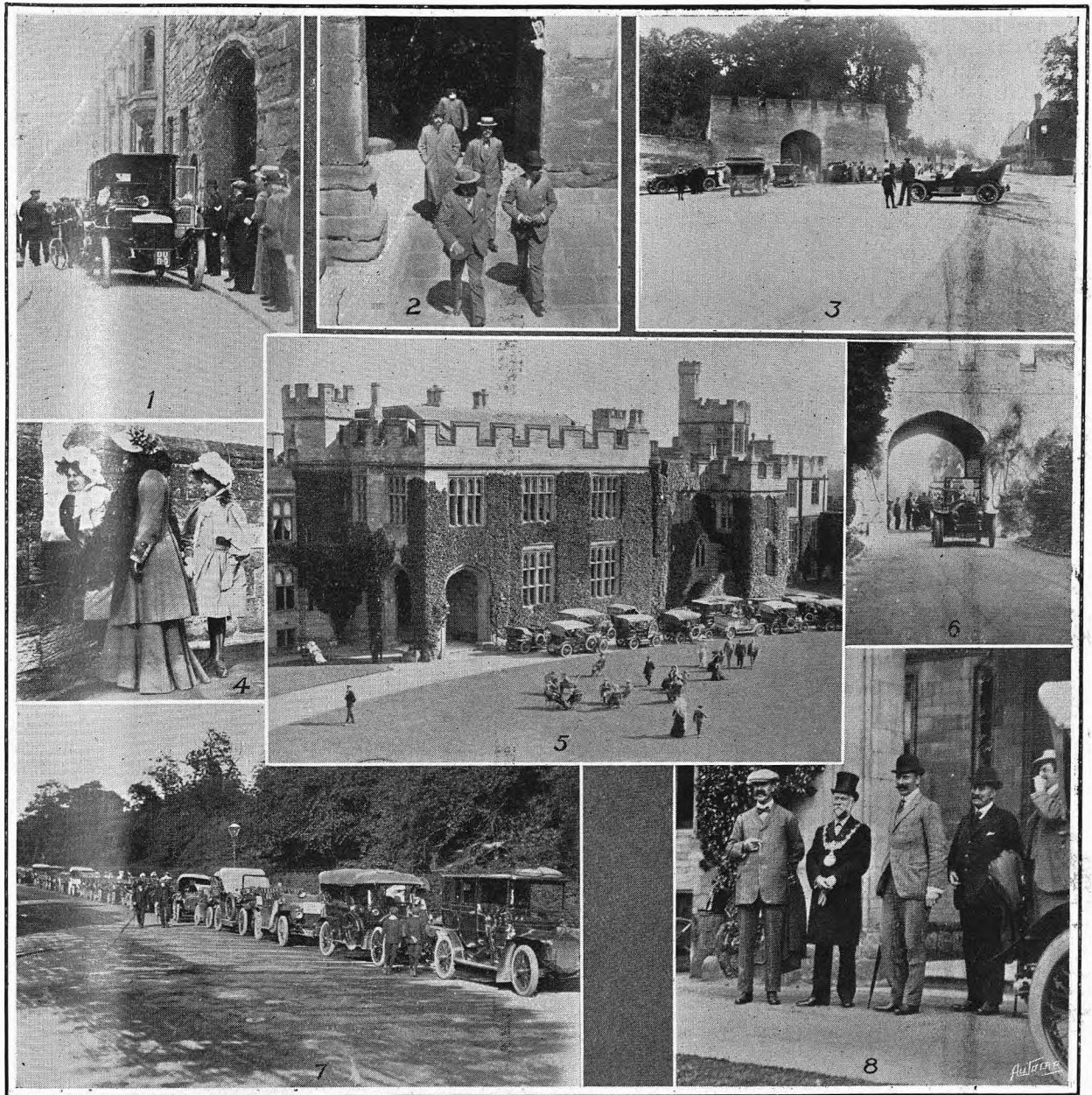
At Warwick Castle the party was received by the Mayor of Warwick in the unavoidable absence of the Earl and Countess of Warwick. Some eighty cars were driven into the courtyard and ranged in concentric rows round the matchless lawn, their occupants dis-

persing to inspect the castle and grounds, while a number of cars remained outside for lack of room. Although the ordinary charge of 2s. per head was imposed, the motorists enjoyed many privileges which are not accorded to the casual visitor, as they were shown many parts of the castle which are not usually open to sight-seers. We have no intention of dwelling upon the delights and wonders of Warwick Castle, as it would be impossible to do justice to them in the space at our command, and even if we were to fill the entire paper with some details of them we should still leave volumes unsaid. We had the good fortune to meet the Clerk of the Works, and he showed us much that was absorbingly interesting, and gave us an insight into the methods adopted by the mediæval architects which added double interest to our visit, as he seemed to know every stone in the building which was his constant care. Many of the visitors lingered so long in the castle itself that they had no time to inspect the grounds or what is, perhaps, Warwick's greatest treasure, the Adrian vase, a magnificent marble vase which was thrown down by an earthquake from a terrace on an island in the Bay of Naples early in the Christian era, and was retrieved from the sea and brought to Warwick some seventeen centuries later, little the worse for its age-long immersion. The view of the concentric rows of cars in the historic courtyard from the battlements of Cæsar's Tower was one that would not soon be forgotten, as it afforded such a striking contrast between the ancient and the modern, and we should hardly have been surprised had an aeroplane alighted upon the battlements to accentuate it. At five o'clock the visitors tore themselves away from Warwick and drove to Leamington.

### Leamington's Hospitality.

Here, again, for the third time in one day the automobilists were given a civic reception. The Mayor of Leamington not only met them at the Jephson Gardens—the open air rendezvous of Leamington, opposite to the Pump Room—but he also entertained them to afternoon tea and an open air concert. Tea was most daintily served, and it and the concert were much appreciated. The visitors lingered in the Jephson Gardens till it was time to dress for dinner, and the day wound up with the dinner in the Town Hall at Leamington, which was kindly lent by the Mayor for the purpose. The Town Hall is next door to the Regent Hotel, at which most of the guests from a distance stayed—an hotel, by the way, which has really ample accommodation for motor cars, as there is not only good shelter, but room to turn in the yard without backing. Many of the guests from Birmingham and other places near by drove home after dinner. The chair was taken by H.S.H. Prince Alexander of Teck, G.C.V.O., D.S.O., who was supported by Colonel Wyley, V.D. (president of the Coventry and Warwickshire Motor Club), Mr. T. H. D. Berridge (the member for Leamington), the Mayors of Coventry, Leamington, and Warwick, and a whole host of people well known in the motor world. After the loyal toasts had been proposed by the Chairman, "The Makers and Administrators of the Law"





(1) The cars arriving at St. Mary's Hall, Coventry, for the Committee Meeting. (2) H.S.H. Prince Alexander of Teck and Mr. J. W. Orde in the courtyard of the Hall. (3) Cars at the entrance to Warwick Castle. (4) Visitors on the roof of Caesars Tower, Warwick Castle, from which a magnificent view of the beautiful park may be obtained. (5) The lawn round which the cars were parked. (6) Entering the Castle grounds. (7) Cars lined up outside the Jephson Gardens, Leamington Spa, where the visitors were the guests of the Royal Borough. (8) H.S.H. Prince Alexander of Teck, the Mayor of Warwick, Alderman Purser, and Mr. A. Armitage. Mr. T. H. D. Berridge is on the Prince's left.

was given by Colonel Wyley, and responded to by Mr. T. H. D. Berridge on behalf of the Law Makers. In his response Mr. Berridge dwelt mainly on the advantages which, from his way of thinking, would accrue to motorists from the new motor taxes. We have no wish to be hypercritical, but as these remarks consisted mainly of a repetition of optimistic assurances of which our readers have become somewhat tired, we may well leave them till we really know what the advantages of the petrol tax are, for, as we pointed out quite recently, no one at present knows except the Chancellor of the Exchequer himself, and Mr. Berridge was therefore unable to give his hearers any fresh

information. He could only warn them of what he thought they would lose if they opposed the tax. Mr. G. Norris, J.P., responded on behalf of the Administrators of the Law, and greatly amused his audience by his quaint way of putting things; but he was essentially practical, and pointed out the extreme desirability of reasonable methods being adopted in all cases before drastic attempts were made to deal with any inconvenience which might be caused by new forms of traffic. He instanced the case of Leamington Spa. Here some inconvenience had been caused by the inconsiderate driving of some of the test cars which came from Birmingham and Coventry. He had caused

letters to be written to the principals of the firms, and now he said it was a pleasure to see the way in which test cars were driven through the Royal borough. The Chairman proposed "The Coventry and Warwickshire Motor Club," and after briefly sketching its achievements referred particularly to the work of its honorary secretary, Mr. Eric Walford, who had been indefatigable throughout the day and right through all the preliminary arrangements, which resulted in its being brought to a successful issue. As a soldier, H.S.H. dwelt particularly on the successful military reconnaissance recently carried out by the club by cars and motor cycles working in conjunction. He expressed his pleasure at the proposal to repeat the manoeuvre next year, and said he hoped other clubs would conduct similar reconnaissances in their own districts. Response was made by Mr. C. Vernon Pugh, who made a most excellent speech, and very cleverly justified the toast. "Coventry, Leamington, and Warwick" was proposed by Mr. A. Armitage, J.P., the chairman of the Organising Committee of the Associated branch of the R.A.C. In well-chosen and graceful language he thanked the three Mayors for their gracious courtesy and hospitality. He said the Club had often enjoyed one Mayoral reception in one day, but never before had it been honoured by three. With the toast were coupled the names of the three Mayors, who replied in order. The Mayor of Coventry told his hearers that his experience had taught him that it was very unwise for motorists to anticipate very great benefits from the proposed increased taxation. Unquestionably it would be a hindrance to the industry and to the movement, and they must bear in mind that, whatever was promised them, they would get very considerably less. It was an essentially practical speech, which was much appreciated by the gathering. The Mayors of Leamington

and Warwick fairly convulsed their audience by diplomatically but none the less unmistakably pointing out the residential advantages of their respective boroughs. There appears to be a healthy rivalry between the ancient borough of Warwick and the comparatively modern Spa of Leamington, and the two chief magistrates caused infinite amusement by their good humoured rivalry in singing the praises of their respective towns. At this point Prince Alexander had to leave, as his military duties made it imperative that he should be in town early on Sunday morning. He was driven back from Leamington to London by Mr. Orde, and as he left the room he received a rousing cheer. Everyone by then recognised his good nature in presiding over the day's proceedings, though few of them knew till that moment that his efforts must wind up by a ninety-mile drive back to town after 10.30 at night. Prudence forbids us to say at what time Prince Alexander told the gathering he expected to reach home, and no doubt this is a thing we shall never know, as Mr. Orde is also prudence personified.

Soon after the company dispersed, and the agreement was universal that the day had been one of the most successful, and deserved to rank with the two most celebrated provincial meetings of the R.A.C.—the Nottingham and the Hampshire. When so many did good service for the cause it is almost invidious to mention names, but the bulk of the local work fell upon Mr. Walford, the honorary secretary, and Mr. V. A. Holroyd, the chairman of committees of the entertaining club. Mr. G. H. Spicer and Mr. T. H. Berridge, of Leamington, did splendid service in the Royal Spa, while, to perpetrate an Irishism, Mr. Orde seemed to be everywhere at once, and on the rare occasions when his gift of ubiquity failed him, Mr. Norman always knew exactly where he was to be found.



*The members of the Institution of Automobile Engineers who, on July 22nd, visited, amongst other places, the Daimler Works, Coventry, and the Wolseley Works, Birmingham. Included in the party will be noticed Dr. H. S. Hele-Shaw, F.R.S (President), Major C. Leveson Gower, Messrs. L. A. Legros (Vice-president), A. E. Tucker (Past President), Alex Craig, H. S. Rawlings, A. Marsdon, F. Leigh Martineau, Chas. Wheeler, Max R. Lawrence, A. A. Remington, Henry Lea, G. H. Lanchester, W. Cannell, A. S. Hill, Chas. L. Simms, H. S. Smallman, C. R. Crosher, C. E. C. House, A. Pettit, P. Barkie, T. H. Rose, E. Smith, E. Withers, Henry Carter, Frank Starley, L. C. Roscoe, W. J. Pearmain, and B. W. Shilson.*

Kempshall tyres have won the Jubilee Prize of the North German Lloyd, a gold medal in the first class event, second, third, and fourth prizes in the second class event, and the Conqueror Prize and a second in the third class event.

The Motor Union recently became affiliated to the Secret Commissions and Bribery Prevention League, Incorporated, and will, we are informed, be represented on the council of the latter body by Mr. H. R. Oldfield.

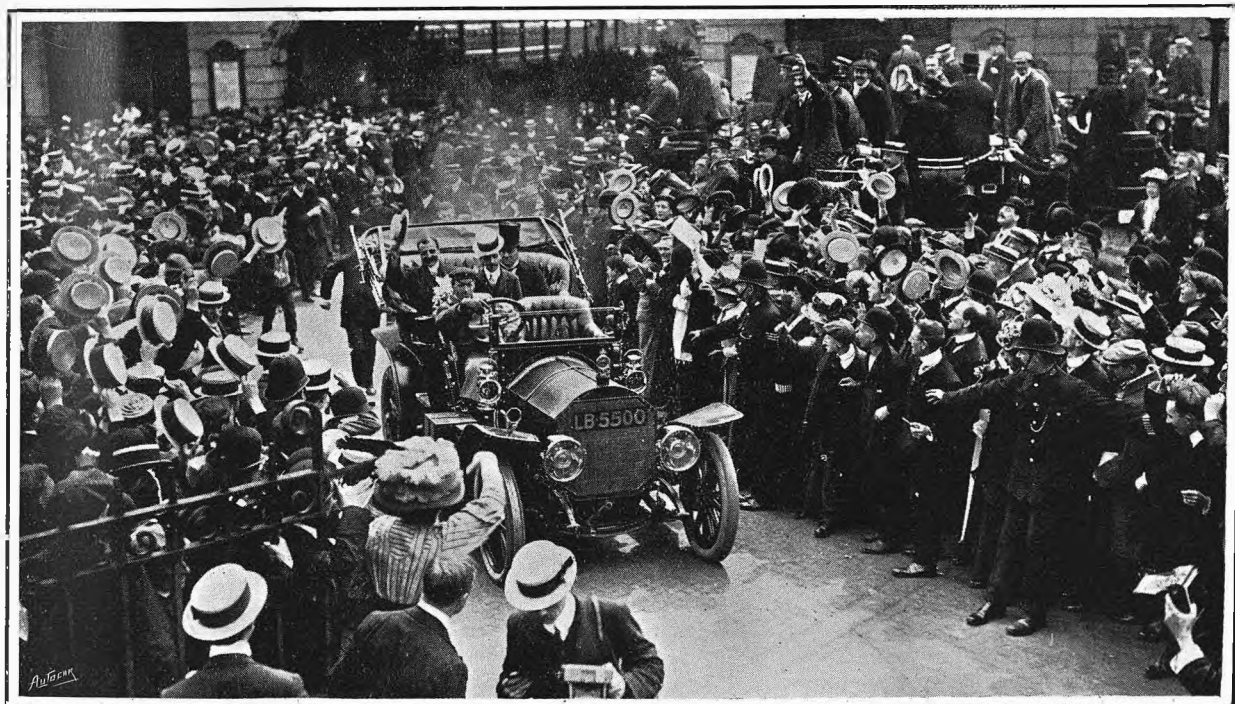
## On the Track. By H. C. Lafone.

THE raging gales against which we have had to strive at Brooklands recently have made the track at high speeds anything but agreeable, but, in spite of wind and rain, there have been a great many machines down for practice. Major Lloyd is to be congratulated on the completion of the new entrances from the Byfleet Road, and I scarcely think that the lazy ones who don't arrive in time to see the first race to-day (Saturday) will have any cause of complaint so far as delay in obtaining admission to the car enclosures is concerned. I should esteem it a personal favour if the Clerk of the Course would, as soon as the August meeting is over, devote some of his energy to road improvement on the hill just above the tunnel under the track. The "man of war" says the surface here is not the limit, but I respectfully beg to disagree with him. Anyway, my poor Sizaire, which is not exactly a snail on hills, bounces like an indiarubber ball when scrambling up this slope. It may be all right for a heavy machine, but it shatters the nervous systems of the small fry. Speaking of "fry" reminds me of Resta, who used to drive for Mr. Fry last season. I see that Resta is going to take the track this week-end with one of Lucas's valveless cars. When I drove a machine of this type eighteen months back I was much impressed with its capabilities, and I shall be interested to see how Resta puts it through its paces in competition with cars built on standard lines.

I notice that the B.A.R.C. is being criticised for not encouraging Nazzaro to go record-breaking again at this meeting. It is suggested that the club is wasting a good "draw" by refraining from once more

billing the Italian as the chief attraction. At the risk of being written down an inveterate partisan of the B.A.R.C., I must say that I think its officials are behaving in the only manner open to men of common-sense. Everybody who has been much at Brooklands lately knows perfectly well that Nazzaro has never gone near breaking record, and that the chances would be 100 to 1 at least against his setting up new figures in an attempt at the August meeting. The public are fairly long-suffering, but I think there would be a bit of an outcry were Nazzaro to be held up again as a lure, and were he then to perform much as he performed last month. The novelty of the thing would have worn off, and those who had paid their dear money at the gates would do a deal of grumbling, even if they did not demand their cash back. No! Nazzaro was an excellent bait at the June meeting, but it would be little short of dishonest for those who know his chances of success to trot him out again just now.

A slight alteration in the programme for this week-end's meeting has been rendered necessary by the falling through of the private match arranged for to-day, and also on account of the large number of entries for the August Senior Handicap on Monday. It has been decided to transfer the July Junior Private Competitors' Handicap from Monday's card to that of to-day, and to run the August Senior Handicap on Monday in two heats and a final, in which the first three in both heats will take part. Some slight shuffling of the times of the events has also been effected, but that is a small matter. It speaks well for Napier fame that in the Grand Prix Race on



*M. Bleriot, the successful cross-Channel aviator, leaving Victoria Station on his arrival from Dover. The popularity of M. Bleriot's achievement may be judged by the crowd around the station gates and by the fact that similar crowds lined the route to the Savoy where M. Bleriot went to receive the "Daily Mail" prize from Lord Northcliffe who is seated beside him in the car. Bleriot XI. is described in "The Aero" this week.*

Bank Holiday it has been found expedient to bar the Napier "Mercury." The O'Gorman Trophy, which was open to every power of car last year, is now restricted to machines of 21 h.p. by R.A.C. rating, with a stroke limit of 121 mm. Instead of being over a 100 miles course, as it was last August, the competitors will cover ten laps from a "fork" start, so that there is no reason to imagine that this event will be merely an endurance test of tyres.

In my notes last week I stated that the Sunbeam

car during its official test at Brooklands had created a record in the matter of acceleration as recorded by Col. Holden's acceleration testing instrument. The Vauxhall Company, however, claim that this honour is theirs, and that, whereas the Sunbeam's acceleration was 4.1 feet per second per second, that of the 20.54 h.p. Vauxhall was officially certified as 5.101 feet per second per second. I must apologise to the Vauxhall people for my mistake. They may well be proud of their record.

## Brooklands August Meeting. Programme.

2.0.—THE JUNIOR MOTOR CYCLE HANDICAP. Sixteen entries.

2.30.—THE AUGUST JUNIOR HANDICAP.

N. C. Neill (24.8 Rolls-Royce)	R. W. A. Brewer (24.8 Decauville)
R. R. Jackson (6.7 Jackson)	R. W. H. Kane (20.1 Imperia)
H. O. Combe (15.9 Vauxhall)	G. L. Paton (20.1 Lancia)
E. B. Ormerod (6.2 Jackson)	L. J. Holman (15.9 Varsity)
E. Erl (15.0 De Dion "Elsa")	G. C. Colmore (24.8 Darracq)
J. H. Evans (18.2 Lagonda)	Le Roy Soher (18.8 Straker-Squire)
D. Resta (22.0 Valveless)	
W. H. Milburn (11.1 Martini)	

3.0.—THE SPRINT RACE.

A. Baker White (60.0 Napier)	Eric Loder (59.6 Itala)
P. D. Stirling (59.6 Brasier)	Baron Knut Bonde (41.9 Bianchi)
Sir Geo. W. Abercromby, Bt. (39.5 Napier)	H. J. D. Astley (59.25 Napier)

3.20.—THE AUGUST MOTOR CYCLE HANDICAP. Seventeen entries.

3.45.—A PRIVATE MATCH for £50 a side between Mr. F. R. Goodwin's 16.9 Briton car and Mr. A. C. Godwin-Smith's 22.4 Certus-Gearless car.  
[We are informed that, owing to Mr. Goodwin's car having been sold, this match will not be run.—Ed.]

4.10.—THE JULY SENIOR PRIVATE COMPETITORS' HANDICAP.

A. H. Moreing (38.1 Daimler "Billy")	W. H. Milburn (18.8 Straker-Squire)
N. C. Neill (24.8 Rolls-Royce)	J. Valentine (41.9 La Buire)
C. B. Krabbe (25.6 Métallurgique)	S. J. B. Lacon (35.7 Minerva)
Col. Thomas Cowper-Essex (48.6 Daimler)	G. L. Paton (20.1 Lancia)
L. H. Mander (49.4 Mercédès)	T. Faulkner (24.8 Mercédès)
J. H. Pearson (29.4 Standard)	Eric Loder (59.6 Itala)
Sir Geo. W. Abercromby, Bt. (39.5 Napier)	O. S. Thompson (36.1 Austin "Pobble")
	V. W. Eyre (41.9 Weigel)

4.35.—THE SENIOR MOTOR CYCLE HANDICAP. Thirteen entries.

5.0.—THE RELAY RACE.

Mr. C. B. Krabbe's 25.6 Métallurgique and Mr. J. T. C. Moore-Brabazon's 27.9 Métallurgique.  
Mr. A. Baker White's 25.6 Hutton and Mr. A. Baker White's Métallurgique.  
Sir Geo. W. Abercromby, Bart., 39.5 Napier and Mr. Chas. Jarrott's 6.2 Sizaire.  
Mr. O. S. Thompson's 16.1 Austin "Pobble" and Mr. P. C. Kidner's 20.1 Vauxhall.  
Mr. E. H. Turnbull's 35.7 Mercédès and Mr. J. H. Evans's 18.2 Lagonda.

Mr. E. Berkeley Ormerod's 6.2 Jackson and Mr. L. H. Mander's 49.4 Mercédès.

The following races will be run on August Bank Holiday:  
2.0.—THE SECOND ROADSTER MOTOR CYCLE HANDICAP. Sixteen entries.

2.30.—AUGUST SENIOR HANDICAP.

A. H. Moreing (38.1 Daimler "Billy")	W. H. Milburn (18.8 Straker-Squire)
N. C. Neill (24.8 Rolls-Royce)	D. Resta (22.0 Lucas-Valveless)
L. H. Mander (49.4 Mercédès)	F. Ruffer (35.7 Minerva)
A. Baker White (60 Napier)	P. L. D. Perry (22.4 Bedford)
P. L. Stirling (59.6 Brasier)	G. L. Paton (20.1 Lancia)
A. C. Godwin-Smith (22.4 Certus-Gearless)	H. P. Martin (38.7 Humphris)
A. Baker White (Métallurgique)	G. C. Colmore (24.8 Darracq)
J. H. Pearson (29.4 Standard)	O. S. Thompson (36.1 Austin "Pobble")
J. H. Evans (18.2 Lagonda)	D. Resta (46.9 Mercédès)
Sir Geo. W. Abercromby, Bt. (39.5 Napier)	Baron K. Bonde (41.9 Bianchi)
E. H. Turnbull (35.7 Mercédès)	A. Baker White (48.6 Minerva)
J. Valentine (41.9 La Buire)	V. W. Eyre (41.9 Weigel)

3.0.—THE JULY JUNIOR PRIVATE COMPETITORS' HANDICAP.

N. C. Neill (24.8 Rolls-Royce)	W. H. Milburn (11.1 Martini)
J. R. W. Taylor (6.2 Jackson)	G. L. Paton (21.1 Lancia)
E. Erl (15.0 De Dion "Elso")	L. J. Holman (15.9 Varsity)
V. V. D. Hewitt (15.9 Singer)	A. R. V. Garnett (18.8 Straker-Squire)
Dr. W. B. Secretan (15.9 Brooks and Woollan)	Eric Loder (6.9 Sizaire)

3.30.—THE SECOND CHAMPION MOTOR CYCLE PLATE. Ten entries.

