THE AUTOCAR

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

EDITED BY H. WALTER STANER.

No. 404. Vol. XI.] SATURDAY, JULY 18th, 1903. [Price 3d.

THE AUTOCAR.

(Published Weekly.)

EDITORIAL OFFICES:
COVENTRY.

PUBLISHING OFFICES:
3, ST. BRIDE STREET, LUDGATE CIRCUS, LONDON, E.C.

CONTENTS.

COLONIAL AND FOREIGN EDITION.

In addition to the usual edition of "The Autocar," a special thin edition is published each week for circulation abroad. The English and Foreign Rates will be found below. Orders with remittance should be addressed "The Autocar," Coventry.

The Autocar can be obtained abroad from the following:
Australia: Phillips, Ormonde, and Co., 533, Collins Street, Melbourne.
Nice: Levant & Chevalier, 50, Quai St. Jean Baptiste.
United States: The International News Agency, New York.
Paris: Neal's English Library, 248, Rue Rivoli.
Melbourne, Victoria, Sydney, N.S.W., Brisbane, Q.L.D., Perth, W. A., Wellington, N.Z., Christchurch, N.Z., Capetown, S. Africa, Durban, Natal, S. Africa — Messrs. Gordon and Gotch.

SUBSCRIPTION RATES.
British Isles, 16s.; Foreign, 22s. 8d. per annum.

Notes.

Motor Cars as Feeders for the Railway.

The North-Eastern Railway Co. has decided upon the adoption of an innovation to attract traffic to its system. Some time ago it was petitioned to provide a railway giving access to the stretch of country on the Yorkshire wolds lying to the east of Beverley and extending to the sea coast, and which has hitherto been unprovided with direct railway communication. The directors of the company have sanctioned the adoption of a service of motor cars, which, whilst opening up the district to their system, will obviate the heavy capital expenditure incidental to the promotion and construction of a light railway. The motor cars will provide both a regular passenger and goods service, and are intended to carry sixteen passengers, with rather over half a ton of luggage or merchandise on the roof. The cars are of a powerful type, provided with four cylinder petrol engines of twenty-seven horse-power, working at 750 revolutions, and will be able to travel at a fair rate of speed. The places which will be accommodated by the new motor service include Long Riston, Routh, Leven, Brandsburton, North Frodingham, and Beeford, all of which are from four to eight miles distant from any railway station. It will be understood, of course, that this enterprise is entirely separate from the North-Eastern self-propelled carriages run on rails, which are nearing completion, and are for use on branch lines where the traffic is not sufficient to warrant the running of the ordinary local trains, or where it is desired to have a large number of light trains close together in preference to only occasional and heavier traffic. The North-Eastern Co. is certainly to be congratulated on its foresight in being not only the first company to take up the question of petrol propulsion upon the railway, but also to utilise the autocar as a feeder to the railway itself—in other words, to make the best use of the King's highway as well as of its own iron road. The road and the railway have been too long divorced; but it is only a question of time before the importance of the older route as a feeder to the more modern one is fully recognised and utilised.

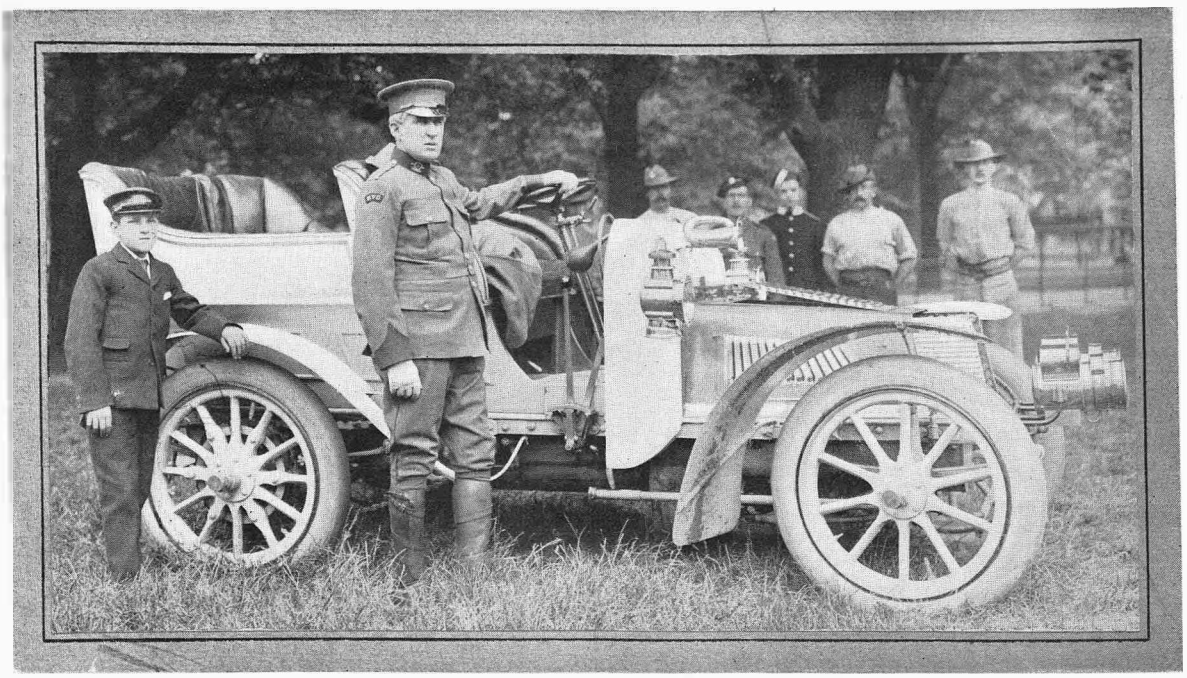
The Motor Bill.

Last week in criticising the terms of the Motor Bill introduced into the House of Lords we referred to the fact that it appeared to be based on the assumption that all owners of motor cars were extremely rich people, and it appears to us that it is the penalty clause in the bill which above all others should be fought tooth and nail by every member of the House who has the least regard for the future of automobilism, as the fines are simply monstrous. It is true that the maximum penalty would not always be inflicted, but till the prejudice which is so prevalent in so many districts has died a natural death it is not just that such penalties should be made possible, as apart from the £20 maximum or three months for a first conviction, it must be remembered that for a second conviction £50 or six months can be inflicted, and despite the fact that the first conviction may have been obtained solely on police evidence and more or less in the

face of facts. What we should like to see done above all other things would be for some stalwart friends of automobilism in the House to propose some sweeping amendments, and first and foremost among these should be the universal treatment of all vehicles. That is to say, every carriage, horse drawn or not, should be numbered. It is all very well to maintain that because the automobile is faster than the horse the horse vehicle should not be numbered. Everyone knows that an inconsiderate or brutal horse driver is under many conditions as difficult of identification as an inconsiderate motorist on a high-powered car. Perhaps more so, and as the numbering is proposed entirely because there are a few black sheep in the ranks of automobilists, it is but equable for the same reason it should be applied to all other vehicles. If this were done we should not have a word to say against numbering. On this subject Mr. C. R. Garrard, who, by the way, was the first to suggest that cars should be classified according to the cubical contents of their cylinders for racing purposes, having advocated this at least two years ago, now suggests that the same rule should be applied to identification, and that all cars with a greater cubic content of cylinder than would give, say, 8 h.p. should be specially marked. This is certainly a practical suggestion, but we fear it is almost too much to expect that it shall be made law, for speaking broadly Parliament is very chary of instituting any law which requires the smallest amount of technical knowledge on the part of the administrators. However, this is a matter which might well be brought up in the form of an amendment. There is little doubt that the enemies of the motor will suggest the addition of all sorts of restrictive measures to the clauses of the bill, and it behoves the well wishers of the motor to be prepared with alternative amendments which shall lessen the severity of the conditions which it is proposed to apply to motor traffic, and, further, to endeavour to expand them so that they shall include all vehicles.

Simplicity and Reliability.

From time to time we have urged the desirability of the development of the simplest form of motor and mechanism. This is a matter of small importance to wealthy automobilists who keep a mechanician to look after the car. His time may as well be fully occupied as not, and there are undeniable advantages from the majority of the complications offered. That is to say, the flexibility of the engine and the freedom from tremor are, broadly speaking, at the present time the distinctive qualifications of the more complicated vehicles rather than those of simpler character. At the same time, owners who have to look after their cars themselves, or, at any rate, with the help of entirely unskilled assistance, rightly regard simplicity and reliability as of the first importance, and as this is the case, everything possible should be done to encourage the development and improvement of the single cylinder engine and to ensure that the two cylinder engine shall not be neglected through attention being concentrated upon the four cylinder variety. No one can for a moment deny that a four cylinder engine is pleasanter to drive behind than a two cylinder engine, but that is just the very reason why the utmost attention should be paid to the motor of the simpler form. We have the smoothness of running, ease of starting, and regular torque of the four cylinder engines, and it should be the aim of the designer to reproduce these excellent features as far as possible in the two cylinder motor, while with regard to the one cylinder engine, every effort should be made to bring it up to the higher standard of the



The new uniform of the motor volunteers is essentially a smart and workmanlike dress. This will be seen from our illustration of Private Oliver Stanton in the uniform of the corps standing beside his 22 h.p. Daimler. It will be remembered that Mr Stanton took out papers of naturalisation, so that he could serve the King, as His Majesty's motor expert is by birth an American. (The uniform is described on page 111)

Mr. Campbell Muir surmounting Castlewellan on Mr. Alfred Harmsworth's 60 h.p. Mercedes.

two cylinder engine. We dwell on this matter because we so fully recognise the fact that, broadly speaking, the fewer cylinders the less time will the owner need to occupy for adjustment, and not only so, but the incidental expenses are lower. The item of sparking plugs alone may be taken as directly proportionate to the number of cylinders, and practically everything in the same ratio.

What is Wanted.

What we should like to see would be the development of a thoroughly sound single cylinder two speeded car, with solid tyres and comfortable accommodation for four people. This is a type that many automobilists would sneer at, but it is one which, nevertheless, is very much wanted. There are plenty of people who can afford to buy a motor, but they will not undertake the trouble of looking after a complicated vehicle, still less do they relish the idea of roadside tyre repairing. Solid tyres eventually wear out, but they give good warning of having come to the end of their active life, and on a moderately speeded car this is a very long one. It is true that many of the roadside delays due to air tyres are simply and solely from the fact that tyres too small for the work are used, or insufficient rubber is employed in the tread, and the fabric is too thin. A great deal too much emphasis is placed upon resiliency. It is desirable to have the quality, but it is far better to have reliability. It was shown very plainly by the club tyre trials last autumn, though, of course, everyone who knew anything about tyres was well aware of it before, that it is very difficult to combine the two. A thin lively tyre will not stand the same amount of work as a thicker, stronger, and, consequently, less resilient one, but as the engine will not complain of a little extra load, it appears to us that cars not intended for speed, and speed alone, should be fitted with the strongest possible tyres. If this were the case, the prejudice against pneumatic tyres would be to a large extent overcome, for the simple reason that they would give practically no trouble. It is not possible to make a super-reliable tyre of quite the same efficiency in the matter of the absorption of engine power, but this is a matter of small moment. With regard to the comfort of the tyre, what is lost by having the thicker and less responsive tyre could be made up by very easy springs, not only to the road axles, but in the cushions, particularly if backs as well as seats were nicely sprung. These alone make a great difference, while the comforts of spring hassocks and foot bounds have only been exploited in a very few cases. To return to the simple car we outline, it should be clearly understood we do not mean that it should be a "cheap" vehicle. Far from it. It should all be as good as it can possibly be made, and handsome looking, too. Its cheapness would come out in its very small cost for upkeep, and not in its selling price, which, although reasonable, would not, and could not, be low in the ordinary acceptance of the term. In fact, at first glance, considering its simplicity, it would appear dear. There are already cars to be had which very nearly approximate to our specification, but it must be confessed that they have not met with so much encouragement as their makers might have expected, though this has in most, if not all, cases been due to some fault, such as ungainly appearance, poorly balanced engines, inefficient silencers, noisy gearing, bad exterior finish, inadequate springing, or uncomfortable upholstery. In other words, they have not quite filled the requirements of those on the look out for a simple, well designed, well made, and comfortable car, as their makers have not quite realised all the essentials of such a vehicle, and have spoiled their production by the omission of some essential feature or quality. They have then become discouraged, and have turned their attention to a more conventional type, in which too often speed has been given the first place, and low cost of upkeep and freedom from adjustment the last.

USEFUL HINTS AND TIPS.

On Tyre Repairs (continued from page 64).

Cutting at the Edges.

A point at which tyres are very liable to suffer, and, unfortunately, very often do suffer, is at the bottom of the outer cover, where it joins on to the beaded edge. This is very frequently cut into, and unless great care is taken the tyre may burst close to the rim. There are two or three causes which contribute to this cutting, and these, by taking a little care, may be obviated to a large extent. Excessive pressure on the tyre is one of the chief causes of this trouble. When the tyre is only sufficiently strong to carry the weight of the car, it will be understood that a very severe strain is put upon it when it is blown up to withstand the extra weight of the *loaded* car, and that the lateral strain upon the beaded edges when turning corners must be very great. We have always advocated the use of a slightly heavier tyre than was absolutely necessary, and we take this opportunity to repeat it. When the tyre is blown up very hard, it cannot possibly stand its own internal pressure and the external pressure placed upon it by the weight of the car; it must therefore give way at its weakest point, and this is at the junction of the cover with the beaded edge. The best method of overcoming this is to allow the tyres to run in a *very slightly* flattened condition which will reduce the internal strain very much, although it will slightly increase the lateral strain.

Wrong Sizes of Tyres.

Another cause of cutting at the edges is the fitting of a size of tyre to a rim which is unsuitable. Every size and section of tyre has its own rim, though it is useful to note that Michelin and Continental tyres are interchangeable on their rims, *i.e.*, an 80 mm. section Continental tyre will fit a Michelin rim for the same size and section and *vice versâ*, but if a tyre of, say, 90 mm. was fitted to a rim intended for one of 80 mm. section, it would be very much like an individual trying to put on 6¾ gloves when the suitable size was 7½. This undue strain leads to much wear on the tyre at the edge of the rim. If one contemplates fitting heavier section tyres to car wheels one will find it cheaper in the long run to have the wheels provided with a suitable rim.

Rust in the Rim.

A further cause of cutting lies in the rusting of the rims. These should in the first instance be painted, and the tyres should not be put into position until the paint has thoroughly dried. In removing the cover from the rim and putting it back again the paint upon the rim is certain to suffer more or less injury. The places where the paint is removed, both on the inner edge of the rim and on its outer edge, should not be allowed to remain bare for an indefinite period, but, as opportunity occurs, should be painted over with some air drying enamel, having previously been cleaned up with a little worn emery cloth. If the bare places are allowed to remain and the water gets to them in running through the mud, rust sets up and eats its way into the canvas and rapidly rots away the fabric. Driving on slack tyres is also responsible for the breaking away of the beaded edge, but most drivers are well aware of the evil effects arising from such treatment and for their own safety's sake as well as for the sake of the tyres take every precaution to keep the tyres in a properly inflated condition.

The Preservation of Rubber.

The principal enemies of indiarubber are a strong light and changes of temperature. Strong light is particularly bad for any class of indiarubber, as its action destroys its elasticity by extracting the sulphur used in the vulcanisation. This is followed by a hardening of the rubber and the development of small cracks which let in more light, and eventually cause the rubber to peel off the fabric in quite large pieces. As to temperature, this has very much the same effect as strong light, although in not such a high degree. The temperature of a room in which rubber is stored should be about 65° to 75° F. A higher temperature should be avoided; lower ones will not do any harm. It is obvious that one cannot choose the ideal storage for tyres which are in position on their wheels, and it is as well to note that the house in which one's car is stored should not be subject to great heat, or that the windows do not admit of rays of strong light being projected on to the tyres. Galvanised iron sheds, for instance, attract great heat in the summer time, and are very cold in the winter. They are particularly unsuitable buildings, therefore, in which to store rubber. One peculiarity of the tyre is that it is not so liable to decomposition from changes of temperature or the influences of light after they have been used as they are when new. Any spare tyres which may be kept should be stored in a room where as even a temperature as possible is maintained, and where they are free from strong lights. A useful tip which is not generally known is that if the tyres are washed free from mud or dirt after every run, it will appreciably lengthen their life. When touring, particularly with large tonneau-bodied cars, there is some difficulty in finding a storage place for a spare cover or covers, which should always be carried on such journeys. A handy method of storing such covers is to have a false bottom constructed to the tonneau of the car. In this the spare cover or covers of the inner tubes and a variety of other useful appliances may be carried with every convenience.

Use the Brakes Carefully.

