THE AUTOCAR

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

EDITED BY H. WALTER STANER.

No. 358. Vol. IX.] SATURDAY, SEPTEMBER 6th, 1902. [Price 3d.

THE AUTOCAR.

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 on the last page. 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.
France: Nice, Levant, and Chevalier, 50, Quai St. Jean Baptiste.
United States: The International News Agency, New York.

Notes.

Automobile Roads in New Countries.

By a communication from the Commercial Department of the Board of Trade, and an extract from an article appearing therein which we give in another place, the views which we have from time to time expressed upon the employment of automobiles in opening up new countries are more than endorsed. We regret that the Belgians should be the first of the colonising nations in Africa to form a practical automobile road on that continent, but the work done and doing by Captain Carton between Nsongololo and the River Kwango may prove an incentive to the undertaking of such works within our own boundaries on the dark continent. Roads capable of accommodating such automobile traffic as would serve to open up interiors and facilitate trade in a wonderful way could be easily and cheaply formed from local material, and not being subjected to the wear of hauling cattle and horses, which is responsible for ninety per cent. of the damage done to road surfaces by traffic, would last infinitely longer than ordinary roads. Indeed, for the most part the automobile traffic would improve rather than deteriorate the road surface.

The Reliability Trials.

Those who have followed the automobile movement, and who have had the opportunity of taking part in the various trials promoted by the Automobile Club, can hardly fail to be struck with the difference between the present trials and the thousand miles tour of 1900. In the latter, if one started at all late on a fast car, one would overhaul quite a number of the competitors every day stranded from various causes. It is true a very large percentage of the vehicles in the 1,000 miles got through with credit to themselves and the drivers, but the best of them required a very considerable amount of roadside attention. In the present trials it is a positive surprise to come across a machine stopped for anything but a puncture, and these have been comparatively rare. All this goes to show that the reliability of the car has been greatly increased within the last two years, but it is not entirely on this account that the number of roadside stoppages is so very small. It is partly due to the fact that the drivers, or those in charge of the cars, know exactly what to do to keep them in good order, and, what is more, see that it is done every night after the run. The small adjustments required are in themselves trifling, but neglect of them nearly always results in a stop sooner or later. It may be only for five minutes, but it is a stop all the same, and five marks are lost by it in the trials. This has a moral which may well be taken to heart by any private user who may find that his particular car does not perform with the same regularity as its sister machine which ran through the club trials. With very few exceptions, it may be taken that the car which will not run 650 miles in a week without serious roadside delays is not properly attended to in the garage. At the same time, quite a number of the vehicles being driven in the contest are unnecessarily handicapped, particularly with regard to making a good show in the hill climbs. Although nothing over twelve miles an hour is counted to the credit of the machine, and only a comparatively small excess of that average results in disqualification of the offender altogether, we find machines capable of speeds

well over three times the legal limit, and there are some higher than this. So far as hill-climbing is concerned this does not matter much in the speed gears, which, notwithstanding the high top speed, give a really low bottom gear; but others are not so proportioned, for while they are geared to fly, they cannot climb at all well, and often drop on to the bottom gear when they might well run on the second, or even the third, had they been more moderately geared in the last reduction. Generally speaking, although the machines are run under conditions which bring them approximately within the legal limit, they are, with very few exceptions, capable of greatly exceeding it, and they should be able to come through such a test with flying colours.

A New Road Surface.

The excellent and concise report which Mr. E. Purnell Hooley, the county surveyor of Nottinghamshire, has just presented to his council, contains much that is of interest to automobilists. After pointing out the great and incessant damage which is being done to the roads by the ever-increasing steam traction traffic, Mr. Hooley goes on to state that, as the highways of Nottinghamshire now have to carry another, and what is becoming a more important, traffic every year, viz., motor traffic, it is necessary to find out some reliable and more resisting system of road-making than that at present adopted. Mr. Hooley then proceeds to suggest the remedy which we referred to recently in these columns. He states that he has after repeated trials found that the most satisfactory material yet produced is tar mixed with furnace slag of the very best hand-picked quality, but, unless this is well warmed and perfectly dried before being used, it has too often been a failure. The cost of drying the material has hitherto been very great, but after much patient labour Mr. Hooley has, he believes, overcome the questions of expense and floor space in the manufacture of tarred material. He has found out how the whole of the expense of drying slag, as well as mixing by hand labour, can be saved, viz., by having the material tarred just as quickly as it is broken, and the whole made reliable by being regulated in its manufacture by machinery, instead of being entirely left to the discretion, or want of discretion, of the mixer. The financial results will be easily appreciated when Mr. Hooley confidently states that he can make perfectly tarred slag roads at the present cost of an equal quantity of ordinary granite or syenite material untarred, that the cost of consolidation will be about one-half the present cost, and that the life of the road will be at least five, if not more, times as great as the present road; whilst, from the general public point of view, the great reduction, if not the total abolition, of dust, mud, the prevention of the irritation that is caused by constantly repairing roads, and the improved sanitary condition of the roads themselves, will be almost inestimable. Mr. Hooley suggests that his council should grant him permission to lay down a few miles of this new road in Nottinghamshire, with the view of testing it, and it is to be hoped that no objection will be raised to this. Automobilists will watch with the greatest of interest Mr. Hooley's experiments, for, if successful, the automobile millennium should be close at hand, provided, of course, the other county councils are enterprising enough to follow the lead of the Nottingham body.

The Railway Companies' Requirements.