3.50.—THE SECOND GRAND PRIX RACE.

H. J. D. Astley (59.2 Napier)	H. P. Rose (59.2 Weigel)
P. D. Stirling (59.6 Brasier)	"Anette"
Eric Loder (59.6 Itala)	

4.15.—THE SECOND RACE FOR THE O'GORMAN TROPHY.

J. L. Kirk (20.1 Talbot)	R. W. H. Kane (20.1 Imperia)
Wilbur Gunn (18.2 Lagonda)	Le Roy Soher (18.8 Straker-Squire)
Percy C. Kidner (19.6 Vauxhall)	The Earl of Shrewsbury and Talbot (20.1 Talbot)
Percy C. Kidner (19.6 Vauxhall)	W. L. Stewart (20.1 Lancia)

5.0.—THE AUGUST WINNERS' HANDICAP.

For all winners at August Meeting except the Second O'Gorman Trophy.

On Monday, the 19th inst., before the Haywards Heath bench, Messrs. Huth, W. Renshaw, K.C., and other justices, Francis Benjamin Beech, of Wimbledon Park, was summoned for driving a motor car at a speed exceeding ten miles an hour through the village of Handcross contrary to the order of the Local Government Board of November last. Mr. Robert Tweedy Smith, solicitor for the Society of Automobile Mechanic Drivers, who defended, called evidence to prove that the police were mistaken in the identity of the driver, and the case was dismissed.

The Local Government Board have imposed ten miles speed limits at Wimbledon and Aldenham. These applications have been the subject of considerable correspondence between the Local Government Board, the local authorities, and the Motor Union. The Motor Union has succeeded in securing the omission from the order of certain roads and parts of roads which were included in the original applications, upon which, in the opinion of the Union, there was no sufficient reason for the imposition of a reduced speed limit.

## Road Warnings.

### The Third of a Periodical Series of Police Trap Maps.

THIS is the third of our summer series of police trap maps on which are shown as nearly as possible the locality of the police traps of which we have received intimation from our readers during the year. It will be noticed that Surrey and Merionethshire are still on the "black list," and have been joined by Lancashire. The position in Merionethshire has now reached an acute stage, as may be gathered from a perusal of our correspondence columns this week. Sussex, as may be seen from the shading, is very little better. Cardigan, we are pleased to announce, is now free from these ignoble workings, but, on the other hand, Warwickshire seems to be adding by degrees to its list. Cumberland is still free from traps, but we have received information that extreme care and consideration must be shown by motorists if this state of affairs is to continue.

Our thanks, and those of our readers, are due to all who have gone to the trouble of making us acquainted with the location of the traps. When communicating the position of a trap readers should as

far as possible give the names of the two towns between which a trap occurs and the county in which it is situated.

At present out of the forty English counties sixteen are entirely free from traps, and four have but one apiece. They are:

Bedfordshire	Herefordshire	Shropshire (1)
Cumberland	Leicestershire	Staffordshire
Derbyshire	Monmouthshire	Suffolk (1)
Dorsetshire	Norfolk	Westmoreland
Durham	Northamptonshire	Wiltshire (1)
Essex	Nottinghamshire	Worcestershire (1)
Gloucestershire	Rutlandshire	

All the Welsh counties are tolerant and appear to be free from this ridiculous hedging and ditching with the exception of Denbighshire and Merionethshire. Merioneth appears to be in a transitional stage, which may result in improvement.

Ireland is free from the pest, as being so essentially unsportsmanlike that it is within the bounds of possibility that the R.I.C. men would revolt at being told off to such mean duties.

#### BERKSHIRE.

Bath Road. New measured distance in operation from the thirty-sixth milestone east side of Reading; also through ten-mile limit at Slough.

Bath Road, just beyond Maidenhead, between the twenty-seventh and twenty-eighth milestones from London, quarter-mile trap on small hill, invariably worked downhill towards Reading. Mostly worked on Saturdays and Sundays.

The Wokingham bench are very keen, and generally obtain good hauls from traps worked between Reading and Wokingham, and down Buckhurst Hill between Wokingham and Bracknell.

London-Bath road. Between Maidenhead and Reading traps are frequently worked. They are almost invariably set at one of these places: (1) Knowl Hill, (2) near Wargrave, or (3) near Sonning, at the point where the road from Woodley to Sonning crosses the main road.

King's Road, Windsor, ending at the Park Gates (Queen Anne's Gate).

London-Basingstoke road in Sunningdale.

London-Basingstoke road, between Holloway College and top of Wheatsheaf Hill.

There is a trap in Windsor ending 100 yards from the Park gates on the road from Windsor to Bagshot. It is 440 yards long, and commences about a quarter of the way down the slope. The timing police are behind the hedges, and the uniform constable remains in the Park lodge till required.

Through Egham High Street, also from Egham Causeway to Old Windsor, along the Runnimede Marshes; also up Egham Hill.

A trap is working in the village of Clewer Without, in the parish of Windsor, starting outside the village and ending at a blind corner about the centre going towards Windsor.

There is a trap a quarter of a mile the Windsor side of the post office, near the Wheatsheaf, between that and the Long Walk. A boy is stationed at the post office and whistles to a man round the corner.

#### BUCKINGHAMSHIRE.

Bath Road. A quarter-mile trap between Maidenhead and Slough, near Burnham and Taplow villages.

Bath Road, in or near Colnbrook.

Quarter-mile trap on Slough-Beaconsfield road at Farnham Common. Trap either includes or is near to a cross road.

On the Bath Road, between Slough and Maidenhead, trap between twenty-third and twenty-fourth milestones from London.

Taplow, from goods station to Slough, and right through to Colnbrook. The traps are 300 to 600 yards long, and are often shifted.

A ten miles speed limit now exists at Well End, Little Marlow, over a stretch of about half a mile, covering the distance guarded by Motor Union and parish notices. This stretch is on the Bourne End-Marlow road, after leaving Bourne End village. The trap is operated by two plain clothes and one uniform official, and is worked in and just outside the limit stretch.

The police are very strict on the ten miles limit in Slough. They have different traps in the town 200 yards long.

Rickmansworth to Amersham. Quarter of a mile long, and starts soon after the road from the Chenies joins the main road. It goes round a curve towards Chalfont Road Station.

London-Coventry road, over a hill top a mile and a half into Fenny Stratford.

Cars are timed in Burnham.

London-Oxford road from Gerrard's Cross to Beaconsfield. Also there is generally a trap down White Hill, a long slope between an avenue of trees about two miles on the High Wycombe side of Beaconsfield; also through Beaconsfield town itself on Saturdays and Sundays.

#### CAMBRIDGESHIRE.

Newmarket-London road, eight and threequarter miles out of Newmarket, near cross roads.

In Trumpington village, near Cambridge, two and a half miles on the

London Road. This trap, which covers about 490 yards, is constantly being moved up and down the road. Anything above twenty miles per hour, speed limit; under twenty miles per hour, common danger.

London-Cambridge road (*via* Bishop's Stortford) at Sawston, about six miles south of Cambridge. This trap is evidently worked in addition to the one in Trumpington, near Cambridge.

#### CARDIGAN.

This county is dealt with separately on page 173, and is apparently free of traps.

#### CHESHIRE.

The police are active again in Cheshire. For a long time, since the Chief Constable bought a motor car, they have left motorists pretty well alone, but lately they have been stirred up by fussy inhabitants of the county, and are out again between Plumley and Altrincham, also between Chester and Northwich, also on the Warrington and Tarporley road.

The police were recently timing between Knutsford and Macclesfield.

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.

Chester-Wrexham road, a few miles out of Chester.

Nantwich-Whitchurch road, from the first mile post out of Nantwich to four miles further on round a corner, and again at a mile post (this being the fifth mile from Nantwich).

The police are timing cars between Netherton and the foot of Dunham Hill on the Warrington to Chester road.

West Kirby-Birkenhead road, on the road *via* Sanghall Massey, and also between the Glegg Arms, Gayton, and West Kirby, on the Chester-Hoylake road.

#### CORNWALL.

A measured 440 yards at Compass, Southpetherwin, about a mile from

Launceston towards Camelford. There is a trap in St. Columb, and one about a mile out, on the Wadebridge Road, in the hollow of two hills, a straight and open road. Also on entering Newquay. This trap finishes at the first house of the town. Also one on the Falmouth Road from Truro.

The police are active on the Helston-Falmouth and the Helston-Lizard roads.

Between Bude and Tintagel (old road near Stratton).

Traps are being worked on the Antony Road and the Polbathic Road.

Lizard main road at Dodson's Gap, Mawgan; also at Bolan Green, Wem-drom.

Bodmin-Truro road, at Brighton Bridge, about two miles from Ladock, another about one mile.

#### CUMBERLAND.

We are glad to be able to announce that Cumberland, as well as the sister county of Westmoreland, are entirely free from police traps. At the same time the ice is thin, as complaints are again being made of reckless driving in Cumberland. In consequence the police are becoming active, and motorists will have only themselves to blame if traps are instituted in this hitherto tolerant county.

#### DENBIGHSHIRE.

Ruthin-Corwen road, from Ruthin to the county boundary. Motorists are advised to drive with special caution through the towns of Denbigh and Ruthin.

Holyhead Road, near Cerrig-y-Druidion.

#### 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.

#### FLINTSHIRE.

The county surveyor advises us that the Joint Counties Bridge at Bangor-on-Dee is closed until further notice for the purposes of repairing and strengthening the bridge.

#### GLAMORGAN.

Complaints reach us of the inconsiderate driving of some few motorists along the Swansea-Mumbles road to the discomfort and annoyance of cyclists and other road users. It is hinted that police action may follow unless more moderate speeds are adopted.

#### HAMPSHIRE.

The police are taking proceedings against motorists for exceeding the speed limit on the Winchester Road at North Waltham, and at the Hatch cross-roads, on the London Road, near Basingstoke.

Havant-Cosham road, on the Cosham side of the former village, a 220 yards trap was working recently, several cars being stopped.

Ports north-Southampton road, between Cosham and Fareham.

Winchester to Ringwood and Poole. There is a trap between Winchester and Hursley.

A trap is being worked on the main road from Southampton to Totton (for Christchurch, Salisbury, etc.) The

measured distance is 220 yards between Millbrook and Redbridge, a mile or two west of Southampton.

There are three traps between Basingstoke and Winchester, one is between five and a half and six miles from Basingstoke, and ends just before the road forks to Winchester and Stockbridge. There are three traps between Winchester and Romsey. (1.) Pilt (two miles from W.) (2.) Hursley (about five miles from W.) (3.) Ampfield (about eight miles from W.) All are in the open country where there is no danger. Great caution should be observed all round Bournemouth.

Lyndhurst - Bournemouth road, between the fourth and sixth milestones from Lyndhurst.

London - Winchester road. A trap was working recently on this road a few miles west of Farnham, going towards Alton.

There is a trap at Sherfield English between Romsey and Salisbury on a straight stretch of road four miles out of Romsey.

There is a trap at Sleet, near Petersfield, on the Portsmouth Road, about a mile and a half the Liphook side of Petersfield. It is a quarter-mile trap, worked towards and from Petersfield, round a bend.

Haslemere district is now in charge of Sergt. Pike, who obtained considerable notoriety at Godalming last year in connection with the trapping of motorists. All motorists using the road from Hindhead to Haslemere, or *vice versa*, should drive very steadily. Parts of the road are narrow and twisty, and the local people are trying to get up a petition for a ten mile limit.

Basingstoke district, just before leaving Hatch Cross going towards Basingstoke; also after passing Hook.

#### HERTFORDSHIRE.

A trap about a quarter of a mile long is being worked on the Rickmansworth-Amersham road, commencing soon after passing the road that leads into Chenies.

In High Barnet, between Park Road and the church, over 200 yards on the ten-mile limit. Traps are in daily operation on the Great North Road between Barnet and Littleheath, at places which vary from time to time.

#### HUNTINGDONSHIRE.

Through Buckden.

St. Neot's-Cambridge road, trap just outside St. Neot's, beginning on the Cambridge side of a railway bridge and finishing at some cottages. This trap is sometimes worked three miles nearer Cambridge.

Through the village of Alconbury Weston. The average width of road through the measured distance is about 27 feet.

Little Stukeley, a few miles north of Huntingdon. Motorists should drive with every caution at this point, as the two hills on which the trap is worked are dangerous, there being cross roads at the bottom. Motorists are usually convicted of driving to the common danger.

St. Neot's. All entrances into St. Neot's are intermittently trapped. One favourite spot is by the Great Northern Railway Bridge. Just before entering St. Neot's one passes under the G.N.R., and a trap begins at this point.

#### KENT.

Folkestone road. Measured distance of eight miles between Maidstone and Lenham.

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

Between Starry and Upstreet, on the Ramsgate Road; a four miles trap.

The police are likely to be active on the main road from Wrotham to Preston Hall, near the second milestone out of Maidstone. There will be several measured lengths on a six miles stretch of road, so that if a motorist should escape one he will probably fall into another. Traps may also be worked between Kingsdown and the Horse and Groom, at the top of Wrotham Hill.

A trap is in operation at least every Sunday at the entrance to Catford, at the end of the tramlines going towards Sevenoaks. At the point where the trap is the road is 43ft. wide, and the distance over which the trap is worked is one furlong.

There is a trap near Bromley from the twelfth milestone on the Bromley-Sevenoaks road to the ten miles limit boards just entering the town going towards London from Sevenoaks.

Canterbury Road. Traps over measured furlongs in operation from Park Lane, Shooters Hill, to the Fox; also on London side of Shooters Hill. St. John's Park Road, Lewisham, to Heath House.

Eltham. From the Tiger's Head, Lee, along the road to Eltham. Trap is moved from day to day.

#### LANCASHIRE.

Lytham-St. Anne's.

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

Preston-Clitheroe road.

Preston-Chorley, to and from the seventh milestone.

Preston to Blackpool and Kirkham.

Lancaster-Skipton road. A two-mile trap, beginning about half a mile before High Bentham, and continuing to the far end of Low Bentham.

Southport-Preston road at Crossens, a few miles out of Southport.

Chorley-Preston road, just outside Chorley.

St. Annes-on-the-Sea-Blackpool road.

Liverpool-Preston road. Several traps. Preston-Lancaster road. Care should be exercised just north of Preston.

Manchester-Liverpool road *via* Warrington. There is a trap between Manchester and Warrington, and another between Sankey and Bold.

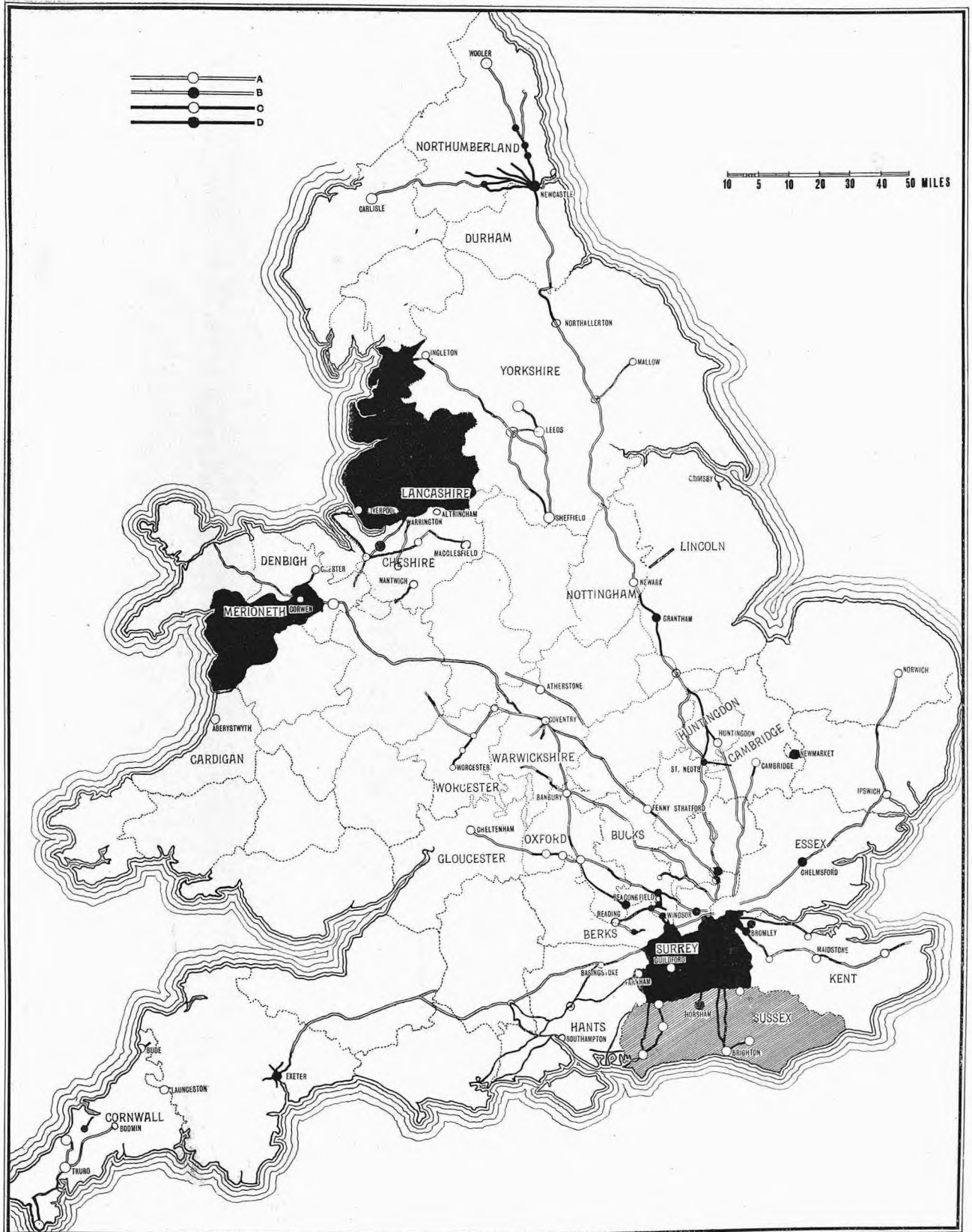
Motorists are warned of the existence of traps around Burnley and Nelson district, particularly on the main road from Nelson to Gisburn, at the village of Blacko.

A correspondent asks us to warn motorists who may have occasion to pass through Bolton to exercise extreme caution in negotiating the crossings, especially on Sundays. The police are unusually vigilant, and the motorist must always be on the alert.

Traps are in operation at Merghill and Burscough, on the main road between Liverpool and Preston; also at Formby, on the main road between Liverpool and Southport.

Wigan-Warrington road, south of Wigan, and on the Preston-Southport road at Crossens, near bridge, and at Longton.

Preston-Blackpool road and Preston-Garstang road are likely to have traps.



Open roads and towns A are inserted to indicate connections and localities. A black town B on an open road indicates that a town is trapped under the borough police, while a road which is trapped under the county police is indicated as at C. A trapped town on a trapped road is indicated as at D. Merionethshire, Surrey, and Lancashire had best be avoided altogether, while Sussex is distinctly risky. There are no police traps in seventeen English counties, and ten Welsh counties are free.

## LINCOLNSHIRE.

Louth-Grimsby road. 220 yards trap just entering Grimsby.

There is a measured 575 yards, finishing at the end of a village, but beginning in the open country, between the sixth and seventh milestones south of Stamford on the Great North Road. The police, we understand, appear to exaggerate the actual speed by ten miles an hour or so. The trap is at a corner.

Great North Road, between Colsterworth and South Witham, two and a half miles. Colsterworth is about eight miles south of Grantham. This trap is sometimes worked between Colsterworth and Great Ponton. North of Grantham cars are being timed over four miles between Great Gonerby and Long Bennington.

Newark-Lincoln road. A trap of about four miles is moved from place to place on this very open road.

## MERTONETHSHIRE.

There is a two-mile trap in operation through the village of Bala, whence information is telegraphed to the police at Dolgelly, who stop the cars and take particulars.

There is a measured distance on the road between Llan Festiniog and Blaenau-Festiniog.

Harlech-Festiniog road, about one and a half miles out of Harlech, commencing at a cottage called the "Old Turnpike." Worked downhill only.

Barmouth-Harlech road. We understand that there is a trap on this road between Barmouth and Dyffryn which commences near the old church at Llanaber, situated on the left side driving from Barmouth.

There is a five miles trap through Corwen.

From Llangollen to Corwen there are several short traps (worked principally at the week-end), another at the head of Bala Lake (police hiding behind white wall), with a further short trap at the Dolgelly Bridge (officer usually dressed as workman in Sunday attire, lounging near bridge).

Llangollen-Corwen road, a five miles trap between Glydyfyrddwy and Corwen. Cars are not stopped.

A trap is in operation from a point one mile south of Bala Lake on the Bala-Dolgelly road and continuing for half a mile. The police are in a field on the left-hand side after crossing the bridges into the village.

Trapping takes place at times on the road from Dolgelly to Barmouth.

[The state of affairs in this county shows signs of improvement. See Correspondence columns.—Ed.]

## MIDDLESEX.

There is an occasional trap over one furlong on Rosslyn Hill, Hampstead, on the main road from Haverstock Hill, extending from Pond Street to Thurlow Road.

London-Harrow road, between Holland's Can Factory and Kensal Green Cemetery.

Uxbridge Road. A police trap over a measured furlong is in operation at Hanwell.

London Road, two traps, one between Stanmore and Bushey Heath, across Stanmore Common, and the other in Edgware, at the old stopping place of the trams. There is very often one through Bushey Heath itself, all men, as a rule, in plain clothes.

## NORFOLK.

There is a measured distance on the Cromer-Overstrand road, as the roads round Cromer are very narrow and unsuitable for excessive speeds. Only care is required to avoid traffic, as the road is not trapped, but controlled.

## 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 hill.

Carlisle-Newcastle road, at Horsley, eight miles from Newcastle, beyond Corbridge.

Buteland-Newcastle road, at Walbottle, a 440 yards trap at railway bridge, down slope about four miles from Newcastle.

Newcastle-Morpeth road, at Seaton Burn and Stannington-Alnwick road at the Northgate, and also on the Wooler Road. About seven miles further on the Wooler road there is another trap (760 yards) worked from the Wooler side into Long Horsley village. On the Morpeth-Alnwick road there is a trap at Causey Park. Last year Alnwick was trapped both north and south.

Newcastle to Hexham. Denton Bank foot, just out of Newcastle. This is a short trap where cars rush it to take the other bank.

## OXFORDSHIRE.

Oxford Road. Measured distance between Aston Rowant and Postcombe.

Oxford-Cheltenham road. A trap is occasionally worked on this road about a mile west of Witney, where the road overlooks the valley of the Windrush.

There are three traps between Henley and Shillingford, on the Henley-Oxford road. The entire distance is more or less dangerous.

Between Eynsham and Witney, on the Oxford to Cheltenham road, as well as on the one between Witney and Minster Lovell.

Oxford-Banbury road, about one and a half miles from Kidlington Gate when going from Oxford to Banbury, and finishing near the cross roads to Woodstock and Bletchington.

## SHROPSHIRE.

Kidderminster-Bridgnorth road, at Quatford, close to the school.

## SUFFOLK.

There are intermittent traps at various points in the ten-mile area at Newmarket.

Ipswich-Norwich road, between Swan Inn, Brome, and Scole Inn, both ways.

## SURREY.

Measured distance midway between Norbiton Railway Bridge and the tramway terminus, near the Albert Hotel, Kingston Hill. Measures 220 yards, and is worked both up and down the hill.

Prosecutions for exceeding the speed limit are being instituted by the police at Windlesham, near Chertsey.

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.

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

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.

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.

The local police have taken many measurements of Leigham Court Road, Streatham, and also on the north side of Streatham Common.

We learn that any portion of Reigate borough may be trapped at any time. Speed limits are to be imposed at Redhill from opposite the Institute to about 150 yards south of the Square, a total of about 400 yards. Reigate from drinking fountain past level crossing to south portion of White Hart Hotel. In an east and west direction, a small portion of Redhill (up to schools) and Reigate High Street.

Brighton Road at Reigate, from the end of the tunnel at the entrance of the town to the foot of the hill, about three furlongs on the main road. The trap sometimes extends over a measured mile.

The Kingston police are out at nights, and are provided with electric flash lamps for the purpose of timing.

There is a trap of about one furlong working nearly every Sunday between Belmont Station and Sutton Station, on the Brighton Road.

Near Stoot's Nest Station, each side of the Purley Road.

Traps are set on all roads leading into Farnham; on the Hog's Back to Guildford Road from the Aldershot fork to Simonds Hill; on the Winchester Road from the Bardon and Petersfield branch, towards Berbley. The ten miles limit is being rigidly enforced in Farnham.