Many car owners' and drivers' costs for the upkeep of tyres are no doubt increased by the manner in which they apply the brakes. The old spoon-type brake acting directly upon the tread of the tyre was abandoned on account of the manner in which it used to wear out the tyre, so that it was extremely expensive in its application. With the introduction of the band brake this trouble was not entirely overcome, for if a car is proceeding at even a moderate pace, and the driving wheel brakes are suddenly applied, they will entirely lock the wheels, preventing their rotation, or check them to such a degree that there is a dragging action caused by the momentum of the machine drawing the tyres

over the surface of the road. The result of such treatment is that tyres do not last nearly so long as they would do if the brakes were applied gently. We have on many occasions noticed the pride with which some paid drivers dash up to a point on their third speed, and suddenly pull up the car in about ten yards, when their pace, before applying the brakes, has probably been quite twenty miles an hour. No tyres made will stand this treatment, and the owner should not grumble at his tyre expenses if he allows this sort of treatment to his car. There are necessarily times when one has to put down all the brakes as hard as possible to prevent an accident, but such occasional applications are not sufficiently important to be considered in dealing with the upkeep and repair of tyres.

Sundry Notes.

Great care should be taken to see that the holding down bolts are pulled down squarely on to the edges of the tyre. On opposite sides of the bolt are two flats, which, if kept parallel to the edge of the rim, will ensure the bolt coming down to its correct position.

* * * *

After cleaning the tube and patch with glass-paper or wire brush, in repairing a puncture, both should be well rubbed with petrol to remove the loose particles brought up by the rough cleaning material, otherwise these particles will work into the solution, and will probably ruin the repair.

Indiarubber solution for repairing purposes should not be too thick. It should be sufficiently fluid to flow readily—that is to say, if one wanted to pour a quantity of solution out of the tin, it should not be necessary to hold the tin sidewise for a minute or two before the solution ran over the edge. In its more fluid state the solution is more workable; it sets quicker on account of the solvent being more readily released, and it is therefore more adhesive.

* * * *

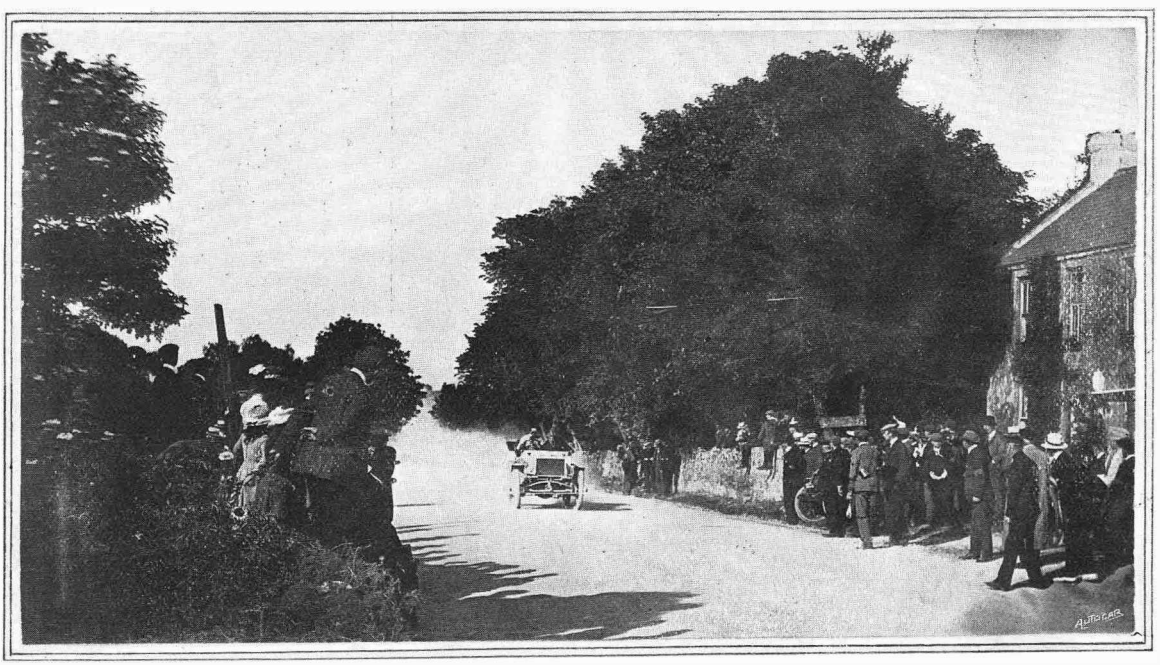
Only the thinnest and best black or, rather, brown patching rubber should be used for placing between the tube and the red rubber patch. Last week we made two futile attempts at a repair, using a piece of old grey rubber inner tube in place of the proper material.

* * * *

A small piece of copying ink pencil is a useful addition to the repair outfit, and its presence is appreciated when one has to deal with small punctures which are difficult to find. A ring drawn round the puncture after cleaning will denote readily its position, and ensure the patch being centred over the hole.

* * * *

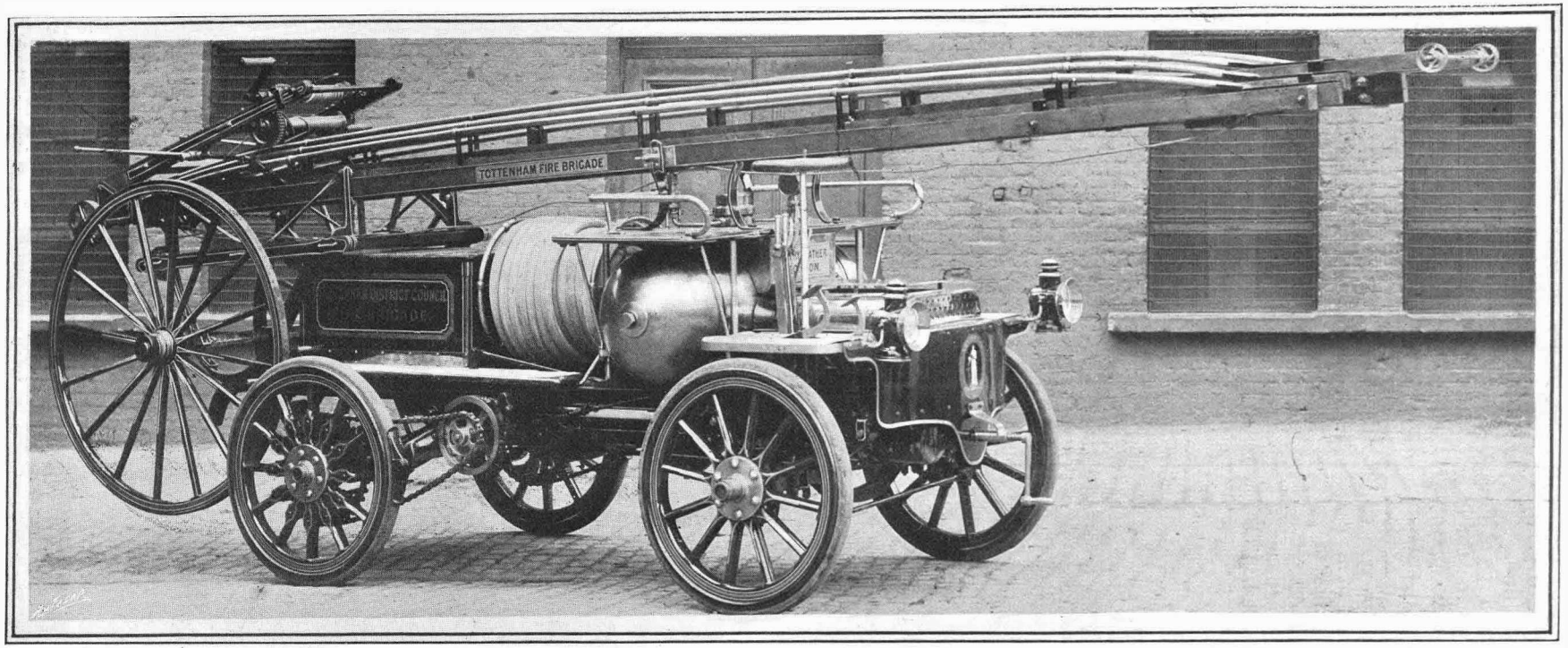
We are indebted to the Continental Caoutchouc and Guttapercha Co.'s handbook on their motor tyres and how to treat them for information upon which two or three of the foregoing hints and tips have been based.



Mr. J. W. Cross on the 20 h.p. Humber winning the "Graphic" Cup in the Castlewellan hill trials.

Messrs. George Senior and Co. have opened a motor garage at Rochester, about halfway along the main street on the left-hand side travelling eastward. A correspondent, who had occasion to call for a repair, testifies to the thoroughness of the work, and the moderate charges, while Mr. Senior was most obliging in seeing that everything was in order before the restart. There is a demand for a garage in this district, and the address should be noted by those having occasion to use the main Dover Road.

A MOTOR CHEMICAL FIRE ENGINE.



Councillor L. E. Ward, the chairman of the Tottenham District Council, lately opened the first motor-equipped fire station in this country at Conway Road, Harringay. This establishment is equipped with a 300 gallons Motor Fire King steam fire-engine, and a 20 h.p. petrol motor fitted with 70 gallon chemical cylinder and a 50ft. fire-escape, as shown in our illustration. This machine was designed and constructed by Messrs. Merryweather and Sons, of London and Greenwich. The 20 h.p. petrol motor chemical fire-engine has a steel frame carried on wrought-iron axles through elliptical steel springs. The wheels are made with steel rims, and have Clincher solid rubber tyres. The petrol motor is fitted with Simms-Bosch magneto ignition, and drives the machine through a well-made form of Panhard type change-speed gear, giving three speeds forward and a reverse, the drive passing from a bevel-driven countershaft through chains to the road wheels. The steering is on the usual Akerman lines, but very stoutly constructed. The chemical cylinder is of 60 gallons capacity, fitted with acid bottle, and special mixing fans and delivery to hose. A connection is also provided for refilling from street hydrant.

The telescopic fire-escape is carried horizontally upon the body of the vehicle, and can be run on its own wheels either horizontally or vertically, as desired. The advantages claimed for this special form of fire-engine are—first, its speed in getting to the scene of operations; secondly, the celerity with which it can be turned out; thirdly, the instantaneous readiness of the chemical jet immediately upon arrival at a fire, without delay for coupling to engine or hydrant; fourthly, the rapidity with which the fire-escape can be got to work; and fifthly, the simplicity and lightness of the whole plant.

The chemical agent employed is carbonic acid gas, in which fire, however fierce, cannot live. Unfortunately, the same applies to human beings; therefore, its use is chiefly restricted to enclosed areas where there is no life. As a means of suppressing fires in their earlier stages, carbonic acid gas has come very much to the front in late years, and there is a great future for the motor chemical engine.

THE ALBION SPRING DRIVE.

The two accompanying illustrations show the details of the spring drive which the Albion Motor Car Co., Ltd., employ in their 12 h.p. car.

The spring drive is inserted between the engine and the change-speed gear, and forms at the same time a flexible coupling between the two, so as to

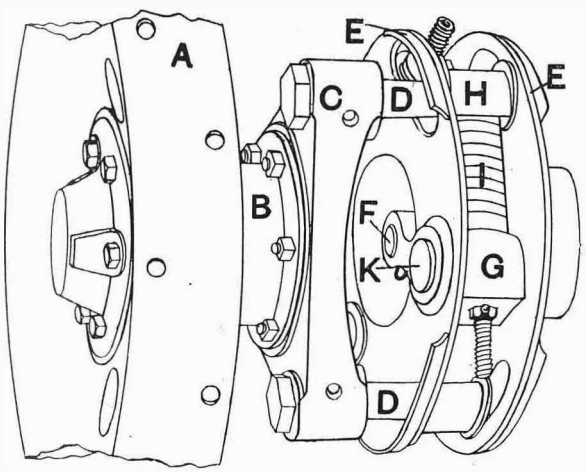


Fig. 1. Perspective side view of the Albion spring drive.

A, male cone of the clutch
B, sleeve carrying the three-armed plate C
C, three-armed driving plate
D D, two of the three driving pins in C
E E, flanges on a bronze drum connected to the primary change speed gear shaft
F, nut securing the bronze drum to the primary gear shaft
G, cross-head secured by pivots K K K between E E
H H, eye bolts working on D
I, square section spring on the shaft of H
K K K, steel pivots to G
M M M, concentric slots in which the driving pins D work

allow for any twisting of the frame over particularly rough roads without causing any binding in the gearshafts.

In fig. 1 A is the male portion of the conical friction clutch, which is of the usual type. This is mounted freely on an extension of the engine crankshaft, which extension is hollowed out, and the spring for actuating the clutch is placed within it, the pressure being transmitted to the sleeve B through a ball thrust bearing. The rim of the flywheel, which is not shown, forms the female part of the friction clutch, the male portion A being bolted to a flange on the end of the sleeve B. On the other end of the sleeve B is a flange to which is bolted a triangular arm connected to a driving plate C by means of three driving pins D, which engage with and drive through the second plate carrying the spring members. On the end of the first mainshaft of the change-speed gear is mounted a drum having two large flanges E E. In these flanges are cut concentric slots at three equi-distant points of the circle. At three other points are placed guide blocks G, which are provided with hardened steel pins K K K. Through these guide blocks work the shaft of an eye bolt H. The eye of the bolt H works upon the three pins D of the triangular arm before mentioned, and shown in fig. 1. Upon the bolt is placed a strong rectangular section coiled spring which is adjustable by means of the lock nuts shown. When the required tension is obtained, in the first place the lock nut is pinned, so that no further adjustment is required. The phosphor bronze drum is locked to the first shaft of the change-speed gear by means of the nut F, which is secured by means of a split pin, as shown.

Now, as to the first action of this drive. When the male portion of the clutch A is brought into contact with the female portion, which is the flywheel of the engine, the sleeve is rotated, and with it the triangular arm C and the three pins D D D. These pins being directly connected with the eye bolts H compress the springs against the cross heads G, which in their turn are secured firmly to the flanges E E of the drum, which, it will be understood, is part and parcel of the first motionshaft of the change-speed gear. It will thus be seen that, instead of the shock of the clutch engaging being transmitted directly to the gear, it is taken up in the first place by the springs. These compress until the whole form a solid drive. It will thus be seen that this spring drive, as it is, pure and simple, eases the shocks upon every part of the driving mechanism, and tends to equalise the torque of the engine.

The advantages of this drive are apparent to the student of automobile mechanics; and, as we have said before, for those who do not appreciate its points actually, the whole object is to relieve the gearing from shocks, to equalise all strains of the driving gear as much as possible, and in so doing to cause the drive of the engine and any shocks therefrom to be as little felt as possible by the occupants of the car. It will be seen that such an arrangement as this would be of great advantage in cases where one had a very fierce clutch. We mentioned this

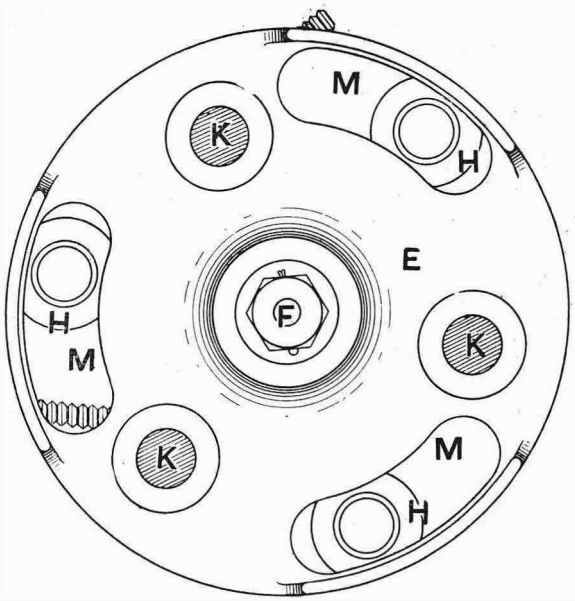


Fig. 2.—End view of the front flange of the bronze drum. The same letters apply to this drawing as to fig. 1.

spring drive in a short reference which we made to the Albion car at the time of the last Crystal Palace Show (see *The Autocar* of February 7th, page 154.

High art. Every autocar in Lisbon is numbered, and very conspicuously. The big red car belonging to the King's brother, Duke Alfonso, bears in crude white letters, about four inches high, painted in the most prominent place, "3-Lisboa."

THE WHITE STEAM CAR.

The accompanying illustration shows the new tonneau pattern 10 h.p. White steam car, in which a steam-driven vehicle is made to approach as nearly as possible to the favourite type of petrol car. These steam cars, which have received the approval of so well known an authority as Col. Crompton, R.E., C.B., are steadily winning favour in this country. The White car is propelled by a 10 h.p. compound engine placed under a shapely motor bonnet in front of the dashboard closed in at either end—at the front by a condenser which has the appearance of a radiator, and at the back by a water tank in the style of petrol carriages. The boiler is of the flash type, which will not burn out or explode, and which rarely gives trouble from leakage. When it is desired to spurt the car to climb a sharp ascent, high pressure steam can be admitted to both cylinders for a short time. The drive is by an universally-jointed propeller-shaft to the bevel gearing surrounding the differential gear on the live axle. It is claimed that the radius of the travel of the car on one charge of water is practically unlimited. The wheelbase is 6ft. 8in., and the gauge 4ft. 8in. Wheel steering is fitted, and the road wheels are shod with large diameter detachable tyres. The running of the car is almost noiseless; there is no visible exhaust, and no vibration to speak of. We hope shortly to speak further as to the behaviour of this car upon the road from personal experience. Its present appearance certainly attracts us.