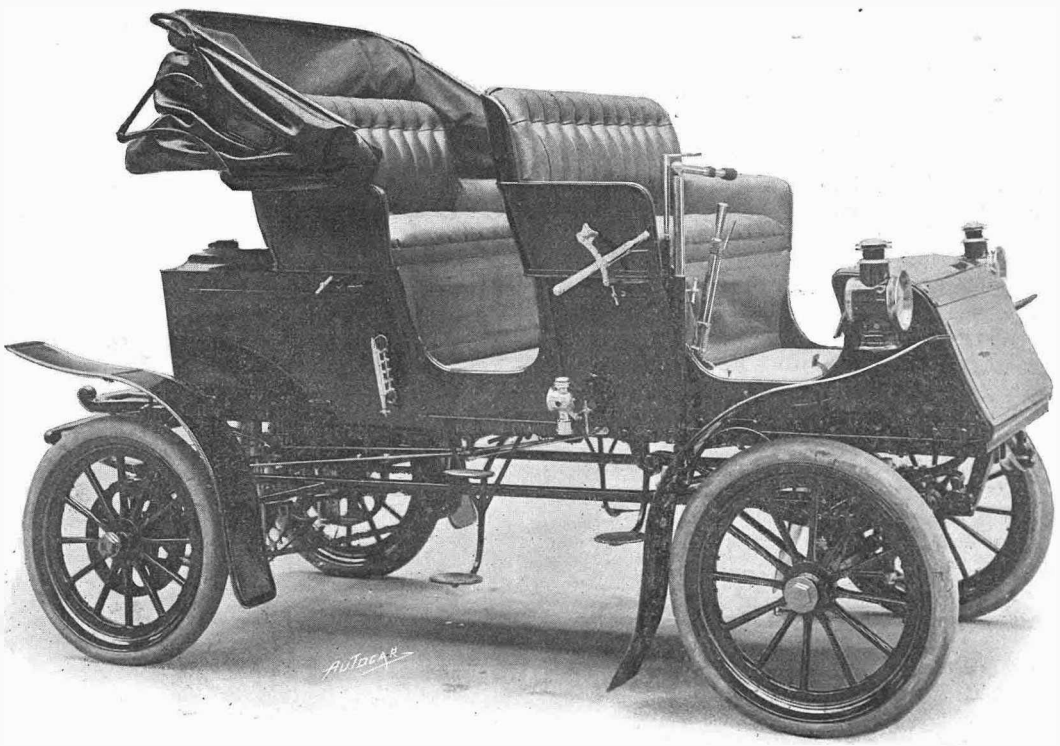
In view of the remarks let fall by Lord Stalbridge, the chairman of the London and North-Western Railway Co., at their recent half-yearly meeting, we took the opportunity of obtaining the views of the particular chief of the company with whom finally rests the pronouncement for and against the adoption of self-propelled lorries for the handling of the rail-borne traffic when it reaches its delivery station. The L. and N.W.R. Co. have not slept on this matter, but have already made much experiment with several motor lorries which have been submitted to them. With more than one of these they express approval, so far as heavy goods are concerned, but up to the present they contend that for light goods and frequent deliveries, motor service, as they have found it, has proved more expensive than horsed vans for the purpose. Those who contemplate dealing with a motor suitable for the collection of goods, their delivery at depots or goods station—indeed, self-propelled vans to do the work that Londoners are accustomed to see performed by Pickford's vans—must, if we are to adopt the L. and N.W.R. Co.'s official view, approach the problem from quite another standpoint than that from which it has been hitherto attacked. It must be borne in mind that the entries and ways to many of the goods depots—the London goods depots particularly—are difficult of approach, and in many cases can only be attained by narrow ways turning out of already crowded thoroughfares. Therefore, whatever the form of lorry adopted, it must possess the capability of extreme handiness in confined spaces. Again, as the L. and N.W.R. officer put it to us, railway companies cannot afford to have motor lorries costing some £600 or so standing idle for two or three hours to unload or load, as railway vehicles of the kind are bound to do in the ordinary course of handling the goods traffic of a big railway company. The horsed flats or vans at present used can be so left, and horses, carman, and boy transferred to other vehicles ready to start. What the railway man seems to wish for is some form of powerful and handy tractor, which can be sufficiently intimately associated with adapted flats or vans to manœuvre them as we have indicated, and which can act as tractor to any and every so adapted flat or van which is ready for haulage. This is considered most necessary before the heavy, infrequent stop, long run traffic can be adequately and economically dealt with from the railway point of view, and it remains with our heavy motor lorry builders to at least give consideration to the opinions of those who, having to pay the piper, and, what is more, work the traffic, may desire to bear some part in the calling of the tune. The L. and N.W.R. official informed us that his company were ready enough to consider any reasonable proposal from reputable people, and heartily desired to test anything that gave some promise of a solution of the difficulty, while effecting an economy of time and money in the transport of goods, but that they must be allowed to know how their carrying business can be, and is, best effected.

MILITARY MOTOR WAGONS.

The report on the trials of self-propelled lorries for military purposes, held at Aldershot from December 4th to 19th, 1901, has been published. In the opinion of the committee appointed to watch the work done by the competing vehicles, the trials at Aldershot have shown that these steam lorries are good and serviceable machines suitable for present supply, and likely to be of great advantage to the transport service in countries where fuel and water are in sufficient quantity available. The committee would, however, desire to call attention to the great possibilities for military purposes of the internal combustion lorry for burning heavy oil, as shown by the small combustion of fuel and practical independence of water of the one which was tried. They strongly recommend that steps to develop such lorries be proceeded with. Compared with horse draught, the committee consider that these trials have shown that self-propelled lorries can transport five tons of stores at about six miles an hour over very considerable distances on hilly average English roads under winter conditions. Regarding the type of lorry, the experience gained at these trials has caused the committee to somewhat modify their original views, and they consider that for the heavier work of moving stores in large quantities to the depots a powerful tractor, drawing a train of wagons behind it, will be found most suitable.

Finally, the committee beg to call special attention to the demonstration afforded by these trials of the entire harmlessness to roads of vehicles considerably exceeding in weight and road speed the limits allowed by the present regulations on the subject, and also fitted with wheels to which road strips have been fixed, so long as these wheels are of large diameter, and have tyres of considerable width. It has now been proved that the existing regulations are unnecessarily restrictive, whilst they stand in the way of the development of a most important method of transport and branch of industry. The committee strongly recommend that this matter be brought to the notice of the proper authorities, feeling confident that the removal of these restrictions will tend to assimilate the commercial and military types of vehicles, and is not only important, therefore, from a service point of view, but also will have a most beneficial effect on British manufacturing industries and commercial development generally.

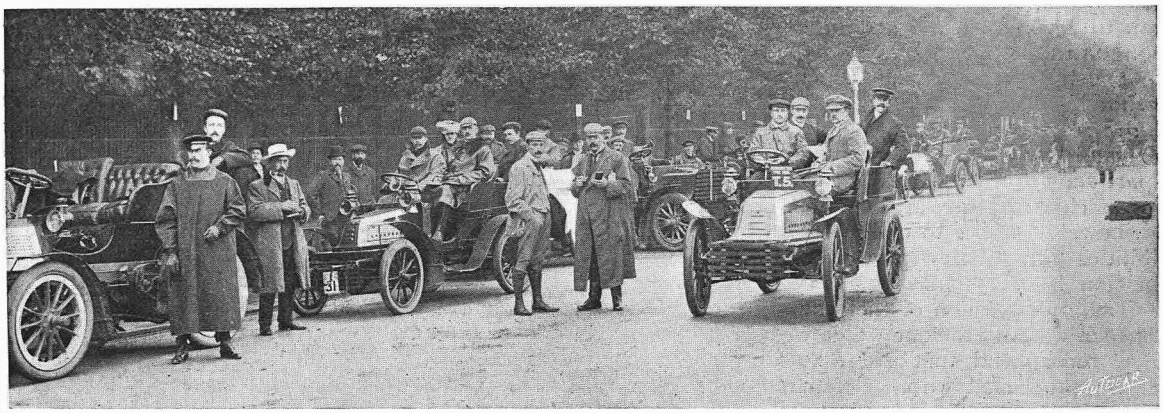
LORD SALISBURY'S LOCOMOBILE.



As showing the exaggerated estimates that some people make of the speed of moving bodies, a reverend gentleman, who is a member of the West Penrith Rural District Council, stated to his fellow members that a cyclist who met with an accident on Trevyn Hill was descending that incline at the rate of "probably a hundred miles an hour!"

The *Strand Magazine* this month commences a series of articles upon "The Humour of Sport," the first (by James Walter Smith) being upon "Automobilism." It is strange, however, that humour can only be seen in mishaps and calamities. However, the articles are extremely interesting, whilst the illustrations are clever and decidedly entertaining.

THE 650 MILES RELIABILITY TRIALS.