About half a mile from the Jolly Farmers' Inn, entering Camberley, a quarter of a mile measured distance. Also from the Jolly Farmers to Frimley.

A trap one furlong in extent on the Sutton Road, just outside Croydon, on the dead level two miles stretch of tramlines leading to Wallington.

Sutton, near railway station bridge. Trap worked both ways.

Mitcham Lane. Trap here in various parts every day.

High Street, Redhill. Several lengths of road have been measured through the town.

A trap is being worked nearly every Saturday and Sunday at Croydon, either between there and Purley, or between Purley and Coulsdon.

There is a trap working over the ten miles limit through Croydon; also on Shooters Hill Road day and night.

A trap is working at Figg Marsh, Mitcham, beyond Tooting, in both directions. The trap is worked all the week, and the exact position of it is shifted from time to time; sometimes it is worked in Lower Mitcham.

Croydon and Mitcham, going towards London, between the railway bridge and the pond at the turning of the road entering the village of Mitcham.



A measured furlong on the Esher-Ashtead road, starting about 100 yards from Esher.

One mile distances have been measured on the London Road between the suspension bridge and the town, between the town and Buckland Corner on the Dorking Road, and both north and south of Redhill.

In Richmond Park, between Roehampton Gate and Richmond Gate.

London-Basingstoke road, between Egham and Virginia Water.

A trap is being worked from the Griffin Hotel, Kingston-on-Thames, for half a mile along the Esher Road. Also just before the post office at Hindhead, on the Portsmouth Road, and another just beyond the Hotel Moorland at Hindhead.

London-Eastbourne road, over a measured furlong situated on the London side of Blindley Heath, between the junction of the two roads from Godstone and the first house in the village.

#### SUSSEX.

Brighton-Horsham road. Measured distance between Cowfold and Henfield.

Eastbourne Road. New measured distance about 100 yards Eastbourne side of Godstone village, near large sandpit.

Littlehampton Road. Measured distance between Billingshurst and Pulborough.

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.

On the Upper Worthing Road, outside Arundel, there is a quarter-mile trap.

On the Hastings Road a trap has been working recently in the vicinity of Hurst Green.

Horsham-Pulborough road, a quarter-mile trap, on either side of a cross road just before reaching Codmore Hill.

Brighton Road, near Hickstead.

There is a police trap working on Sundays on the road between Lewes and Brighton, about half a mile from Lewes. It is about four miles in extent, and is worked both ways.

There is a very dangerous trap at the cross roads five miles south of Horsham on the main road to Worthing.

Guildford-Chichester road, between North Chapel and Petworth.

#### WARWICKSHIRE.

Warwick-Banbury road, near Gaydon. On Stoneleigh Hill, between Coventry and Leamington.

Coventry-Kenilworth road, on the down grade towards Gibbet Hill.

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.

Watling Street between Wilnecote and Atherstone.

Stonebridge-Castle Bromwich road, on the "two-mile straight," working both ways and being continually moved.

Coventry-Kenilworth road, between the top of Gibbet Hill and the end of Stivichall Common.

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.

#### WILTSHIRE.

London - Andover - Salisbury road, down a long slope known as Three Mile Hill to St. Thomas's Bridge.

#### WORCESTERSHIRE.

Worcester-Birmingham road. Intermittent trapping between Worcester and Bromsgrove, *via* Droitwich, particularly at week-ends.

#### YORKSHIRE.

There is a trap four and a half miles from Malton on the York Road entering 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.

Skipton-Keighley road, on a safe straight stretch just north of Kildwick. There is an alternative route *via* Otley, Bearly, Ilkley, Addingham, to Skip-ton.

Leeds - Selby road between Monk Fryston and Selby.

Leeds - Harrogate road, about two miles out of Leeds, between Moortown and All-woody. There is also a stretch of bad road between Pool and Otley.

Between Northallerton and Durham *via* Leeming Lane a trap of about 200 yards is being worked just before the turning off the lane for Darlington.

#### SCOTLAND.

##### ABERDEENSHIRE.

Measured distance between first and third milestones out from Leith on the road to Huntly.

Aberdeen-Banchory-Ballater road, on the Great Western Road leaving Aberdeen.

Aberdeen-Park-Banchory road. Three traps through Banchory, first beginning at ten-mile limit post to railway station, second from railway station to clock tower in centre of town, and third from clock tower to ten mile limit post at railway arch. The whole distance is also timed.

Banchory, clock tower to Bridge of Feugh.

There will probably be one through Ballater.

##### DUMBARTONSHIRE.

Measured distance on the Black Hill Road.

Glasgow - Dumbarton Road, through Bearsden. Timed ten miles limit.

Glasgow-Strathblane road. Timed ten mile limits in Mingavie, Strathblane, and Dumgoyne.

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.

We are pleased to be able to report that in certain districts of Dumbartonshire the campaign against motorists has taken a commonsense turn. In places where a ten miles an hour speed limit exists the limit is not strictly enforced, but the circumstances of traffic, etc., at the time of a car's passing through the scheduled area are taken into consideration. This very fair treatment should be appreciated by all drivers, but woe betide any who attempt to take advantage of it, if they get into the courts.

If they possibly can motorists should avoid the county of Dumbarton, as the police are most prejudiced and traps abound. A correspondent tells us that it matters not whether you are going eight or fifty miles per hour, you are fined just the same. Motorists going from Glasgow to Stirling should go *via* Kilsyth.

#### DUMFRIES.

Care should be exercised in the neighbourhood of Annan between Carlisle and Dumfries.

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

Motorists should be careful to observe the legal limit between Dumfries and Sanquhar, and on principal roads in the neighbourhood of Thornhill. The measured distances of one mile seems to be changed daily.

#### ELGINSHIRE.

Measured distance on the road between Dulnan Bridge and Grantown.

#### FIFESHIRE.

Newport to St. Andrews.

Newport to Cupar.

Cupar to St. Andrews.

Colinsburgh-Leven.

Main roads leading west from Cupar.

Care required right round coast road round East of Fife.

Traps are laid on all the main roads round Cupar and St. Andrews. Care should be especially exercised on the main roads between Newport and Cupar and Newport and St. Andrews. There is a trap from about one and a half miles from Craig Pier, Newport, to St. Michaels; there is also one between Guardbridge and St. Andrews.

#### FORFARSHIRE.

Measured distance at Finavon, on the Forfar-Brechin road, and at Eassie, on the Forfar-Meikle road.

Broughty Ferry, ten mile limits.

Arbroath to Dundee.

Lunan Bay, ten mile limit.

#### HADDINGTON.

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

#### KINROSS-SHIRE.

Ten miles limit at Milnathorp.

Ten miles limit at Kinross.

Fines were inflicted here recently of £10 for an infringement of the ten miles speed limit.

#### PERTHSHIRE.

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

Practically every ten mile limit in Perthshire is timed, particularly Bankfoot, Auchterarder, Cupar-Angus, and Longforgan, while traps are regularly working on the Perth to Edinburgh Road, about the first mile out (up Craighend Brae), and beyond Bridge of Earn, between fourth and sixth mile-stone. On the North Road at different places between Perth and Luncarty, and between Dunkeld and Pitlochry.

#### PERTSHIRE AND FORFAR-SHIRE.

Dundee to Perth. Ten mile limits at Inchture, Longforgan, and Invergowrie, and also twenty mile limit traps on open roads moved very fre-

quently. Police activity is very virulent in this quarter and not too scrupulous.

Auchterarder, ten mile limit.

Between Bridge of Earn and Glenfarg.

Cars are timed over the ten miles limit on Boat Brae, near Rattray, by Blairgowrie.

Keith and Huntly Turnpike Road, one and a half miles from Keith. Traps are likely to be in operation near Elgin and Nairn.

#### RENFREWSHIRE.

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

Paisley-Beith road, at Howwood.

#### STIRLING.

Glasgow-Stirling road. Ten mile limits at Dennyloanhead and Condor-rat, and three mile movable trap each side of Cumbernauld.

#### GENERAL.

All motorists who are touring in Scotland are advised to leave Fifeshire, Perthshire and Kinross-shire out as far as possible. Fifeshire especially is trapped all over. In Perth and Kinross the ten mile limits appear to prove most lucrative to the localities where they are in force, as they are nearly all trapped and very heavy fines are extracted from motorists caught exceeding the speed laid down by the orders.

## Motor Car Traffic in Shropshire.

### Sensible Recommendations adopted by the County Council.

THE manner in which the County Council of Salop has dealt with the question of the regulation of motor car traffic within its jurisdiction is worthy of being taken as a model by other local authorities. Upon the receipt in September last of the circular letter from the Local Government Board as to the provisions of the Motor Car Acts with regard to reckless driving and the imposition of speed limits a sub-committee was appointed to carefully investigate the several points raised. This sub-committee made tours of inspection through each of the main road divisions of the county, and paid particular attention to those portions of road which might be considered in any sense dangerous and to those places in respect of which complaints had been received from time to time.

After most thorough investigation the sub-committee submitted the following recommendations:

1. That the time has arrived when the highway law, after being amended, should be codified and consolidated.

2. That the use of waterproofing and dust-preventing material for roads is desirable, especially in regard to motor traffic.

3. That the attention of agriculturists be called to, and their co-operation invited to prevent, the damage done by soil, mud, or dirt being brought upon the highway by the wheels of vehicles.

4. That the erection of any symbols or signs identical with or resembling those of an official pattern by persons other than a road authority is greatly to be deprecated and should be made illegal, and that it is essential there should be absolute uniformity throughout the country both in type of warning sign and mode of erection.

5. That the multiplicity of signs on the road is likely to constitute a very real danger, in that it tends to induce motorists and other users of the road to ignore them altogether.

6. That villages and towns (where they are clearly discernible) should, by the very nature of their existence, be regarded by motorists as an ample and sufficient warning to them to drive with caution, and that the erection of warning posts outside such inhabited places is generally unnecessary.

7. That similarly, an ordinary direction post, which the Highway Authority is authorised under Section 24 of the Highways Act, 1835, to erect should, where it is clearly discernible, be regarded as an all-sufficient indication of the existence of cross or side roads.

8. That caution signs should only be erected where real danger exists, and special caution is required, e.g., an exceptionally sharp curve, or where the cross or side roads are concealed from view and a direction post is not visible, and that at such places a caution symbol should be erected at the approach from each end thereto, and also that the whole length of road lying between such symbols should be regarded as a danger zone to be traversed with special caution.

9. That the symbol for "caution," which should be universal, should be of the following nature: A hollow equilateral triangle with 18in. sides to be painted bright red on

the side facing the approaching driver and white on the reverse side. The underside of the symbol to be not less than 8ft. from the ground level, to be erected not less than twenty yards from the first point of danger, and on the left-hand side of the road to one approaching that point. To have the best possible background for visibility, preferably a sky background.

10. With regard to village schools and level crossings some special warning is necessary, and this should be given by fixing to the caution symbol, just below the triangle, a plate with the word "school" or "level crossing" marked thereon.

11. That the name of the County Council be placed on all symbols.

12. That it is desirable legal authority should be given to secure uniformity in the designs of symbols.

13. That dangerous corners be removed wherever possible, and that landowners be invited to co-operate with the council in furtherance of this object.

14. That, although a highway surveyor is invested under Section 65 of the Highway Act, 1835, with power to insist on the trimming of hedges, yet it is desirable (and in many cases might be possible) to arrange with the owners of land adjoining the road to consent to the substitution of iron or other transparent fencing for the existing hedge fences at dangerous corners.

15. That copies of the foregoing be sent to the Local Government Board, the County Councils' Association, and each county council in the United Kingdom.

16. The sub-committee also recommended that special caution notices be erected at the main road approaches to Church Stretton.

The foregoing recommendations of the sub-committee were unanimously confirmed by the Roads and Bridges Committee and adopted *nem. con.* by the County Council.

The notices referred to will take the form of large boards bearing in raised letters the legend:

SALOP COUNTY COUNCIL.

MOTORISTS

PLEASE USE

SPECIAL CAUTION

FOR THE

NEXT ..... MILES.

It was the unanimous feeling of the sub-committee that better results are likely to accrue from a civil request than from a brutal prohibition, hence their refusal to apply for an arbitrary speed limit until these notices have been tried. It is hoped that all motorists passing through Church Stretton district will *really* respect these notices, and so strengthen the hands of the council. It may be added that Shropshire is completely free of the obnoxious police trap, and hopes always to remain so.

## The Persecution of Motorists in Wales.

### Condemnation by the Aberystwyth Town Council.

THE action of *The Autocar* in advising motorists to steer clear of Aberystwyth, owing to the roads leading to that town being trapped by the police, was the subject of a long discussion at a meeting of the local Town Council last week.

The Town Clerk reported he had received a communication from Mr. S. N. Braithwaite, of Hyde Park Terrace, London, in which that gentleman stated that the reports he had heard of the annoying treatment of motorists in the neighbourhood of Aberystwyth had induced him to avoid visiting the town. The Town Clerk added that he replied to Mr. Braithwaite as follows: "Sorry to hear that the report as to the treatment of motorists in our district should have induced you to alter your plan. I think I can satisfy you that motorists are not being unduly interfered with, as the number of instances in which proceedings have been taken will, I think, prove to you."

The Town Clerk further stated that he had communicated with the Chief Constable of Cardiganshire on the matter, and in his reply he said that it was evident that Mr. Braithwaite and the Editor of *The Autocar* had been sadly misinformed as to the treatment of motorists in the county. During the past nine months there had been only six prosecutions in the county for exceeding the speed limit—the speeds being from twenty-three to thirty miles an hour—and one prosecution for driving to the danger of the public. Motorists had not been timed on open roads, and they were treated with great leniency. There was no ground for saying that they were subjected to annoying treatment, unless being called upon to give reasonable obedience to the law could be construed as such.

The Town Clerk asked if he should communicate with *The Autocar*, explaining the true state of affairs, so as to remove the erroneous impression that motorists were harassed in the county.

Councillor R. J. Jones said *The Autocar* was a very influential journal, and there was no doubt that the unenviable publicity which it had given to Aberystwyth would deter a large number of motorists from coming to the town. He moved that the Council express its disapproval of the police traps, and that representations be made to the Chief Constable to abolish them.

Councillor G. F. Roberts strongly objected to Mr. Jones's proposal. He liked to see motorists coming to the town, but he did not think it was right to encourage motorists to drive through villages at a speed of over twenty miles an hour.

The Town Clerk suggested they should allow the facts to speak for themselves, and that a copy of the Chief Constable's letter should be sent to *The Autocar*.

Councillor C. M. Williams, who is also chairman of the Cardiganshire Police Committee, said no prosecutions had been instituted except in cases where the speed exceeded twenty-three miles an hour, although the Act fixed the limit at twenty miles an hour.

Councillor Rufus Williams suggested that the policy adopted in Norfolk should be adopted in Cardiganshire, whereby motorists were warned to ease down when approaching villages and awkward turnings.

Eventually, it was agreed that the Clerk should communicate with the Editor of *The Autocar*, and also forward him a copy of the Chief Constable's letter.

The *Montgomery County Times*, commenting upon the police activity against motorists in Merionethshire,

says: "It will be an unfortunate thing for the county if it acquires such a reputation that motorists will be afraid to approach it, for there is no doubt that much tourist traffic is due to the motor, and that such traffic means a good deal to a county like Merioneth."

The following is the communication which the Town Clerk of Aberystwyth has addressed to us in obedience to the instructions of the Council:

#### PERSECUTION OF MOTORISTS IN WALES.

Sir,—I received a postcard a few days ago from an intending visitor to Aberystwyth, in which he stated that owing to the reports he had heard of the "annoying treatment of motorists" in the neighbourhood, he had been induced to avoid visiting Aberystwyth.

The gentleman referred to had probably read the following statement, which appeared in a recent issue of *The Autocar*: "We learn that all roads leading to Aberystwyth are trapped."

In the circumstances I wrote to the Chief Constable calling his attention to the unfounded report referred to, and I enclose a copy of the reply received by me. I feel sure that in fairness to Aberystwyth and to the Cardiganshire police authorities, and for the information and convenience of motorists, you will kindly insert the Chief Constable's reply.

A. J. HUGHES, Town Clerk, Aberystwyth.

Cardiganshire Constabulary, Chief Constable's Office.

Aberystwyth, July 19th, 1909.

#### RE PROSECUTION OF MOTORISTS.

Dear Sir,—In reply to your letter of the 16th inst. enclosing copy of a postcard received by you from Mr. S. N. Braithwaite, 1, Hyde Park Terrace, London, it is evident that Mr. Braithwaite and the Editor of *The Autocar* have been sadly misinformed as to the treatment of motorists in this county.

During the past nine months, in the whole of this county only six of the most flagrant cases of driving through villages (the speed ranged from twenty-three to thirty-two miles per hour) have been prosecuted, and one for driving to the danger of the public.

Motors have not been timed on open roads in this county, although the police would be legally justified in doing so, and I know from personal observation that many motorists often exceed a rate of twenty miles per hour on such roads, and some even thirty.

Motorists are treated in this county with great leniency, and there is no ground whatever for saying that they are subjected to annoyance, unless it is considered an annoyance to be required to give reasonable obedience to the law of the land.

Yours faithfully,

E. WILLIAMS, Chief Constable.

A. J. Hughes, Esq., Town Clerk.



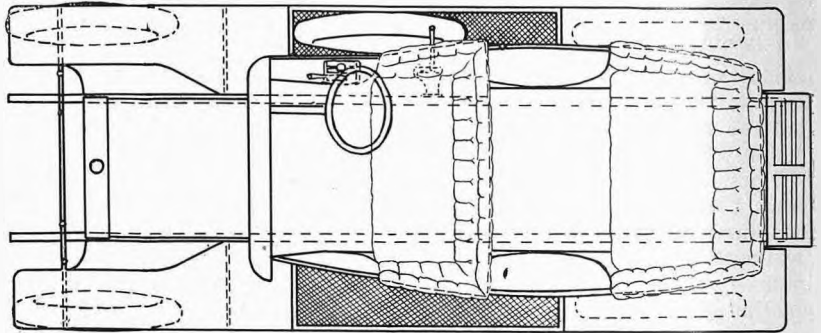
Who owned the road? The car followed the two colliery pulleys on the motor tractor a mile before being able to pass.

## Body Design and Construction.

### An Example of Individuality.

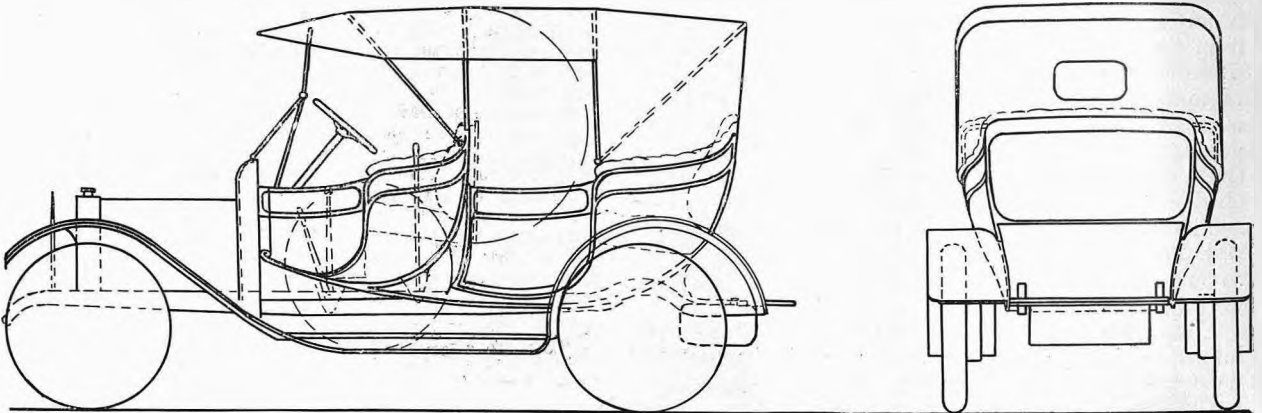
A VERY elegant body containing some really practical features for comfort, has been designed by Mr. Mervyn O'Gorman, who has been good enough to send us the drawings which we reproduce herewith. The object in view has been to produce a body which should be comfortable in use in all weathers yet not so heavy as either a landaulet or small limousine, and consequently less costly to maintain. To achieve this end Mr. O'Gorman has kept the body as short as was consistent from the comfort point of view. There is ample leg room, but no space is cut to waste. The rear seats are as nearly as possible over the back axle, being unfortunately rather behind than in front. Fairly low seats with a backward inclination are provided, but the side doors to both back and front seats might have been a little higher with advantage and without spoiling the general lines of the body. If anything, they would very considerably improve it.

One of the features is a screen hinged to the back of the front seats which may be swung up by the occupants of the rear seats whether the hood be up or



Plan view of the body.

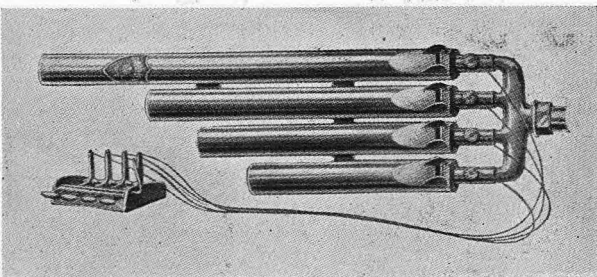
not. The screen is held in position by a clamp. On the sides of this screen are twin buttons, to which side curtains may be attached, so as to completely close in the seats. These side curtains are so arranged over a light frame that they open with the doors, thereby giving easy entrance or exit to the back seats.



Side and back view of Mr. O'Gorman's body design.

### A Four-note Gabriel Horn.

We are advised by Messrs. Brown Bros. that they have on view at their showrooms in Newman Street, Oxford Street, W., a new type four-note Gabriel horn



as here illustrated. This horn is operated in the same way as the ordinary Gabriel horn, but is brought into action through the keys on the board shown, which may be fitted in any convenient place on the car.

### Front Wheel Brakes.

All those who are in any way interested in front wheel braking will remember that the Allen-Liversidge front wheel brakes have been regularly demonstrated on a 15 h.p. Humber. We are told that the car has now covered a distance of upwards of 12,500 miles, that the brakes have been adjusted once, and less than a sovereign has been spent on car repairs, not including tyres. Now both the car and the brakes have been put to unusually hard work, for the vehicle has been driven not by dozens or by scores, but by hundreds of people, most of whom have done their best to make the car skid. That the brakes and the car should have stood up so long under such hard treatment at the hands of so many different individuals, none of whom, be it remembered, were chastened by the consciousness that they were driving their own car, is a wonderful testimony to both brakes and car, even though it be considered that one of the claims for the Allen-Liversidge brake is that it saves the car a lot of strains.

## Motor Union Notes.

(Communicated by the Secretary.)

The "Motor Union British and Irish Handbook" was published last week, and by this time most members will have received their copies. Believing that it is impossible to combine satisfactorily a general book of reference and year book with a touring guide, and that the latter will be of far more service to members, the Union has sought to make the present volume the most complete and discriminating guide to touring in the United Kingdom which has yet been published; the official matter has been reduced so as to occupy a few pages only. The publication of the handbook has been unavoidably delayed owing to the large amount of correspondence entailed in the preparation of a volume containing so much detailed information. Over 15,000 communications have been issued and received in connection with it; the information concerning some 1,000 places has been personally revised by local members, and it is hoped that the completeness and accuracy of the information given will be sufficient compensation for the delay in its appearance.

An entirely new form has been adopted for the arrangement of the matter. In the present issue all necessary information concerning a particular place is given under the name of that place; under this system members have only to turn to a particular town to find all the detailed local information necessary to motorists on tour.

◇ ◇ ◇ ◇

Rapid as has been the growth of the Motor Union in past years, all previous figures are being eclipsed in 1909. The first half of the current year has witnessed an expansion which has exceeded even the hopes of the General Committee, and which has proved that the increased advantages of membership which a rising revenue has enabled the Union to offer for the small annual subscription of one guinea are being widely appreciated by motorists.

The total *individual* membership (now numbering over 8,000) shows an increase of over fifty per cent. when contrasted with the figure for the corresponding date of 1908, the subscriptions received during the first three weeks of July alone exceeding those received during the same period of last year by over one hundred per cent. The department which has perhaps expanded more rapidly than any other is the Touring Department. Its assistance is of the greatest value to members touring in this country, whilst for the convenience of those who take their cars abroad the most complete arrangements have also been made. The appreciation of the membership is shown by the fact that the amount of the deposits made with the Union on account of triptyques issued has increased this year by over 120 per cent.