Upon his return from Ireland, Mr. R. Moffat Ford afforded us some interesting information concerning the police. In driving his Decauville from London to Holyhead, he was agreeably surprised to find that no traps whatever had been laid for motorists. When he recrossed from Dublin, however, the police had evidently repented of losing so golden an opportunity, and were waiting upon the quay at Holyhead, where the cars were unshipped. As each car was landed, they took down a written description of its appearance, together with the name and address of the owner, obtaining this information from the travelling label attached to the car. Mr. Ford asked by what right this was done, and was informed that it was by direction of the superintendent. He then sought out the stationmaster and lodged a complaint against motorists being annoyed and harassed upon the North-Western Co.'s premises by such official impertinence, whereupon the police were immediately ordered off by the stationmaster. In the meantime Mr. Ford had also telegraphed to the secretary of the Automobile Club in Ireland, and since then there has apparently been no further trouble in that direction. But, as Mr. Ford pointed out, it is by such unnecessary actions as these that the constant friction between motorists and the police is perpetuated. Whilst it is only right that all reckless and inconsiderate drivers should be adequately punished, it is absurd that a few scattered local authorities should assume that all motorists are grossly incompetent, and should employ, therefore, every means to harass and annoy them. Certain Welsh magistrates appear to be particularly biassed.

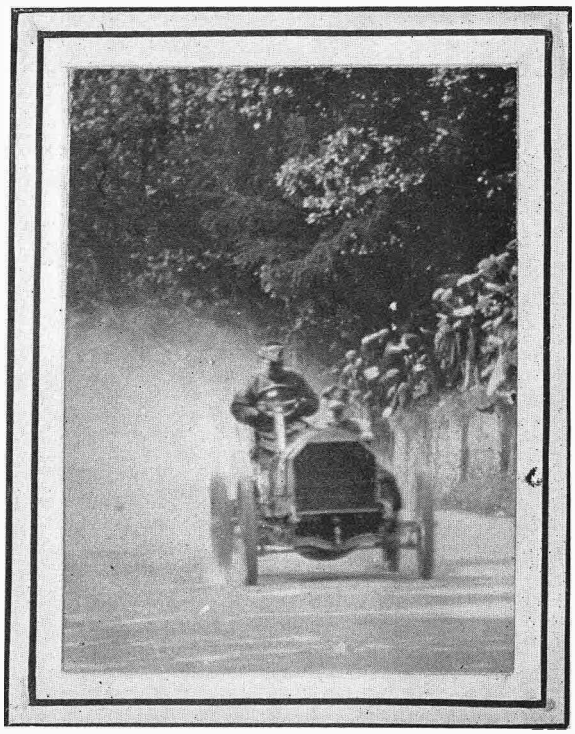
CONTINENTAL NOTES AND NEWS.

Automobile Regulations.

Anything that throws a light upon the deliberations of the extra-Parliamentary commission which was appointed recently to consider the whole question of automobile traffic is of particular interest at the present moment when everyone is looking forward with anxiety to the publication of this body's report. Since its constitution the commission has been chiefly engaged upon the formation of committees to take up different questions, so that the discussion has not yet gone far enough to permit of any opinion being expressed as to the final result of this great automobile parliament; but it is possible to get some idea of the trend of the deliberations by the views which have just been expressed by M. Pierre Baudin, a former Minister of Public Works and one of the presidents of the commission. M. Baudin believes that the principal reason for the hostility towards automobilists is the absence of any proper police supervision on the highways. In the towns they have to drive at an absurdly slow pace; but on the country roads the laws cannot be enforced, because the police have so many other duties that they are unable to look after the automobile traffic; and as owners have no fear of the consequences, there is a good deal of reckless driving, or, rather, it appears reckless to the local authorities who treat automobilists passing through their respective communes with unnecessary severity. M. Baudin believes that the only way of giving satisfaction to automobilists is to organise a special brigade of policemen on autocars who will be able to patrol the road for a considerable distance. This would put a salutary check upon reckless drivers, at the same time that the public, feeling they were protected, would no longer look upon the automobilist as their natural enemy, and thus the prudent owner would enjoy much more liberty and protection than he does at present. Seeing that the Government draws such a considerable revenue from autocars, it could very well go to the expense of purchasing a number of cars and putting them in charge of policemen, who would thus have a much better idea of the requirements of automobile traffic, and would be inclined to give much more latitude to autocarists than men who scarcely know one end of a motor car from another.

Raising the Speed Limit.

There is one thing, however, that the president of the commission regards as very important—the maintenance of the clause in the existing regulations to the effect that "no vehicle presenting a cause of special danger will be allowed to leave the factory." M. Baudin interprets this as including the huge racing machines, which cannot be driven at less than forty or sixty miles an hour; and he is firmly determined to do what he can to prevent these vehicles from leaving the makers' works. At the same time the president does not approve of the present limit of thirty kilometres an hour on country roads, for he states that it is very important for the development of the automobile movement that the vehicle should attain an average speed of from thirty to forty kilometres, whatever may be the gradients; and if this is done, it is obviously impracticable to fix a maximum limit of speed. As more liberty will be allowed in the way of speed, M. Baudin thinks that the drivers should undergo a much more severe examination than they do at present, and this examination should be in the hands of the automobile clubs, who would thus take all the responsibility upon themselves. At the same time, each accident necessitating more than twenty days of incapacity for work should be made the subject of an official inquiry, the results of which should be published, so that it would be seen whether the accident was due to any defects in the vehicle itself or to the driver's own want of skill.



Werner driving Mr. Grey Dinsmore's 60 h.p. Mercedes up the test hill at Castlewellan.

In the latter case the driver would be deprived of his certificate. In a word, the general lines of the reforms suggested by the president of the commission are a limitation of the powers of motors—that is to say, the suppression of racing machines on the road—and the creation of a service of automobile policemen on the principal highways, by which means he hopes that it will be possible to "undertake a rapid tour of France under the best possible conditions of comfort, liberty, and speed."

The Ostend Meeting.

The automobile meeting at Ostend must necessarily be a success; it could scarcely be otherwise. It has everything in its favour—a magnificent seaside resort with a brilliant holiday population in the height of the season, a hard-working committee who have acquired a great deal of experience in organising events of this kind, and on the present occasion the meeting coincided with the formal opening of

the new automobile road from the French frontier to Ostend, which is destined to facilitate automobile traffic from the North of France to the Belgian "queen of watering-places." The meeting opened on Saturday with a ten kilometres speed test on the new automobile road between Nieuport and Snaeskerke. The route is perfectly level with an excellent macadam surface; and as the weather was all that could be desired, it is not surprising that some of the records got a very bad shaking. In the voiturette and light carriage classes the Darracqs repeated their exploit at the Ardennes circuit by carrying everything before them. The Darracq voiturette driven by Villemain covered the ten kilometres from a standing start in 6m. 11⅗s., which is a record for the distance; while the Corre voiturette of d'Hespel took 7m. 42⅕s. Béconnais on a Darracq also broke the record for light carriages in 5m. 23s., beating Baras on another Darracq by 13⅖s. Then came Henriot (Clément) in 5m. 50⅘s., and Taveneaux (Gobron-Brillié) in 6m. 6⅘s. The most remarkable performance was accomplished by the Mors belonging to M. Amblard. This car was driven by Gabriel, who covered the ten kilometres from a standing start in 5m. 12⅖s., which is equal to seventy-one and a half miles an hour. The car was disqualified because it was not driven by M. Amblard, in whose name it was entered, and the first place was consequently taken by M. Willy Poege, who drove his Mercedes over the course in 5m. 13⅗s.

Other times were:

Salleron (Mors), 5m. 16⅘s.
Duray (Gobron-Brillié), 5m. 29s.
J. de Crawhez (Mors), 5m. 30⅖s.
Le Blon (Serpollet), 6m. 6s.
Guders (Pipe), 6m. 25⅗s.
Hautvast (Pipe), 6m. 38⅗s.
Rigolly (Gobron-Brillié), 6m. 50⅗s.
Coppée (Germain), 6m. 50⅗s.

Rigolly did not compete with his big 110 h.p. machine, which had not arrived from England; but having entered for the trials he took part in them with a standard type of Gobron-Brillié touring car.

The Gordon-Bennett Cup Winner.

The success of Jenatzy has naturally aroused the greatest enthusiasm throughout Germany. The victory was so unexpected, that the Germans look upon it as a convincing proof of the superiority of their cars, and the Daimler Motoren Gesellschaft have expressed their appreciation of the services rendered by M. Jenatzy by making him a present of four cars, which are to be constructed specially for him, so that with the gratification received from the Continental Tyre Co., it is estimated that the winning of the Gordon-Bennett cup race has brought M. Jenatzy not far short of £8,000. No one can feel anything but pleasure at his success. As an autocar inventor he has met with a good deal of reverse, principally because, being an electrical engineer, he first turned his attention to the electric car, and then, on seeing its shortcomings from a touring point of view, he endeavoured to combine the advantages of the internal combustion engine and the electric motor in one vehicle. But he was a little before his time. He has undoubtedly exerted an influence upon the automobile. He was the first to see the possibilities of speed by covering the kilometre with his famous Jamais Contente at the rate of more than sixty miles an hour, and he has also proved that there is something in the petrol-electric car, which is now being developed by some Continental makers in a way that may have important consequences for automobilism in the future. M. Jenatzy's work so far has been that of a pioneer and experimenter, and as this is notoriously unsatisfactory from a financial point of view, it is gratifying to see that he has at length got some tangible return. Now that the cup has gone

Prof. Hele Shaw on his 20 h.p. Thornycroft mounting the hill at Castlewellan.

to Germany, no effort will be spared to run off the race next year in that country, and as the Government of the Grand Duchy of Mecklenburg has already promised to sanction the race on its territory it is not likely that the Automobile Club of Germany will find it necessary to fall in with the proposal which is made to arrange with the other clubs for a modification of the rules allowing of the event to be run off in the Belgian Ardennes. Mr. Jellineck states that the German Club intends to profit from the admirable organisation of the race in Ireland, and will have both English and American representatives on the organising committee. To commemorate his victory Mr. Jellineck has been authorised to add Mercedes to his name, so that henceforth he will be known as Mr. Jellineck-Mercedes.

A Big Factory.

There are rumours this week that the State small arms factory at Chatellerault is to be converted into an automobile works. The manufacture of small arms has been falling upon such evil days that all the State establishments have been reducing the number of their hands, and it seemed only a question of time when Chatellerault and one or two others would be closed altogether. It is reported that a prominent automobile maker in Paris—the name of M. Darracq has even been mentioned—is in negotiation with the State for the purchase of the Chatellerault factory, which will be transformed for the manufacture of autocars. The automobile industry is the last resource for all other branches of the engineering trades that fail. It is, indeed, the only branch that flourishes at all.

An Automobile Paperchase.

The sporting events of Meulan, a pleasant town situated on the Seine to the west of Paris in the direction of Mantes, are beginning to have a decided automobile interest. This is because Meulan is the residence of M. Henry Deutsch, the petrol millionaire, who has been trying to convert the French Henley into a centre for all kinds of sports; and on the occasion of the annual boat races it was only natural that an invitation should be extended to automobilists to be present on this occasion. A paperchase was arranged on Sunday from Paris to Meulan, when, unfortunately, it clashed with the national *fêtes*, and the number of competitors was not so large as had been expected. The trail was laid by Viscount de Morlhan, who marked out a very puzzling course of about sixty miles. Five controls were established, at which numbers were given to the competitors to prove that they had gone over the entire course; but the only automobilist to reach Meulan with the full number of tickets was M. Henri Kapferer on his Renault.

A Motordrome.

It appears as if the first motordrome in France is actually on the point of being constructed. A wealthy syndicate composed of gentlemen well known in sporting circles recently acquired a property near Champigny to the east of Paris with a view to laying out a racecourse; and, seeing the advantage of killing two birds with one stone, they thought of purchasing an adjoining property and throwing the two into one so as to make a vast motordrome, which would be available both for horse and autocar racing. The property is known as Le Tremblai, and it has been acquired at a cost of £80,000. The syndicate has now entered into negotiations with the Compagnie de l'Est for the construction of a railway-station close to the motordrome. It is quite possible, therefore, that before the end of the year a new era for autocar racing will be opened upon the Le Tremblai track.

THE INTERNATIONAL AUTOMOBILE CONGRESS.

(Continued from page 77.)

The "progress of the petrol motor since 1900" was also dealt with by M. F. Drouin, who said that this progress could be considered from different points of view—that is to say, what would be regarded as an advance by one would probably not be deemed of equal importance by another. For example, the racing car of to-day would not have been possible with the motor of three years ago; yet, on the other hand, we see cars built before 1900 come out very creditably in economy and reliability trials. As a matter of fact, in its general lines the motor has not changed; but it has undergone considerable improvements in detail, notably, the carburetter, which have had a great effect upon its behaviour. The progress is especially marked in the elasticity of the motor. The variable speed which is given to the engine nowadays has the triple advantage of simplifying the change-speed gear, diminishing the strains on the clutch, and of being more economical when running under a light load. M. Drouin briefly described the different methods of governing engines, and referred incidentally to the few attempts that had been made to compound engines, remarking that for vehicles the compound motor had the disadvantage of weight, and nothing yet was really known about the economy of a double expansion of the gas. In conclusion, he said that, from the point of view of efficiency and regularity of running, the difference between the motors of 1900 and those of to-day is inappreciable; the power has increased from 25 h.p. to 100 h.p., and the weight has diminished from 10 kilogs. per horse-power to 3.6 kilogs. per horse-power. As regards elasticity the progress is considerable; and, lastly, nearly all the details and accessories of the motor, such as the valves, pipes, water circulation, ignition, lubrication, etc., have been greatly improved.

Mechanical and Automatic Valves.

In his report upon automatic and mechanically-operated inlet valves, M. G. Lumet stated that he had carried out experiments at the laboratory of the A.C.F. with a spring to which he was able to give variable and known tensions on an automatic induction valve, and the diagrams obtained indicated clearly that with a weak spring the volume of gas drawn into the cylinder was greater than with a strong spring; but, on the other hand, it facilitated the backward rush of the gas, which M. Gaillardet attributed to the dilation of the mixture in contact with the hot cylinder walls; while M. Lumet con-

sidered that the backward rush takes place when the piston begins on the compression stroke. To avoid this loss the inlet valve should close as rapidly as possible, and it should be fitted, therefore, with a strong spring. M. Lumet also dealt summarily with the mechanically-operated inlet valve, and thought that the advantage of running the motor at slow speeds with this valve did not compensate for its complication and increased cost. He considered that it was only advantageous on big engines.

M. Bollée asked to what was attributed the increased power with the use of strong springs, to which M. Lumet replied that it was due to a higher compression and a larger charge. The discussion centred chiefly upon the comparative advantages of automatic and mechanical inlet valves, several members speaking strongly in favour of the latter; and M. Bollée said that the objection to the mechanical valve on the score of complication and increased cost could not hold good, for in an autocar costing several thousands of francs the addition of an extra camshaft was of no importance whatever, and the added cost was infinitesimal. M. Huillier said that one advantage of the mechanically-operated valve was its interchangeability, so that it could be replaced on the road by any tourist. M. Jeantaud asked why automatic valves had replaced mechanically-operated inlet valves on the Mors cars in the Paris-Madrid race. M. Huillier said that they were using a carburetter that did not give satisfactory results with mechanical valves. M. Jeantaud said M. Mors had just told him that the automatic valve gave more power. M. Bollée said he did not think that more power was to be obtained with the mechanically-operated valve; but he nevertheless considered that it was the valve of the future. It caused a certain perturbation in the carburetter, which was not sufficiently studied by makers, and this was why some of them failed to get satisfactory results with the mechanically-operated valve.

Lafayette, Ltd., Photos. *Dublin.*

Monsieur Tampier, the French timing expert, at the Gordon-Bennett race, and Mr. R. E. Phillips, the chief English timekeeper, comparing notes. No one criticised Mr. Phillips's system of timing the race more severely than ourselves and we still consider that the risks it involved of serious error were very great, but it gives us pleasure to record that, as Mr. Phillips said himself, "it worked." He attributes its success to the extreme vigilance of the control timekeepers and the exceptional excellence of the watches they used.

On Carburetters.

M. Lumet read a paper describing the various carburetters in use. The only novelty was a new automatic carburetter invented by MM. Grouvelle et Arquembourg, which, however, it is difficult to describe without drawings, and these were not given in the report. Its principal object is to prevent the flooding of the carburetter by always ensuring a proportionate pressure in the mixing chamber and above the float. M. Turgan asked if anything had been done in the way of adapting paraffin carburetters to motors, because he considered that this was, after all, the most important question in the economy of automobiles. M. Arnaux said that he had experimented with the Sthenos carburetter, and found that, after starting the motor with petrol, it ran very well with paraffin. M. Bocandé wanted to know whether the carburetter should be placed near the motor or as far away from it as possible. M. Arnaux said that he had worked an engine satisfactorily by introducing the petrol and air directly into the cylinder, which statement called forth an enquiry from M. Longuemare as to what the consumption would be. M. Longuemare thought that there was an advantage in thoroughly mixing the gas before entering the motor. At the same time the pipes should not be too long for fear of condensation in cold weather; and if placed too near the gas enters the cylinder at a high temperature, when, of course, the motor loses in efficiency. M. Périssé considered that the length of the pipe depended upon the nature of the fuel. Benzine, for instance, could be introduced directly into the cylinder, whereas alcohol required to be warmed previously. Herr Pollak said that experiments had been carried out with a motor in which a port had been cut in the cylinder and closed with glass; and it was seen that with the surface carburetter the gases burned with a violet colour, while with the spray carburetter they burned red, thus showing that there was matter in suspension, and consequently an imperfect combustion.