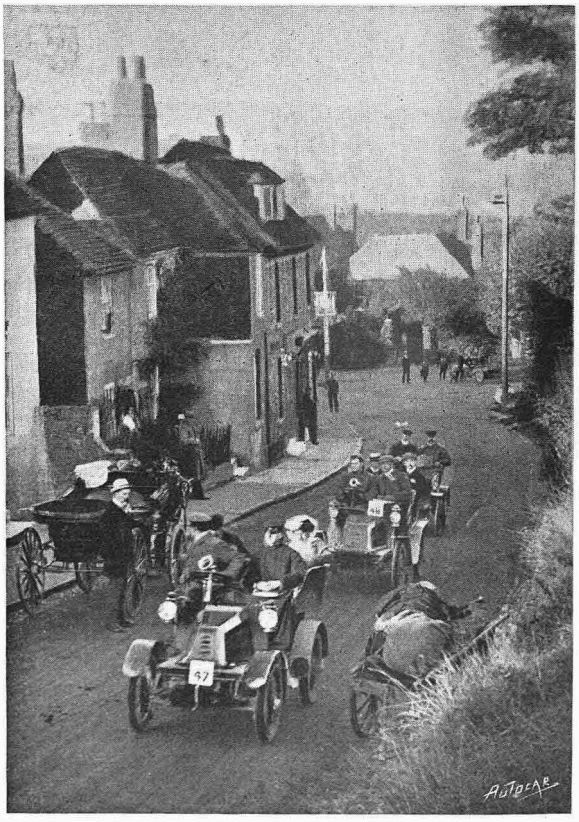


Argent Archer, Photo, The start on Monday morning. *High Street, Kensington.*

This long-looked-forward-to event is now nearly over. It has been robbed of some of its interest by the fact that several cars, the performances of which would have been followed with the very greatest interest, arrived too late to be admitted. No attempt at sustained speed was permitted by the rules, and the cars which exceeded twelve miles an hour earned no extra marks by so doing, although the majority came through at about fourteen or fifteen miles an hour. Anything over this would have led to their disqualification. It is impossible to give more than partial results of the trials this week, so we shall not attempt to criticise the daily performances till they are completed, but content ourselves by giving a brief account of the trials so far as they had proceeded up till Wednesday night. Friday was occupied by the judges in examining the various cars—in fact, their work in examining and sealing was not concluded till late on the Sunday, though only interrupted by

THE BRAKE TRIALS.

On Saturday last all the vehicles qualified to run in the trials were submitted to an up-hill and down-hill trial of their brakes on a one in seven and a half pitch in the Crystal Palace Grounds. The cars were first tested on the descending grade, employing first both brakes, then foot-pedal brake and side brakes separately, to show whether or not they would hold the cars stationary on that grade. Mr. S. F. Edge acted as judge on the hill, with Mr. Cecil Edge and Mr. Astell assisting, while Messrs. Holder and Johnson marshalled the approach of the vehicles to the testing point. The cars were driven slowly on to the pitch, and both brakes applied upon Mr. Edge raising his hand. Then the power of first the foot-brake and then the side brake was tested, with the clutch out, to ascertain whether each would independently retain the car on the grade. We must admit considerable satisfaction at the all-round excellence of the brakes, but noted that in the large majority of cases the foot brakes were proved to be more powerful than the side brakes. In the holding backward trials with both brakes there were practically no failures. The numerous instances in which the side brakes failed to hold on the down-hill test, while the foot-brakes held, should not cause it to be presumed that the side brakes were accordingly inefficient. With the majority the failure was due to oil on the drums, and that general unpreparedness for severe official tests, in which many competitors appear to rejoice. It must also be borne in mind that the brakes are written down as not holding if the car showed the slightest suspicion of moving, so that failure marked here does not presume the brake unsafe or unreliable for general all-round road use.



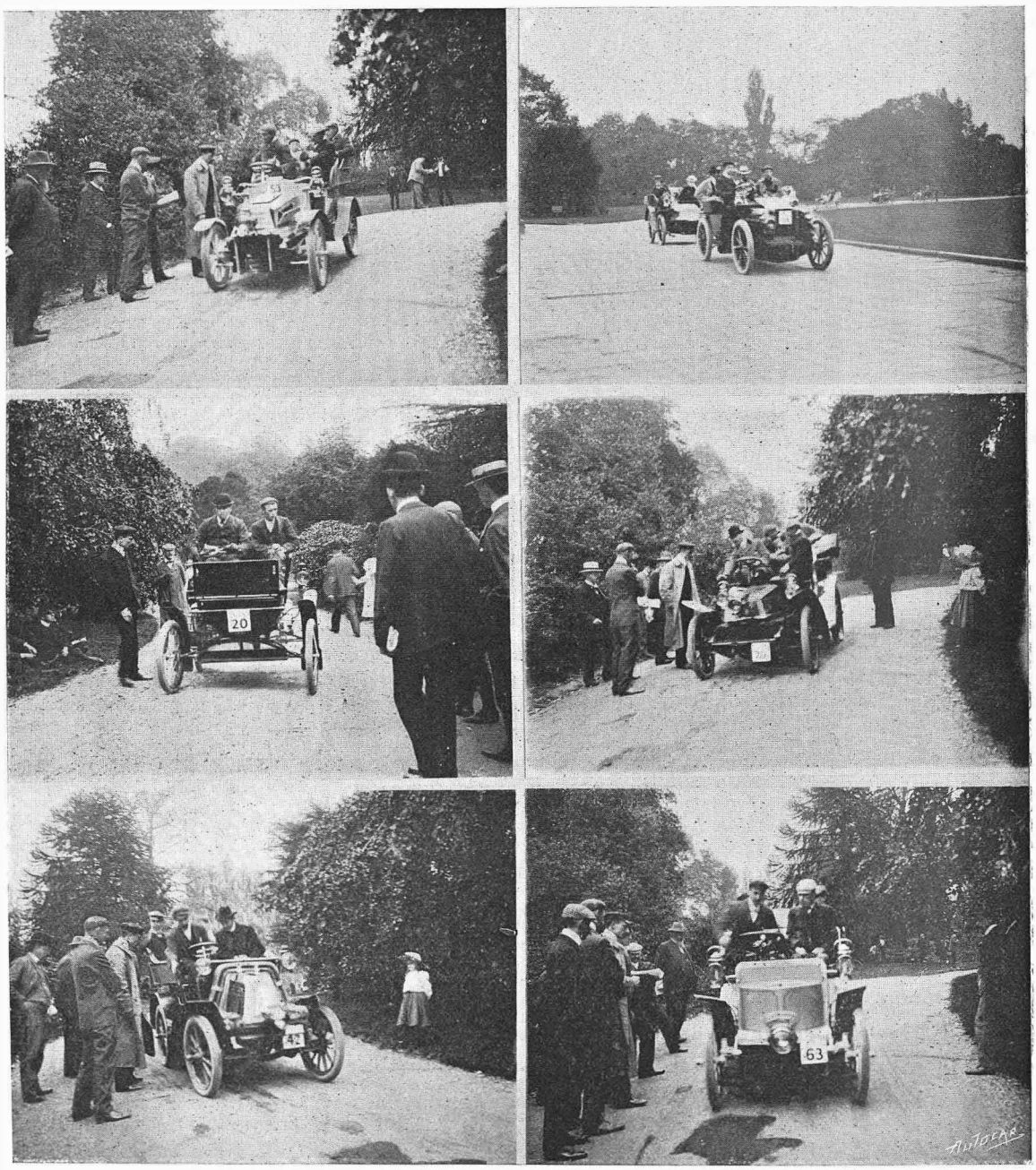
Argent Archer, Photo, *High Street, Kensington.*

Climbing the hill out of Ightham. The 8 h.p. De Dion, the 8 h.p. Clement, and the 4½ h.p. Renault in procession.