The Union is considering the possibility of still further increasing the advantages offered to members, who may themselves help to make this possible by inviting their motoring friends to join the Motor Union.

◇ ◇ ◇ ◇

Last week the Secretary attended inquiries held into applications for speed limits at Mitcham (Surrey) and Great Missenden (Bucks.) With regard to all applications for reduced speed limits, it is the policy of the Union to investigate carefully the conditions which obtain locally, and whilst concurring in the issue of orders restricting the speed of motor cars in places where the safety of the public requires it, the Union strongly opposes the imposition of reduced speed limits

upon roads which are in no way especially dangerous. The Union has thus been instrumental in preventing the granting of a number of reduced speed limits, which, in its opinion, were unnecessary to secure the safety of the public. A case in point is the recent application of the Town Council of Stoke-on-Trent. To this the Union objected, and at the subsequent Local Government Board inquiry, the Secretary attended on behalf of the Union. The view of the Union—that there was no warrant for a special speed limit at this place—has been endorsed by the Local Government Board, who, in refusing the application, write:

"That they are not satisfied upon the evidence given at the inquiry, that the other provisions of the Act are insufficient for securing the safety of the public, or that the road is of such a character as to justify the imposition of a reduced speed limit for motor cars using it, and they are not prepared, therefore, to make the regulation applied for."

◇ ◇ ◇ ◇

At the meeting of the General Committee held in Swansea on July 17th, very hearty votes of thanks were accorded to all those whose generous hospitality and kind co-operation secured the success of the Motor Union Tour, and provided such an interesting and enjoyable holiday for the Motor Union's foreign guests.

◇ ◇ ◇ ◇

The Hendon Rural District Council have made application for six "special caution-school" signs for erection in their district. With their erection forty-six of the Union's "school" signs will have been supplied for the protection of the schools in Middlesex.

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The Motor Union special Customs ticket, which passes a motor bicycle into France or Belgium, or a motor cycle of any kind into Switzerland or Italy free of duty, will also pass an ordinary bicycle into any of these countries. Any member, therefore, who wishes to take a bicycle with him to one or more of the countries mentioned can have the necessary ticket free of charge on applying to the Secretary. On landing in France with a bicycle the owner should apply to the Customs for a "*permis de circulation*," available for three months, which during that period will exempt him from the obligation of paying the cycle tax. The fee payable for this permit is sixty centimes.

◇ ◇ ◇ ◇

Over seventy cases were dealt with last month by the Legal Department of the Motor Union. The matters upon which the Department is consulted embrace a great variety of points arising in connection with the use of motor cars and cycles. A somewhat unusual point has been raised by a motor cyclist, who was riding home at night and had occasion to pass the entrance to a show, the proprietors of which had tarred the road past the entrance, with a view to preventing dust on the following day. It appears that this portion of road had been left in an improper condition, and, riding into it unawares, the member suffered a side-slip and was thrown from his machine on to the tar-covered road. It transpired that he was the third person who fell on that evening as the result of the condition of the road, and the Union advised that the member had a right of action at common law against the persons who were responsible for the tarring of the road. A claim was made, with successful results.

◇ ◇ ◇ ◇

The Motor Union. Chairman, W. Joynton Hicks, M.P.  
Alhmarle Street, London, W. "Speedway, London." 9090 Gerrard.

## Small Car Talk. By Runabout.

### Steering Gears on Semi-racers.

I THINK I have travelled on practically every really speedy small car made, and I have a piece of advice to offer to any readers who are attracted by them. The majority of these cars can do forty miles an hour, some can touch fifty, and one sample I remember could actually force the speedometer needle up to the sixty digits. I do not mean to imply such speeds are habitually indulged in, but the fact that the cars are capable of them shows that the prospective owner intends to travel fast now and then, if not in England then abroad. Here, then, we have some forty little cars, all designed in engine and gear box to do a mile in a minute and half or less upon demand. Of this number not more than half a dozen are either comfortable or safe when flying along all out, because their steering is neither sufficiently well designed nor sufficiently well made. I have been driving a sample this week, and though I am not a nervous man I consider its steering dangerous at any speed in excess of legal limit. This is an extreme example. But the steering of many of the cheaper cars is totally unsuited to high speeds, and any motorist who is trying to buy speed cheaply should undoubtedly give his first attention to the steering gear, and pencil the car off his list unless in workmanship, design, and actual road trials it proves to be suited to its job. These light vehicles get a rare bucketing when they are driven fast on normal English roads, and it is probably true to say no car requires a more stable or carefully designed steering gear. Sundry official reports of the condition of small cars after prolonged reliability trials show that expense is being scamped in this detail.

### Big Cars at Low Prices.

Everybody knows that certain factories produced more large cars last year than they were able to sell; and nearly everybody knows that these big and medium powered surplus cars are now being bandied round the market at very tempting prices indeed. I might almost say that a man with £300 to spend may choose whether he will order a 1909 car of 10-12 h.p. or a 1908 car of 30 h.p. The latter is an excellent bargain to the man who had intended to buy a 1909 car of 30 h.p., but at any price—even at a gift—it is a very poor bargain to a man who had intended to buy a 10-12 h.p. Only the experienced motorist knows how strictly up-keep charges rise in proportion to power and weight, and though the 30 h.p. of last year's make may be cheap to buy, it will be comparatively dear to run. A few motorists of my acquaintance have already been tempted into purchasing cars of about double the power proper to their income, because these cheap surplus 1908 cars came within their purview; and already they are beginning to look a little blue when the quarterly tyre bill is due. Let me clinch the point by a couple of actual instances. A friend of mine has bought a truly magnificent 30 h.p. 1908 limousine—a fine car in brand new order. He requires a new pair of covers for the rear wheels once a quarter. A second friend of mine preferred to buy a single-cylinder voiturette—his fourth of the same make. In his six years' motoring he has never once bought a new cover, the original tyres having lasted him till the car was sold in each case. Another friend of mine has used a small two-cylinder car for business purposes for five years. He finds weight so vital a factor in up-keep charges that he detaches two of his men to exchange

the two-seated body for the four-seated whenever he is not absolutely compelled to go out with the heavier body. He thinks it cheaper to pay two men for an hour's work apiece than to face a day's run with a body weighing 6 cwt. heavier than his light racing body. *Verb. sap.*

### The Uses of the Speedometer.

I notice that comparatively few small cars possess speedometers, although quite a reliable instrument may now be purchased for £4 4s. or so. Doubtless this is because the average motorist regards a speedometer as a luxury. To me a speedometer is a necessity. First, if a motorist lives near London, the instrument is likely to save its cost in police fines within a year. Magistrates now almost regularly dismiss charges where two occupants of the car can swear that the speedometer contradicted the police timing. Secondly, a speedometer is of inestimable assistance in tuning up a car. This applies especially to the small car, which can actually travel all out without danger on English roads, for the speedometer instantly reveals whether certain adjustments have increased the car's speed capacity or not. Thirdly, the odometer portion of the mechanism makes accurate reckonings of petrol consumption and the life of tyres quite simple and possible. Your speedometerless owner has very crude ideas how many miles he is getting out of a gallon of petrol, or how long his back tyres last. These three benefits are cheap at four guineas, especially when the speedometer can be detached at the end of the season and refitted to the new car.

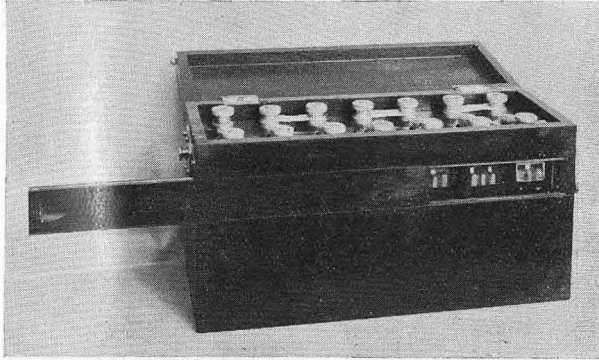
### Small Cars and Magnetos.

The small car has to be low priced, and the magneto is the most reliable ignition on the road. Hence we find a growing tendency to fit magnetos to voiturettes as their sole ignition. This is only wise, in my experience, when the magneto is of a type in which the firing point is not fixed, and whereon retarding mechanism, controllable by the driver, is actually fitted. The range of ignition setting on a magneto is small, and if this be the sole ignition the day will come when the little car is labouring exceedingly on bottom gear on a very bad hill, and a failure must ensue, because the ignition cannot be retarded by just that trifle which would spell salvation. Something of the same reasoning applies to silent running of the engine when the car is stationary. The coil and accumulator ignition undoubtedly allows the engine to be run slightly more slowly, and this is an important feature on a small car, especially if it have a single-cylinder engine. I should without hesitation select magneto ignition for the very smallest of small cars if I were limited to a single ignition. But of this I am sure, that the small car stands in more urgent need of the supplementary coil and accumulator than any big car that was ever made, not only for climbing real teasers in the way of hills, but also for quiet stationary running. If the magneto be the sole ignition, it ought to be provided with retarding mechanism, after the fashion of a motor bicycle.

*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. x 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.

### Some Practical Accumulators and Accumulator Boxes.

**E**LECTRIC lighting is now becoming so universal for motor cars, particularly for side, tail, and body lights, that neat and convenient storage for the accumulators providing the current is more than a necessity. Messrs. Moore, of Preston Street, Brighton, are now putting sets of accumulators upon the market contained in handsome well made cases as shown. These



cases are provided with a draw piece which permits the condition of the accumulators to be inspected without lifting and removing them from the box. By the withdrawal of the slat the individual in charge of the charging can easily note the progress of the operation and the condition of the plates and electrolyte. The terminals of the accumulators in question are in absolutely uncorrodable metal.

### Palmer Cord Tyre Studs.

**A**LTHOUGH automatic machine tools are only distantly connected with motoring, they serve a very important part in the hands of motor manufacturers in the enormous amount of time and labour saved by these wonderful repetition machines, which are capable of turning out large numbers of small component parts with remarkable rapidity and a minimum amount of attention. A good example of the time saver's ingenuity is evident in a small automatic capstan lathe which we inspected recently, of which a number have recently been turned out from the workshops of the noted firm of machine tool makers, Messrs. Alfred Herbert and Co., Coventry, which have been made specially for the rapid and accurate manufacture of a new tyre stud to be used on the Palmer Cord tyre.

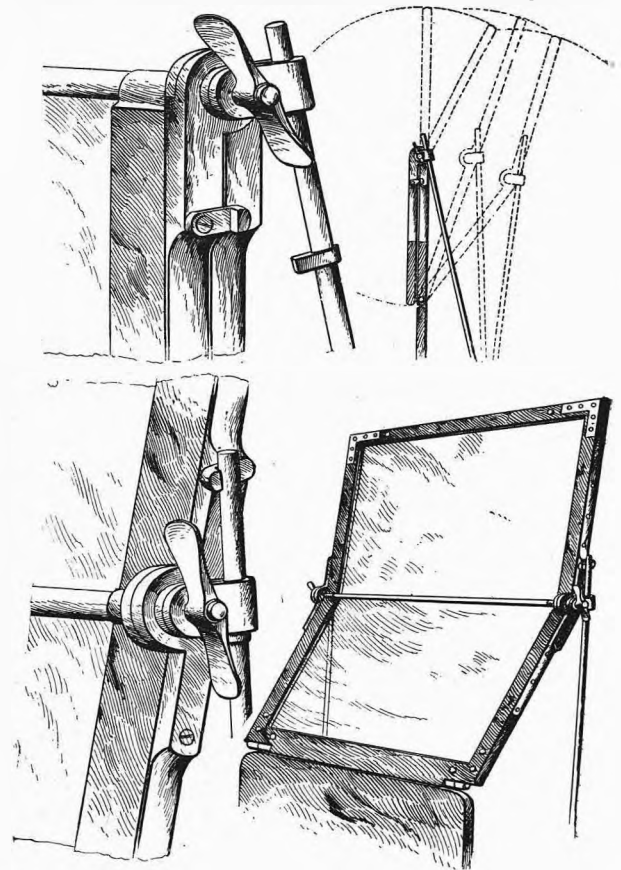


The studs are turned from a 5/8 in. steel bar to the form shown in the illustration, and the object of design is to eliminate the trouble of the studs becoming loose and being torn out of the tread. It will be noticed that four holes are drilled in the grooved lower half of the stud which is bedded in the cover tread, and the special cord of the tyre is threaded through these holes, so fixing the stud. We are informed that the cover itself has positively to be torn to shreds before a stud can be extracted.

It is in the drilling of these four holes in the stud that the particular ingenuity of the Herbert machine lies, as both the forming and drilling are done in one operation, the holes being drilled by special little bevel gear-driven drills whilst the stud is revolving in the machine.

### Summers's Wind Screen.

**T**HIS screen, which is the conception and production of Mr. H. H. Summers, of 28, Cheap-side, E.C., has several excellent points to recommend it to those who are on the look out for something efficient and satisfactory in this direction. In designing this screen Mr. Summers was anxious to make one which would reduce the distressing back draught—more or less common to all screens—as far as possible. From actual experience with one of these screens fitted to a 26.6 h.p. Napier which we owned in the early part of the year we are bound to say he has succeeded in a very marked degree. Reference to the drawings will show that the screen is so constructed that the panels, both upper and lower, can be varied considerably as to their angular positions to the dashboard, to each other, and to the occupants of



Details of joint and clamping nut; diagram showing three positions of screen and the wind screen complete.

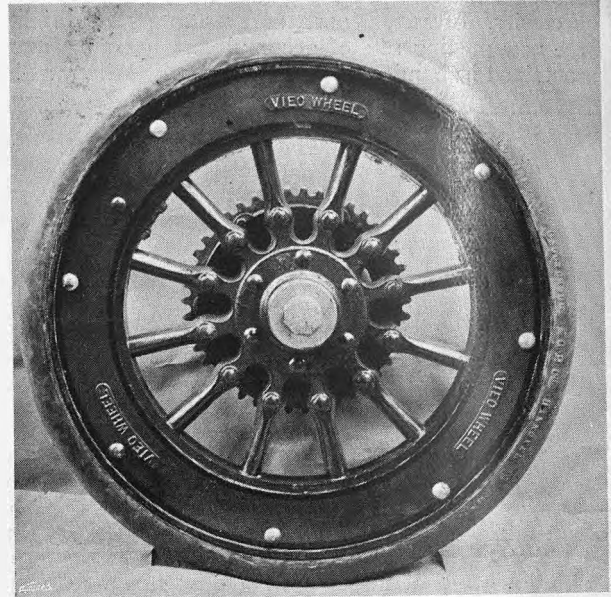
the front seats, or the screen can be used vertically to the dashboard or folded over to form a half screen, as shown. It is by testing the panels at various and varying angles that the best conditions with any car can be found. That such positions can be varied to suit each car and position of dashboard and seat is a great element in the characteristics of this screen. With the Napier car above mentioned we found after several experiments that there was a certain angular relation of the two panels by which, while the faces of the occupants of the front seat were perfectly protected, the back draught was almost eliminated. It will be admitted that the universality of position is obtained in a very ingenious and thoughtful manner.

## The Vieo Wheel.

**A Device which has now Emerged from its Experimental Stage.**

ON Wednesday of last week a number of the representatives of the motor press heard from the lips of Mr. Marshall Hall, K.C., the chairman of the private company known as Vieo, Ltd., of the intention of that company to appeal to the public now that the Vieo wheel had been completely perfected and proved. The ingenious construction of this wheel, which is, as our readers know, the invention of Mr. Stuart Ogilvie, J.P., the well-known dramatist, has already been described and illustrated in our columns. We give herewith, however, an illustration of the Vieo wheel as it is now manufactured, whence it will be seen that it is in every way a presentable thing. The press representatives were afforded opportunities of making trial trips in several different forms of vehicles running on Vieo wheels, and even over the roughest road stretches to be found round London it would not have been possible to say that the cars were not running on fairly hard blown pneumatics. The economies afforded by Vieo wheels shod with solid rubber or iron tyres over and above pneumatics were clearly instanced by statistics given by Mr. Ogilvie. Since the last time we dealt with Vieo wheels, Sir William Bull, M.P., and Sir Clifton Robinson, the tramway expert, have become interested in the wheel, and are thoroughly convinced of the great utilitarian future which lies before it both for private and commercial cars. When we made our last trial trip on Vieo wheels then running under the heavy Daimler car owned by Mr. Stuart Ogilvie, we remarked upon the existence

of some little rattle, but last week we were quite cognisant of the disappearance, and although Mr. Ogilvie



*The Vieo wheel in its latest form.*

drew our attention to the fact that this noise had been entirely eliminated, there was no need for his doing so.

## A Security Bolt Improvement.

**A Time and Trouble Saver.**

IT is very well known that the old style of security bolts for pneumatic tyres give more trouble and take up more time than anything else when fitting on a new cover or replacing an inner tube. They are also apt to pinch the inner tube, and, apart from the trouble they give, they often mark the tube badly when they are in their proper place, sometimes causing a puncture.

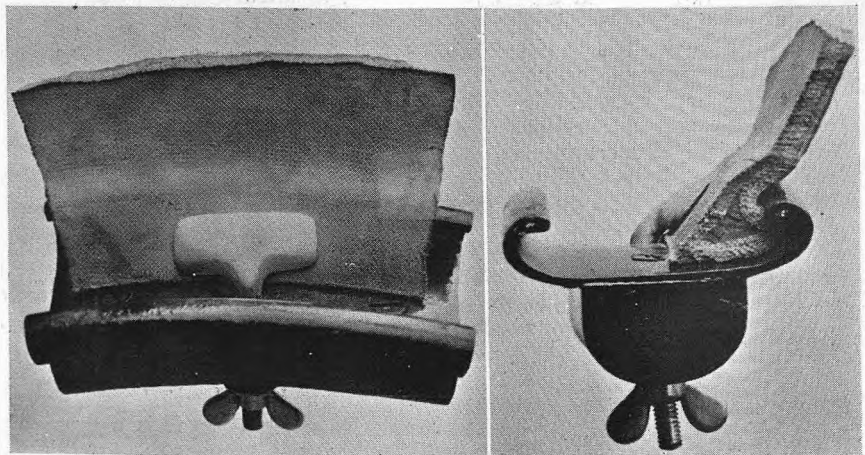
To overcome these imperfections Mr. Samuel Murison, Ebbw Vale House, Ebbw Vale, Mon., has patented an improved bolt that should without any doubt be of great advantage to motorists.

The main idea of the invention is to keep a pneumatic tyre perfectly steady and in its proper place upon the rim by holding one beaded edge only of the cover, thereby leaving the outer side free from security bolts or any fastenings. Fig. 1

shows the improved bolt from a side view; fig. 2 shows an end view, in which the other side of the rim may be seen left clear for the other edge of the tyre.

The advantages claimed for the bolts are that in case of a puncture one is able to replace an inner tube in less than half the time and with less than half

the trouble attending the ordinary type; also one is able to fit on a new cover with similar expedition and without any fear of pinching the inner tube. The Stepney wheel can also be fitted in much less time than



*Figs. 1. and 2.—The new security bolt as seen from the side and end.*

ordinarily, as by reason of there being no security bolts to touch, it can be put on as soon as the car is jacked up. The bolts are one-piece drop forgings, canvas covered, with roughened faces, and have been very severely tested for a distance of over 6,000 miles upon a heavy-bodied Daimler limousine.



## The R.A.C. Headlight Trials.

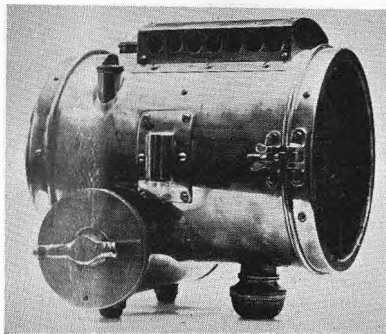
**L**AST week we recorded the above trials, which took place at the Crystal Palace on the 19th and 20th ult., and referred to several of the lamps submitted for trial. We are now able to give a few further particulars of other of the light givers, which we subjoin with the numbers of the entries.

1. W. TWEED AND Co., 43, Tabernacle Street, E.C.—The Frankonia separate acetylene lamp fitted with a lens mirror behind the burner, and a tubular condensing lens in front, projecting a powerful central beam of light some considerable distance ahead.

4, 5, 6, 7, and 8. WEILL BROS., Colonial Buildings, 59-61, Hatton Garden, E.C.—All acetylene burning lamps, of which we have been unable to obtain any detailed particulars from the entrants.

9 and 10. BROWN BROS., LTD., Great Eastern Street, E.C.—Two models of the well-known Autoclipse lamp identical in design but varying in size. The model A is the largest size lamp of 4,900 c.p., with a projection of 700ft. Model C is a medium size of 3,300 c.p., with a projection of 560ft. Both lamps are fitted with the light damper consisting of a blackened disc which can be dropped between the flame and reflector, and so cut out the powerful central beam of light when meeting traffic. The Autoclipse is mechanically controlled by the driver. Model A has a 12in. face, and Model C 9½in.

11. ALFRED DUNHILL, LTD., 359-361, Euston Road, N.W.—The Dreadnought acetylene headlight, with self-contained generator. This depends upon the



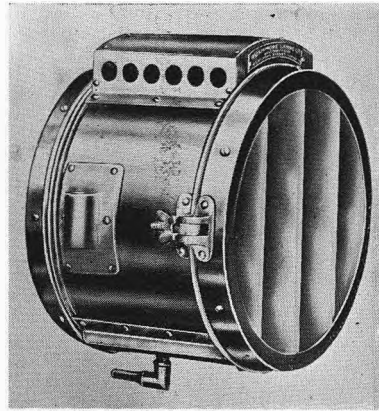
*Dunhill's Dreadnought.*

reflector for the concentration of the light beams upon the road through a "grid" front glass.

12 and 14. THE ROTAX MOTOR ACCESSORIES Co., 43-45, Great Eastern Street, E.C.—Two lamps, one acetylene and one electric, of which we have received no particulars.

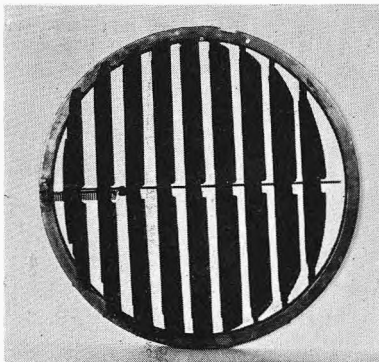
17 and 18. THE BADGER BRASS MFG. Co., 32-34, Featherstone Street, E.C.—The Solar acetylene lamps are designed to give a non-dazzling yet powerful light by a combination of a deeply curved mirror lens and a conical reflector. The mirror lens collects and projects the light in a long cylindrical shaft around which is a soft halo of light which does not affect the eyes of anyone meeting a car fitted with Solar lamps. Of course, if one persists in staring into the central beam when the lamp is at a distance the eyes will become affected, but then one never does this from choice.

25, 26, and 27. RUSHMORE LAMPS, LTD., 49, Rupert Street, Shaftesbury Avenue, W.—Three of the well-known



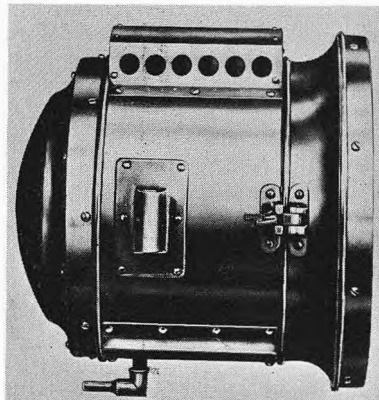
*Rushmore's multiplex lens front.*

Rushmore headlights. One is the ordinary 7in. lens mirror lamp with plain front, and another answers the same



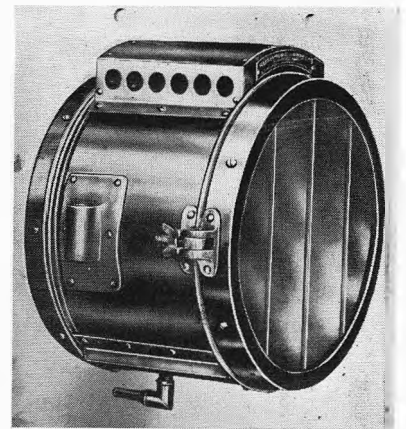
*The Rushmore shutter.*

description, but contains a new departure in the multiplex lens door. In this the ordinary glass strips are replaced by much heavier ones 2in.