Ignition Experiments.

M. Lumet presented another report with diagrams showing the results of his ignition experiments at the laboratory of the A.C.F. He first of all alludes to the different factors that influence the ignition, such as the composition of the mixture, temperature, and compression, and he states that a perfect mixture will explode instantly without any exhaust flames. Some makers put ribs on the face of the piston so as to facilitate the mixing of the gas. His experiments showed that there is every advantage in using comparatively high tension currents to secure as hot

a spark as possible. The ignition had, in fact, a considerable influence upon the efficiency of the engine. Two interesting conclusions resulting from these tests were that when the mixture had an excess of air the power increased with an advance of ignition, but when the mixture had an excess of spirit the power decreased with an advance of ignition, in which latter case it was advisable to raise the potential to six volts.

M. Pollak thought that this was the moment to discuss whether the motor was an explosion or rapid combustion engine. In some experiments he had carried out he had taken two plugs; one of them he pointed, and the other he rounded off to present the largest surface possible, so that in the former case he got a thin spark, and in the other a good "fat" spark. With the pointed plug he could not get the engine to run, while with the other it developed its full power. He thought that this proved that the petrol engine was an explosion motor and not a combustion engine.

The Magneto System.

M. Arnaux briefly summarised the merits and drawbacks of the electrical and magneto systems of ignition, and concluded that they were of about the same value. The magneto was more complicated, and was only employed on expensive cars on account of its cost. It would be a great advantage if the use of electricity could be suppressed altogether. For this reason, he looked forward with confidence to the general employment of auto-ignition. The temperature to produce this must not be too high, or its advantage would be neutralised by the difficulty of cooling the engine. His experiments showed that this method of ignition was much more regular than with electricity, because the compression heated the gas through the mass, and the mixture consequently fired immediately. Special precaution would have to be taken to cool the end of the cylinder. The only difficulty with auto-ignition was that the engine could not be started without the electric spark. M. Arnaux also referred to the much greater efficiency obtained by causing a shower of sparks to pass between the ends of the plug, and he got excellent results by bending over the ends so that they presented curved surfaces to each other.

M. Brazier advocated the use of the magneto, and objected to the statement of the previous speaker that the magneto was only used on expensive cars. On the contrary, it was coming into extensive employment on light vehicles. The price was only slightly more than the ordinary electrical gear. He described his own system of magneto, and claimed that this method of ignition had a distinct advantage over electrical ignition.

(To be continued.)

The iniquitous tolls between Fareham and Southampton can be avoided by following another road, practically no further, and free from the shockingly bad surface of part of the Bursledon-Northam route. After passing Titchfield, a turn must be taken to the right through Botley, whence the route is through Swathling, into the London Road end of Southampton, avoiding the Northam suburb.

Correspondence.

The Editor is not responsible for the opinions of his correspondents.

A SMART PIECE OF WORK.

[3046.]—We are interested in Mr. F. A. Beadle's letter, headed "A Smart Piece of Work," in your issue of July 11th, but in justice to ourselves consider that the latter referred to requires some amplification. Our 30ft. yacht's launch, a sea going boat built to carry in davits, which was designed, built, and engined complete by us, has a speed, taken by Admiralty officials, of 23.6 miles; thus it is clear that our speed record for a boat of this size has not yet been broken. As regards expedition in building, we would remark that the last 27ft. yacht's launch delivered by us was built complete and dispatched in 31½ days. From the above it appears that our 30ft. steam launch is still the fastest of her size afloat, and that we can on occasion build a launch in 31½ days as against your correspondent's 45 days. On both counts, therefore, the record is still with us, and we think we may fairly claim any credit arising therefrom.

We cordially endorse your correspondent's remarks as to the fascination of a high-speed launch, and shall be only too pleased if the sporting public takes up again a form of amusement of which we were the pioneers, and in which, as the result of years of experience, we are still in a position to guarantee the highest results.

For SIMPSON, STRICKLAND, AND CO., LTD.,
WM. CROSS, Managing Director.

ON DRIVING A DE DION CAR.

[3047.]—Referring to Mr. A. J. Wilson's article under the above heading in your issue of the 4th inst., will you allow me to correct two slight errors.

The carburetter level of all De Dion-Bouton cars made during the last two years has a movement of ninety degrees. When the lever is placed in the centre of this movement the inlet is opened fully and all the air drawn in passes over the spray. When the lever is moved in one direction a proportion of the air, according to the amount of the movement, passes direct to the motor. When moved in the other direction the inlet is partially closed, but all the air drawn in passes over the spray.

Mr. Wilson states that he has known the gear wind up on account of the clutches getting overheated through being allowed to slip. I consider that if, as very rarely occurs, the clutches do get expanded when the car is being driven, it is invariably through the key not fitting properly in the slot of the adjusting rack. The cause of this may be due to the key not being long enough to enter the slot to the proper depth, or through the spring holding it in position not being strong enough.

I may say that we are always pleased to give advice to users of fully licensed De Dion-Bouton cars in respect to any trouble they may have if they will write to us on the subject.

DE DION-BOUTON, LTD.,
WALTER MUNN, secretary.

THE PHŒNIX PARK SPEED TRIALS.

[3048.]—Has the Automobile Club formulated a new system of running off contests? Why I ask is because in the Phœnix Park Trials on July 4th I saw the various heats of the tourist class cars run off, altogether nine heats of two cars each, and then the final heat in which only two cars competed. This seemed to me to be a very funny way of doing things, and absolutely at variance with the usual way of carrying out races. The coupling in the heats, too, seems to have been most extraordinary; for instance, two 20 h.p. M.M.C. cars were pitted against two 10 h.p. cars—Panhard and Brush. Of course the M.M.C.'s won their heats without the slightest difficulty and without having to hurry. This leads me to the assumption that the two M.M.C. cars, although running, did not do their best in their heats because it was not necessary, their opponents being much slower cars, consequently because of this erratic coupling it is quite probable that they lost their chance of the prize. I imagine that they would have made faster times had they had cars of their own

mettle to run against. It is proved by the winner's times that the fact of his being obliged to do his very utmost in the final made him get more out of his car. His first time was 2.11 and his final 2.6.

I questioned some of the drivers of cars in the contest afterwards, and elicited the information that they were quite unaware before the race was run that it would be carried out in the way it was, and Mr. Burgess said he could have got more out of his car if it was necessary, as its accelerator had several more notches to go.

I advised him to protest. I most certainly should had I been in his position.

I do not hold a brief for the M.M.C., but mention them specially because of the way they were matched.

W. ETHERINGTON.

THE MOTOR BILL.

[3049.]—Referring to the Motor Bill at present before Parliament, I think that motorists or the committee that looks after their interest should be slow to accept it. If the bill passes with a penalty of £20 and £50 for a second offence it will probably mean the death of the motoring industry. Surely such an extravagant and heavy penalty should only be inflicted where harm is done. As the bill stands at present, if a constable fancies that you are going at more than the legal pace (and it is superfluous to add that he will swear what he fancies), it means on the first occasion a fine of £20, and on the next £50. This is absurd, and should not be entertained for a moment. I am quite willing to admit that if anyone drives to the common danger a penalty of £20 or £50 should be exacted, and this indiscriminately whether it be a motor car or a milk car. I think motorists should contend for a revision of the law all round, otherwise if this bill becomes law it will be impossible to drive a car. The law should be amended, and it should be made a penalty for anyone to drive on the wrong side motor or horse van, or for cyclists to ride three abreast, and block the road, and for horses to be allowed to be driven through the streets tethered to one another. Another frequent source of danger is leaving unattended horses outside publichouses, etc., and another dangerous practice that should be put down is lads who ride cycles with young girls holding their arms. It was only the other evening I was driving along a narrow road when I met a youth blocking the road by riding along with his arms round a young lady's waist, and he would not move an inch, and if I had touched one of the riders, of course it would have been the motor car that was in the wrong.

Heavy traffic should be made to keep on its own side, and not allowed, as it is at present, to drive in the centre of the road, and there should be a severe penalty inflicted on men who make it a practice of going asleep on top of drays and let the horses wander along without anyone to guide them.

Another thing to be provided against is that people stepping off a kerb on to the roadway should be held liable for negligence when they do not take the trouble to see if the road is clear, and simply step off and leave the drivers to nearly break their cars to save them from being run over. Street traffic is undergoing a change, and the law will require to be revised and amended all round unless we are to stick to the old slow-moving modes of the present day, but even with them the rules, or rather laws, of the road require to be revised, as is apparent when one takes up the statistics and see how many fatalities there are from horse-drawn vehicles alone in each year, and that in ninety-nine cases out of one hundred brought about by the carelessness of the public, who seem to think there is no obligation on them to save themselves or take any trouble to do it.

A CONSTANT READER.

[3050.]—The first sub-section runs in these words: "If any person drives a motor car on a public highway recklessly, or at a speed which is dangerous to the public, having regard to all the circumstances of the case, including the nature, condition, and use of the highway, and to the amount of traffic which actually is at the time, *or which might be expected to be on the highway*, that person shall be guilty of an offence under the Act."

On Thursday last week I was the victim of the Bingham Court in a fine of £10 and costs, although it was my first offence, no one was proved to be endangered, and it was stated that my car was used by me as a business vehicle as a commercial traveller.

This is my fourth season of motoring, and I doubtless have driven 50,000 miles and have never before been even cautioned by the police. I have found my motoring a great success in my business, but I fear for some years I shall have at least to "go back" from my present specially-finished, smart, two-cylinder, 12 h.p. Progress to something very much more unpretentious in the solid tyre line just for local journeys only, and so take my longer journeys in the old miserable way, per trains and "hay motors," as I see no relief in the new Bill from the clause quoted by me above under such justices as I was brought down by. I very truly hope that this particular clause may yet be amended.

R. R. LATHAM.

THE MOTOR BOAT RACE.

[3051.]—As regards the limiting of the crews of competing launches for the Harmsworth Cup, may I point out that the Marine Motor Association do not limit the crews in their rules. This cup was presented to the Automobile Club by Mr. Alfred Harmsworth, and the Marine Motor Sub-committee of that club formulated the conditions under which the race should be held.

One of the chief objects held in view in framing the rules of the Marine Motor Association has always been to put together equitably all types of motors—petrol, paraffin, electric, steam, or what not.

E. DU BOULAY,
Vice-president Marine Motor Association.

[This letter is in reply to one from the Hon. C. S. Rolls published in our issue of July 4th.—ED.]

THE TERMS OF AFFILIATION.

[3052.]—May I ask your assistance in ascertaining the terms of affiliation offered to provincial clubs by the A.C.G.B. and I.?

The terms of affiliation have been at various times very variously stated to us by the officials of the A.C.G.B. and I. At one time they were as follows: 10s. 6d. fee per member, membership of the Motor Union (stated by the A.C.G.B. and I. last autumn to be in a moribund condition), and the *Journal* free weekly.

I have lately received a copy of the rules of the A.C.G.B. and I. from the secretary of that club, in which the terms of affiliation are stated to be 10s. 6d. fee per member and the *Journal* "free." The Scottish A.C. has, I understand, made terms of affiliation satisfactory to itself. Would the Scottish A.C. let us know what these terms are, and if they differ from the terms given above?

The Derby A.C. is at present negotiating terms for itself. It would be interesting to know what these terms are. It would be interesting also to know if the terms of affiliation agreed upon with individual clubs are proportional to the amount of pressure each club can bring to bear at headquarters. Also, is every club affiliated forced to take the Automobile Club *Journal*? Our members, by a very large majority, prefer to take their own motor journal, and would gladly give up the *Journal*, and think the affiliation fee asked should be much less than 10s. 6d. a member, as the advantages given in return are almost nominal. It is obvious that if the A.C.G.B. and I. can say that the *Journal* circulates among 104 owners of cars in Lincolnshire (practically including every automobilist in this county), the value of its advertising space is enhanced very considerably. We think this fact should be taken into consideration, and our "fee" reduced in proportion. May I also say that we receive far more courteous treatment by the editors of the automobile press in the matter of the publication of local "club news" than we do from the editors of the *Journal*. Yet we pay over £50 a year towards the club funds, and seriously hamper ourselves in using our influence locally on behalf of automobilism in consequence.

I beg to ask again therefore, can any member of a provincial club inform me what are the terms of affiliation offered by the A.C.G.B. and I., and do they vary with the club affiliated?

E. CRAGG, honorary secretary
Lincolnshire Automobile Club.

Saracen's Head Hotel, Lincoln.

Flashes.

Last week we referred to an excellent first drive made on one of the 10 h.p. four-cylinder Star cars. We now hear of another of these vehicles which has been driven well over 2,000 miles without the least trouble to the owner.

* * *

Last Saturday, Mr. Leonard Beadle, of Kentisbury, Barnstaple, made an excellent run upon his Rigal car, driven by a 6½ h.p. Aster engine. He says: "I started from Greenwich at 3 a.m., and arrived here (Kentisbury, Barnstaple, Devon) at 9.45 p.m.. I went thirty miles out of my way through misdirections. The net running time was 13h. 20m. I had no trouble, used no water, and only five and a half gallons of petrol. The only hill that was the least trouble was at Bratton Fleming, near Lynton. Total distance, 244 miles."

* * *

It has often been our pleasing task to refer in terms of appreciation to the Century tandem, and it will be good news to many to know that the Century Engineering and Motor Co. have decided to reduce the price, and are making a special 5 h.p. tandem to sell at £125. This, they tell us, they are able to do without in any way interfering with the quality of workmanship or in any way reducing the efficiency of this very sporting little machine. The reduction in cost has been brought about by improved factory methods and generally increased facilities of production coincident upon the enlargement of the Century works at Willesden.

* * *

Most of the daily papers referred to the collision which Maher the jockey, when driving his car, had with another motor vehicle near Godstone. We understand that the victims of the collision were Mr. E. H. Clift, of Sinclair Road, Kensington, and his wife, who were driving their Darracq quietly enough, when a car dashed past theirs from the opposite direction at a tremendous speed, followed immediately by a second car, which appeared to be going faster still, and which collided with the Darracq. Mr. and Mrs. Clift were shot into the air and considerably damaged, and are now in the doctor's hands, while the car is completely smashed. The force of the impact was so great that the Darracq was forced back twenty feet, while Maher and his mechanician were precipitated forty-five feet, and terribly injured. It has been stated that the accident was due to Maher's steering failing, but we should say it is much more probable that it was really caused by driving at much too high a speed in the dust of the car in front. In any case, there seems little doubt that the jockey was driving a great deal faster than he should have been.

"THE AUTOCAR" DIARY.

July 18.—Sheffield and District A.C. Drive to Buxton.
,, 18.—Wolverhampton and District A.C. Drive to Albrighton, *viâ* Shifnal.
,, 18.—Lincolnshire A.C. Drive to Asgarby Hall.
,, 19.—Circuit de l'Argonne.
,, 22.—Cheltenham & Gloucester A.C. Drive to Stratford-on-Avon and Teddington.
,, 23.—Lincolnshire A.C. Drive to Beachfield, Grimsby.
,, 24.—A.C. G.B. & I. 100 Miles Quarterly Trial.
,, 24-25.—Southport Speed Trials.
,, 25.—Wolverhampton & District A.C. Drive to Stafford.
,, 25.—Winton-Fournier Match, New York.
,, 25.—Midland A.C. Hill Climb.
Aug. 1-3.—Cheltenham and Gloucester A.C. August Tour Monmouth, Abergavenny, Usk, and Tintern.
,, 1-3.—Wolverhampton & District A.C. Week-end Tour. Shrewsbury and Llangollen.
,, 5.—Winton-Fournier Match, Cleveland.
,, 8.—Scottish A.C. (Western Section). Drive to Biggar.
,, 8. Sheffield and District A.C. Drive to Matlock Bath.
,, 16.—International Races, Switzerland.

The Continental Automobile Co., Ltd., 20, Long Acre, W., inform us that the Duke of Manchester has purchased one of their 24 h.p. Continental cars.

* * *

Some exceedingly smart and amusing prehistoric motor postcards have been produced by Mr. W. Tempest, publisher, of Dundalk, Ireland. On them are portrayed sundry adventures of prehistoric men on the most crude of motor cars and motor cycles.

* * *

Out of twenty-five cars which started for the Circuit des Ardennes race only eleven finished, and of these eleven three were Pipe cars, forming the complete team entered by La Compagnie Belge de Construction d'Automobiles, the manufacturers of these sterling vehicles. This result, coming on top of the record obtained by the same cars in the Paris-Bordeaux section of the Paris-Madrid race, in which all the Pipe cars engaged finished in the average time of 8h. 14m., goes far to prove that in the Pipe car we have a vehicle of the greatest reliability.