No.	H.P.	Car.	Downhill Test.	Uphill Test.
		CLASS A.		
4	5	Century Tandem	Wheel locked and skidded	Brake only just held.
5	5	Baby Peugeot	Both brakes held well, singly and together	Held well.
		CLASS B.		
8	4	Oldsmobile	Both brakes held well, together and singly	Held well.
9	5½	Locomobile	Both brakes held well, together and singly	Held well.
10	5½	Locomobile	Brakes together held well; hand brake held, foot brake only just held	Held well.
11	4½	Swift	Both brakes held well, together and singly, but to use tyre brake engine must be out of gear	Held well.
		CLASS C.		
12	8	Parr Light Car	Brakes together held well singly, pedal brake held, but not side brakes	Held well.
19	7	Star	Brakes good together, singly foot brake held, but not side brakes; carried only two passengers	Held well.
20	5½	Locomobile	Foot brake good, hand brake did not hold	Held well.
21	5½	Locomobile	Foot brake good, hand brake did not hold	Held well.
22	4½	Renault	Brakes held well together, and singly	Held well.
23	8	M. M. C. Voiturette	Brakes held well together and singly	Held well.
24	6	De Dion	Side brake good, foot brake did not hold	Held well.
26	6	White Steam Car	Both brakes held well together and singly	Held well.
29	6	White Steam Car	Did not hold on foot brake alone, no other brake	Held well.
		CLASS D.		
30	10	Decauville	Both brakes held well together and singly	Held well.
32	9	James and Browne	Held on foot brake side, brakes did not hold	Held well.
33	12	Gladiator	Both brakes held well together and singly	Brakes did not hold.
35	10	Brooke	Both brakes held well together and singly	Held well.
36	8	Light Car fitted with Simms Motor	Both brakes held well together and singly	Held well.
38	10	Star	Foot brake held, side brakes did not hold	Held well.
39	10	Wolseley	Both brakes held well together and singly	Held well.
40	7½	Wolseley	Foot brake held, side brakes did not hold	Held well.
41	10	Wolseley	Foot brake held, side brakes did not hold	Held well.
42	12	Belsize	Only just held on foot brake, back wheel brakes good	Held well.
44	9	New Orleans	Foot brake held, side brakes did not hold	Held well.
47	8	De Dion	Both brakes held well together and singly	Held well.
48	8	Clément	Both brakes held well, together and singly	Held well.
		CLASS E.		
51	12	Gladiator	Both brakes held well together and singly	Held well.
52	10	Ariel	Both brakes held well together and singly	Held well.
53	14	New Orleans	Both brakes held well together and singly	Held well.
54	12	Century	Foot brake did not hold very well, side brakes held excellently	Held well.
56	14	New Orleans	Foot brake held well, side brakes did not hold	Held well.
57	10	M.M.C.	Foot brake did not hold well, side brakes held	Held well.
59	7½	Germain	Brakes held well, together and singly	Held well.
		CLASS F.		
62	6	Gardner-Serpollet	Both brakes held together, hand brake only just held, and singly foot brake held well	Held well.
63	6	Gardner-Serpollet	Foot brake good, hand brake did not hold	Held well.
64	10	Peugeot	Both brakes good, together and singly	Held well.
65	12	Brush	Foot brake held, side brakes did not hold	Held well.
		CLASS G.		
66	12	Humber	Foot brake held well, side brakes did not hold	Held well.
67	12	Humber	Both brakes held well, together and singly	Held well.
69	20	Wolseley	Foot brake held well, side brakes did not hold	Held well.
70	10	Mors	Both brakes held well together and singly	Held well.
71	8	Wilson and Pilcher	Both brakes held well together and singly	Held well.
74	15	Germain	Foot brake held well, side brakes did not hold so well	Held well.
75	16	Clement	Both brakes held well together and singly	Held well.
		CLASS H.		
76	12	Daimler	Both brakes held well together and singly	Held well.
77	12	Daimler	Foot brake held well, side brakes did not hold	Held well.
81	29	M. M. C.	Both brakes held well together and singly	Held well.
		CLASS J.		
82	20	Maudslay	Foot brake held well, side brakes did not hold	Held well.
83	20	Pascal	Both brakes held well together and singly	Held well.
84	20	Pascal	Both brakes held well together and singly	Held well.
85	24	Dietrich	Both brakes held well together and singly	Held well.
		CLASS K.		
86	22	Daimler	Both brakes held well together and singly	Held well.
87	22	Daimler	Side brakes held well, foot brake did not hold	Held well.
88	15	Panhard	Both brakes held well together and singly	Held well.

SNAP SHOTS OF THE BRAKE TESTS.

Reproduced from photographs kindly placed at our disposal by Mr. Ernest Hutton.



The 14 h.p. New Orleans.
The 5½ h.p. Locomobile.
The 12 h.p. Belsize.

The 20 h.p. Pascal.
The 10 h.p. Mors.
The 6 h.p. Gardner-Serpollet.

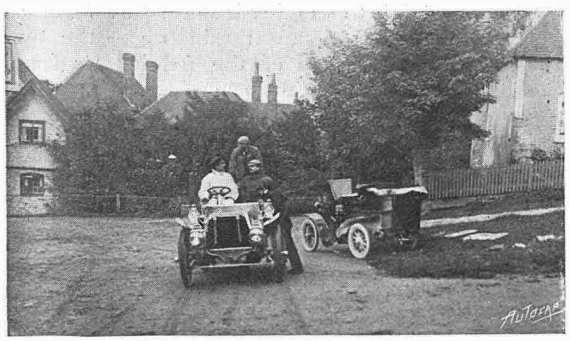
An additional brakes trial is to be held on Friday, the 5th inst., on the outward journey to Tonbridge, during the descent of Riverhill. The drivers will be required to stop their cars at four points, such points being marked by white flags. The consumption trial is also to take place on Friday, so that it promises to be altogether a busy and eventful day.

The reliability of the cars was well shown by the very few stoppages on the road. It was very different from the thousand miles trial, and the advance made in a little over two years was most noticeable. Tyres, too, gave very little trouble, and many remarked on the very few delays that occurred in this respect.

THE CRYSTAL PALACE TO FOLKESTONE AND BACK.

MONDAY. FIRST DAY.