*Rushmore flare front lamp.*

wide, flat on the rear side and optically ground to a convex curvature in front. These lens strips spread out the light in a horizontal plane, and give a wide field of illumination and a non-flickering light. The third lamp is an 8in. plain front Rushmore fitted with a Venetian blind type of shutter under the control of the driver.

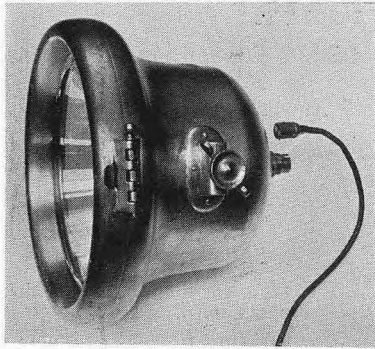


*Rushmore plain front headlight.*

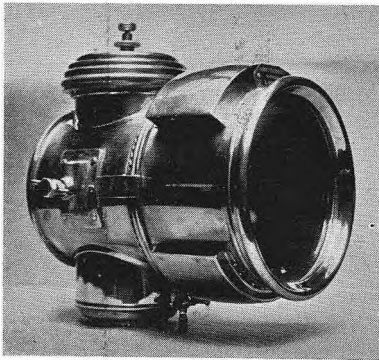
29. UNIVERSAL MOTOR IMPORTS, LTD., 10, Wilmington Square, Rosebery Avenue, W.C.—An ordinary 11in. front glass lamp fitted with the Eclipse lens which is the speciality. This lens consists of a plain glass with a series of wavy lines engraved on both sides of the upper half, the object being to reduce the upper portion of the light beam.

30. SALSBURY LAMPS, LTD., 124, Long Acre, W.C.—The Dublito acetylene separate headlight, in which an ingenious arrangement of lens is employed. In one form a small lens mirror is mounted on a bracket in front of the burner, so that on looking into the light the flame cannot be seen. This mirror projects the light on to the rear reflector, whence it is thrown on to a patented lens of a very ingenious character. This lens is composed of a series of horizontally built up strips of glass cemented together, and ground to the requisite shape. The rays of light striking obliquely against the internal upper surfaces of the lens are reflected downwards, whilst those which strike against the lower surfaces are absorbed and projected forward. As a result of this lens, the upper part of the beam of light from the lamp is soft and illuminating only near to the car; the lower part is strongly thrown upon the road at a great distance, and below the ordinary eye level.

37. THE MOTOR ACCESSORIES Co., 55, Great Marlborough Street, W.—The Fanphare acetylene lamp with separate generator. This lamp has a plano-convex lens of cylindrical form, which has the effect of throwing the light forward in the form of a horizontal fan illuminating the whole of the road very brilliantly at a low level.



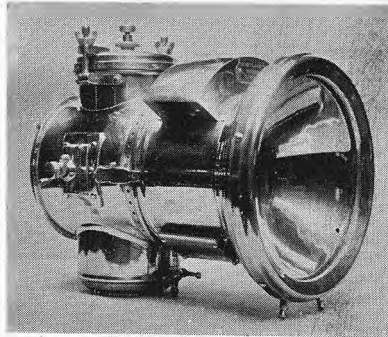
The C.A.V. electric headlight.



Another of Smith and Sons' lamps.

32 to 36. C. A. VANDERVELL AND Co., Warple Way, Acton Vale, W.—Electric headlamps with bulbs for 8 or 12 volt currents placed in focus before a parabolic silvered reflector. The front glass measures  $8\frac{1}{2}$  in. in diameter. The 12 volt two ampère lamp in pairs is claimed to be powerful enough for all ordinary purposes.

38 and 39. S. SMITH AND SONS, LTD., 9, Strand, W.—Two self-contained acetylene head lamps. One has a 7 in. face, and is fitted with a gold reflector. The second lamp has a  $7\frac{1}{2}$  in. face and a  $4\frac{1}{2}$  in. Mangin mirror gold plated by the Cowper-Coles



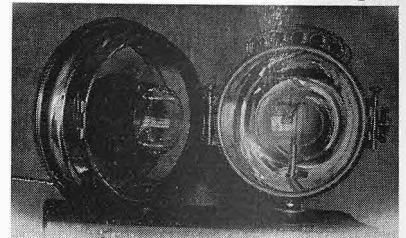
Smith and Sons' self-contained lamp.

Reflector Syndicate behind the burner, and a gold plated parabolic reflector in front.

42, 43, and 44. BLERIOT, LTD., 53-54, Long Acre, W.C.—The first lamp is a Bleriot petrol-oxygene capable of

giving an extraordinary power. The light is produced by making a small pastile of Zirconia incandescent with a burning jet of petrol vapour. The light is projected with a lenticular reflector. The electric lamp has a special parahyperbolic reflector and a carefully focussed bulb, and is fitted with the Bleriot no-glare shade. The acetylene lamp has a separate generator. The light is concentrated and controlled with combined parabolic-spherical reflectors, Fresnel lens, and Bleriot no-glare shade (optional).

45. WORSNOP AND Co., LTD., Carlton Lamp Works, Halifax.—The New Non-Glare acetylene headlight, in which a central tube fitted with lenses is employed to project a powerful centre



Worsnop's projector.

beam of light from a soft circle of light. It is claimed that this powerful beam of light does not dazzle at a distance, and as one approaches the light the soft outer circle of light only has to be faced. It is an attempt to give the driver all the light he wants without inconveniencing other road users.

## A Demonstration of K.T. Tyres.

ON Friday of last week a party of experienced motorists were given a demonstration of the running of the K.T. tyre over some of the worst and most evilly trammed roads of South-east London. Three cars starting from the Piccadilly Circus Garage in Windmill Street—one of them a 40 h.p. Martini, driven by Mr. A. C. Hills, and upon which the writer travelled—accommodated the party. The route was taken *viâ* the Old Kent Road, Blackheath, and Erith to Gravesend, and so far as surfaces are concerned nothing of a more searching nature could be found in the Metropolis. The back wheels only of the 40 h.p. were shod with K.T.'s, but when occupying the rear seat it was indeed difficult to imagine that pneumatics were not fitted throughout. Several times on the journey, selecting some specially watered section of trammed road, Mr. Hills gave most convincing demonstrations of the wonderful resistance offered to side-slip by the K.T. tyres. Though the car was swung violently from side to side, and first the pedal and then the side brakes were violently applied, no skid of any kind was noticeable. Also the speed of the car did not appear to be in any way lessened by the existence of K.T. tyres on the back wheels. Under all the available conditions the K.T. tyres were agreed by all the experts present to be eminently satisfactory. As the K.T. tyre has already been described and illustrated in our columns, it is only necessary here to remind our readers that the tyre consists of two parts, viz., the rubber and the steel ring which attaches it to the wheel. It is practically a pneumatic

tyre in which the rubber of which it is manufactured is homogeneously moulded without the addition of fabric, steel, or other hard substance. The rubber is formed in long strips having a double row of hollow studs, or inflated cups, forming a series of airtight chambers, secured to the wheel by the ring aforesaid. When the car is stationary and the load is delivered to the ground through these studs, the pressure of the air within the cells amounts to about 40 lbs. to the square inch, which increases with the drive, attaining about 60 lbs. at high speed. The tyre certainly does seem to hold the road in a remarkable manner when driving fast, no bouncing even when traversing very rough surfaces being noticed. Many claims over the pure pneumatic are made for it. It cannot burst, punctures are negligible quantities, and its sections are easily and cheaply renewed.

The K.T. tyre has, we are informed, been used extensively and most satisfactorily on the wheels of taxicabs, and if further assertion as to its non-skidding properties is required, it may be said that the K.T. tyre is the only tyre of its kind made without metal studs which are authorised by the authorities of Scotland Yard for taxicabs running on the London streets. We were informed that in the matter of taxicabs, mileage totals of upwards of 20,000 miles have been reached without the tyres requiring any attention. Also in this connection no time is lost on the road or in the garage in tyre charging. Properly handled, the K.T. tyre would appear to have a very promising future before it.

**Midland A.C.**

The results in the closed event at Shelsley Walsh Hill-climb, held on July 17th, and which was fully reported in our issue of July 24th, have now been announced, and are as follows :

Car.	Driver.	D.	S.	N.	Time.	Formula.
12 h.p. Riley, V. Riley ...	...	4	5	2	2.20 <sup>2</sup> / <sub>5</sub>	1.8997
9 h.p. Riley, A. Cox ...	...	3 <sup>3</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	2	2.40 <sup>2</sup> / <sub>5</sub>	1.6196
12 h.p. Clément Talbot, W. Pilkington ...	...	80	120	4	2.38	1.387
38 h.p. Minerva Knight, G. F. Heath ...	...	124	130	4	1.42 <sup>3</sup> / <sub>8</sub>	1.345
12-14 h.p. Calthorpe, G. W. Hands ...	...	75	120	4	1.59 <sup>2</sup> / <sub>8</sub>	1.332
25 h.p. Minerva, L. Merry-weather ...	...	106	115	4	2.1 <sup>1</sup> / <sub>2</sub>	1.31
25 h.p. Calthorpe, J. A. Holder ...	...	100	130	4	1.27 <sup>2</sup> / <sub>5</sub>	1.297
14 h.p. Alldays, C. E. Simms ...	...	3 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>4</sub>	4	2.28	1.2848
18 h.p. Enfield, W. Stokes ...	...	95	115	4	2.8 <sup>2</sup> / <sub>8</sub>	1.26
40 h.p. Métallurgique, G. Bird ...	...	5	6	4	1.22 <sup>4</sup> / <sub>5</sub>	1.256
14-18 h.p. B.S.A., A. J. Clay ...	...	90	100	4	2.53 <sup>1</sup> / <sub>2</sub>	1.141
18-24 h.p. Austin, J. H. Dean ...	...	4 <sup>1</sup> / <sub>2</sub>	5	4	2.20 <sup>1</sup> / <sub>2</sub>	1.13
16 h.p. Calthorpe, M. C. Blewitt ...	...	93	104	4	2.24 <sup>2</sup> / <sub>5</sub>	1.127
57 h.p. Daimler, F. A. Bolton ...	...	124	130	6	1.21 <sup>4</sup> / <sub>5</sub>	1.083
25 h.p. Calthorpe, T. R. Fletcher ...	...	102	130	4	2.5 <sup>1</sup> / <sub>2</sub>	1.081
25 h.p. Calthorpe, H. Joyce ...	...	100	120	4	2.45 <sup>2</sup> / <sub>5</sub>	1.053
58 h.p. Daimler, H. C. Holder ...	...	154	140	4	1.11 <sup>2</sup> / <sub>5</sub>	1.024
14 h.p. B.S.A., J. H. Deykin ...	...	90	100	4	2.45 <sup>2</sup> / <sub>5</sub>	.9663
10 h.p. Little Briton, W. Guilding ...	...	4	4 <sup>1</sup> / <sub>2</sub>	2	3.	.931
18-24 h.p. Enfield, L. Meek ...	...	95	115	4	3.5 <sup>1</sup> / <sub>2</sub>	744

In the open class the 20 h.p. Vauxhall takes first place on formula, and the 24 h.p. Vauxhall second place, and *vice versa*, as given in the provisional list of placings last week.

**Road Warnings.**

The following notifications came to hand too late to be included in our classified list:

**CHESHIRE.**

Stockport-Buxton road, just below the village of High Lane, and probably including the village; also from the top of the hill beyond High Lane to Disley has been measured.

**DEVONSHIRE.**

Bideford-Barnstable road, two mile trap worked occasionally.

**HAMPSHIRE.**

Lyndhurst-Bournemouth road, between fourth and sixth milestones from Bournemouth. We have been notified that there has never been a trap here, or, in fact, in the immediate vicinity of Lyndhurst, the local police being very reasonable.

**SURREY.**

Kingston-Leatherhead road at Hook.

**YORKSHIRE.**

There are plain clothes men stationed about Bridlington to check "driving to the common danger."

**SCOTLAND.**

**ABERDEENSHIRE.**

Huntly-Keith road, between forty-sixth and fiftieth milestones from Aberdeen.

**BANFF.**

Craigellochie-Aberlour road. Banff-Aberlour road near Delnashaugh.

**ELGIN.**

Lhanbryde-Elgin road.

**PERTH.**

Pitlochry-Blair Atholl road, commencing half a mile beyond the former place a two-mile trap. The Pitlochry ten-mile limit is taken very seriously by the police

**STIRLING.**

Strathblane-Campsie road, a half-mile trap just outside Strathblane. The country in this district is bristling with "warnings" and "speed limit" signs.

From Inverness through Nairn, Elgin, Forres, to Aberdeen, and on as far as Perth towards Edinburgh, the traps are frequent and the police, to use our correspondent's expression, "are very excited and peevish."

**The Annual Meeting of the Automobile Association.**

The fourth annual meeting of the members of the Automobile Association took place at the Hotel Cecil on Tuesday last, July 27th. In presenting the report of the committee, the Chairman called special attention to the rapid growth of the Association, which, partly owing to the successful establishment of branches at Manchester and Glasgow, can now boast a membership of nearly 11,000. Another point to which reference was specially made was the value of the scheme for giving free legal defence to all ordinary members.

The balance sheet for the year showed that income and expenditure had been very fairly balanced, the latter being very slightly in excess. It will thus be seen that no attempt is made to hoard the funds of the Association, and an examination of the accounts shows that a very high percentage of the income goes direct to the useful working departments, and there is no waste in directions which would not be of benefit to members.

Eight members of the committee, including Colonel W. J. Bosworth, the chairman, retired by rotation in accordance with the rules, as did also the auditors, but all were re-elected. The business of the meeting was carried through smoothly and rapidly, and consequently there is very little room for comment.

H.S.H. Prince Alexander of Teck honoured both the Deasy and the Daimler Works with a visit on Saturday morning last when the R.A.C. were in Coventry.

\* \* \*

At the Bath pageant last week, Mr. Horace Walker's 35 h.p. Deasy was awarded first prize and *prix d'honneur* for the best decorated car, and Mr. F. J. Tucker's 35 h.p. Deasy gained second prize.

\* \* \*

In describing the self-cleaning sparking plug sold by Mr. Andre Godin in the last issue of *The Autocar*, page 127, the word Cronan was misspelled; it should have been Crouan. We understand that the title Crouan-Pognon is incorrect as given, the legal name being Crouan Patent Pognon Licence. The plug is, however, known as the Crouan, as already stated.

\* \* \*

In our road warnings this week we are afraid we have done Shropshire an injustice, as we mention one police trap within its borders. Since that portion of the paper went to press we have received advice that the county of Shropshire is entirely free from police traps, and we are delighted to publish the fact.

\* \* \*

The custom of inviting ladies to the dinners in connection with the R.A.C. and M.U. provincial meets is much appreciated, and on Saturday last at Leamington a large number of ladies were present at the dinner. They listened even more patiently than the men to a speaker who seemed to regard the petrol tax as one of the greatest blessings which has yet been vouchsafed to the motor world.

\* \* \*

There is at the moment a lull in the Parliamentary world, and this applies to motoring as well as to other interests. Until the Budget is resumed, which may not be for a fortnight, politics generally pass into a state of suspense. As matters stand, however, it is impossible to forecast when the motor taxation will be reached, and for some time there may be little to deal with in this connection.

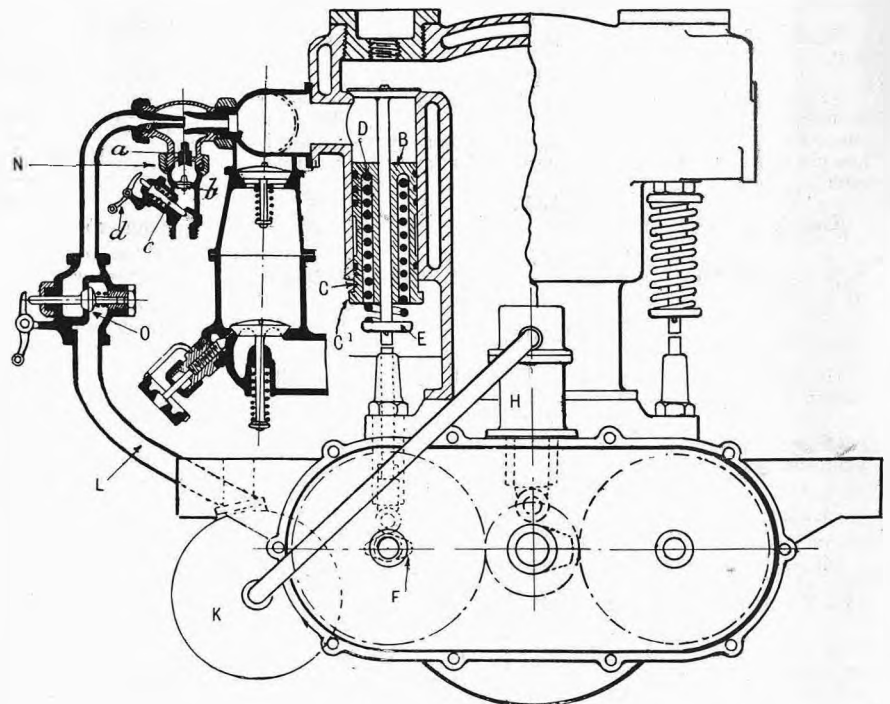
## A Five-cylinder Engine and Gearless Car.

The Inventor explains how he has been able to make Forced Induction a success. For the benefit of the non-technical we may say that Forced Induction is the term used to signify that the air and petrol are pumped or forced into the engine instead of being sucked in as they are under the prevalent system of Atmospheric Induction.

**I**N *The Autocar* of July 17th, page 88, reference was made to the interesting subject of forced induction. We said we had reason to believe that the difficulties hitherto experienced had been overcome. We also went on to state that the new engine was claimed to have such a wide range of power that a change-speed gear was no longer necessary, and we questioned whether it was possible to make a one-gear car which would not be very uncomfortable owing to the slow but necessarily powerful impulses of the engine when climbing steep hills at comparatively low road speed and therefore at low engine speed. Our criticism brought a letter from Mr. A. Gore, the inventor of the engine we referred to. He told us that he quite understood our incredulity, but that as a matter of fact his engine did all that was claimed for it, that there was nothing fierce about its action, and that the detonating effect which we anticipated at slow speeds under load was non-existent. He told us that the power stroke had a silky expansion like that of steam. By his system, he assured us, he obtained a steady expansion acting for the whole of the stroke, and this was clearly indicated by the high mean effective pressure for the whole cycle. He told us that the engine ran equally steadily at 25 as at 1,000 revolutions a minute, and that it started as readily under load as a steam engine. His engine can be worked by forced or ordinary atmospheric induction at will, the shutting down of one automatically bringing the other into action, though in actual practice the engine is always working under forced induction. All Mr. Gore's engines have five cylinders with cranks set at 72 degrees—that is, equally spaced around the 360 degrees of a circle—and he informs us that an engine of 90 mm. bore by 127 mm. stroke develops 50 b.h.p. at 1,000 revolutions with a mean effective pressure of 251 lbs. on a consumption of 0.38 pint per horse-power hour. The largest engines built up to now have a bore of 460 mm. and a stroke of 680 mm., developing 1,562 h.p. at 225 revolutions with a mean effective pressure of 239 lbs. We believe a car engine of somewhat smaller dimensions than 90 x 127 mm. has been made, but we are not permitted to give any details of this at present. Interest is added to the matter by the fact that the Gore engine, which was declined by the British Government, or rather by one of its departments, has been bought on behalf of a foreign Government, and the inventor tells us that this Government—the name of which we are not at liberty to disclose—already has a large number running. The great

difficulty with forced induction hitherto has been to make an engine which will run smoothly. We believe there has been no trouble in obtaining high power in proportion to engine size, but the valves have burned out, and the engines have hammered themselves to pieces, and have refused to run slowly or to pull nicely at low speeds. The difficulties encountered in designing an engine on the forced induction principle are very great, and it will be seen from what we print below that no one is in a better position to realise this than Mr. Gore. We have not yet had the opportunity of seeing one of his engines, though we hope we may be able to do this before long. Still more do we hope that we may be able to try it in a gearless car, *i.e.*, a car with one speed alone. In the meantime the inventor has been good enough to give us a rough general description of his engine with a drawing and diagrams, which, it should be clearly understood, are not intended in any way to show the correct proportions of the parts, but merely to make the explanation of the principle clear. Mr. Gore's description is as follows:

"As you know, forced induction had been tried and found wanting. I myself have been at it since 1879, and actually made and tested fifty-two different devices, all more or less resulting in failure, commercially. This failure was not due to the principle, but to the want of a device simple enough to make the application of forced induction possible, and at the same time making the idle induction stroke into a power stroke by using forced induction expansively. This combination gives the means of raising or lowering the mean



A part section of the Gore engine showing the air pump, balanced valves, and carburettor. This drawing is not to scale.

effective pressure acting on the piston on its induction stroke, and with it governs the effective explosion pressure acting on the power stroke, making the four-stroke engine into what is practically a two-stroke one, without any of the disadvantages of the two-stroke engine.

"How this is done will be seen from the part sectional elevation. The engine is provided with a compressor H driven from the crankshaft, and which forces air under pressure into a receiver K. The receiver is connected with the inlet side of the forced induction device N by a pipe L, in which is a stop-valve O. The forced induction device is connected with the inlet valve pockets of each cylinder by the usual induction pipe.

"The mechanically-operated inlet valves are of the usual construction, and bear on seats formed in the valve chamber; they are retained on the seating by springs D acting on the stems of the valves through the usual cup and cotter E. The stems of the valves, instead of sliding in the guides B, work in sleeves or pistons C, the latter also being arranged to slide in the guides.

#### Forced Induction and Valve Details.

"The pistons C are each provided with piston rings, also with metallic packing rings for the valve spindles (not shown), and with a flange C<sub>1</sub>, which operates as a stop by engaging the underface of the guides B, and limits the upward movement of the pistons when at rest.

"Owing to the method of mounting the inlet valves, the pressure of the compressed gas in the inlet valve pockets of the cylinder cannot open the valves, as the pressure tending to lift the valves reacts on the pistons, so that the pressure on the valves is opposed by that acting through the guide sleeves to keep the valves on their seats. In other words, the inlet valves are balanced, and therefore, notwithstanding the pressure of the compressed gas in the valve pockets, the valves can only be opened by the cam F in the usual manner.

"The construction of the forced induction device (this is a master patent) is clearly shown. The body N contains two cones and a fuel jet *a*, below which is fitted an automatic non-return valve *b* and an adjustable needle-feed *c*, actuated by a lever *d*. The fuel pipe is attached to this body (*vide* sectional elevation, also explanation).

"The action of the forced induction device is as follows: On opening the main compressed air valve O the compressed air rushes in to the first cone at a high velocity, creating a vacuum below the fuel jet *a* lifting the non-return valve *b*. There being a vacuum, the atmospheric pressure forces the fuel through jet *a*. This fuel on entering the body N is (1) caught by the centrifugal force of the compressed air and is atomised (2). As this compressed air is of a higher temperature the fuel is also vaporised. This action is instantaneous and simultaneous, and this combination is brought about under a pressure of several atmospheres generating a gas of great expansive power, and as this gas is generated on its way to the engine no condensation can take place. It is here where the foundation is laid for the ultimate high mean effective pressure of the whole cycle.

"It is quite clear from the peculiar action of the forced induction device that on starting from rest the first charge is stratified, and with the pressure acting expansively on the induction stroke extremely smooth starting is the result. To a certain extent this stratification also takes place at low speeds. It is obvious as the forces are acting twice during the cycle the

flexibility is equal to that of steam as acting in a single-acting multi-cylinder steam engine, and the engine readily starts under load in either rotation.

"When the engine is working the pistons C are floating pistons. There is no hammering, for the simple reason they never get a chance to seat, and the load on the springs is very light indeed. Their function is very much like that of a human heart; should the engine be working under atmospheric induction, these pistons are at rest.

"Without these piston guides forced induction is impossible, while starting under a variable load and reverting to atmospheric induction is an utter impossibility.

#### The Method of Control.

"Two cams are provided for each inlet and exhaust valve. These cams form an inclined plane, and both camshafts are made sliding (fore and aft), with suitable small levers fixed on the top of the steering wheel.

"The engine is controlled (1) by the valve gear, *i.e.*, sliding inlet camshaft, (2) by the main compressed air valve, which acts as a throttle, or (3) by using both together.

"The sliding inlet camshaft gives a variable cut-off, and with it the means of raising or lowering the mean effective pressure acting on the induction stroke as well as the resulting explosive pressure and the resultant mean effective pressure of the power stroke, and thereby governing the output of the engine.