* * *

The makers of the Argyll cars—the Hozier Engineering Co., Ltd., of Glasgow—have consistently improved their factory from the beginning, not only increasing its size, but by installing a large amount of new machinery. We recently referred to the hundred miles non-stop run made by one of the machines which was driven straight out of the factory, and it is interesting to record that the manufacture is now so thoroughly systematised that no less than sixty-two cars were turned out during the months of May and June last. As we write we have the auditor's certificate, which has been sent us by the makers, to show their claims as to output are thoroughly substantiated.

* * *

Messrs. Geipel and Lange are removing to new and more commodious premises at 72a, St. Thomas Street, S.E., where they will have a large warehouse, affording facilities for an increased stock of the electrical apparatus in which they deal.

* * *

The motor omnibus is rapidly replacing the old-fashioned diligences on the Continent. Mr. Keyser, the British Consul at Cadiz, writes that a motor car service was recently started in place of the old diligence between that place and Algeciras, thus saving several hours on the journey. This sample, however, is of a type already out of date, and is a mere nothing beside the existing need of transport for passengers, while merchandise continues to be carried in carts. The motor omnibus leaves Cadiz on alternate days, and accomplishes the journey in twelve hours. Private carriages can be hired which will enable the traveller to cover the same distance in eight hours.

When motoring between Ely and King's Lynn a few days since, Mr. Frank Morriss was attacked by a man who commenced by hurling a heavy stick at him as he passed. Mr. Morriss gave chase on the car, and after a fierce struggle kept the man till the arrival of a witness to prove his identity. The stick only just missed Mrs. Morriss, and struck Mr. Morriss on the back. Had it gone a little higher and hit his head, he would probably have been stunned, and the car would either have plunged into the river on one side of the road or into the ditch on the other.

The autocar is indeed a rival of time. It seems but yesterday that Ladysmith was beleaguered, and yet the photograph we reproduce was taken only a few weeks ago, as a Germain car was standing outside the Town Hall. At the same time, a trace of the conflict remains in the battered tower, which suffered from the result of a well-aimed Boer shell. We may add that the car is the property of Mr. A. Madore.

There are not many motor showrooms on the south side of the Thames, so it will not be without interest to mention that the Brush Electrical Engineering Co. have always a number of finished cars on exhibition at their showrooms in the Victoria Works, Belvedere Road, Lambeth, S.E.

* * *

The difficulty experienced by a correspondent in getting less than two gallons of petrol at Brighton may be overcome by purchasing from Mr. Hammond, of 4b, Waterloo Street, Hove. Mr. Hammond is an official repairer to the A.C., and has a well-equipped garage.

The root growers of North Lincolnshire are complaining bitterly of the heavy charges of the railway companies, which are said to be so high as to take most of the cost of production. Why not then turn their attention to motor conveyance? There is a lack of railways, and motors could be used with advantage.

* * *

Mr. C. Binks speaks very highly, from experience, of Mr. James Gough, of the Royal Crescent Mews, South Cliff, Scarborough. He makes a speciality of catering for motorists, and is most reasonable in his charges. Further than that, he has made arrangements so that anyone storing a car at his place can get it any time in the day or night without delay.

* * *

It would be interesting to know what view the magistrates will take of the action of the police in a certain district between Holyhead and Shrewsbury. These energetic constables are reported to have stopped several motorists by putting a ladder across the road. This is undoubtedly an illegal act, and we hope if any of the thirty or forty automobilists reported to have been stopped by this method are summoned that they will take out a counter-charge for illegal obstruction of the King's highway. It is a very serious matter indeed, and it is a testimony to the skill of the drivers and the ease of control of the autocar that no bad accident resulted.

* * *

Last week Mr. Frederick Smith, chairman of the Manchester Automobile Club, was driving through Handforth with Mr. Reynolds (principal of the Manchester School of Technology) and Mr. Charles Rowley (a Cheshire justice of the peace) in his car, when a horse, ridden by a coachman, shied at the car and threw its rider. The inevitable summons followed, though the coachman admitted that he gave no signal for the car to stop, but after conflicting evidence on the part of the prosecution as to the rate at which the car was travelling, the bench dismissed the case, as in their opinion it had not been clearly proved that Mr. Smith had driven furiously.

* * *

Pope seemed to be somewhat in touch with the Motor Car Bill, when he sang:

"As yet a child, nor yet a fool to fame,
I lisped in numbers, for the numbers came."

* * *

Dwellers in the North will be interested to know that the Toledo steam cars can now be seen in Inverness, N.B., as Messrs. Shippey Bros., the agents for this very ingenious system, tell us that they have appointed Mr. G. E. Smith as their northern agent.

We have before now recommended those who wish to limit their expenditure as far as possible to turn their attention to the motor cycle and forecarriage. One of the smartest designs we have lately come across is the new 3½ h.p. Rex tandem tricycle. Instead of the basket-work front seat, a neat little well-upholstered bucket seat is fitted, and with the wind catcher cowl, which concentrates the air draught on to the engine, the vehicle is a thoroughly practical one. So far as the motor and mechanical details are concerned, they follow the practice of the well-tried Rex motor bicycle.

* * *

The new model C steam engine which has just been brought out by the Mason Regulator Co., of Boston, is an exceedingly well-thought-out design. The Mason engines are already well known, and the leading idea of the new design is to still further increase the strength and wearing qualities of the engines. There is no great external difference from the preceding designs, but when the latest and its predecessor are put side by side and carefully examined it will be found that the new engine is an advance in every respect, particularly with regard to the increased areas of working surfaces and facilities for complete lubrication. Both these items lead to increased life and smooth running.

The Ormonde motor bicycle which proved so successful in the hill-climb and speed trials in Ireland last week was fitted with the Vaurs carburetter, which was illustrated and described in detail in *The Autocar* of April 25th, 1903, page 486.

The Moat of Ardscull viewed from the Gordon-Bennett course, from a photograph by Mr. T. Bernard Percy.

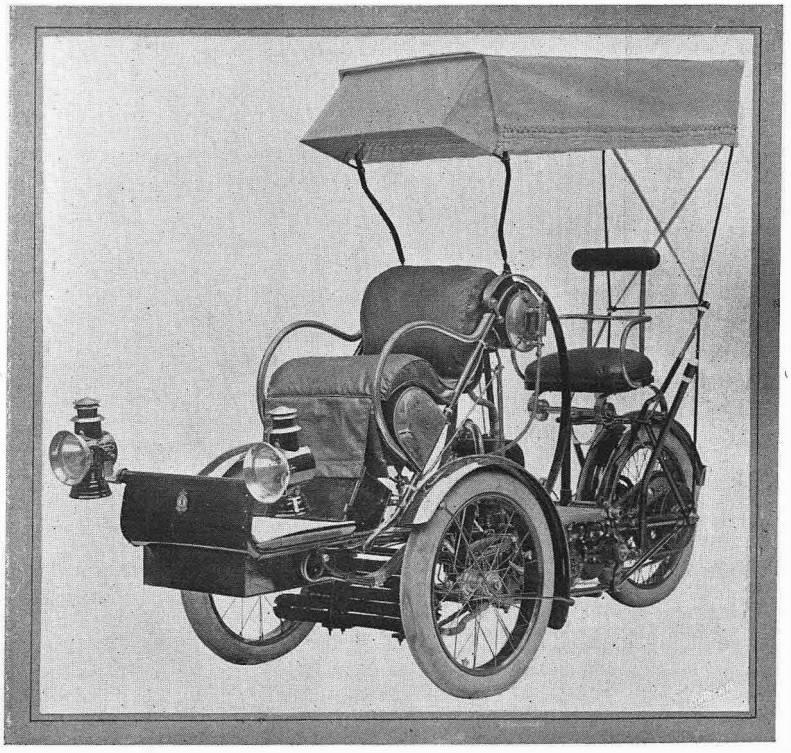
One of the pioneer firms of heavy motor vehicles for goods transport is the Lancashire Steam Motor Co., the makers of the Leyland lorries, and we are glad to hear that they are reaping the benefit of their enlightened policy. That is to say, they entered the industry when many engineering firms would not regard it seriously, and the experience they have accumulated is standing them in good stead. As a proof of the reliability of their vehicles, it is significant to note that over fifty which are now in hand are repeat orders from firms or corporations which have already used the Leyland machines. Among them may be mentioned the Chelsea Vestry, who are ordering two more of the four-ton tip waggons. At the same time the factory is being extended, and for the purpose six and threequarter acres of additional land has been bought, so that before long it will be possible to turn out three full-size motor lorries a week.

* * *

In our issue of July 4th we published an illustration of Mr. R. A. Cooper upon a Gamage car. The machine was stated to be a 10 h.p. This was a mistake, as it was obviously one of the 6 h.p. voiturettes which appear to have given very thorough satisfaction.

* * *

The police have marked out a furlong in Hyde Park, and have been taking the speed of all autocars that pass over it.



We referred in "The Autocar" of June 13, page 700, to a Century tandem which the Century Engineering Co. were sending to Ashanti for the use of the engineers of a gold mining company. Our illustration shows the machine complete with its canopy to protect the occupants from the direct rays of the tropical sun

The Anglo-American Oil Co. have issued a fresh list of their motor spirit agents. It is by far the largest list they have had, and will no doubt prove useful to tourists.

* * *

A garage has been opened by the Motor Manufacturing Co., of 34, North Street, Manchester Square, W., and it will no doubt prove a great convenience to owners of M.M.C. cars in town.

* * *

A motor depot has been established in Stoke-on-Trent at Cauldon Bridge by Mr. W. A. Vincent. He has several well-known cars, and, in addition, keeps accessories, petrol, and requisites generally, besides executing repairs.

* * *

A new type of Belsize car has been produced, and Mr. Rawlings, a member of the firm of engineers in Gloucester Road, who are the London agents for the car, has given us some interesting details of his trials of the car, which has a two-cylinder engine of 16 h.p. The cylinders are differently placed to allow of the inlet as well as the exhaust valves being mechanically operated. The radiator is of the multitubular type, the air current being induced by means of a fan. On the top speed the drive is direct from the engine. A tour of over 400 miles was made on the machine, which embraced a portion of Wales, Worcestershire, Oxfordshire, and Staffordshire, and we are informed that the whole journey was made on the top gear—in fact, our correspondent tells us that the lower gears are scarcely wanted at all, as the top drive can be used in traffic with the engine running dead slow, and further than that, the car can be started on the top speed, though we may say that this is not because the top speed is a low one. Last but by no means least, the machine is extremely quiet, and the seating accommodation has been enlarged, so that there is comfortable room for five people.

* * *

We recently recorded the fact that Messrs. Jarrott and Letts had gone into partnership. Now it is well-known that the large cars they handle are the Napier and the De Dietrich, but to meet the demand for a small handy vehicle at a low price they have taken over the sole agency for the Oldsmobile car for Great Britain, and they inform us that they will be receiving a number of these silent smooth running vehicles both this month and next, and that the price will be £150. Without drawing any invidious comparisons there is no doubt that the Oldsmobile as it stands is the quietest running small petrol car made; in fact it is the only machine at anything like the figure which can compare in silence of running with the steam car or the electromobile. It is possible that the silencer absorbs a good bit of power, but as the engine dimensions are not restricted this does not matter. The little machine has been greatly improved since last year, and we shall look forward to its performances in the reliability trials with very great interest. We hope that the small two-seated car class will be much larger than it was last year. There are a good number of new machines at £200, or less, which have been introduced since last September, and there are many prospective purchasers who will watch their performances in the trials with a very great deal of interest.

THE COUNTY OF KERRY CUP.

Killorglin Hill Climb.

[BY TELEGRAPH.]

On Wednesday, July 15th, the last event of the Automobile Club's Irish Fortnight took place at Killorglin on the Killarney-Tralee Road for the County of Kerry cup, given for the best hill-climbing performance. For thirty hours previous to the opening of the event rain fell somewhat heavily, so that the roads were in a very bad condition, and on this account the distance was reduced to about 1,200 yards instead of a mile, as in the programme. The cup was won by the Hon. C. S. Rolls.

J. W. Cross's 20 h.p. Humber (25s.) Gross time, 1m. 58 3-5s.

Geo. Iden's 20 h.p. M.M.C. (32s.) Time, 2m. 14s.

J. M. Gorham's 22 h.p. Daimler (35s.) Time, 2m. 43 3-5s.

Sir A. J. Macdonald's 22 h.p. Daimler, driven by P. G. Garrard (45s.) Time, 2m. 25s.

J. Wilson's Elswick, driven by R. Dickson (28s.) Time, 2m. 35s.

J. W. H. Dew's 6 h.p. Gardner-Serpollet, driven by J. Warren (5s.) Time, 2m. 15 3-5s.

R. W. Leader's 16 h.p. Century (40s.) Time, 2m. 51 1-5s.

Hon. C. S. Rolls's 20 h.p. Panhard, driven by C. W. Hacking (30s.) Time, 2m. 51 1-5s.

Hon. C. S. Rolls's 80 h.p. Mors (scratch). Time, 1m. 5s.

FINAL HEAT.

1. Hon. C. S. Rolls's 80 h.p. Mors. Time, 1m. 1 4-5s.
2. Sir A. J. Macdonald's 22 h.p. Daimler. Time, 2m. 13s.

Mr. J. W. Cross's 20 h.p. Humber qualified for the final, but was unable to start.

The racing class was declared void, and the handicap was framed from the Hon. C. S. Rolls's 80 h.p. Mors.

The timekeepers were Mr. W. S. Crowley at the start and Mr. R. E. Phillips at the finish.

The attendance was very meagre, there being only four visitors' cars and about 800 spectators present.

THE RELIABILITY TRIALS FOR MOTOR CYCLES.

Owing to many of the principals of firms connected with the trade being in Ireland during the past week, it has been decided to accept entries up till noon to-day (Saturday, the 18th inst.) without payment of extra fee. After this date the entrance fee will be increased twenty-five per cent. until July 25th, when the entries finally close. The trials will take place from the 10th to 22nd August next, starting daily from the Crystal Palace, to such places as Brighton, Folkestone, Eastbourne, Worthing, etc.

Autocarists in the South Wales district resent no less the officiousness of certain constables in respect to motor cars than their utter dereliction of duty in regard to the drivers of other vehicles. Recently no fewer than eleven heavy trucks were counted in one evening on the Cardiff-Newport Road after dark without any lights whatever attached to them, although the county has most stringent byelaws on the subject. If a motor car dashed into one of these vehicles and loss of life followed, we should speedily be regaled with tirades against "reckless automobilists."

SOME REPLIES TO QUERIES.

We are always pleased to reply to queries, even if they be of an elementary and untechnical description, under this heading. Only a selection of those which are of general interest will be published, though all will be answered direct through the post, for which purpose a stamped and addressed envelope should be enclosed.

When advice concerning different makes of cars is sought, each vehicle should be given an identifying number.

Letters should be addressed The Editor, "The Autocar," Coventry.

SEVERAL USEFUL QUESTIONS.

(1.) What is the precise use of the "accelerator," and when and how should it be used? Does it tend to strain the engine or other working parts? Is it equally useful on all the speeds? (2.) The fourth speed is a direct drive on my 12 h.p. Peugeot. In going down a hill on this speed will the momentum over-drive the engine, and should the clutch therefore be withdrawn? (3.) The throttle valve does not seem to have any effect on the petrol supply until it is *more than half-way* over the slotted guide on the steering-pillar. Is that a defect? And how should it be remedied? (4.) Using Pratt's spirit about .710 to .720 specific gravity, how often should the induction and exhaust valves be cleaned? And what is the best method of cleaning them? It is a day's work to do so by paraffin oil and rubbing with "waste." (5.) What is the function of the manometer? And what do the figures thereon indicate? (6.) With the Dubrulle sight-feed lubricator, how many drops per minute should I allow for cylinder lubrication? (7.) What is the kind of pump used? And is it liable to go out of order readily?—A.M.W.

(1.) The accelerator is a simple piece of mechanism which cuts the governor out of action, preventing it performing its usual functions and maintaining the engine at an approximately regular speed. By using the accelerator the speed of the engine is increased, and with it the power, so that its use is obviously to increase the speed and the power of the engine as occasion requires. It does not in any way tend to strain the engine if intelligently used. For instance, one would not use the accelerator when halfway up a hill, but would use it before actually attacking the hill, so as to get up a good speed on the car in the first instance, the momentum helping it well on its way. If the engine were allowed to run with the governor in action until the car began to labour on the hill and the accelerator was then used, the extra power which the engine would suddenly develop would tend to strain the working parts. The accelerator may be used with equal effect upon any of the speeds. (2.) In descending a hill the momentum of the car will certainly continue to run the engine, but on top gear should not overrun it. If this is the case the noise produced will very quickly warn the driver that it is time to withdraw the clutch. With the mixture and sparking cut off the engine may be used as a brake in descending hills. If there is an extra air opening in the induction pipe which can be opened while the engine is running, in this way the cylinders will be greatly cooled and cleansed by the pure air which will be drawn in and expelled from them. (3.) The fact that the throttle valve does not operate until the lever is more than halfway over rather indicates that there is misadjustment in the connections at some point. It should operate for the full length of its travel if the best results are to be obtained. (4.) The valves should be cleaned about every 500 miles or so. The best method of carrying this out is to remove the valves and to wash them in petrol, using a hard nailbrush to remove oil and carbon deposits. (5.) The function of the manometer is to show that the water circulation is working properly, the figures indicating the pressure in pounds per square inch at which the water is flowing through the pipes. (6.) The approximately correct speed for lubricating the cylinders should be three drops per minute, but much depends upon the quality of oil used and the efficiency of the water cooling. (7.) The centrifugal pump on the Peugeot cars is very efficient as long as it is kept working, but if the frictional contact between the pump friction wheel and the flywheel of the engine becomes at all slack the water circulation will drop and the engine tend to overheat.