The garage at the Crystal Palace, on the Upper Terrace, where the entered vehicles have reposed beneath the judges' vicarious eyes since Friday last, was early astir for the first and the longest day's run. As early as 6.30 a.m., with a horrible drizzle falling and every promise of a nasty day—which promise was kept, by the way, until after lunch—vehicles in the drawn order of their numbers were taking their places, as notified by huge tickets attached to the fence on the east side of the Crystal Palace parade. The road surfaces already promised to be heavy, by reason of the wet that had fallen so heavily on Sunday and almost since the dawn. It was clear that drivers, observers, and passengers were not in for a good time, and, meteorologically, appearances were borne out. We made the parade out to number in all sixty-nine vehicles, but these figures may undergo some little alteration when the marks are set out from the observers' reports. The parade, as we took it, was made up as under, and a very impressive parade it was for those who, by experience, were able to compare it with similar turns-out in the club trials of the past. The order of departure for each day is settled by lot, and as it makes no difference to the marks awarded, and is merely done



The Hon. Marshal reporting progress as he passed through Ightham, after he had started the cars back on the first day.

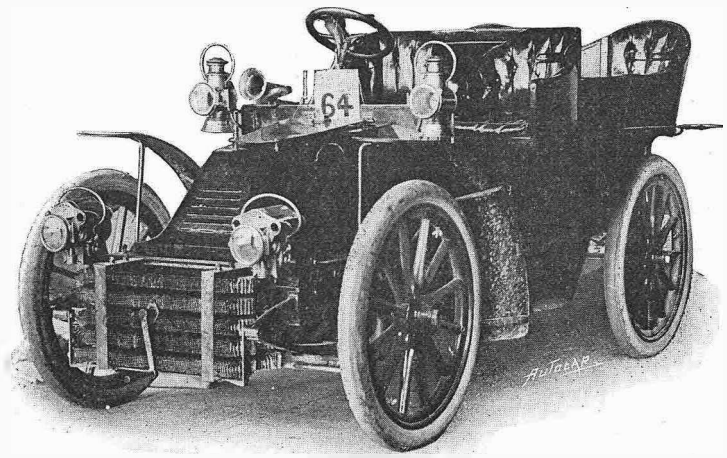
to prevent jealousies, we content ourselves by giving the names of the starters, as they represent the cars actually taking part in the trials:

Official No.	H.P.	Name.
1	3	Chain-driven HumberBicycle
4	5	Century tandem.
5	5	Baby Peugeot.
7	1¾	Ormonde Bicycle.
8	4	Oldsmobile.
9	5½	Locomobile.
10	5½	Locomobile.
11	4½	Swift.
12	8	Parr light car.
19	7	Star.
20	5½	Locomobile.
21	5½	Locomobile.
22	4½	Renault.
23	8	M.M.C. Voiturette.
24	6	De Dion-Bouton.
26	6	White Steam Car.
28	10	Georges Richard.
29	6	White Steam Car.
30	10	Decauville.
31	10	Georges Richard.
32	9	James & Browne.
33	12	Gladiator.
35	10	Brooke.
36		Light car, fitted with 8 h.p. Simms motor.
38	10	Star.
39	10	Wolseley.
40	7½	Wolseley.
41	10	Wolseley.
42	12	Belsize.
44	9	New Orleans.
47	8	De Dion.
48	8	Clement.
51	12	Gladiator.
52	10	Ariel.
53	14	New Orleans.
54	12	Century.
56	14	New Orleans.
57	10	M.C.C.
59	7½	Germain.
60	20	Georges Richard
62	6	Gardner-Serpollet.
63	6	Gardner-Serpollet.
64	10	Peugeot.
65	12	Brush.
66	12	Humber.
67	12	Humber.
69	20	Wolseley.
70	10	Mors.
71	8	Wilson & Pilcher.
74	15	Germain.
75	16	Clement.
76	12	Daimler.
77	12	Daimler.
81	20	M.M.C.
82	20	Maudslay.
83	20	Pascal.
84	20	Pascal.
86	22	Daimler.
87	22	Daimler.
88	15	Panhard.
T1	12	Panhard, fitted with test set of Dunlop tyres.
T2	11b.	Napier, fitted with test set of Dunlop pneumatic tyres.
T3	10	Panhard, fitted with test set Dunlop pneumatic tyres.
T4	10	Wolseley, with one set of Dun'op test tyres fitted thereto.
T5	16	Clement, fitted with test set Maison-Talbot tyres.
T6	8	Clement, fitted with test set Maison-Talbot tyres.
T7	11	Napier, fitted with test set of Collier tyres.
T8	12	M.M.C., fitted with one set Martin's pneumatic tyre.
T12	16	Napier, fitted with one set Midgeley's armoured tyres.

A total train of 69 vehicles in all.

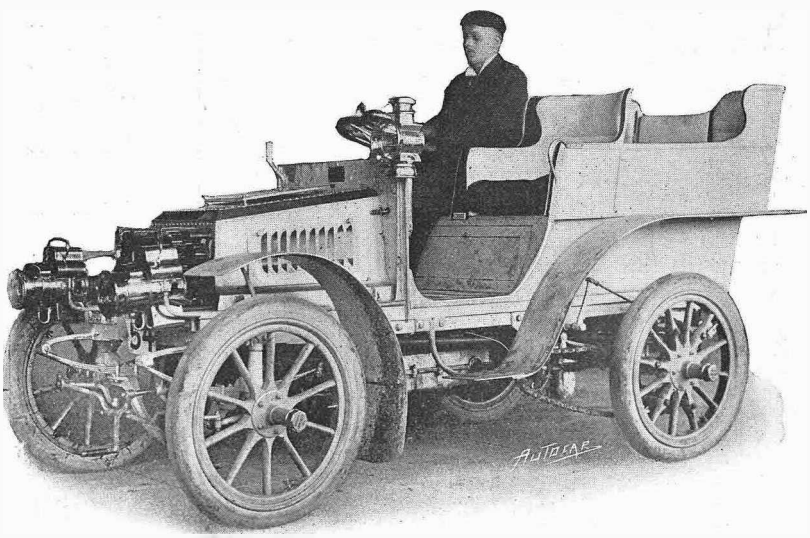
A view along the Crystal Palace Parade in the morning

The early hour and discouraging weather precluded anything like a spectacle of departure, and as the cars were dispatched at regular intervals of time, after each driver had received some solemn caution from Mr. Secretary Johnson, there was no sort of procession for the benefit of the few early birds who gathered along the outer suburban roads.



The 10 h.p. Peugeot.