"The fuel supply is independent of the cycle of operations; therefore the power output is not limited by the rate of speed of the piston. This permits of an increased supply of fuel under pressure to an engine labouring under an increasing load, and at the same time making the motor self-starting.

"As the rate of revolution decreases the bulk of the charge can be increased, and so maintain a steady torque at low piston speed and the engine made to work under a constant thrust.

"The exhaust valves are always working at their maximum lift. The reversing is effected by sliding both camshafts forward, and the handling of the engine is exactly like that of a steam engine.

"The ignition gear consists of a continuous generator working in conjunction with accumulators and five coils with single trembler. By the way, I used two plugs from one coil in conjunction with a Leyden jar before a good many people had a chance to dream about it, but I did not rush into print or to the patent office; there is not much in it.

"The cooling is by thermo-syphon circulation, even in the largest sizes built up to now.

#### Convertibility to Atmospheric Induction.

"To start the engine either ahead or astern the levers are set in the required position, and by opening the main compressed air valve off it goes. When the engine is new the receiver is pumped up with an ordinary inflator. The power absorbed by the compressor is ten per cent. of the maximum power developed by the engine, and if atmospheric induction is also to be used a clutch is provided for cutting out the compressor. If desired, an atmospheric carburettor might be fitted as a stand-by by simply fitting a non-return valve into the induction pipe as shown. The shutting down of one device automatically brings into action the other, and *vice versa*. The control of the engine when using atmospheric induction is by the valve gear.

"The consumption under forced induction is 0.38 pint per horse-power hour under full load. Any kind of fuel can be used, including crude oil. Paraffin has given best results up to now; the gas evolved is very stable. As forced induction is very economical, it is preferable to discard atmospheric induction, doing away with the carburetter and the clutch, with its actuating gear for disengaging the compressor. Of course, for car work the main clutch is retained.

"A non-return valve is fitted in the induction pipe, which comes into action automatically on closing down the main compressed air valve, as, for instance, when coasting, the engine acting as a powerful brake, which is assisted by the compressor and with the exhaust valves at the point of minimum lift (*vide* valve setting sketch). The car could be brought up in its own length, should such brutal action be necessary."

**Valve Setting.**

In addition to the above, Mr. Gore has sent us a diagram of the valve setting of his engine, which he refers to as follows:

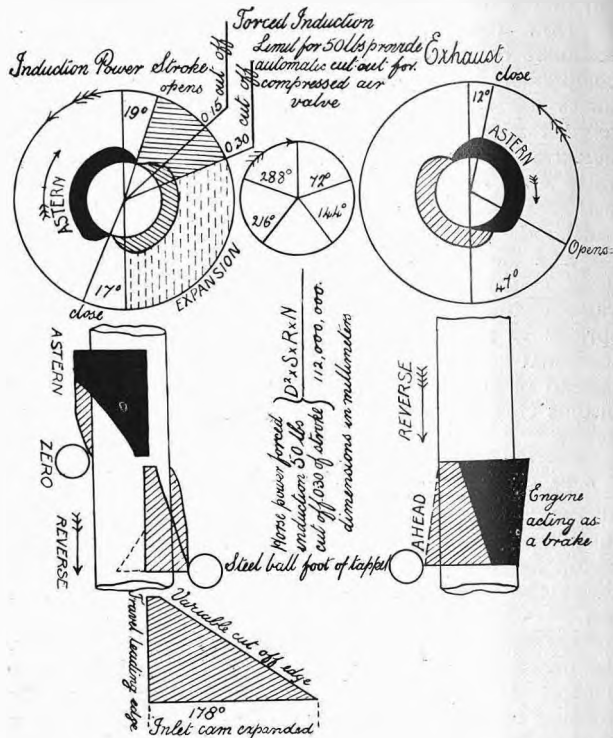
"This rough sketch shows a valve setting for dual purposes, *i.e.*, for working at will under forced or under atmospheric induction. As the initial pressure and cut-off are given, you will see that the induction stroke is quite a respectable power stroke. As this pressure is acting 500 times per minute when the engine is running at 1,000 revolutions, it amounts to something considerable.

"As a rule, all the work is done on 0.15 cut-off; the 0.30 cut-off is what one might term an emergency gear. The sketch also shows the small volume of compressed air required to obtain such results. It also shows the small power absorbed by the compressor, which in practice is driven at half engine speed. It also shows the relatively low compression on the compression stroke of the working cylinder, and the great expansive power acting on the power stroke proper, which with a valve setting for out and out forced induction is considerably better.

"The temperature of the compressed air at the discharge end of the compressor is 100° to 200°, depending on the kind of fuel used. This makes it clear how vapourisation takes place in the forced induction device. It is the quality and the bulk of the gas

combined which make success. Neither can be got under atmospheric induction.

"The only difference between an ordinary six-cylinder engine and my engine is: (1) That the sixth



Mr. Gore's diagram to illustrate the valve setting of his engine for working at will under forced or atmospheric induction.

- or air cylinder has a larger bore and a shorter stroke.
- (2) The bore of the working cylinders is smaller.
- (3) The power output per square inch of piston area is twice as much on practically the same weight.
- (4) The consumption is cut down by half (nearly).
- (5) No 40% power-wasting costly gear box, with its actuating gear is required.
- (6) Cheaper to make.
- (7) Cheaper to maintain.
- (8) Cheaper to run.
- (9) Pressure for tyres.
- (10) Pressure for brakes."

**Royal A.C. Test of Homoil.**

A sample of Homoil fuel was entered for a consumption test by Messrs. the L.W. Syndicate, of 122, Cannon Street, London, E.C. The trial was carried out on Brooklands Track on June 10th, the car used being a Charron car (110 mm. by 130 mm.), 35.7 h.p. by R.A.C. rating.

The fuel was used in conjunction with a special carburetter which was not entered for test.

The car was fitted with a two-seated body (with third dickey seat), having a wind resistance area of 18.3 square feet.

The engine started up when cold after the carburetter had been flooded and 4 or 5 cubic centimetres of the fuel had been injected into the upper portion of the carburetter. On the journey from the Motor House to Brooklands Track the engine running was rendered irregular by several fluctuations of the explosive mixture; on these occasions a quantity of black smoke issued from the exhaust pipe. Before running the car on the track a hot air pipe was affixed to the bottom of the carburetter, but as it was found that carburation was still faulty, the fuel supply was adjusted so that the fuel passed into the carburetting chamber at a constant speed irrespective of any float valve.

The car ran for 27.42 miles at an average speed of 37.3 m.p.h. During the fifth mile the speed of the car fell off to about 10 m.p.h., apparently through bad carburation. During the fourteenth mile a stop was made to adjust the carburetter (2½ m.) At the nineteenth mile the car slowed down

and ultimately stopped, the carburetter being again adjusted (¾ m.)

The consumption for the distance of 27.42 miles was 12.8 pints, being at the rate of 17.13 miles per gallon, or 33.9 ton-miles per gallon. The specific gravity of the fuel was .875 at 25° C., that of the fuel used to make up amount consumed on test being .885 at 16° C.

The "R.A.C. Number" of the fuel was measured, and found to be 139, that of the R.A.C. standard fuel being 100, *i.e.*, the fuel, as measured on the R.A.C. scale, is twenty-eight per cent. less volatile than the standard fuel.

Mrs. M. V. Jackson asks us to correct an error which crept into the account given on page 131 of *The Autocar* of July 24th of the accident that befell a 57 h.p. six-cylinder Daimler car in Ireland. She says the car is her property, as was also the race-horse Velocity, and that her son, Mr. Robert Marshall, was not driving at the time, but the chauffeur. The point of the moral in reproducing the photographs was to show the danger of looking behind when driving fast, and it was immaterial to whom the car belonged, though we always like to be accurate.

# 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.

Enquirers 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.

### CAR PARTNERSHIPS.

[14481].—I have just retired from business with a very small "unearned income," and would fain keep a car if I could get a suitable garage. Our garden here (Weston-super-Mare) is so small that little would be left were I to build a garage at the back of the house, but there are a few vacant houses a few doors away with gardens large enough for a big garage, and plenty of room for any other horticultural hobby. These houses, which overlook the sea, have seven large bedrooms, and three good sized rooms downstairs, lavatories on both floors, etc., and have besides a carriage drive to the back of the house, and at present they can be bought right out at a price which comes out to about £45 a year at 5%, which includes the ground rent.

Now, it occurred to me that if any of your readers want a really good and cheap house in a nice motoring neighbourhood they could secure one of these and I would then share a garage, and perhaps the expenses of a lad to look after the cars and garden with them. Anyway, I would be pleased to give more information about the neighbourhood, and will only add that Weston-super-Mare is a splendidly healthy place, that we brought two delicate Ceylon children here some few years ago, and they have quite outgrown all traces of their Oriental infancy.

A. H. D.

[In the ordinary way a letter of this sort would be regarded as being too much in the nature of an advertisement for admission to these columns, but we have been so often impressed with the idea that if a partnership were entered into between individuals many people who are unable to afford a motor car would be able to buy one. Not only might arrangements such as that proposed by our correspondent be made with mutual advantage, but undoubtedly in many cases two or more friends might enter into partnership and arrange to run a car between them, though it would be out of the question to do so individually. Of course, we know there are many difficulties in the way, but they are not insuperable so long as the right people get together. The great danger is that these partnerships may be one-sided, so that one man has all the work and the other all the fun, but so long as congenial spirits combine there should be no trouble, as after all a car partnership is much the same as a business partnership. If the right men be associated it is a success; if not, it is a failure.—Ed.]

### SMALL CAR RACES.

[14482].—I had not thought of joining in the discussion started by "Monte Cristo's" letter [14384], but in answer to Messrs. Phoenix [14433] have pleasure in submitting a few observations relating to the subject. It is a letter the thesis of which may be found regularly in contributions to your columns about the time of the great Continental road races. I suppose there will always be a racing and an anti-racing section amongst motorists, but it seems to me that the quasi-anti-racers, if I may use such a term, are in a particularly illogical position. They may be divided into two classes:

(A.) Those who admit the value of racing in the past, but say that motor design has now reached such a state of perfection that further benefit cannot result. They assume the pose of prophets, though to most people it would seem that the internal combustion engine has nothing like reached perfection. In particular might this be said of the small car.

(B.) Those who admit the value of racing, but say that racing should only be practised on strictly stock cars. It is without doubt that racing in the past owes its immense efficacy entirely to the fact that designers were given as free a hand as possible. It is the very essence of the thing that the racer should be an experi-

ment, or a "freak," if you prefer the term. The early stages of all mechanisms partake of this nature, and I think it will be admitted that the racer of to-day has always contributed something to the design of the stock car of to-morrow.

It cannot be denied that makers with a racing experience invariably turn out swifter touring cars. How can it be otherwise? The designer of racing cars must be influenced by his racing experience in designing a touring car, and the perfection of material and workmanship essential in the racer must have its effect on the workmen who later on will be engaged on the stock car.

If we were to take two stock cars—one a certain well-known French small car of racing extraction, the other a representative English small car—and race them on Brooklands, we all know that the French car would come in an easy first. And really, after all, can the English car claim such a great superiority in comfort or reliability as to make up for the want of speed that is so essential in a small car where engine power is at a discount? And speed on the level is usually associated with speed up hill, which small car owners want even more.

The truth is that racing provides a concentrated incentive to progress that no other form of competition can offer. It speedily eliminates the impracticable, and it is seldom that the verdict has been reversed by experience afterwards. It eliminated the steam car on the Continent, and yet I think the best of all steam cars is the Serpollet—the one which stuck to road-racing as long as possible in view of the inherent limitations of steam, and was developed consequently. In fact, such is the value of racing that it is practically impossible for a maker to seriously and consistently take part therein without benefit to his workmanship and design. No matter the howls of execration that greet the great road races, it is difficult to point to any racers that have not contributed something of value to the touring cars that followed.

But I am as strongly convinced as ever that the idea of racing stock cars is a fallacy, since progress in design can only result if the maker be allowed to strike off the beaten path. I am in favour of stock car competitions, where the amateur stands an equal chance with the maker, but only as a sport—hill-climbs, reliability trials, or track races are suitable forms of competition for stock cars. To prevent makers trying their experimental cars in any test would be to scotch the progress in design resulting from competition that has so far been a notable feature in the history of the motor car. I think this is a view that is held by all who hold dear the evolution of motor design, and that, when racing has passed from under the ban it is at present suffering from, we shall again have races of the four-inch type or similar to that which is going to be held in the Isle of Man for motor cycles this year. Lucky motor cycles—you have been thought too small fish to bother about, and will get a year ahead of your four-wheeled brothers!

Great objections are raised to the voiturette racers because they are unsuited for touring. Power and efficiency must first be aimed at and proved by the strenuous road test, and then in the quietness of the workshop we must try to control and tame the force called into existence. The small car is handicapped by its small engine, therefore it must always have the most efficient type of engine; in other words, the single cylinder never will be displaced. The maker will succeed who, realising this, endeavours to increase its flexibility and silence, and lessen its vibration, rather than waste his breath preaching the multi-cylinder gospel. There is a wide field open. There are multi-jet carburettors to be tried, and, best of all, compression variable by moving a lever whilst running. By the way, I should like to be told why an engine with more than one exhaust valve is unsuitable for touring. Both "Monte Cristo" and Messrs. Phoenix mention this. But I think it is becoming fairly evident which way popular opinion as regards the small car is tending. Buyers will prefer the smart fast single-cylinder, low, and with small wind resistance, to the slow and stodgy looking vehicles that used before the recent small car races to represent the breed. They want a car that will run for long periods on full throttle (and only a car with a racing ancestry will do this), so that hills may be taken at a decent speed, and hair-raising descents be unnecessary to maintain a 20 m.p.h. average.

H.

## Correspondence.

[14483].—I have read with interest the letters written by Mr. Victor Riley, Phoenix Motors, Ltd., and "Monte Cristo," dealing with the small car races. I repeat what I have already said, viz., that in an international motor race, the conditions of which make it essential that the manufacturer should build a certain type of racing car, it is quite understood that after the race it is not meant to be sold or used as a touring car. A race of this description is entirely different from an ordinary stock car race, or a race in which the actual cars as sold and supplied to the public every day are entered.

One has only to look at the past performances in races, such as the Gordon-Bennett, Grand Prix, and the Voiturette Race, to find that these cars are used chiefly for the race, and are then sold to people who want to take part in future races of this description, or wish to be the happy possessors of cars which have achieved some distinct performances. As a rule there are not more than three or four of such cars built, or perhaps, in some cases, half a dozen. When Messrs. Sizaire et Naudin won the Voiturette Race they built six cars simply to take part in that event.

However, dealing with the letters of Mr. Victor Riley and Messrs. Phoenix Motors, Ltd., let me assure them that I am with them in every word they say regarding stock car races, so much so that my firm were, I think, the first to organise a stock small car race at Brooklands. In this way there is no attempt at gulling the public, and anyone who has been to Brooklands for the last three or four meetings could see ten or a dozen ordinary 12 h.p. Sizaire cars, such as are to be found on the floor of the showroom every day, taking part in the races, and it is not a question of what one car does, but the public has a chance of seeing what a dozen cars will do, and they know that these are the ordinary stock cars, exactly as sold.

I am sure your correspondents will agree that this sort of thing should be encouraged, as a man naturally wants to see what the actual car that he is buying will do, which, in the case of the Sizaire, he has been able to see at Brooklands, and I am ready to let the Brooklands Automobile Racing Club, or the Royal Automobile Club, organise a race for Sizaire et Naudin cars, the conditions being that they themselves shall have the right to select in our showrooms the cars which are to take part in the stock car event.

On the other hand, when the Sizaire et Naudin, at Brooklands, secured the world's record for a single-cylinder car, at a speed of 66.48 miles per hour, obviously the public did not imagine for one moment that this was the ordinary 12 h.p. stock car which they would purchase, and use as an ordinary touring car. A racing car built for a race is one thing, while the usual type of touring car taking part in a race for stock cars is totally different, as the two races are quite distinct, the only trouble being that, from a spectator's point of view, the former is generally the most interesting and exciting.

W. M. LETTS.

## MOTOR FUEL: BRITISH OR FOREIGN?

[14484].—It appears that the rumours current during the past few weeks have a substantial foundation, and that an amalgamation of the two great petrol-producing interests is really imminent.

That such an event would have most serious consequences, alike to the motoring public and to the trade, is hardly to be doubted. Despite the soothing assurances of the petroleum kings, motorists as a body will probably agree in anticipating that the little finger of such a combine is likely to prove thicker than the loins of Lloyd George.

Permit me then, while there is yet time, to urge upon our fellow motorists the desirability of immediate protective action; to remind them that unity and determination only are necessary in order to render available a cheaper, safer, and far superior fuel to petrol; one which has the crowning merit of being producible, in unlimited quantities, in this country, and from native-grown materials. Why should we be compelled to pay fancy prices to foreign producers of an inferior fuel when, by taking proper action, we could at one and the same time secure at lower rates the indisputable advantages of an alcohol fuel, and give employment to a large additional number of farm and industrial workers?

I would remind you of the tests carried out during 1905 by yourself, jointly with the editor of *The Motor Cycle* and your staff, under circumstances preclusive of the possibility of error or deception, upon a fuel consisting wholly of specially treated or denatured commercial alcohol. You will recall the fact that a substantial increase in power on the test hill and of speed on the level were on each occasion

obtained by the use of such fuel in substitution for petrol. You will probably not have forgotten that you were impressed by the superior smoothness of running evinced, and that the taste and smell of the liquid were sufficient to repel a hardened "black-lister." You may also remember that I guaranteed this fuel to be free from benzol or other added hydrocarbon, regarding such addition as alike objectionable and unnecessary—objectionable, as impairing the well-known freedom of alcohol from pre-ignition tendencies; and unnecessary, as I even then regarded easy starting from the cold as attainable by suitable modification in the carburation methods employed. I am happy to say that the latter anticipation has been fully justified.

I now offer the fruits of my experience and research to the motoring community of this country without fee or reward. I am prepared to communicate to you and your colleague, and later to the Excise authorities, all particulars regarding this fuel and its preparation, and to demonstrate the latter. I am further prepared to adapt at nett cost and free from royalty any required number of cars for the successful use of the fuel so that the Excise authorities may be furnished with the practical demonstration for which they have stipulated as an essential preliminary to their consideration of the matter. Mr. Roger W. Wallace, K.C., has assured us that the cost of the crude fuel alcohol, prepared by the process in which he is interested, is about 3d. per gallon in bulk at the works, and treatment will be found to work out at about one halfpenny per gallon; possibly less. Motorists may safely accept my assurance that, having once experienced the many advantages incident to the use of a properly carburetted alcohol fuel in a suitably adapted engine, they will never willingly go back to the foreign product, the greatly superior flexibility and smoothness of running, the comparative freedom from noise, the absence of carburetter "hunting," due to far wider explosive range, the freedom from tendency to pre-ignition, overheating, and sooting, the more even regular torque and cooler exhaust—all combine to render this British fuel a real luxury as compared with the alien article, to which we have for so long pinned our faith.

Motorists, here is your opportunity! Patriotism and interest should alike inspire you to achieve the unity, and exert the determination, which alone are essential for your permanent enjoyment of the great advantages I have above enumerated. I have no axe to grind, save that I would "taste the luxury of doing good" to a great sport and a greater commercial movement.

R. W. AYTON.

## BAD ROADS IN GLOUCESTER AND SOMERSET.

[14485].—If letters like 14345 more often appeared in *The Autocar* I think they would do an immense amount of good, and would wake some of the sleeping local authorities into recognising that good roads are one of the best of advertisements. As a Somerset motorist I would go further than yourself in your comment, and say that Somerset roads have always been very bad, and the roads of Bath and her neighbourhood a disgrace to any village in the depths of the country. Your correspondent describes our roads to a T.

G. H.

[14486].—As a dweller in Somerset I regret the publicity your correspondent has given to the evil state of our roads. One must admit, however, that the description given is not a bit exaggerated. We have dust in unusual excess when it is fine, mud inches deep when it rains, stones when our road authorities feel so disposed, and bumps and holes always. Must we wait till a kindly providence removes our very inefficient authorities, or would it be justifiable to assist nature?

WANDERER.

## THE POLICE IN MERIONETHSHIRE.

[14487].—I am glad to observe your protest against the unfairness of the timing on the short distance traps with which Merionethshire swarms, and it is quite possible the police may be working their lucrative hobby without the knowledge of Sir O. Williams, as this gentleman definitely stated, in a very explicit manner, that short distance traps were non-existent in Merionethshire. These traps appear to receive official recognition, mainly on occasions when good hauls are made, as in a recent week when nearly £100 were collected in fines from motorists at Corwen. I cannot understand why the anxiety of the Hon. C. H. Wynne to purchase additional stop watches for extended police trappings should prove beneficial to motorists, even if these timekeepers were purchased out of the proceeds of the recent hauls. Perhaps



your correspondent "Merionfab" will explain more fully, and I would ask him and other local celebrities what their forefathers would say if they could see the "Men of Harlech" of the present day effecting their bold and gallant captures from behind walls, with one eye on the village clock and the other glued on their victim.

With the true interests of the county at heart I realise that this systematic persecution of visitors represents infinitely greater monetary loss to the district than the amounts collected in fines in such a questionable manner from the pockets of tourists.

If motorists are sufficiently foolish to persist in touring through these parts in their present disreputable state they have but themselves to blame for contributing towards the local funds and an excess of stop watches. Your warnings should lead all prospective tourists to more charitable districts, of which there are many, quite equal in scenic effects, with superior accommodation and at more reasonable charges.

CRAIG-Y-DON.

[14488.] Thank you for your notices of police traps and letters devoted to bringing the police persecution in Merionethshire into prominence.

I hope to take my car across *via* Holyhead *en route* to Surrey. Previous years I have gone through Corwen and Llangollen, stopping in the latter place for a night. I shall now carefully avoid this beautiful route, and take the roads through some of the "clean" counties. I am sure there are many other Irishmen who will likewise carefully avoid Merionethshire when taking cars over to tour in England and Wales. We are much indebted to *The Autocar* for the care it takes of our unwary "wheels."

HIBERNICUS.

[14489.]—I was interested in reading the letters which have appeared in *The Autocar* in reference to the Merionethshire Constabulary, and I think my experience in connection with the Deputy Chief Constable will be of interest to your readers. This, I think you will agree, amply illustrates the unfair methods employed against motorists.

I received a letter from Mr. T. J. Morgan, from which the following is an extract:

"I shall esteem it a favour if you will kindly favour me with the name and address of the person who was driving the said motor car between Corwen and Glyndyfrdwy on the Holyhead Road on the 10th inst. An early answer will be esteemed a favour."

To this I replied calling attention to the fact that the nature of the complaint, if any, against the driver of the car was not stated, and that I should be glad to hear from the Chief Constable upon this point, when I would reply further. The following letter came in answer:

"The car was driven on the 10th inst. over a distance of five miles along the Holyhead Road, in the parish of Corwen, at the rate of twenty-five miles per hour. It was my intention to proceed under Section 9 of the Motor Car Act, 1903, against the driver, although the evidence is sufficient to sustain a conviction under Section 1 of the Act. As, however, you have not replied to my enquiry so as to enable me to give notice under Section 9, I intend to take proceedings under Section 1, and I request that you will forthwith furnish me with the name and address of the driver, or I shall immediately proceed against you for refusing to do so."

In reply I wrote:

"I am in receipt of your letter of the 27th inst., and note your remarks. As I was not the driver of the car in question, I thought it only fair, without consulting the actual driver, to ask the nature of the offence committed, particularly as I was on the car at the time and felt perfectly satisfied in my own mind that due care had been taken. However, the name and address of the driver are . . . and I need hardly say that I should be sorry if you penalise him by summoning him under Section 1 because of any, and I think natural, hesitation on my part to give his name and address."

It is perfectly clear in my opinion that the idea was simply to get the name and address of the driver of the car, and this is to a large extent proved by the fact that before the case came into court the solicitor for the prosecution stated that the Chief Constable was willing to agree to the case being taken under Section 9. As conviction under this section did not necessitate the endorsement

### Correspondence.

of a licence which had not been previously endorsed, and as a conviction of any kind under Section 1 would have involved an endorsement, it was agreed that the case should be reduced to a charge of exceeding the speed limit. However, I do not think any fair-minded person will agree with the methods adopted for obtaining the name and address of the driver, and it is to be hoped that the publicity given to these methods will result in a change of tactics which cannot but be beneficial to the county of Merionethshire, or to North Wales generally. I have hitherto visited Llandudno at least twice a year, and have gone there with my family on my car, but in future I shall give it a wide berth, and so will my friends. I am quite aware that my one case will not have any material effect, but it is well to bear in mind that each motorist who is unfairly treated does the same thing, as only foolish people drive voluntarily into police traps twice.