TO PREVENT KNOCKING.

I have a 6 h.p. De Dion-Bouton motor car and find that when ascending hills on the high gear the car slows down in speed and the engine commences to thump. Of course I know that these hills should have been taken on the low gear, but what I wish to know is, what is the cause of the thumping? At times when starting the motor by hand lever the engine goes for some little time, then starts thumping, and eventually stops, and this happens when the car is stationary. I shall also be glad if you can inform me which is the proper side to pass a tramcar when overtaking it? I nearly had an accident the other night when passing a tramcar on the right hand side by meeting another tramcar coming in the opposite direction before I had time to get past the first car. I could easily have passed the first car on the left hand side, but did not do so, thinking that it was against the rule of the road. I should be glad if you would give me your opinion. What are the advantages of membership of the Automobile Club, and what steps should I take to become a member?—R.T.B.

The knocking in the engine is caused by premature ignition. When ascending hills, as soon as the engine begins to show signs of labouring and the knocking sound commences, the ignition should be slightly retarded and the lower gear put in, when the ignition may be advanced to the position at which the engine works best. As to the knocking of the engine when standing, this may be due to the accumulation of a small knob of soot in the cylinder head. After running for a few minutes this becomes sufficiently hot to ignite the charge before the spark actually occurs. If this is the case it can always be located by retarding the spark and then seeing if the knocking still continues. The head should be removed and all carbon deposits cleaned away if this is so. There appears to be a great diversity of opinion as to which side of the road one should take when passing a tramcar. The commonsense point of view is that when there is a single line of rails running down the centre, or rather to the left side of the road, to follow the rule of the road and pass on the right. When there is a double line of tram rails the safest method is obviously to pass the tramcar on the left hand side, as if a car is coming in the opposite direction there is a possibility of a bad accident occurring or of blocking the opposite stream of traffic. You will obtain all information as to advantages of membership of the A.C.G.B. and I. on application to the secretary, 119, Piccadilly, W.

TWO-CYCLE ENGINES.

Sir,—I notice in the last issue of your paper a reply about a two cycle motor. You may perhaps be interested to hear—in view of any possible future correspondence on this matter—that I have for several years had an experience of two cycle and four cycle motors, chiefly marine, and recently—to my sorrow—land motors. I can sincerely and heartily recommend the Popular Motor as supplied by Messrs. Lister and Co. I have driven one in a twenty-five foot launch for thousands of miles in all sorts of weather. I have never had the slightest trouble or worry, and the motor has never, with the exception of one new sparking plug, cost me one single penny for repairs. Would that some enterprising manufacturer would come forward and put a similar motor on the road. I have a shore-going motor, the name of which for the sake of the decent man who sold it to me shall be nameless. Something is continually out of order, and it seems like the barber's razor—made to sell and not run. G. M. GARRETT.

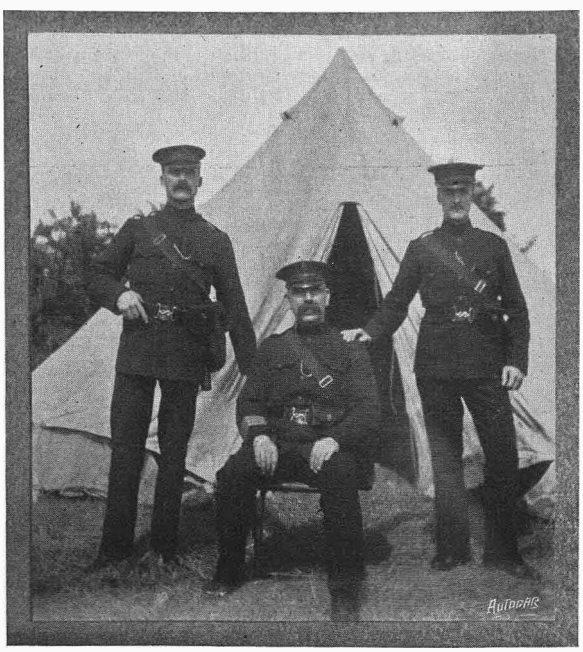
THE SPEED TRIALS AT CORK.

At the conclusion of the Newcastle programme, which included the Castlewellan hill climb, as reported in *The Autocar* of the 11th inst., the cars turned southward for Cork, stopping at Dublin *en route*. There were very few really exciting or noteworthy incidents on the journey, the passing through

Some of the competing cars entering the grounds of Cork Exhibition.

Martinstown on fair day being the leading feature. Here a bibulous countryman insisted upon drawing his cart across the road upon the approach of every car, until an accident occurred to the Belgica, when the crowd took the law into their own hands, and gave the offender a bad time. On Friday, the 10th inst., the speed trials took place on the Carrigrohane Road.

Save the possibility that the actual starters might not be so numerous as could be wished, there was no disguising the fact that the party were getting very tired of it all, and many on the entered list had dropped out. The good people of Cork had been most energetic in trying to get the selected piece of road in order, but we cannot say they succeeded in converting it altogether into an ideal racing track; still, they did their best with the poor material at command. The road selected was perfectly straight for some two and a quarter miles with high banks and hedges on each side, and of fair width, but for a light railway occupying some ten feet on one side of it, whilst it shelved sharply away to a deep gutter on the other. Towards the finishing end it narrowed considerably, and was exceedingly dusty; but at the other end, where the cars were lined up for the start, it was beautifully shaded with fine trees; and the road surface, which had been under the steam-roller, and had been copiously watered, was a thick pasty slippery mud, which showed most clearly that, had the weather been anything but the gloriously fine time it was, the trials would have been an impossibility. Mr. Julian Orde, the secretary of the club, officiated as starter, and a telephone line had been laid along the course, through which Mr. Ochs at the starting end gave the word to Mr. R. E. Phillips at the other end, the latter gentleman then starting his watch, and so timing the cars over the course with the same watch —a somewhat crude and fantastic device, which is hardly to be commended for repetition, and which, seeing that in some of the contests the times were within fifths of seconds, can hardly be said to be altogether satisfactory. We wonder when the club will cease to experiment in matters such as this. From a spectacular point of view, the races could hardly be said to have been a success, though in this matter, of course, they were no worse than other time trials of like nature, though some little life was imparted into the proceedings by a match between the Hon. C. S. Rolls on a 20 h.p. Panhard and the Hon. J. Scott Montagu on his 22 h.p. light Daimler, which the latter won by a few yards, both starting together. This was the only "race" which the public could *see*. The races on the card were two events for racing cars, one for the heavy class and one for the light class; but although some very handsome cups had been presented by local authorities and people, only four cars turned out for the heavy class, whilst the Prunel, which got out of hand on the Castlewellan Hill, was the only starter in the other, and a "walk over" for the very handsome silver vase resulted. There was also a handicap for touring cars, irrespective of class; but the handicap published in the programme was so manifestly absurd in view of the Phœnix Park and Clough-to-Castlewellan performances that a hurried meeting of the racing committee was held, and it was revised on the spot, with very fine results, except that the Serpollet steamer was fairly thrown in for the Lord Mayor's cup. Just twelve cars started, and in order to lengthen out the proceedings a bit, the fastest cars under each of the club categories were sent over the course again, after which all made the best of their way to the exhibition, where they "processed" round the grounds, and were received in good style by the Lord Mayor, who afterwards presented the cups to their respective winners.



The custodians of "The Autocar" balloon.

The fastest car in each class competing ran in the final.

The following are the results and the times made:

Tourist Section.

An open handicap for Classes D, E, F, and G (tourist cars). First prize—Silver cup, presented by the Lord Mayor and Corporation of Cork. Second prize—Silver medal. Preliminary run. Each car ran independently against the clock, and the following times were recorded:

J. W. H. Dew's 6 h.p. Gardner-Serpollet (handicap 50s.), driven by W. J. Warren. Nett time, 2m. 2 3-5s.

George Iden's 20 h.p. M.M.C. (25s.), driven by owner. Nett time, 2m. 48 1-5s.

J. W. Cross's 20 h.p. Humber (5s.), driven by owner. Nett time, 2m. 48 3-5s.

The Hon. J. Scott Montagu's 22 b.h.p. Light Daimler (8s.), driven by owner. Nett time, 2m. 51 2-5s.

R. W. Leader's 16 h.p. Century (50s.), driven by owner. Nett time, 2m. 53 2-5s.

Alfred Burgess's 20 h.p. M.M.C. (25s.), driven by owner. Nett time, 2m. 54 1-5s.

J. Lisle's 10 h.p. Light Star (60s.), driven by owner. Nett time, 2m. 57s.

H. Du Cros's (jun.) 12 h.p. Light Ariel (45s.), driven by owner. Nett time, 2m. 58 2-5s.

Sir A. J. Macdonald's 22 h.p. Daimler (8s.), driven by P. G. Garrard. Nett time, 3m. 4s.

E. M. C. Instone's 22 b.h.p. Light Daimler (15s.), driven by owner. Nett time, 3m. 19 1-5s.

The Hon. C. S. Rolls's 20 h.p. Panhard (2s.), driven by C. W. Hacking. Nett time, 3m. 20 2-5s.

F. R. S. Bircham's 30 h.p. Dennis (5s.), driven by owner. Nett time, 4m. 7s.

The fastest car in each class ran in the final, the result of which was:

Mr. J. W. H. Dew's 6 h.p. Gardner-Serpollet. Class G. Time, 2m. 7 4-5s.

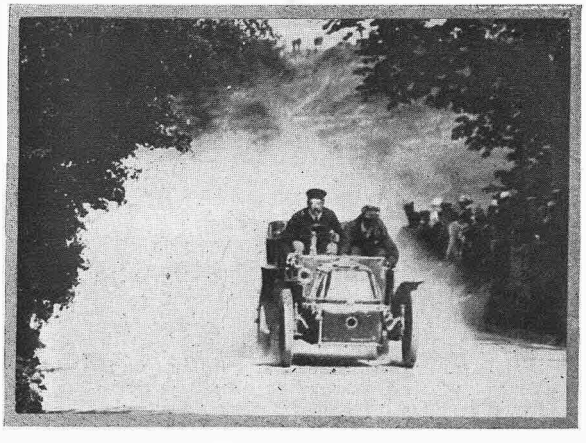
Mr. G. Iden's 20 h.p. M.M.C. Class E. Time, 2m. 35 1-5s.

Mr. R. W. Leader's 16 h.p. Century. Class D. Time, 2m. 59s.

Racing Section.

Class H.—Racing cars weighing less than 650 kilogs. First prize—Silver cup, presented by the Lord Mayor and the Executive Committee of the Greater Cork International Exhibition. Second prize—Silver medal.

E. Brun's Prunel car ran over in 2m. 49 2-5s.



Mr. H. Du Cros, jun., 12 h.p. Ariel car, in the Castlewellan hill trial

Class J.—Racing cars weighing not more than 1,000 kilogs. Prize, presented by the proprietors of the *Cork Constitution*.

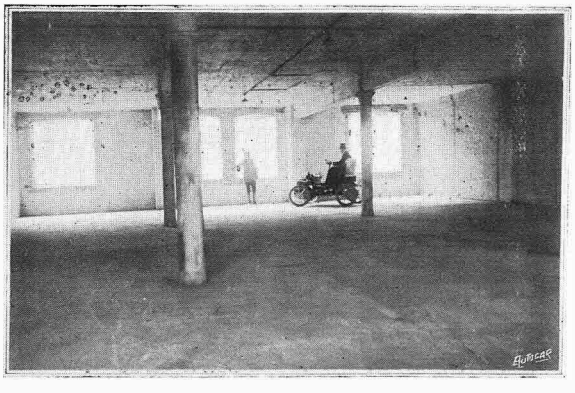
1. The Hon. C. S. Rolls's 80 h.p. Mors, driven by owner. Time, 1m. 49 3-5s.
2. J. E. Hutton's 60 h.p. Mercedes, driven by owner. Time, 1m. 52 4-5s.
3. Lieut. Mansfield Cumming's 50 h.p. Wolseley. Time, 2m. 4-5s.
4. G. Higginbotham's 60 h.p. Mercedes, driven by owner. Time, 2m. 6 2-5s.

MOTOR VOLUNTEER CORPS.

On June 30th Mr. Oliver Stanton drove the officer commanding Royal Engineers Fourth Army Corps on duty to Caterham and back. On July 4th, 5th, 6th, 7th, and 9th, he was also employed, doing duty in connection with the visit of President Loubet, driving Lord Grenfell, the general officer commanding the Fourth Army Corps, Brigadier-General Eyre Crabbe, Chief Staff Officer Fourth Army Corps, and Major-General Sir W. F. Gatacre, commanding the Eastern District. Lieut.-Colonel Mayhew, Captains Crampton and Midgley, and Mr. E. A. Miller were also employed on the same duty, and, in addition, Mr. Miller drove the officer commanding the Royal Engineers to Caterham on July 7th for inspection duty.

It has been stated in several papers that July 6th was the first public appearance of the Motor Volunteer Corps, which is entirely a mistake, as the corps has been doing a large amount of good work for the last three months; but it was the first appearance of the corps' uniform, which has only just been approved by the War Office.

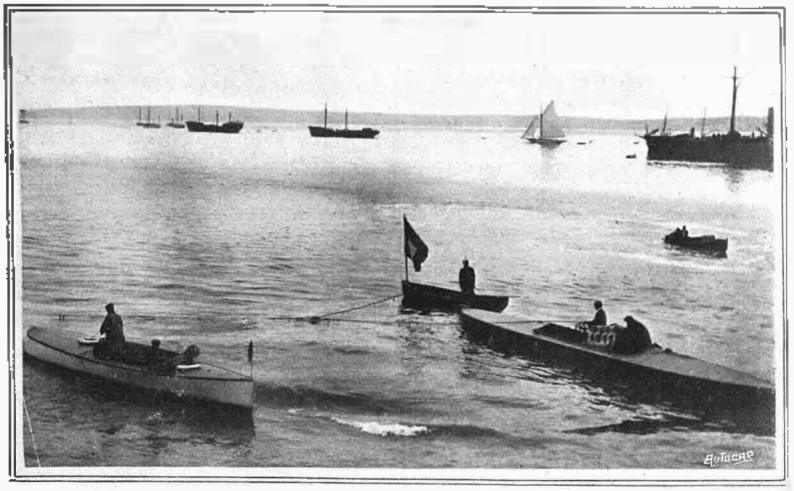
The uniform is both smart and serviceable, consisting of tunic and knickerbocker breeches of field service colour serge, with dark green collar and cuffs, and red piping down the seams of the breeches and round the cuffs of the tunic. The cap is of the staff pattern and of the same colour as the tunic. The badge of the corps consists of a road wheel intersected by an arrow, with the motto "Surbito" underneath. The buttons are white metal, and bear the impress of a crown with M.V.C. over it and the motto underneath.



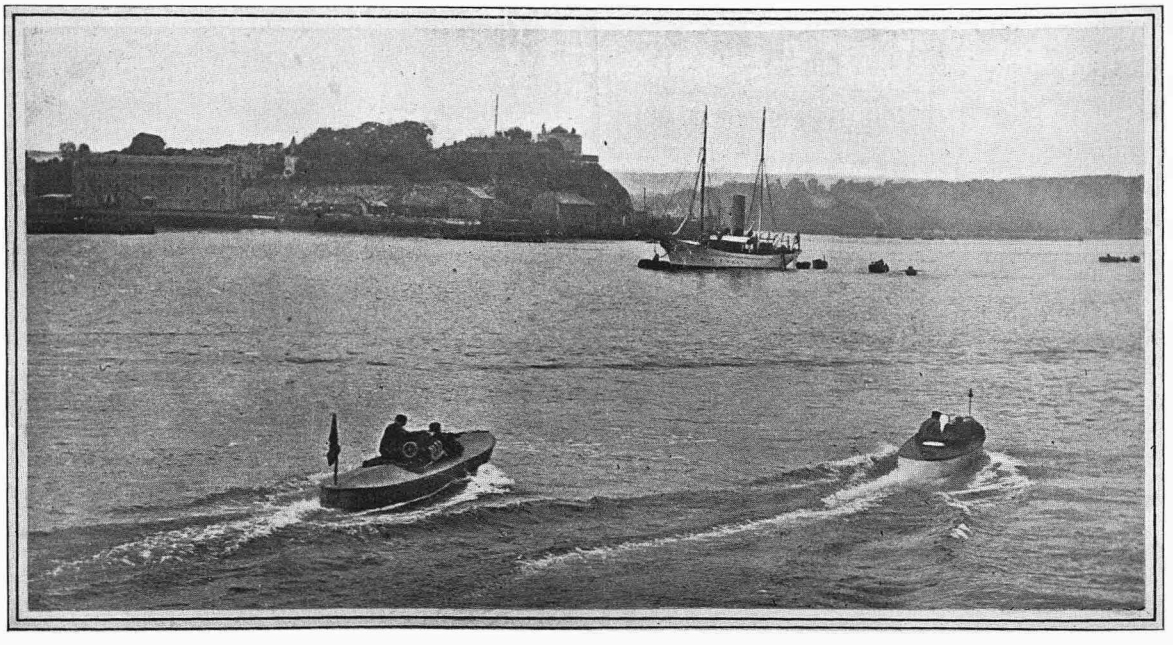
This illustration is interesting, as it is reproduced from a photograph taken on the third floor of Messrs. Friswell's motor repository in Albany Street. It gives some idea of the area of the premises, which will be further realised when it is mentioned that the occupant of the Baby Peugeot in the background is receiving a course of driving instruction; and it will be seen that he has plenty of room for the execution of the preliminary manœuvres before being taken down the lift and dismissed to make his way through the traffic on his new car.