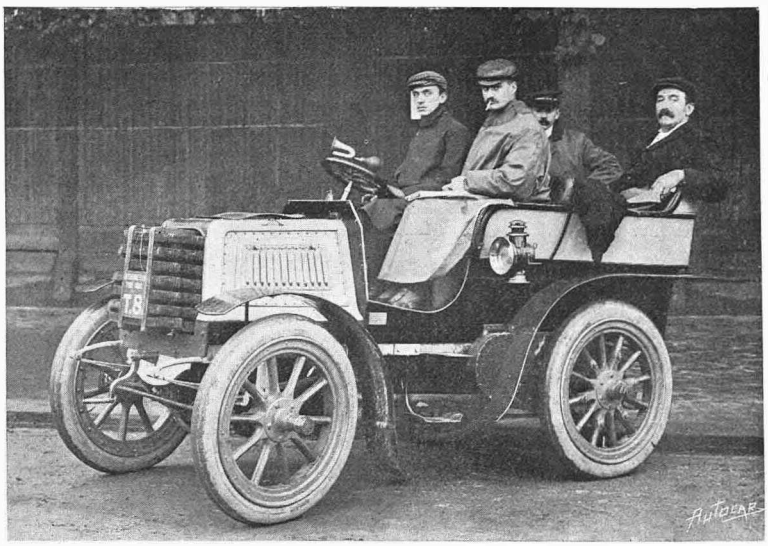
In the country proper there was no sort of excitement, except, perhaps, in Ashford and Folkestone on the return journey. To vary the monotony of the start, however, a drover sent a herd of wild and uncontrolled cab-horses through the little knot of officials and idlers, but, luckily, without doing any damage. The local fire brigade also turned out with engine and horsed fire-escape, so that their cattle, too, might become accustomed to a crowd of purring, buzzing, and sometimes back-firing motors. Sundry cars which, from one cause or another, had got shut out of the trials, were present on the parade, among them being the 9 h.p. Rex, the 8 h.p. Dennis, and the smart-looking 16 h.p. four-cylinder Ariel, upon which Mr. Chas. Sangster was good enough to give us a seat for both the outward and homeward non-checked journeys. Taking our departure at least a quarter of an hour after No. 63 had disappeared into the drizzle down the Crystal Palace Park Road, we found the surfaces right through Beckenham, Bromley, and over Chislehurst Common, to be very holding and side-slippery. The surface of the London and Maidstone road, when taken at Foots Cray, was found to be excellent and fast. A car or two were passed, but up the steep and holding hill to Chislehurst Common we found the 10 h.p. Ariel crawling up light, with her observer and passengers walking. Upon enquiry, we learnt that another car had stopped directly in front of the Ariel on the worst portion of the hill, with the result that the driver stopped his engine, and, owing to the very heavy condition of the road, the car could not be got going again without unloading. Some few moments before this we had passed the 11 h.p. Napier (T7), with some small trouble—we believe, carburetter, but are not sure. One or two of the motor cycles passed at this juncture, and it was evident that they were having a bad time in the heavy going. A stop at the Lion at Farningham put us about an hour behind the hindmost, so we had to proceed a long way before we got among the crowd again. Maidstone was greasy to an extreme, but no one seemed to have slipped seriously, except the 10 h.p. M.M.C. (No. 57), which unseated its observer, and narrowly escaped collision with a trap. Considering the condition of the road there, this was really not to be wondered at. Just before reaching Harrietsham we passed the 8 h.p. Parr (No. 72) bucketing merrily along through the sheeting rain; and upon clearing that village we shot by No. 8 (the Oldsmobile), being returned thereto by hand, a flawed bracket of the crank chamber having given, with evil results. Those on the road between Charing and Ashford at the same time as ourselves were treated to a little ray of sunshine—the only glint on the downward run. The majority of the cars took the steep slope up from Sandgate to the heights above Folkestone in order to earn the extra marks, the Ariel, too, taking it quite *fors l'honneur* in splendid style. Upon turning on to the Leas Road, a good sprinkling of the public was found, but as most of the cars were here running out time the show suggested a funeral procession rather than a motor run. The descent of the steep slope from the Leas to the harbour was in some cases more than



The 12 h.p. Century.

ludicrous, No. 74 (the 15 h.p. Germain) descending at a speed not greater than one foot per minute, or thereabouts. The 6 h.p. De Dion, which was driven by Mr. Walter Munn, did its best to emulate the speed of the big-powered Germain. Reaching the Pavilion Hotel, the cars were marshalled by Mr. S. F. Edge round the drive in the order of their arrival,

and left again so soon as each had stayed its allotted threequarters of an hour. The arrangements for petrol supply here were, thanks to the interest of the Anglo-American Oil Co.'s agent, excellent in every way, and there was no waiting for the necessary spirit. But for one slight shower, the return journey was made in something approaching sunshine, and over dry roads where they were at all exposed; but the tree-lined sections of the Wrotham Heath, Ightham, Seal, and Riverhead road were still very heavy. All the cars save two had left Folkestone well before two, and their fifteen minutes' halt at Maidstone quite woke up that town. Although we picked up and passed through the whole line before we reached the Palace, we did not see a single halt for repairs; indeed, on no previous trial or test of the kind have we seen so few breakdowns. This was remarkable, considering the heavy and trying nature of the course, running as it did over biggish rolling country and extremely heavy roads. The first car to arrive was the 10 h.p. Peugeot (No. 64), and this was followed at very frequent intervals, until by seven o'clock no less than thirty-six vehicles had wheeled into place for washing. All had returned by eight p.m., drivers, observers, and passengers being well content to have arrived at the end of a somewhat uncomfortable and arduous day. The lukewarm interest of the rural public and the general complacency observed by the equine population were noticeable features of the run.

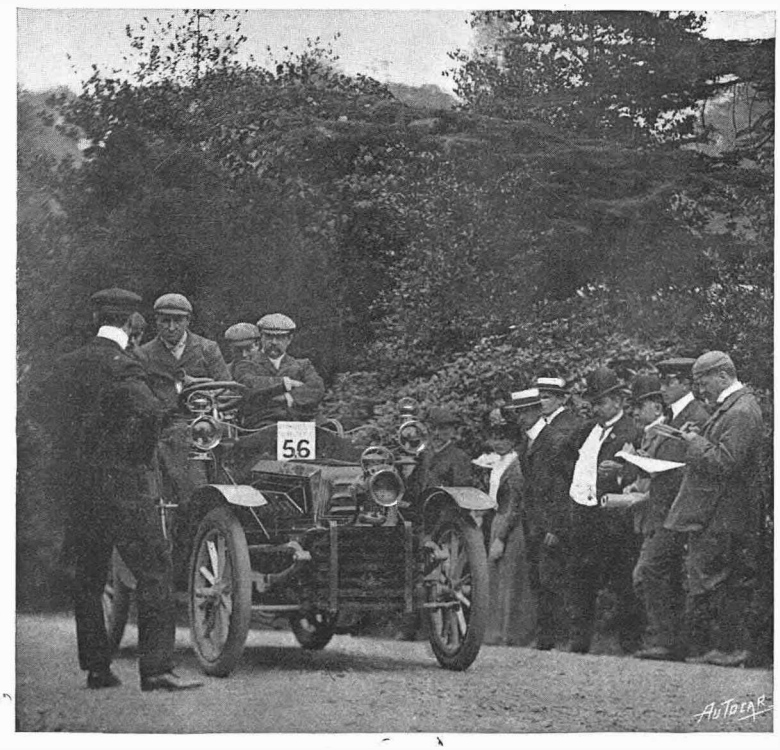


The 12 h.p. M.M.C. car, fitted with Martin tyres.