FAIR PLAY.

[14490.]—I sent you through Lord Russell such information as I had from our Chief Constable regarding the attitude assumed by the Merionethshire police towards motorists, and you were kind enough to embody it in an editorial paragraph in your paper. I greatly regret to find upon further enquiries, due to more letters upon the subject in your columns, that the information afforded me was incomplete, and I now find there have been "traps" in other parts of the county, as asserted, and in places that I consider quite unnecessary. These I am now assured will be discontinued.

I need hardly add how deeply I regret that we should both have been misled. I enclose a copy of the General Order issued to the Merioneth police, and shall be grateful if you would kindly insert it with this letter in your next issue.

OSMOND WILLIAMS.

Chief Constable's Office, Dolgelly, July 10th, 1909.

General Order:

#### POLICE MOTOR TRAPS.

Several members of the Police Committee have intimated to me that the so-called "police traps" upon open roads and prosecution for simply exceeding the speed limit should as far as possible, consistent with the safety of the public, be discontinued, and that the activity of the police should henceforth be confined to preventing and punishing dangerous and reckless driving through towns, villages, and narrow roads with houses abutting thereon. Most of our roads except the Holyhead road are extremely narrow, full of turns, and sharp hills; motorists should therefore drive their cars with due care and consideration for other users of the road.

As the touring season is now approaching, when a great many cars will visit Merionethshire, the police are instructed to have measured distances in places as mentioned above, and to stop all cars whom they consider to be driving dangerously, whatever the speed might be, and to take their name and address, when possible, and inform them at the time that they will be reported for a summons for breach of Section 1 of the Motor Car Act, 1903. The attention of the police should be mostly given to towns, villages, and dangerous cross roads where houses are abutting.

[The thanks of motorists are due to Sir Osmond Williams, the Lord Lieutenant of the county, for the frank manner in which he has told them that he was misled in the statement which we made on his behalf in our issue of June 19th (page 880), that there were no police traps in Merionethshire. It will be seen, however, from the order issued from the Chief Constable's office on July 10th that a more reasonable attitude is likely to be taken in the future. We do not wish to discount this, but we must point out that if the Chief Constable has only just discovered that the main Holyhead road is not quite the place on which he should set traps, it is rather hopeless to expect his police constables, who are probably less intelligent, to be able to discriminate between what is and what is not dangerous driving. We are most strongly opposed to dangerous driving, but after the examples we have had of the Merionethshire police methods we cannot say that we are satisfied that the county police are able to discriminate between proper and improper driving. We hope we are wrong, and they must not blame us if we seem lacking in confidence. This lack of confidence is only due to their record of the immediate past, as motorists have been fined during the present year for alleged excesses of the legal limit on open stretches of the Holyhead road, and in cases where there has been the least difficulty in obtaining the name of the driver the summons has been taken out for driving to the common danger though no one had been endangered in the least.—Ed.]

## Correspondence.

[14491].—It is perfectly obvious that letter 14460 is inspired, and I should like to add my warning to the others you have printed, in spite of "FFOO." The writer is trying to throw dust in the eyes of your readers by stating there are no police traps in Merionethshire, which is quite beside the point. If you are not had for exceeding the legal limit you will be had for driving to the common danger. So my advice is "keep away." I know the country and the men on the job, and what they are out for. Keep away, and save your money, or put it to some better use. They do not extract money at the rate of £1,000 a year from motorists unless they are vindictive. They do not buy stop watches as playthings for the policemen's children, and there is no getting away from the fact that these preparations, and others that I know of, speak for themselves.

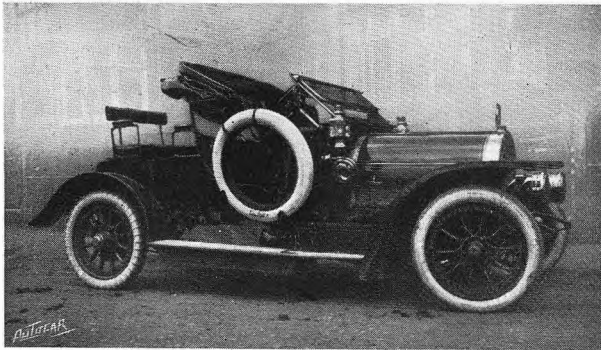
Thank goodness, there is scenery as good, better roads, and infinitely more charming people in Devon, and no police traps or persecution, or extortion, and in time Merionethshire folk will perhaps recover their reason, but may be too late to do them any material good. I know the county from end to end, and from top to bottom, and in the state of feeling that exists there at present I cannot urge too strongly upon motorists who have included any part of it in their itinerary to avoid it.

I consider motorists as a body owe *The Autocar* a debt of gratitude for bringing this matter so much to the front. You have done it before, with good results, and it is only by means of a rigorous boycott that we can bring "little tin gods" like these to their senses. The pity of it all is that the poor shop and hotel keepers have to suffer as well, but they, too, will be raising their voice in protest before long. Of that I have no doubt. In the meantime Merionethshire is a "plague spot." Keep away.

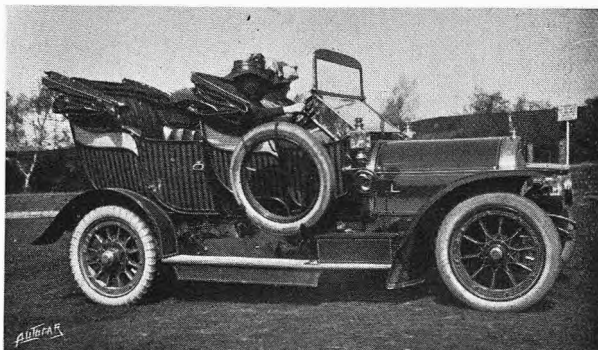
W. PADDON.

## BODY DESIGN AND CONSTRUCTION.

[14492].—I frequently notice that you reproduce photographs of privately owned cars which in your opinion include some new body design or other. I herewith enclose photo-



graphs of my 25-30 h.p. Maudslay which you may like to reproduce. I have seen no other car on the road like it.



It may be described as a double phaeton, and has seating room for six persons (three in front and three behind). The back is detachable, and can be replaced by a sloping box

containing a folding seat for two. The leather hoods can be used separately or together: when in the latter case, by unrolling triangular side curtains, the back is quite enclosed yet has ample view to front and rear through tall windows. The excellent bodywork was carried out by Messrs. Heath and Wiltshire, of Farnham, in whom I have no interest except the garaging of my car. J. A. G. CHAPMAN.

## FRIENDS IN NEED.

[14493].—During the last four or five years I have from time to time read in your paper about the various excessive charges made by certain automobile engineers for repairs and assistance rendered to motorists when in trouble, so I should therefore like to bring before you and your readers a recent experience of my own as follows:

Last Sunday week my daughter and I were motoring from Ilkley *via* Leeds and Manchester to Eccles, but when at Liversedge, which is about eight miles on the Leeds side of Huddersfield, I had trouble with a party of five or six cyclists who persisted in taking up the whole of the road. After keeping in the rear for about a quarter of a mile and tooting all the while, the cyclist on the right side of the road did at last cross over to near the middle of the road, when I put on a little speed to pass him, but just as I was nearly level the fellow again turned sharp towards us and across the front of my car, so, in order to avoid him, I swerved sharply to the right, with the result that I collided with a lamp-post, which in turn caused the car to swing round and bump against a low rubble wall. Unfortunately, my daughter was thrown out of the car, and when I jumped off to pick her up found that, while she was not seriously injured, she was severely bruised about the face, so I half-carried her across the road to a cottage, where they very kindly attended to her. When I came out of the cottage about five minutes later I found that all the cyclists had bolted, but that three brothers named Milan, automobile engineers, 175, Lockwood Road, Huddersfield, who happened to be passing by in a small car, had kindly extracted my car from the broken wall, and were taking it to a garage in Liversedge. The garage was closed, so they found the owner and stored the damaged car. They then drove me back to the cottage where my little girl was staying, about one and a half miles distant, and afterwards drove both of us to Huddersfield Station, some eight or nine miles away, just in time to catch the 7.30 train to Manchester. When I asked these gentlemen what I could pay them for their timely help and most valuable assistance, they replied that they could not accept payment, as they were only too pleased to assist under such conditions, and, further, they advised me to have the car (a 14-16 h.p. Belsize) repaired by the makers.

Now I think that such real and genuine help and assistance given so spontaneously and without charge, under such circumstances as the foregoing, should receive some recognition, and as they will not take payment from me I hope you will publish my appreciation of their practical sympathy in your paper, which would be much esteemed by me, as, in common with other motorists, I have been charged rather excessively for assistance by some so-called motor engineers.

FRED DOWSON.

## FLINTY ROADS.

[14494].—As if the dust nuisance were not bad enough by itself, the enlightened Rural District Council in this district (Salisbury) are actually laying *chalk* down on the main roads round Salisbury. Could folly further go? This moreover at a time when there are signs that the dust question is being grappled with by the authorities. The Wilts County Council are supine as usual; they refused to put up danger signs; they refuse to do anything about the dust. The District Council here have spent next to nothing on the roads for the past few years, and now are patching them with chalk and flints. We want granite here on our main roads. Flint is not good enough, with the heavy traction engines, carriers' carts, timber waggons, and motors using the roads. I believe a strong protest from the Roads Improvement Association on this aggravation of the dust nuisance might bear fruit. I intend to notify the county surveyor, and I am sure anybody using the Salisbury-Southampton Road or the Blandford Road within a few miles of the city will agree with me that it is the dustiest and whitest piece of main road they have ever been along.

I appeal to you to publish this letter in the interests of the great number of motorists and cyclists who use our roads  
SARUM.

## BODY PRICES.

[14495].—We notice in your issue of July 24th a letter [14467] which states that the difference between the chassis price and the price of a complete 14-16 h.p. Pelsize car is only £20.

This is manifestly an error, as the correct price of the chassis is £250, and of the complete car £285, making the allowance for the body £35, and not £20.

BELSIZE MOTORS, LTD.

## ROADSIDE THIEVES.

[14496].—I wish to report to you a matter that occurred on the 3rd July, and which, I think, ought not to go by without observation. On the date mentioned I started out for a ride accompanied by a small motor car and another motor cycle. We went on the main Birmingham-Warwick road for about five miles, and then stopped at a house close to the main road, leaving the two motor cycles and the motor car drawn close up to the footpath; we were in the house for the space of five minutes. When we came out again and I started my machine I noticed that the belt began to slip. I then said that I would put the other belt on. (Let me here explain that previous to starting out I had fastened on with four straps a new belt which I had not yet had on the machine.) My friends then drew attention to the fact that I had not a spare belt on my stand. I then found that the belt had been taken off and all the straps carefully done up again.

I must say that whoever took that belt, whether he be a motorist or not, must be in very good practice to be able to unbuckle four straps and do them up again in so short a time and without being observed. I at once gave notice to the police, but I have not heard from them as to the recovery of the belt. I think that it is a great shame if we cannot leave our motors outside a house for a few minutes without having things stolen, especially on a main road.

C.O.C.M.

## DOES A SPRAY CARBURETTER SPRAY?

[14497].—Letter No. 14457, over the signature of Mr. H. G. N. Conybeare, describes some experiments with a view to determining the action of so-called spray carburetters, and the results he obtained justify the assumption that they are misnamed.

My own experiments, extending over a period of four years, taught me a lot about the action of carburetters, and I have obtained some most remarkable results in the way of petrol economy with carburetters, which, unfortunately, were far too delicate for continuous road use. One carburetter had two peepholes, or windows, in the spray chamber, and suspended in this at intervals along the induction pipe opposite similar windows were small four-volt electric lamps, and I was thus enabled to watch the course of the mixture right up to the engine ports, and the most remarkable feature of the results I obtained was the fact that no matter how the petrol left the jet, or spray chamber, altering the contour, as it were, of the induction pipe, had far more influence on the resulting mixture than any other factor.

The ordinary single jet does not spray, and cannot be made to spray, but by the addition of some rotating or other device it is possible to break the stream of petrol up into some semblance of a mixture, although I have never found that these devices had any great effect in reducing petrol consumption, and any good results obtained in this direction were more often than not completely counterbalanced by the throttling effect set up, together with consequent loss of speed and power.

At the present time I am experimenting with a single jet carburetter in which the petrol is absolutely pulverised at all engine speeds; fast or slow makes no apparent difference. Even at very slow speeds it is next to impossible to see anything leave the jet, the power and picking up qualities of the engine are vastly improved, and the results as regards consumption surpass anything I have yet obtained.

Where most designers of carburetters appear to fail is in the shape and area of the air passages, factors which are quite as important as the jet itself, and, in the majority of cases the pulverising Venturi tube effect appears to be overlooked, and is perhaps unknown to many.

Unfortunately, these experiments absorb a considerable amount of time, and still more money, and as I can ill afford either they will have to stand for the time being, but I hope to furnish you with further particulars and actual figures on a future occasion.

W. PADDON.

[14498].—In your issue of July 24th, 1909, I note a letter from Mr. H. G. H. Conybeare [14457], in which he states that he fitted a revolving fan over jet but failed to obtain any economy from it. It is scarcely to be expected that he would, if he merely fitted a fan over the jet. He overlooks the fact that the flow of petrol would be just the same, although it would be better atomised and his engine would run the better for it. If petrol is atomised properly, less is required, therefore the jet may be closed a little with advantage; it is by this means only that economy is effected. Also, the fans must be made in a proper manner.

I used a fan over nine years ago, with good results, and have always used one, but it is only recently I added a fly-wheel and revolving gauzes with double fans or turbines, with results far exceeding my anticipations. I immediately patented this appliance, and I am very well pleased with the demand created, and as a good portion of the orders are from recommendation I think the economiser speaks for itself. I will not enter into details, as full particulars of my appliance appeared in *The Autocar* of July 10th, 1909. If Mr. Conybeare will look at these details he will note the difference between merely fitting a fan and fitting my appliance.

It would perhaps be better for me to explain the functions of the flywheel.

It is a well-known fact that, if a propeller or fan, properly constructed, be placed in a tube and revolved mechanically, it will induce or draw up any air, gas, or any similar or powdered substance. The fans of the turbine petrol economiser are given momentum, of course, by suction from the cylinders, but between suction strokes, when there is no suction, the fans are kept revolving by the weight of the flywheel only; therefore the revolving fans draw up gas between suction strokes, which fills the inlet pipe ready for the inlet valve opening, thus starving of inlet pipe and erratic running of the engine are avoided.

Mr. Conybeare would find, when using the fan (of course, assuming it to be properly made), that it was impossible to overheat his engine, even in traffic; also his engine would run with greater silence.

If Mr. Conybeare or any other reader who is interested in the above subject likes, I shall be pleased to send him a pamphlet dealing with the above subject, which I think he will find entertaining.

T. ELTRINGHAM HENDERSON.

## POLICE PERSECUTION. SURREY OUT-SURREYS ITSELF.

[14499].—I enclose you herewith the facts of a case which I was interested in against the Surrey police. I think the manner in which the officers of the Surrey police treated the case certainly ought to be shown up to the public through the medium of your paper.

NORMAN C. SEEMANN.

## THE FACTS OF THE CASE.

On Sunday afternoon, the 18th inst., a serious accident occurred at Bush Corner, Isleworth, a man being knocked down by a motor car and badly hurt. The injured man was conveyed to Dr. Frank Dendles's surgery and attended to. On the man regaining consciousness he expressed a strong wish to be taken to his home at Sandhurst. The motorist who caused the accident could not convey the injured man home as his car was broken down, whereupon Dr. Dendles asked a motorist in the neighbourhood, Mr. Norman C. Seemann, if he would take the man home with all speed, as his condition was dangerous. This he consented to do if the Metropolitan police officer who had charge of the accident accompanied him. The party started off for Sandhurst, and while proceeding along the London Road, Windlesham, was stopped by the Surrey police. The sergeant in charge of the trap came up, and although Mr. Seemann (the driver of the car) and the Metropolitan police officer did their best to explain matters, and it could plainly be seen that there was an injured man on the car, the sergeant still held the motorists up, and, to say nothing of the delay that he was causing, and every minute being of importance to the injured man, said that a summons would be issued for exceeding the speed limit. It was an absolutely clear road and on a downhill grade.

In due course Mr. Seemann, of Isleworth, received the summons, and had to appear at Chertsey to defend himself. The sergeant in his evidence made no reference whatsoever to the extraordinary circumstances of the case until the question was put to him, and then he said in reply to the Clerk of the Court, "That the man did not appear to be badly hurt." On medical evidence being called it was proved beyond any question that the injured man was in a very

*Correspondence.*

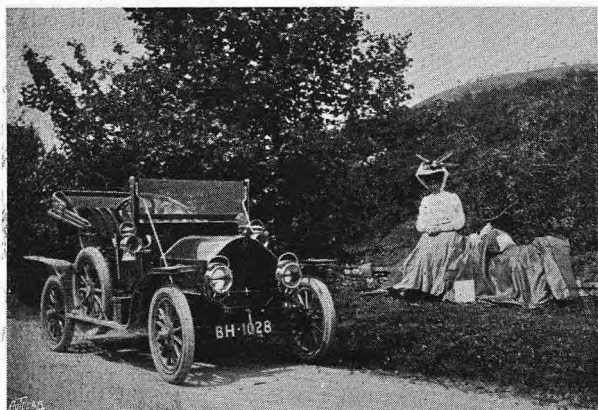
critical condition, and eventually the summons was dismissed. Under the circumstances it was monstrous that a summons was issued, as it put Mr. Seemann to a great deal of trouble and inconvenience, loss of time, expense, etc. It is disgraceful to think that this is the way in which a motorist gets treated while in the act of doing his very best to spare a man's life. As a matter of fact the injured man now lies at the Reading Cottage Hospital, and he is only a working man, and a father of three young children.

[Mr. Stenson Cooke, secretary of the Automobile Association, of which body Mr. Seemann is a member, also sends us particulars of the case, and asks the pertinent question, Can a more spiteful action, or one more opposed to the interests of common humanity, be conceived?—Ed.]

## THE 8 H.P. HUMBER.

[14500.]—I read with very great interest and pleasure in the issue of your excellent paper of July 17th the "Appreciation" of the new 8 h.p. Humber car, and having been the fortunate owner of one of these smart little two-seaters since May, during which time I have driven it over 3,000 miles without the slightest mechanical trouble, I should like to be allowed heartily to endorse your correspondent's remarks.

The hill-climbing capability, consistent reliability, and silence of this sweet-running engine are remarkable, while the power developed makes it the equal of many four-cylinder



ones of higher rating. The control is all that can be desired, and the comfort of the body is astonishing.

I find that on runs of 100 to 150 miles this car will easily maintain an average speed well over the legal limit, and having recently driven it from Liverpool to Tenby (South Wales) and back—474 miles, over trying ground—in two days, I can testify to its "staying power."

The enclosed photograph, taken on the Brecon road, about six miles north of Llandovery, clearly shows the neat method of carrying a spare wheel, the manipulation of which I have found extremely simple and quick. R. S. B.-H.

## HORSE-POWER RATING.

[14501.]—Will you allow me to send a line to protest against Mr. Roots's statement [letter 14463] that his formula is practically the same as the one I advocate? His is an "area" expression like that of the R.A.C., whereas mine is volumetric, which is a most important difference. The Club formula varies as the area of the piston, Mr. Roots's takes the area of the rectangle formed by multiplying the stroke and diameter together, and mine is based upon the volume displaced by the piston, in the same way as the usual formula for steam engines. His is better than that of the Club, because it gives a different value when the stroke varies, but it resembles it more closely than it does mine. As for being more accurate, that is also a matter of opinion.

C. F. DENDY MARSHALL.

## ROAD WARNINGS.

[14502.]—The trap at Pulborough, Sussex, which has been worked hitherto on the hill ascending to the church, is now moved between two and three miles nearer Billingshurst. at Codmore Hill. It is in charge of an officer who boasts that he has been trapping motorists for ten years. The "control" is 420 yards in length, and is worked both ways by

signal. The man in charge hides midway between the two policemen, who lie on their stomachs each behind a hedge, and the former is disguised in light flannel coat and waistcoat, and invariably has a bicycle with him. He alone carries a stop-watch, and a conviction for fast driving depends upon him only, as there can be no corroborative evidence. On fine days the three policemen idle away their afternoons in this ignoble fashion, lolling in the shade, and proving to demonstration why the police of this country compare so unfavourably with those of all other countries in their detection of crime. H.G.R.

[14503.]—It will be advisable in the interests of motorists generally to draw attention to the bad condition of the mountain road between Mold and Ruthin (North Wales). For the present motorists would do well to avoid this route which, high up on the open moors, is in a very rough state. There is a good deal of loose metal about, deep ruts, and a steam roller at work. The alternative route *via* Denbigh is much the better way of approaching Ruthin at present, though longer. C. COPE.

[14504.]—It has been announced in the Surrey papers that the Watch Committee of the Guildford Town Council have "authorised the expenditure of £4" on what the local and some of the motor press term "an expensive (?) watch" to aid the police of Surrey's capital in trapping car drivers. The Motorists' Protection Association, Ltd., cautions all motorists to be very careful in this neighbourhood, for when the police start playing with this new toy they are certain to produce some curious times, and will have to show results for the severe drain on Guildford's cash chest.

H. HEWITT GRIFFIN.

## EASY GEAR CHANGING.

[14505.]—Your correspondent "J. W. E." [14455] is, of course, right in saying that it is the peripheral speed of the wheels about to be engaged that should be as nearly equal as possible, and consideration of any gear box will show that this equality of speed can only be obtained in changing down (i.e. to lower speed) by letting in the clutch momentarily as the gear lever passes through the neutral position, and so speeding up the counter-shaft, while in changing up a momentary pause at the neutral position effects the necessary speeding down.

Let anyone try this next time he is changing down from third to second with heavy load on steep hill, and he will find his second goes in like butter, without a sound. E.H.B.

## ROADSIDE COURTESY.

[14506.]—I do not think that your correspondence columns can be put to a better use than in recording instances of roadside courtesy by motorists to fellow motorists in distress; *pour encourager les autres*.

Last Saturday afternoon, about 5.30, I might have been seen wrestling with a refractory tyre on the road between Enniskerry and Dublin. A large car slowed down and stopped. Its owner enquired whether I needed assistance; I modestly deprecated the suggestion. He said, "No trouble at all." I replied, "Thanks awfully." His deft chauffeur speedily taught the refractory tyre its proper place, and in a few minutes my small slave was pursuing its humble way at a strictly legal speed, while the big car flew on at a speed which would have cost its owner at least £5 in some districts, but, fortunately, that fine body of men, the R.I.C., have something better to do than "fine snatching."

This little incident caused me a gratification quite out of proportion to its importance, and if this should chance to meet the eye of the unknown Good Samaritan I hope he will realise that his roadside courtesy was not unappreciated. *Si sic omnes*. C. W. D.

## PETROL CONSUMPTION ON SMALL CARS.

[14507.]—In letter No. 14456 Mr. Alfred Meigh relates how his engine has gone 4,500 miles and the valves have not been ground in, but I can beat this record easily. My 20 h.p. six-cylinder Standard has up to date done considerably over 15,000 miles and the valves have never been out; in fact I cannot recollect that I have even had the valve caps out, and the engine to-day pulls as well as ever.

W. PADDON.

## Flashes.

One of our readers, the owner of a 14 h.p. Alldays, intends making a four weeks' tour in France, starting on September 1st. He is anxious to be put in touch with two or three people who would accompany him and share expenses, which he places approximately at £5 to £6 a week. Co-operative Continental touring is an excellent plan, and we know many friends who have tried it, with the utmost satisfaction. If any of our readers are interested, we shall be pleased to put them in touch with the owner of the 14 h.p. All-days car.

\* \* \*

The Automobile Association has progressed so remarkably of late that the head offices at Princes Buildings, Coventry Street, and the Road Department, 8, New Coventry Street, are no longer sufficient to accommodate the staff. The committee have therefore acquired a handsome and commodious building at 66-68, Whitcomb Street, opposite the present offices, and it is hoped that the Association will be installed there by the end of September.

\* \* \*

In the recent ballot for positions at the forthcoming Olympia Show, the Sheffield-Simplex Motor Works, Ltd., were successful in securing the most central position in the show, viz., Stand No. 54.

\* \* \*

We have an enquiry from a reader for the name of the makers of Pearson's motor spirit. We do not know it, and shall be glad if any reader who may have the information will be good enough to send us a postcard giving the name and address of the makers in question.