THE MOTOR BOAT RACES AT CORK.

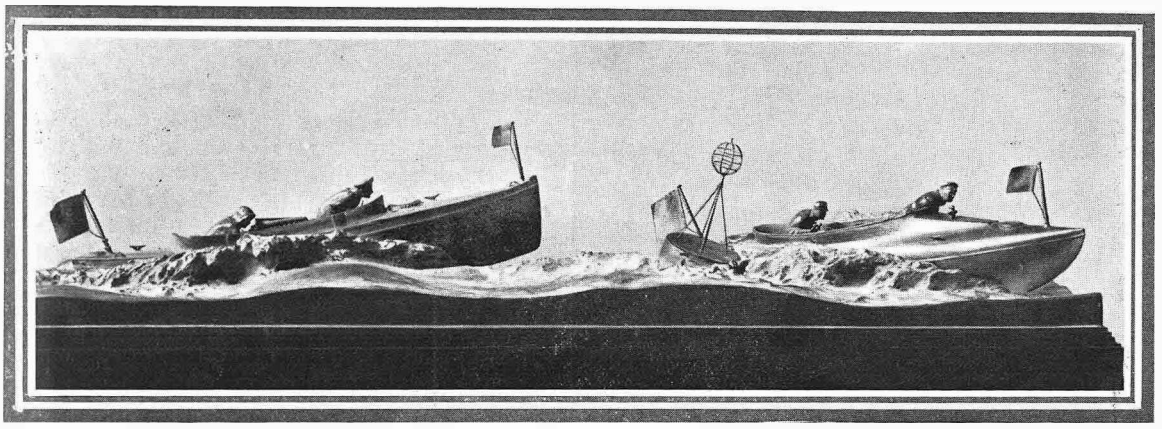
Saturday, July 11th, was another intensely hot day with scarcely a breath of air stirring, but towards the end of the afternoon some light thunder showers fell. The feature of the day was the race for the Harmsworth Trophy for motor launches, and handicap in connection therewith. The race was held over a course of about eight and a half miles, the competing boats starting from moored boats opposite the comfortable clubhouse of the Royal Cork Yacht Club, the course following the channel of the river, which was marked out by red and white flags, and finishing at Glanmire, about a mile from Cork, opposite a judge's pavilion and grandstand, which had been erected for the purpose. During the morning the competing boats proceeded down the river to Queenstown in order to be officially measured; but the 40 h.p. Mercedes, which, although owing to its French hull was ineligible for the international event, was entered for the handicap, failed to reach its destination, the lack of lubrication causing a crank bearing to be fired about three miles out of Cork, and the mechanician in charge not having had the foresight to take a kit of tools with him, it was found impossible to effect repairs in time to participate in the events of the afternoon—an occurrence which was much regretted. All arrangements as to the details of the racing and the course had been placed in the hands of the Royal Cork Yacht Club, the members of which were most assiduous in their attention to the visitors and most successful in their efforts at organisation. Entered for the Harmsworth Trophy was Mr. S. F. Edge's boat, with the 75 h.p. Napier engine used by Mr. Edge in the Paris-Berlin race of two years ago, fitted into a 40ft. steel hull designed by Linton Hope. This boat was steered by Mr. Campbell Muir, with Macdonald as engineer. It occupied the outside position in the heat, having as its competitor a 30ft. boat belonging to Mr. F. Beadle, with a hull by Saunders and a 50 h.p. eight-cylinder engine, made up of eight M.M.C. single-cylinder engines coupled together. The third boat, which was drawn to run a bye, was entered by Mr. J. E. Thornycroft, and was also 30ft. in length and fitted with a 20 h.p. four-cylinder Thornycroft engine, both hull and engine being built by the Thornycroft firm.



At the start for the Harmsworth Trophy. The Napier boat on the right.



The race for the Harmsworth Trophy. Mr. F. Beadle's boat leading.



The Alfred Harmsworth Trophy, which was raced for and won by Mr. S. F. Edge's boat in Queenstown Harbour, on Saturday, the 11th.

Capt. Usborne, R.N., Harbourmaster of Queenstown and a member of the Yacht Club, acted as starter, sending the boats away by a gun signal, and the representative of the Automobile Club and starting timekeeper was Mr. Henry Sturmey; whilst at the other end of the course were Messrs. Bernard Redwood and G. F. Pedley as club representatives, and Mr. R. E. Phillips as timekeeper at the finish. When the boats were brought in line and the engines started, the roar was deafening, and it was unfortunate that a megaphone was not available, for the start was given before Mr. Campbell Muir was actually ready, having only just got his engine running. As a result Mr. Beadle went off with a clear lead of a couple of lengths. This, however, made but little difference to the result, as, when once going, Mr. Campbell Muir, just cutting under the stern of a shore boat which got in the way, hauled him back hand over hand, and, taking his opponent's water half a mile from the start, went right away to the finish, accomplishing the course in 24m. 44 , as against Mr. Beadle's 27m. 44⅖s.

In the run off for the bye, the Thornycroft boat, manned by Mr. J. E. Thornycroft and his brother, an extremely shapely and eyeable boat, by the way, got away to a good start; and, steering a splendid course, covered the distance in 30m. 28⅘s.

The Edge and Thornycroft boats, therefore, were left in for the final; and, as may be surmised by the before-mentioned times, the race was a foregone conclusion for the longer boat. It was driven on practically dead water, as against the top of the flood of the previous heats. Mr. Campbell Muir's boat got through in 26m. 6s., as against 31m. 14⅗s. of the Thornycroft boat, which shows that the latter was pulled out to a fuller extent than in the heat.

The "Yachtsman's" Cup.

This was a handicap in which the same three boats competed, the handicap, calculated according to the rules of the Marine Motor Association, being: the Napier (scratch), the M.M.C. (6m. 55s.), and the Thornycroft (11m. 50s.) M. Charley's Mercedes was handicapped at 6m. 37s.; but owing to the mishap recorded above was unable to participate. The boats were started in the order of the handicap, the Thornycroft getting away first and, as the tide had now commenced to ebb, there was some little difficulty in keeping the boats in position. Mr. Beadle got his line foul with his propeller, but managed to clear it in good time. As, however, this operation harried him and his engine was not started, he was informed of the approach of the last minute; but, misunderstanding the message, started his engines at once, and got right away a minute in advance of his time, the noise of the engine preventing his hearing the shouted instructions to stop. In the result, it was seen that the handicap was all in favour of the low-powered boats, the craft finishing in the order in which they were started. The cup was taken by the Thornycroft boat in the actual time of 33m. 51⅛s., the Beadle boat doing 33m. 12⅗s. and the Napier 27m. 9⅛s. A race for cruising or yacht launches was won by a 4 h.p. 23ft. Lifu steamer as against a couple of 6 h.p. Daimlers.

Spoiling the Egyptians.

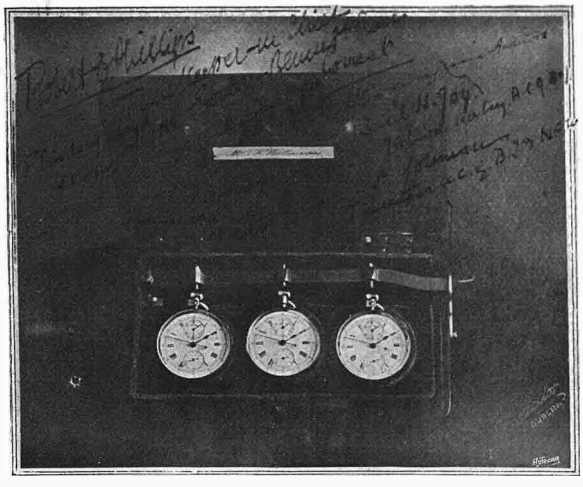
One example of the manner in which the Irish hotel-keepers appear determined to fleece the motorist is afforded by a printed notice which is being circulated as the result of an agreement that has been mutually entered into by the South of Ireland Tourist and Hotel Proprietors' Association, wherein it is set forth that the proprietors of the hotel "decline to accept any responsibility for damage or injury to motor cars by fire, storm, flood, or any other cause while on their premises, and agree to accept same into the hotel premises for storage at owner's risk only. A charge of five shillings per day is made for storage, and the owner of the car must have removed from the car any loose vessels in which the reserve stock of petrol may be carried for storage in separate building to comply with the insurance regulations."

To this there is added the statement which the owner of a car is required to sign: "I, the undersigned, agree to the above conditions for storage of motor cars at owner's risk, and declare that all loose vessels containing reserve stock of petrol have been removed from the car." But the proprietor of one hotel complained bitterly to us that at least one of the twenty-five signatories to this agreement has already broken it, and is charging only 1s. 6d. per day for storage.

GORDON-BENNETT ECHOES.

Timing the Race.

The photograph we reproduce gives a vivid idea as to the accuracy with which the race was timed. It represents Mr. T. H. Woollen's case of three Stauffer patent split seconds and minute recording chronographs. They were started simultaneously by the side lever when the first car was despatched,



and stopped when the last car passed the finishing post, and record the same time exactly, viz., 12h. 51m. and 48s. The accuracy is of such a unique character that Mr. Woollen had the case photographed by Chancellor of Dublin next day, when all his colleagues and officials at the finishing point signed it, completing a most interesting souvenir of the race.

* * * *

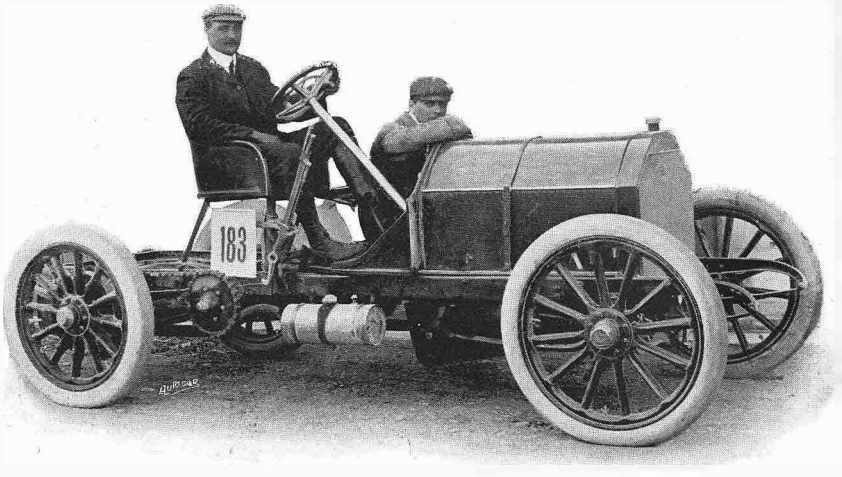
The Duryea three-wheeler did not only do well in the Phœnix Park trials, but also at Castlewellan, when the car climbed the hill without changing gear, while the time accomplished was in advance of that of many of the higher powered cars.

* * * *

Those who watched the entry of the cars to the controls in the Gordon-Bennett race noticed that the majority of them came up so fast to the mark that the driver was obliged to apply his brakes so powerfully as to lock the wheels, and the vehicle was only brought to a state of rest between the white lines after a skid of some thirty to forty yards. Anybody who knows anything of the effect of this operation upon tyres will understand how great a testimony for the Continental tyres, with which the car driven by Mr. Jenatzy was fitted, seeing that they stood such tremendous strain again and again, and gave no trouble throughout the race.

The Kilcullen Cross Roads.

One of our readers who was located at the Kilcullen cross roads says that it was odd how this corner appeared to be neglected by pressmen and visitors alike, although from what he has since heard he believes that it was absolutely the most interesting of all the spots along the route. It was not a control in the ordinary sense of the word, but being a corner where the eastern and western circuits diverged, with a very acute angled turn to the east, it was made a spot where a compulsory stop of one minute was enforced, during which minute the marshals emptied the pouches (which were borne upon the cars) of all the timekeepers' vouchers for the previous round. The spot had, therefore, all the interest of both an arriving and a departing control, with the additional advantage that when starting on the eastern circuit the cars had an extremely acute curve to turn. There was a good view of the cars approaching, and, by walking a few yards along the grass, a wonderfully good view of the cars departing on the eastern circuit, where they had to climb a very long hill—the worst one on the western circuit. It was most interesting to see the cars dash up the first part of this hill, which was divided as it were into three enormous steps. Upon reaching the top of the first step the car would disappear behind its own dust into a hollow, and in a few moments it would suddenly be seen rising above the cloud of dust and climbing the next step, to again disappear behind its dust as the road levelled, and finally it would climb above the cloud of dust, and shoot up around the final curve at the top of the hill at a most wonderful speed. Another point upon which our correspondent touches is that according to all the photographs he has seen published, the Kilcullen cross roads corner appears to have been the only control which was efficiently kept clear. In all published pictures of the other controls, the cars appeared to have been surrounded by a horde of officials and loafers; but at the Kilcullen cross roads the police and officials kept the road perfectly



Mr. Alfred Harmsworth's 60 h.p. Mercedes. Winner of the Henry Edmonds hill-climbing trophy (at Castlewellan). Time, 32⅘s. The driver's seat is occupied by Mr. Campbell Muir; and Mr. Bernard Redwood, who acted as mécanicien, is seated on the footboard.

clear. When the marshals had done their work and emptied the pouches they stepped back on to the grass, leaving the timekeepers alone on the road to restart the cars. There was no confusion, no crowding, no flurry. Everything went off with clockwork regularity, and the only vestige of a sensation was created when the motor cyclist messengers, who were the hardest worked at this point, came back after taking the dispatches to Ballyshannon, and continually reported the mismanagement and incivility with which they had been treated at headquarters.

A Strange Mishap.

What might have been a very serious smash took place on Monday, July 6th, *en route* to Castlewellan. A couple of miles before reaching Newry the road runs along a high embankment by the side

of a bog. Amongst the tourists was Mr. Ochs with a party of friends on a 16 h.p. Napier, and just here, when travelling at a good pace, an unfortunate cow got in the way. The cow attempted to race the car, but with that curious outward swing of the legs which cows have, swung its leg into the front wheel. Its leg was instantly broken, and the car promptly went a header, falling some fifteen feet into the bog below. It fell on its side, and buried its bonnet and front wheels, one of the latter being entirely out of sight, whilst the passengers one and all fell clear of the car, and alighting on soft places, were, bar the shaking, unhurt. The car was eventually dragged out of the bog by means of a steam roller which was fetched up for the purpose, and it was then found, except for scratches, to be practically without damage, and once on its wheels again was driven back to Dublin for an overhaul.

* * * *

The slow running of Mr. Instone's 22 h.p. Daimler at Cork was due to a short circuit in the ignition of No. 4 cylinder. This would, of course, rob the car of about 5½ h.p.; in addition to this, there would be a further loss by friction.

* * * *

Owing to their inability to get the 24 h.p. car ready in time to compete in the Phœnix Park trials, the Wolseley Co. ran a standard 10 h.p. tonneau in its place. This was driven by Mr. A. E. Crowdy, and covered the full distance in 2m. 53 3-5s. It is obvious that had the 24 h.p. car been run and was working up to its power better time would have been accomplished.

The Oiled Stretches.

Sir,—In a special number of your journal dealing with the Gordon-Bennett Cup race you have been good enough to mention the fact that a certain proportion of the track was sprinkled with "Westrumite." Unfortunately, owing to the fact that the whole of the sprinkling had to be done in a very short time, and with the crudest of accessories, it appeared that one particular patch was not properly treated.

I believe that there are several old jokes which refer to the fondness of the average Irishman for whiskey, and as the sprinkling had to be done by the roughest of rough and ready Irishmen, I was placed entirely at their mercy.

The work had to be done at night, and in order to keep our Irishmen up to the mark it was necessary to use the best materials to hand, namely, whiskey, with a result that at the end of the track two of the men, wishing to get to bed, deliberately dumped down a half-barrel of neat "Westrumite" in the middle of the road. As "Westrumite" is mixed with water, generally only five parts of "Westrumite" to ninety-five parts of water, it will be readily understood that very undesirable results would accrue from any action such as I have mentioned.

This is the explanation then of the unsatisfactory patch of road, and I feel sure that the highly satisfactory results achieved over the other portion of the sprinkled road will speak for themselves.