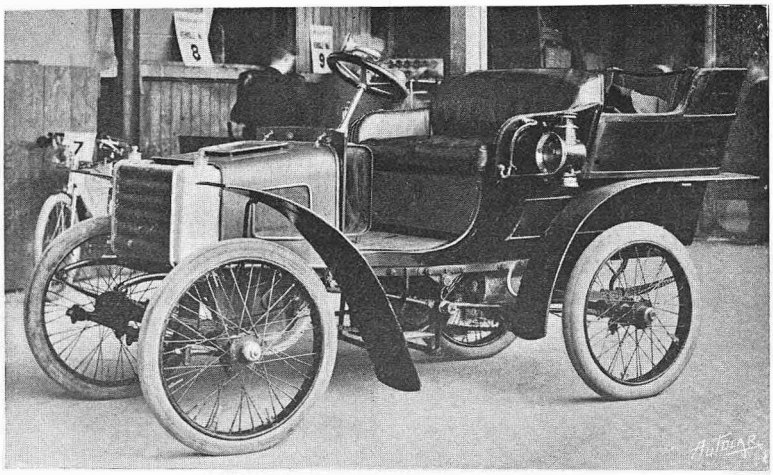
TUESDAY. SECOND DAY.

Crystal Palace to Eastbourne.

Of the seventy cars that started on Monday morning, sixty-four were returned to the Palace by 7.30 p.m., and three more, making sixty-seven, were in shortly after. The *St. James's Gazette* report, that in the early hours of the morning several cars were still out, is quite beside the facts. But three of the seventy vehicles were missing from the parade when the queue for Eastbourne was formed up, and these were No. 20 (Georges-Richard); No. 67 (Humber), which suffered from a cracked bearing case only; and No. 8 (Mr. Packham's Oldsmobile), which, as previously mentioned, suffered a flawed bracket on crank chamber. The morning was fine though dull, and, to use sporting parlance, we may say that Edge, Johnson, and Siddeley got their field away to a capital start. By 7.30, sixty-seven mechanically-propelled carriages conveying 242 people were *en route* to Eastbourne. The roads had dried wonderfully during the night, and, except in tree-sheltered parts, the main roads afforded splendid going. The route, both on the outward and homeward journeys, was a far severer test than that of Monday. Reference to the sections published on page 217 of our last issue will convey some impression of the huge amount of climbing to be done. Going, we have Polhill, then the clamber up into Sevenoaks, then Quarry Hill from Tunbridge to Southborough, and again from Tunbridge Wells to Frant, and the steep pull up to Cowden, before letting go for sea level. Homeward, worse awaited the cars, for, after the steep and long climb through Duddeswell, and the several nasty stiff bits between Hartfield and

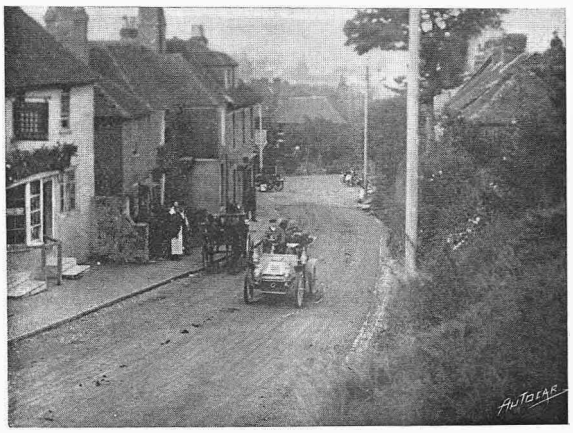


The 14 h.p. New Orleans coming up the hill for the brake test.



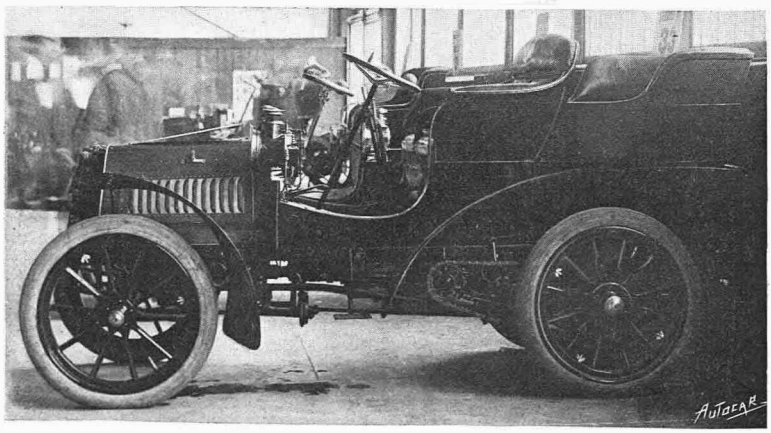
The 8 h.p. Parr light car.

Cowden Pound, there came Crockham Hill—a terribly trying ascent for automobiles, owing to its sharp turnings—and the well-known Westerham Hill, which will form one of the scaling tests of Friday next. As we have suggested, the run was made to Eastbourne over good roads and, after nine o'clock, in fine weather, the first car arriving shortly before noon on the front. The day being fine, large crowds were out in Eastbourne to view the arrivals of the vehicles, Brighton's great compeer being very full of visitors at the moment. The quarter of an hour stop of the morning had been made at Tunbridge Wells, whereto the road long ago was crowded with visitors driving to take the waters, and who wanted no Homburg or Baden in those days. The Wells were agog to see us, but there is no doubt that the public generally are somewhat disappointed at the business nature of the trials. They boast no fringe or fal-lals—no processions, no receptions, no speeches, quite a tame running of many motor cars at infrequent intervals. And no automobile of note—no "Roaring Forty," no "Soaring Seventy," nor the Gordon-Bennett crack; naught but the family touring vehicle, so to speak, of many sorts, sizes, and shapes, assuredly, but no vehicle of sensation. On the return journey the fine weather held as far as Hartfield, when a drizzle was run into, which increased as the time wore on, until the leading vehicles finished up the Crystal Palace Park Road in a heavy and steady downpour, which by that time had rendered the roads very holding. Indeed, the wet had made the surface of Westerham Hill very hard going, so that drivers got a very smart taste of what may be expected on Friday. Riverhill—the first ascent to be taken against the watch on that day—was in a very loose and rough condition when we descended it today, and unless some dry weather intervenes is likely to prove as stiff a nut to crack as Westerham, owing to its bad surface and sharp bends. At the time we made the ascent in the unentered 8 h.p. Milnes voiturette, driven by Mr. Burford—which, by the way, went up excellently, and only spilled her passengers just on the 1 in 7.8 knuckle—several cars were scaling the steep, some doing well, and some otherwise. It would be invidious to refer here to the cars we noted ascending,



Climbing one of the Kentish hills.

well or ill, at the time of our own climb; but we cannot refuse a word to the 6 h.p. De Dion (No. 24), which, shedding but one passenger (a light one) from the front seat, went up without faltering. For the performances throughout, we must let the marks earned speak for themselves. The first vehicle was hardly through the gates into the Palace garage when the return of the vehicles along the parade was notified every few minutes, until by half-past seven sixty-four of the sixty-seven cars were home again. Report had it that misfortune in the shape of a burst petrol tank had seized upon the urbane secretary, who formed one of the trio of the missing. The marks earned on Monday's run were posted in the afternoon of Tuesday, and we give them on the following page as officially announced. Three hundred is the daily maximum that can be earned.



The 7 h.p. Star light car.

The big Daimler pulling up in the brake trial.