\* \* \*

While some members of the community still refuse to be enthusiastic about modern methods of road travel, the lawyers may find advantages in it. A legal practitioner (says *The Western Daily Press*) gives expression to the anticipation that the next visit of His Majesty's judges to the district would be the occasion of a "motor assize," so numerous have been recent cases leading to claims and counter-claims for damages.

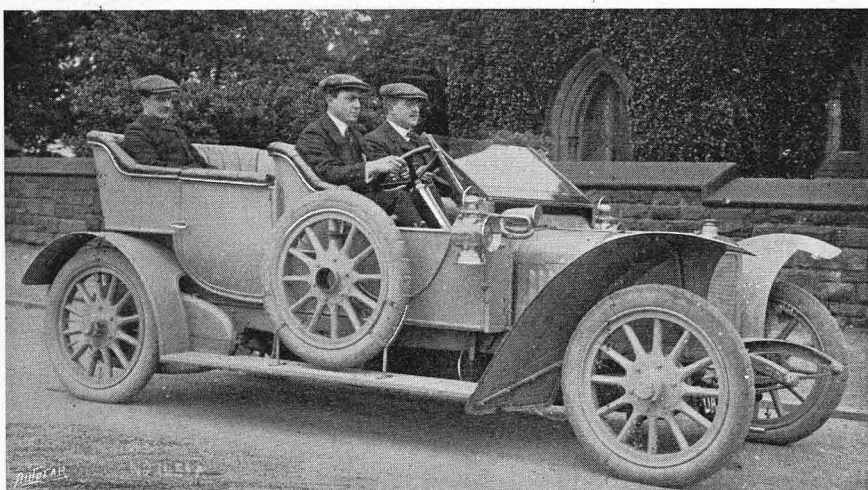
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Mr. Wally Denvers, of the Coach and Horses Hotel, Bromsgrove, has done motorists a good turn by taking proceedings against the owners of a steam roller to recover damages resulting from a collision with one of these machines which had been left standing in the roadway at night. The point was as to whether the steam roller was properly protected. Although there was a fire burning and a watchman stationed near it, there was no light on the front of the roller, and Mr. Denvers drove his car into it. Evidence was given that three other vehicles had driven safely past, but the jury at the Birmingham County Court, where the case was tried, held that the steam roller was not properly protected, and awarded £90 damages. In future probably this steam roller will be taken off the highway when its day's work is done.

An instance of the inability of the average person to judge of the speed of motor cars from observation came before the coroner's court at Lambeth recently. A child who had rushed out from behind a tramcar was accidentally knocked down by a taxicab, and died as the result of the injuries received. Some of the witnesses estimated the speed of the taxicab at thirty miles an hour, but the point was settled when an inspector who was called stated that he happened to be in the cab at the time testing the meter, and he testified that the speed was eight miles an hour.

\* \* \*

Mr. Louis Carle, of 45, Marlborough Street, W., was summoned at Haywards Heath on Monday last week for exceeding the ten-mile limit at Handcross on the 9th May. Mr. Rowand Harker, instructed by Messrs. Amery-Parkes, Macklin, and Co., defended. Evidence



The new 14-18 h.p. Sunbeam car, which did well in the last R.A.C. monthly trial, with Mr. Louis Coatalen, its designer, at the wheel. Beside him is Mr. Thomas Cureton, managing director.

was given to the effect that the defendant was stopped on his way to Brighton, and his licence was produced, but in cross-examination Sergeant Waghorn could not state positively that he drove the car on the return journey to London, as the car was not stopped. The bench held that the evidence of identity was not sufficiently established, and dismissed the summons. The defendant was not present in court.

\* \* \*

An international aeronautical exhibition is now open at Frankfort-on-Main, and will remain open till October 10th. The representative in England is Major B. Baden-Powell, 27, Chancery Lane, London, W.C. Demonstrations of actual flight are given in the spacious grounds connected with the exhibition, and competitions are in progress daily for prizes amounting in the aggregate to £10,000.

\* \* \*

Those of our readers who do not already possess "The Autocar Handbook" would be well advised to purchase one. The price is 1s. 6d., or post free 1s. 9d. from 20, Tudor Street, E.C. It is a comprehensive book, exceedingly helpful, and deals exhaustively with the choice, maintenance, and driving of the best known types. It is in every respect the most practical textbook for the instruction of novices and the assistance of all motorists.

*Flashes.*

Members of the Royal A.C. who are interested in the building of the new Club house will find the first of a series of articles on the work in this week's issue of *Building World*.

\* \* \*

According to a recent report by the Austrian Consul at Amsterdam, Holland offers a good opening for the importation of motor cars. Although the year 1908 was not very favourable, a brisk business was done in the lighter type of motor cars ranging in cost from £80 to £120.

\* \* \*

A proposition to build a British airship is being put forward by Mr. S. F. Edge, who, in conjunction with Messrs. Spencer and Messrs. Napier, will undertake to construct an airship, provided that a sum of £12,000 can be raised to meet out of pocket expenses by guarantee. Mr. Edge points out that the Austrian Government order for an airship amounted to £60,000, and if successful the British airship should be worth at least £20,000. The project is to build a ship which will journey from London to Manchester and Liverpool, and cross to the Continent.

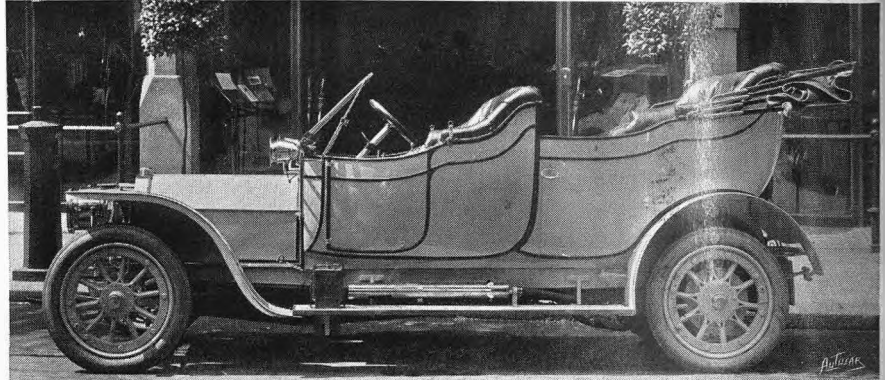
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The Institute of Metals has just completed the first year of its existence, during which period the membership has increased from barely 200 to well over 500. The autumn meeting will take place at Manchester on Thursday and Friday, October 14th and 15th. Sir William White's successor in the presidency of the Institute will probably be Sir Gerard Muntz, Bart.

\* \* \*

Messrs. John I. Thornycroft and Co., having disposed of their Chiswick Works and concentrated their business at Basingstoke and Southampton, advise us that their London office address is now Caxton House, Westminster, S.W. A large and well equipped garage and repair depot have been established at the Vauxhall Garage, 5-11, Vauxhall Bridge Road, S.W.

The ballots for the spaces at Olympia both in the car and tyre and accessory sections were held on Thursday last week. The whole of the space available, except a few applications now under consideration by the Society of Motor Manufacturers and Traders, has been taken up and allotted.



A rotund double phaeton body by W. and F. Thorn, mounted on a 30 h.p. Lancia chassis, fitted with Victoria shaped square corner front seat, high side doors, a single folding wind screen, and a double extension Cape hood. The back seats three persons comfortably. A pair of Thorn's folding seats are also fitted. The car was built for Mr. H. D. King, prospective member for N. Norfolk.

The Argyll car which made the remarkable journey through the Arabian desert is the subject of a most interesting illustrated article in *Harper's Weekly*. No motor car had penetrated the country before.

\* \* \*

If the *Hampshire Post* report be correct, the magistrates who sit at the Petersfield Petty Sessions are not observers of coincidence. In two motor cases the police are reported to have given the speed as 23 miles 1,204 yards per hour through a trap, though why one case should have been dismissed with costs and the defendant in the other should have been fined £1 and 18s. costs we do not know. At or about 23 miles an hour seems to be a favourite speed in the Petersfield court, as another motorist was fined for covering the quarter-mile at 23 miles 135 yards per hour.

\* \* \*

At a meeting of the council of the Society of Motor Manufacturers and Traders on Wednesday, July 21st, further correspondence from the East Lancashire and Cheshire section was considered, and it was resolved that there was no reason for departing from the previous decision on this matter. Resignation from the council was received from Mr. H. Austin, and accepted with regret. Resignation was also received from Mr. Sidney Straker from the council and the Management Committee by reason of want of time to attend meetings, but, in view of Mr. Straker's past services as president, it was resolved to request him to remain on the council. Mr. W. M. Letts was elected to the council in place of Mr. Austin, and Mr. A. F. Mulliner to the Management Committee in place of Mr. Straker.



A 20-30 h.p. Renault landaulet cabriolet which was recently supplied to Sir C. D. Rose, M.P., J.P., by Messrs. A. Gaal and Co., 17, Hanover Square, W

# Club Doings.

## West Hartlepool A.C.

The members of the West Hartlepool Automobile Club on Wednesday, the 21st inst., very generously gave the West Hartlepool Crippled Children's Guild their annual motor car excursion to Sedgfield, where an enjoyable day was spent.

## British Motor Boat Club

The Club races at Cowes on Monday next, August 2nd, will be started from the terrace of Norris Castle, Mr. Denham having courteously given permission for this purpose. A special race has been put on the programme for motor boats and hydroplanes exceeding twenty knots in order to let Mr. Fauber's 150 h.p. hydroplane and Mr. de Keowin's 60 h.p. hydroplane *Ricochet XXIV*, compete with *Ursula Amazon*, *Baby IV.*, *Defender*, etc.

## Automobile Club of Western Australia.

The annual report of this club states that during the past year almost every motorist in the Perth district has become a member. The committee had interviewed various agents for motor tyres, and succeeded in obtaining a special concession on prices, which had already been reduced, of twenty per cent., and this meant a saving in price to members of about £4 for an average-sized tyre. The price of petrol is very high, being 1s. 7½d. per gallon in Perth. Many pleasant afternoon runs were enjoyed during the cool weather. The members of one important local road authority had been driven over the roads in cars, and as a consequence the roads had been repaired. The Secretary had been in communication with other boards with the result that many defects had been remedied. Motorists had been requested by circular letter to drive in a considerate way, councils had been interviewed, and altogether a very friendly feeling existed between the members of the club and the various authorities, the latter recognising that the club was doing its best to suppress inconsiderate driving.

## Lancashire A.C.

Fine weather favoured the club's reliability and petrol consumption trials on Saturday, July 17th. The entries were divided into two sections—one for cars whose rating by R.A.C. formula was over 25.6, and the other for cars rated at 25.6 or under. A silver cup was offered for competition in each section by the president of the club (Mr. A. Cayley, J.P., D.L.), and the club gave a second prize, whilst certificates were awarded for non-stop runs. A non-stop performance was essential for eligibility for the cups. Mr. G. H. Redman officiated as starter and weighing supervisor, and Mr. S. Wallwork as petrol steward. Blackburn was the starting place, and the fifteen competitors proceeded *via* Clitheroe, Hellifield, Kirkby Lonsdale, and Kendal to Penrith,

where lunch was served at the George Hotel. They then continued to Pooley Bridge, Patterdale, and over Kirkstone Pass to Windermere, the total distance being 121½ miles. The route included four severe climbs—Sawley Brow, Buckhaw Brow, the ascent of Shap, and the negotiation of Kirkstone Pass, where most of the non-stop failures occurred.

In Section A the cup was won by Mr. G. W. Greenwood (30 h.p. Daimler), of Blackburn, and the second prize went to Mr. R. Mangnall (40 h.p. Napier), of Darwen. In Section B the cup winner was Mr. J. R. Marchanton (16-18 h.p. Darracq), of Lytham, and Mr. F. H. Walker, also of Lytham, secured the second prize with a 15 h.p. Austin car. The following four competitors gained non-stop certificates: Messrs. Greenwood, Mangnall, G. W. Ainsworth (Blackburn), and Marchanton. Mr. Ainsworth drove a 10 h.p. De Dion. Mr. T. A. N. Leadbetter, of Preston, on a 16 h.p. Calthorpe, also covered the distance without a stop, but was disqualified owing to the body of his car not complying with regulations. Taking into account reliability and petrol consumption combined, irrespective of class, the first nine competitors were placed in order of merit as follows: 1. F. H. Walker; 2. J. R. Marchanton; 3. G. W. Greenwood; 4. G. W. Ainsworth; 5. R. Crompton (24 h.p. Fainir); 6. R. Mangnall; 7. I. Dootson (20-24 h.p. Ford); 8. J. Robinson (6 h.p. Wolseley); 9. G. N. Gilchrist (10-12 h.p. Darracq).

After the run the competitors and their friends, to the number of over seventy, spent a pleasant week-end at the Storrs Hall Hotel, Windermere.

## Motor Yacht Club.

Some fine speed work was witnessed in Southampton Water on Saturday last, when the Motor Yacht Club held a race over about nine sea miles from the *Enchantress*, for the 6½ to 8 metre classes. In this Sir John Thornycroft's new boat, *Miranda III.*, proved herself to be the fastest of her size afloat. *Cyrinus II.* was a good second up to Dean's Lake Buoy, where she had the misfortune to break the bracket of her rudder, and second place went to *Lucinha*. The starting and finishing times were as follows:

Boat and owner.	Start.	Finish.
<i>Miranda III.</i> (Sir John Thornycroft) ...	3.45 ...	4 11 10
<i>Lucinha</i> (Mr. T. A. Comber) ...	3.45 ...	4 12 14
<i>Cyrinus II.</i> (Mr. B. Redwood and Capt. Field-Richards) ...	3.45 ...	gave up.

In the sailing race for ex-36 footers, both starters, *L'Allegra* and *Flavia*, went off with double reefed mainsails, and a good race ended in favour of *Flavia* by 1m. 2s. The course distance was 8.79 sea miles.

## THE DU PRE INTER-CLUB CHALLENGE CUP.

Final Results of Competition held at Kettleby Hill, on Saturday, 3rd July.

Member's Name.	Maker's Name and H.P.	Cylinders.			Weight with Passengers.	No. of Passengers.	Time.	Percentage of Relative Efficiency.
		No.	Bore.	Stroke.				
Arthur Boulter	15 Star	4	3½in.	4½in.	tons cwts. qrs. 1 9 2	2	m. s. 1 38½	93.0
R. M. Wright	12 F.L.	4	80 mm.	100 mm.	1 4 3	2	1 42½	86.7
Victor Riley	12 Riley	2	4in.	5in.	1 7 1	4	2 19	86.2
Dr. P. E. Tressider	15 Talbot	4	90 mm.	117 mm.	1 10 3	4	1 47½	83.5
Dr. R. G. Hogarth	25 Talbot	4	105 mm.	120 mm.	1 14 0	5	1 33½	78.5
J. A. Doran	38 Minerva	4	124 mm.	130 mm.	1 18 1	4	1 21½	74.4
M. Ross-Browne	12-14 Gladiator	4	83 mm.	120 mm.	1 5 0	4	1 55½	74.1
F. Dickinson	15 Minerva	4	85 mm.	110 mm.	1 6 1	4	2 2½	67.8
D. P. Swainston	25 Minerva	4	106 mm.	115 mm.	1 8 0	3	1 29½	66.2
A. M. Forman	20-30 Hotchkiss	4	110 mm.	130 mm.	1 13 1	3	1 40½	66.2
H. Jefferson	9 Riley	2	86 mm.	89 mm.	1 14 1	2	2 29	62.0
E. E. Coltman	20 Coltman	4	4in.	4½in.	1 8 2	4	1 47½	62.0
Mason Ludlow	16-20 Clyde	4	80 mm.	90 mm.	1 2 3	2	2 15	61.0
Miss L. B. Starkey	15 Humber	4	3½in.	4in.	1 8 1	4	2 41	59.6
G. H. Wait	12 Clyde	3	80 mm.	90 mm.	16 3	2	2 19½	56.0
G. H. Faulkner	30-40 Daimler	4	124 mm.	150 mm.	1 14 2	4	1 35½	53.4
Dr. R. G. Hogarth	8-10 Clyde	2	80 mm.	90 mm.	15 3	2	3 44	51.0
F. A. Bolton	57 Daimler	6	124 mm.	130 mm.	1 18 1	4	1 20½	49.4
H. A. Bennett	10 Little Briton	2	4in.	4½in.	15 0	2	2 21½	48.0
A. Douglas Hunt	8 Clyde	2	80 mm.	90 mm.	16 0	2	3 51½	46.5
G. H. Wait	8 Clyde	2	80 mm.	90 mm.	14 1	2	3 27½	42.6
J. M. Bennett	14-16 Argyll	4	90 mm.	120 mm.	1 8 2	4	3 4	41.0
Arthur Boulter	10 Little Briton	2	4in.	4½in.	16 1	2	2 42	31.5

*Club Doings.***Manchester M.C.**

The annual speed judgment test for cars and motor cycles took place on Saturday, the 17th inst., on the Warrington roads. There was a fair number of competitors, and the results showed a marked improvement on the last year's competition. The driving speed decided upon was twenty miles per hour, and the following are a few of the best results: Car class, Mr. H. Cunliffe's 20 h.p. La Buire proved the winner, being only 49s. fast. Winner of cycle section, C. E. Kettle (3½ h.p. T.T. Triumph), 35s. fast. Members—Bell, Butler, Charlesworth, Dawes, Tytler, and Munroe ran very close. The second reliability trial of the season takes place to-day (Saturday, July 31st). A hill-climb will form part of the trial, and competitors will run on a time limit. The route, although a somewhat difficult one, is a favourite with the club.

Although the elements were so unfavourable a very successful hill-climb competition for cars and motor cycles took place on Saturday, the 24th inst. The venue was as usual in the Longdendale Valley, close to Woodhead; rain fell heavily most of the afternoon, and as the top of the hill (1,500 feet high) was right amongst the clouds the duties of timekeepers and officials at the finish were not to be envied. Amongst the cars competing were Mr. J. Higginson's 80-100 h.p. La Buire, P. A. G. Bell's 20 h.p. Bell, H. Cunliffe's 20 h.p. La Buire, G. Ward's 20 h.p. Lancia and 15 h.p. Lancia, and J. Oliver's 12-14 h.p. Calthorpe. The results on formulæ are as follows: 1, J. Oliver, 12-14 h.p. Calthorpe; 2, G. Ward, 20 h.p. Lancia; 3, G. Ward, 15 h.p. Lancia. Mr. Higginson's La Buire made fastest time.

**Sheffield and District A.C.**

The Sheffield and District Automobile Club held its annual hill-climbing meeting on Saturday afternoon. The roads were in much better condition than might have been expected, but at one or two turns, under the trees, there were bad patches that had to be negotiated very carefully. For the three events there were twenty-four entries. The course, as usual, was from the lane end at the Fox House side of Grindleford Bridge, to the entrance to Longshaw—a short distance down Padley Wood—the course measuring just over two miles, with a very heavy gradient. At each sharp turn a marshal was placed with a white flag, and he had to signal to the competitors if any vehicle was coming down the road. Careful driving was insisted upon by the committee, and this advice being followed there were no accidents. Each competitor was accompanied by an observer.

**Results:**  
CLASS 1. For Harvey Foster Challenge Cup (single-cylinder machines).—1, L. Slater (8 h.p. Jackson); 2, W. Watts (8 h.p. De Dion).

CLASS 2. For members not connected with the trade, driving multi-cylinder cars (three prizes)—1, E. F. Coupe (35 h.p. Daimler); 2, G. D. Flather (12-16 h.p. Talbot); 3, S. Ellis (16-20 h.p. Horbick); 4, H. Beesley (16-20 h.p. Talbot); 5, E. Wilson (12-16 h.p. Talbot); 6, J. Dutton (Yorkshire Engine Co.); 7, H. Adams (14-16 h.p. Belsize); 8, A. Worrall (Hillman-Coatalen).

CLASS 3. For Harvey Foster Challenge Cup (open to all members).—1, P. Richardson (45 h.p. Sheffield-Simplex); 2, H. Burgon (15-20 h.p. Talbot); 3, E. F. Coupe (35 h.p. Daimler); 4, B. Hind (12 h.p. Talbot); 5, S. Ellis (16-20 h.p. Horbick); 6, E. Wilson (12-16 h.p. Talbot); 7, G. D. Flather (12-16 h.p. Talbot); 8, G. F. Wesson (8-10 h.p. Darracq); 9, Jas. Barber (14-16 h.p. Belsize); 10, H. Adams (14-16 h.p. Belsize).

The Sheffield-Simplex, in making fastest time in Class 3, beat the previous best record for time up this hill by a considerable margin. The performance of the Sheffield-Simplex was made from a standing start, whereas the previous record with a larger engine was made with a flying start, and the Sheffield-Simplex also did the climb on top gear.

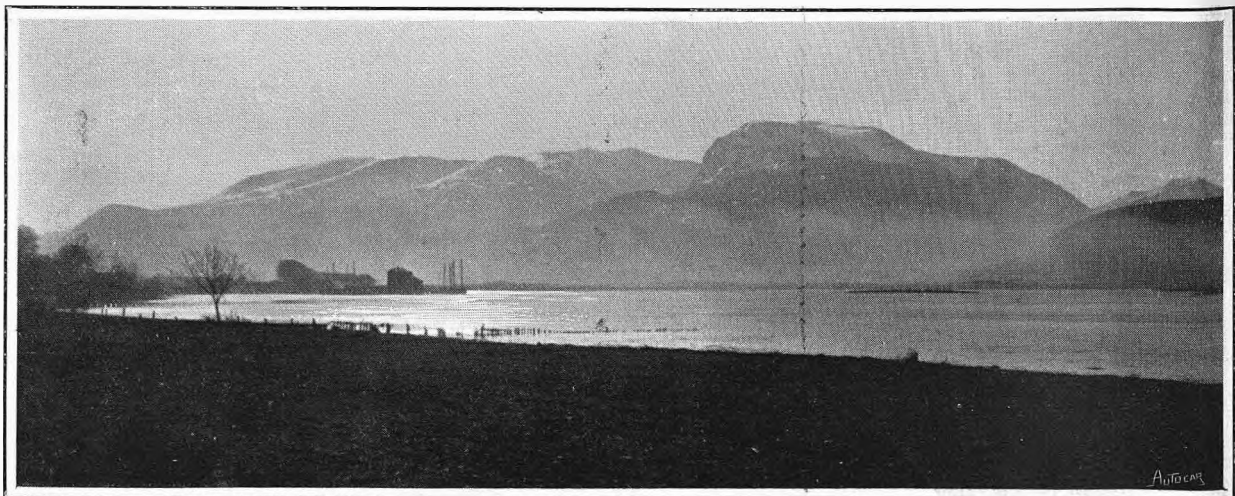
**The Society of Automobile Mechanic Drivers.**

*(Communicated by the Secretary.)*

Member R. Fairburn (347) having opened a garage in Innerleithen, N.B., special arrangements have been made with him for the advice and assistance of members in his district, etc. The new premises of the society officially open on Friday, 30th inst., and at 9 p.m. a billiard match takes place between F. Cox and another (600 up). The committee ask members to bring their friends.

**Review.**

"Highways and Byways in Surrey," by Eden Parker, with illustrations by Hugh Thompson. Macmillan and Co., Ltd., 6s. So soon as the motorist has passed the stage of distance annihilation, the driving of long drives for joy of the conduct of his car, and the pleasures of the travel of it, he arrives at the more enduring phase of using his vehicle for the attainment of objectives of interest not necessarily greatly removed. Then, if he be a dweller or a sojourner in the Home Counties, such fascinating, instructive, and seducing books as the delicious tome in which Mr. Eden Parker so graphically deals with the antiquities, the manners, the customs, the history, and the scenery of Surrey becomes to him a sheer necessity. The writer has time and again imagined that thirty years fossicking by cycle and car had left him little undiscovered or unknown in this county, but the county lore and love of Mr. Parker has opened up much that has been hitherto unknown and unsuspected. From the first chapter, which deals so interestingly with the Pilgrims' Way, to the last word of the delightfully descriptive chat with its beautiful and realistic illustrations, the book holds the Surrey lover, whose name is legion, to the end. Motorists who make daily or week-end excursions into and through the county should carry this book in the side door pocket, and, when time permits, and a fresh village, eminence, ridge, stream, lake, or mere is passed, Eden Parker consulted, will surely afford some fresh and entertaining lore anent the particular matter or place of interest under observation. Sweet Surrey has never been more lovingly or more intimately treated.



TOURING IN SCOTLAND. Sunrise on the Ben Nevis group of mountains. Vide Week End and Touring Notes.