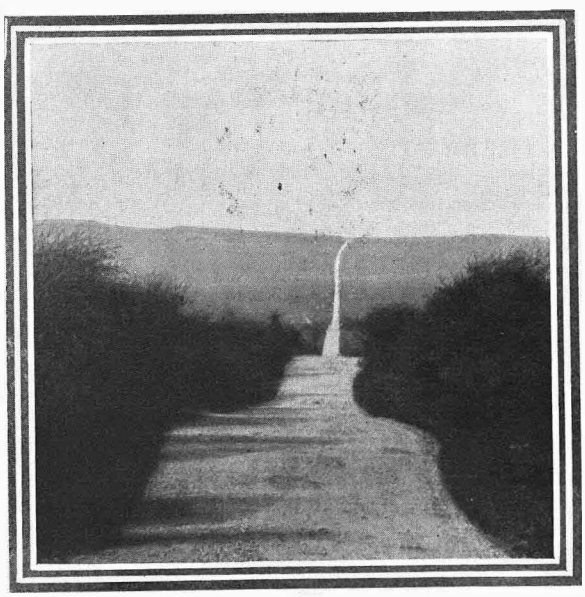
I might point out that the manager of the Biograph Company who took the pictures from the Automobile Club enclosure told me that if the road had not been sprinkled the dust would have been so bad that he would never have succeeded in getting any pictures; in point of fact, it was only on the sprinkled parts of the road that he was able to take pictures which were presentable.

PERCIVAL L. D. PERRY,
On behalf of the Westrumite Syndicate.

The Accident to Mr. Stocks.

Sir,—Various accounts of my accident in the Gordon-Bennett race (some quite untrue) having found their way into the papers, I think it would be interesting to place the true facts before your readers.

From the Castledermot outward control is a two miles stretch of road perfectly straight, but with a rough surface, then a rather sharp sweep to the left. I was travelling between seventy and eighty miles an hour, and struck a projection in the road at the time when I should have applied the brakes on my car. This displaced me in my



Killorglin Hill, where the climbing trials for the County of Kerry Cup were held on the 15th. This was the last event in the Irish fortnight (see page 108).

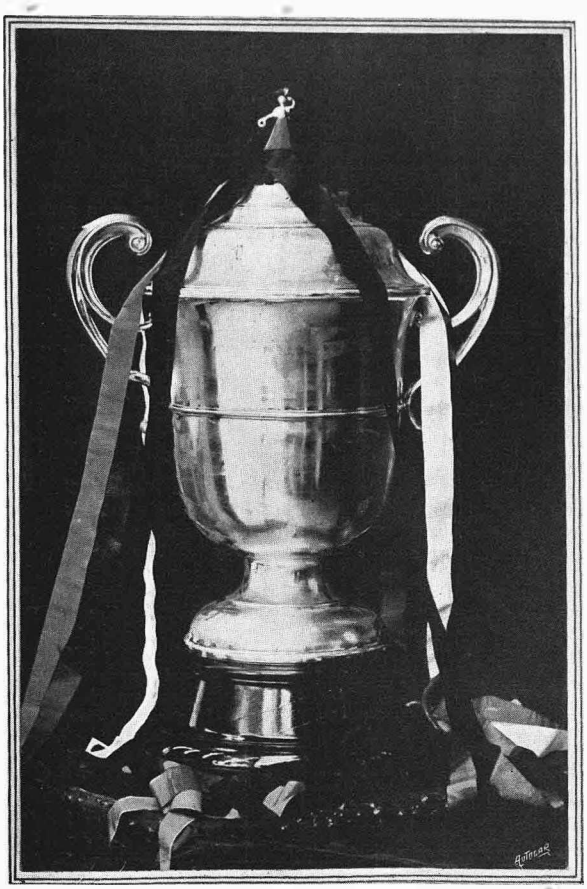
seat and momentarily delayed the application of my brakes, thus preventing my car slowing down sufficiently for me to take the corner, and, seeing an absolutely straight road in front of me apparently quite clear, I decided to go along it and reverse. When about three yards from the entrance to this road (and too late to even chance the correct one) I saw some wire stretched right across, and as my car struck this the wire first stretched, then the post to which it was attached at the right-hand side of the road came out of the ground. My near side front wheel was held by the wire, the car turned round, the off side front wheel broke with the strain, the off side back wheel caught the grass on the left of the road, and I was dropped lightly into the hedge. Fortunately, I did not sustain a bruise of any description, nor did my mechanician (Mr. A. Macdonald).

I offer no excuse for what some people would call inexperience, and others an error of judgment; I merely state the facts. I knew the road perfectly, also that I had to take the road to the left.

I might, however, add that a very experienced driver went through the same wire (I should say over, as it was not fastened so securely at that time) some fifty minutes' earlier, which warned the people at that corner that there was a possibility of others doing the same thing, and they, therefore, kept close to the side of the road. The wire could not be seen when approaching at a high rate of speed, and, having heard an Automobile Club official state that roads which might possibly be taken in error would not be wired within a certain number of yards of the entrance, I think I was within my rights in concluding there was absolutely no danger in that direction, though there probably was if I took the right course at the speed I was travelling.

My car was going perfectly at the time, and on taking a new front wheel out the same night, I drove the car home.

J. W. STOCKS



The County of Kerry Cup. Presented to the winner of the Killorglin hill-climbing trial by the County of Kerry.

CLUB DOINGS.

Yorkshire Autom bile Club.

The committee of the Yorkshire A.C. made special arrangements for its own members and friends to view the Gordon-Bennett race, and some two or three months ago the honorary secretary, A. W. Dougill, and the honorary treasurer, L. Hey, visited the course to find a suitable place for viewing the race.

After inspecting miles of road and dozens of typical Irish people who had plots of land to hire, a site was selected at Ardscull for the erection of the camp.

On the Tuesday evening before the race, the Y.A.C. party left Leeds per the L. and N.W. Railway Co. *en route* for Athy, *viâ* Holyhead and Dublin, and in due course were safely landed at North Wall, Dublin, in time to catch the early train to Kildare. At this place a request to send a telegram to Athy at 2 p.m. was met with the statement that there were messages awaiting transmission since 9 a.m. As the camp was only twelve miles from Kildare, and there was a two hours wait for the train at Athy, some of the members suggested driving over by jaunting car, and accordingly prices were asked of several drivers. These showed a great difference of from 15s. to £3 for each car to carry four. Eventually the camp, consisting of two large square sleeping tents with wooded floors, and mattresses to sleep on, one long dining tent, and a similar sized kitchen tent, was reached. A substantial supper was laid out. The whole camp was ready for bed about 10 p.m., after having had a long day with practically no sleep on board the night before. Early on the day of the Gordon-Bennett race (about 2.30 a.m.), there were sounds of rising, and the members speedily completed their impromptu toilets. Before breakfast the race commenced, and an excellent view of the contest was obtained from the camping ground. Lunch at midday and tea between 4 and 5 p.m., with dinner at 7 p.m. completed the catering arrangements. On the following morning some of the party returned to Dublin by rail from Athy, whilst others witnessed the departure of the police from the barracks. Later in the day a number returned to England, whilst others decided to remain in Dublin for the Phœnix Park trials.

The Cheltenham and Gloucester A.C.—The Motor Bill discussed.

A special meeting of the members of this club was held at their headquarters on Monday last to discuss the Government Motor Bill. The bill was considered clause by clause, and though the general feeling was favourable, there were one or two reservations. The first amendment suggested was in Section 1, which seeks to enact that if any person drives a car recklessly or at a dangerous speed, having regard to the circumstances and the amount of traffic which is *or which might be expected to be* on the highway, he shall be guilty of an offence. It was unanimously agreed that the words italicised ought to be deleted as creating great uncertainty and as placing arbitrary power in the hands of police and magistrates. With regard to the proposed penalties, it was felt that they are ridiculously excessive. Ultimately the following resolution was unanimously passed: "That this club is of opinion that the section imposing fines and imprisonment is unnecessarily harsh and unfair to the owners of light cars, voiturettes, and motor cycles, and that the former resolution of this club as to graduated fines, based upon the horse power of the vehicle, should be substituted, and by this means more uniformity of punishment be ensured. And, further, that the portion of the section relating to imprisonment without the option of a fine should be entirely deleted." [The previous resolution referred to reads thus: "That fines for excessive speed should be proportionate to the horse power of the motor vehicle, and that the present limit of the fine of £10 is excessive for persons of moderate means."] It was decided to send copies of the resolutions to the secretary of the Local Government Board, the local M.P.'s and Mayors, and the motor papers. A communication from the Lincolnshire A.C. on the question of federation of the provincial clubs was read, and the club expressed its willingness to join in a conference to discuss the matter, suggesting London in September or October as a suitable place and time.

Feeding the tyre repairer, whose hands were too grimy to touch food.

THE RELIABILITY TRIALS POSTPONED.

At a meeting of the Trials Organisation Committee on Tuesday evening it was decided that, as the previously-arranged date for the reliability trials (September 1st) will clash both with the autumn manœuvres and with the meeting of the British Association—at both of which functions many of the judges and the members will be engaged -the date for the commencement of the trials should be postponed until September 18th, the closing dates for entries being at the same time also advanced a fortnight. This will give two weeks more for the preparation of trial cars, which will doubtless be appreciated by competitors. Up to the present 107 entries have been received.

THE MOTOR BILL

The Motor Bill passed its second reading in the House of Lords on the 14th inst. Lord Balfour of Burleigh, in replying to the debate, mentioned the following modifications of the bill:

All to be Licensed.

The Government would undertake to put down an amendment so that the amateur who drove for amusement would be licensed as well as the professional driver.

No Examination for Proficiency.

There would be no examination for proficiency certificates. (Accidents due to recklessness rather than incompetency. "A certificate of competency would be difficult to put in practice, and would be a delusion and a snare.")

Speed.

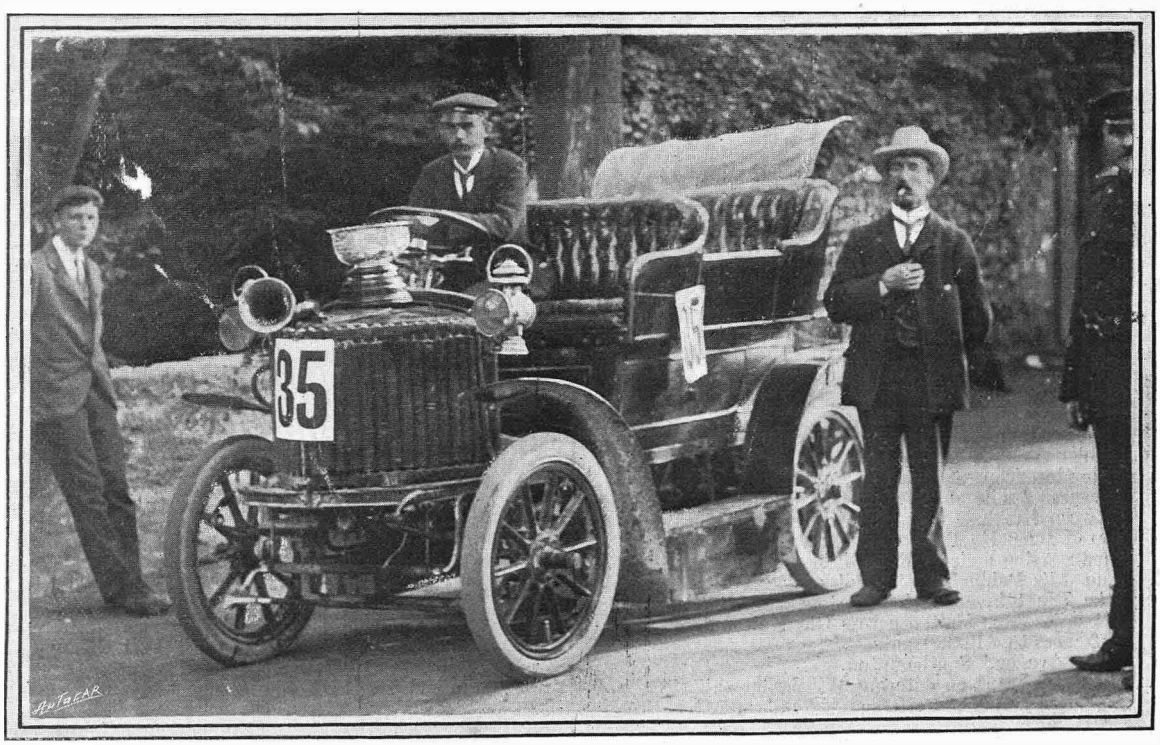
The actual supremacy and initiative would remain with the Local Government Board. (He thought that even in tolerably crowded thoroughfares a motor car was infinitely safer when going at twelve m.p.h. than was a horse driven at a similar rate. He pointed out that the reserve of power of some cars made the question of limiting speed extremely difficult. It would be a serious departure from the principles on which the Bill was framed if Parliament imposed a speed limit.) The responsibility for speed would rest with the person driving the car. The question as to what was excessive speed would be decided by circumstances. Present speed limit would be abolished except in those populous places where the speed limit of fourteen miles was maintained. The onus of asking for the continuance of the existing system of not exceeding fourteen miles would rest with (*a*) local authority, who would move (*b*) county council, who would move (*c*) Local Government Board to sanction the fourteen miles limit.

Motor Cycles.

Motor cycles would be included in the Bill, and this would be made clear.

Numbering.

Every car would be registered, but there might be some modification in the form of distinguishing mark.



Mr. J. W. H. Dew's 6 h.p. Gardner-Serpollet, winner of the cup presented by the Mayor of Cork for the fastest touring car.

POLICE AMBUSCADES.

WHERE THE LETTER AND NOT THE SPIRIT OF THE LAW IS ENFORCED.

We are happy to be able to record that in a very large portion of the country motorists are not interfered with by the authorities. That is to say, so long as cars are reasonably driven in traffic, through populated areas and round corners, nothing is said should they exceed the legal limit by a few miles an hour on the open highway. We are absolutely opposed, as we always have been, to furious or inconsiderate driving, and will never do anything to encourage it; but we consider with Lord Balfour of Burleigh that it is a disgrace to the police authorities that traps should be set to catch motorists who on perfectly open stretches of highway may exceed the twelve miles an hour limit somewhat. With a view to warning users of cars of the districts which are most affected, we have prepared a map, which we think will graphically show where special caution should be exercised. It is impossible without publishing a map of inconvenient size to give details on it of the roads on which the police are endeavouring to capture motorists. Our plan is to number the approximate position of each trap on the map. Beneath will be found the corresponding number, and against it brief details of the position of the ambush. As the borders of the counties are lightly outlined, anyone can see in a moment whether the district through which he contemplates driving is likely to make his trip more expensive than enjoyable. We propose to revise this map as often as may be necessary, and we beg automobilists at large to help us in keeping it up to date by sending us brief particulars of any police ambushes not marked on the map which they may come across in the course of their drives. For inclusion in any current week, such information (addressed *The Autocar*, Coventry) should reach us not later than midday on Monday.

1. Near Newmarket Inn, 2½ miles on Brighton to London road.
2. Between Newbury and Thatcham.
3. Between Newbury and Hungerford.
4. Between the top of Godstone Hill and Caterham.
5. Between Sutton and Carshalton from railway bridge to convent walls.
6. Yarmouth, Acle, and Blofield routes.
7. In and around Garstang.
8. In and around King's Heath.
9. 3 miles from Wetherby on the road from Boroughbridge.
10. Near Horndean, 62 miles on Portsmouth-London road.
11. Measured ¼-mile at Twyford from Reading.
12. Between Heacham and Snettisham, near Hunstanton.
13. Top of Buck Ha Brow on the Clapham side of Settle, and passing under railway bridge through Settle.
14. Four Alls Public-house, 6 miles from York; between the 7th, 8th, and 9th Milestones; at Barton Hill; 1½ miles from Malton across Old Malton Lane.
15. Entrances to Alton, Hants.
16. "The Avenue," Southampton.
17. Numerous traps on entering Winchester—all sides.
18. Measured ¼-mile at Potterspury, 3 miles north of Stony Stratford.
19. Measured furlong from Benhilton Church into Sutton, Surrey, and a measured distance on Cheam Road.
20. Between Towcester and the first milestone towards Daventry.
21. Top of Acomb Hill to Acomb Schoolroom, Wetherby to York road.
22. Approaching Beckenham from all sides.
23. Ilford, Hinton, and Totton from Bournemouth to Southampton.
24. ½-mile, both entering and leaving Shifnal.
25. Entering Penkridge from Wolverhampton.
26. Near Wheat Sheaf, Sheldon, on the Coventry-Birmingham road.
27. All entrances to Oxford.
28. Near Crowborough, between Uckfield and Tunbridge Wells.
29. 2 miles from Lymington on the road to Brockenhurst.
30. Measured ¼-mile outside Burley just past Malt Shovel, near Bradford.
31. 220 yards between entrance to Ranelagh Club and the Common, Barnes.
32. About 1 mile from Ashford, Kent, on Hythe road.
33. About 1 mile beyond Utley on the Keighley-Skipton road.
34. Lowfield Heath, 2 miles London side of Crawley.
35. Entering Epsom from the south.
36. Near Hickstead, about 10 miles from Brighton on London road.
37. "The Bloody Oaks," 6 miles N. of Stamford.