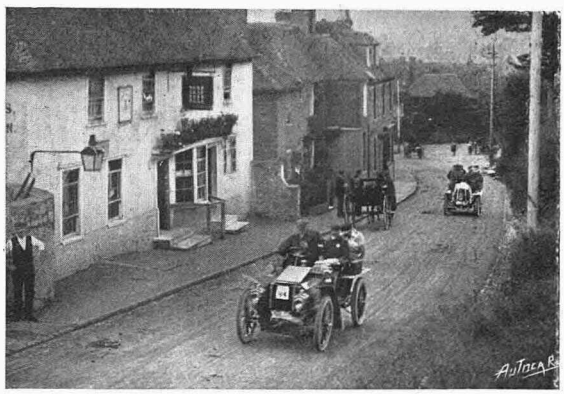
5 h.p. Baby Peugeot (Official No. 5), number of marks earned, 299; 5½ h.p. Locomobile (10), 289; 4½ h.p. Swift (11), 299; 7 h.p. Star (19), 285; 5½ h.p. Locomobile (20), 292; 4½ h.p. Renault (22), 267; 8 h.p. M.M.C. voiturette (23), 281; 6 h.p. De Dion-Bouton (24), 268; 6 h.p. White steam car (26), 294; 6 h.p. White steam car (29), 300; 10 h.p. Decauville (30), 295; 10 h.p. Georges-Richard (31), 297; 9 h.p. James and Browne (32), 300; 12 h.p. Gladiator (33), 300; 10 h.p. Brooke (35), 289; light car fitted with Simms 8 h.p. motor (36), 299; 10 h.p. Star (38), 295; 10 h.p. Woseley (39), 300; 7½ h.p. Wolseley (40), 300; 10 h.p. Wolseley (41), 300; 12 h.p. Belsize (42), 300; 9 h.p. New Orleans (44), 295; 8 h.p. De Dion-Bouton (47), 300; 8 h.p. Clément (48), 248; 12 h.p. Gladiator (51), 196; 12 h.p. Century (54), 273; 14 h.p. New Orleans (56), 299; 10 h.p. M.M.C. (57), 292; 7½ h.p. Germain (59), 297; 10 h.p. Peugeot (64), 299; 12 h.p. Brush (65), 300; 12 h.p. Humber (66), 300; 12 h.p. Humber (67), 174; 20 h.p. Wolseley (69), 300; 8 h.p. Wilson and Pilcher (71), 300; 15 h.p. Germain (74), 300; 16 h.p. Clément (75), 290; 12 h.p. Daimler (76), 297; 20 h.p. M.M.C. (81), 300; 20 h.p. Maudslay (82), 300; 20 h.p. Pascal (83), 286; 20 h.p. Pascal (84), 294; 22 h.p. Daimler (86), 300; 22 h.p. Daimler (87), 300; 15 h.p. Panhard (88), 300.

WEDNESDAY. THIRD DAY.

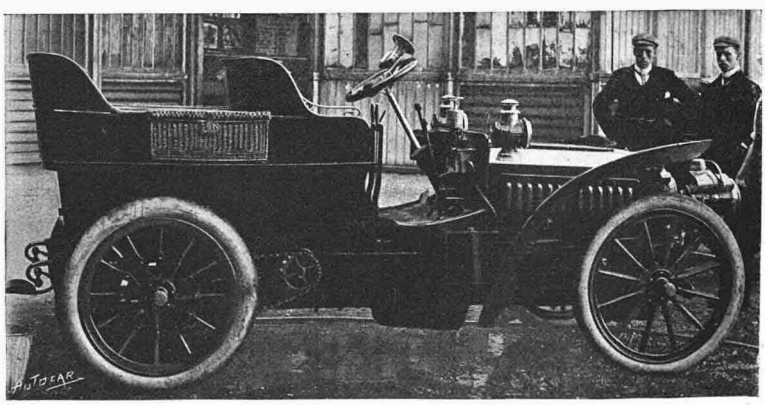
Crystal Palace to Worthing and Back.

At the start on Wednesday for the run to Worthing *viâ* Horsham and back *viâ* Arundel and Pulborough nothing could have looked more inauspicious than the meteorological outlook. As the cars faced the starter on the Crystal Parade the rain had been falling heavily through the early morning hours, and the roads were about as heavy and as slippery as they well could be. A close procession of the crowd was led by Mr. S. F. Edge, the Hon. Marshal, on his 16 h.p. Napier out to Carshalton, and on to the Epsom Road at Cheam, where the vehicles were restarted in their proper order, and at proper intervals. The Dorking Road was in excellent condition, as was the road right on to Worthing. The day was now glorious, with a bright sun and a cool fresh breeze.

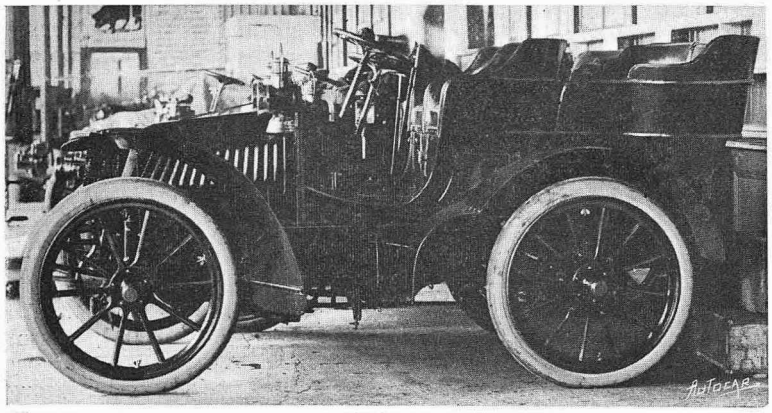
Given the acme of motoring weather, but few breakdowns, and those of the smallest, took place during the day, the majority being slight tyre repairs. The Sussex police were posted about five miles outside Worthing, and took the names of drivers who exceeded eighteen miles per hour, and they were again found in ambush around Reigate. Most of the competitors were warned of the traps in time, but the officiousness of the police was absolutely unnecessary, as the cars were driven throughout at a reasonable and perfectly safe speed. By seven o'clock all the vehicles were back in the Crystal Palace garage, clean and fit for exhibition, so that the evening attendants at the Palace were able to enjoy a fine view of the much travelled vehicles. Several of the "gated" cars were on the road, the 16 h.p. Ariel, the Rex, and others, and all who travelled on the former have nothing but praise for the manner in which she ran, her silence and smoothness of running being remarkable. The day was a perfect success throughout. The marks earned on Tuesday's run were posted in the afternoon of Wednesday, and we give them over leaf as officially announced.



The 20 h.p. Pascal with the 10 h.p. M.M.C. a few lengths back



The 20 h.p. Pascal.



The 15 h.p. Germain.

5 h.p. Century (Official No. 4), number of marks earned, 300; 5 h.p. Baby Peugeot (5), 295; 5½ h.p. Locomobile (9), 262; 5½ h.p. Locomobile (10), 293; 4½ h.p. Swift (11), 282; 7 h.p. Star (19), 297; 5½ h.p. Locomobile (20), 270; 5½ h.p. Locomobile (21), 295; 4½ h.p. Renault (22), 286; 8 h.p. M.M.C. (23), 295; 6 h.p. De Dion (24), 299; 6 h.p. White (26), 296; 6 h.p. White (29), 300; 9 h.p. James and Brown (32), 97; 10 h.p. Georges-Richard (31), 293; 12 h.p. Gladiator (33), 300; 10 h.p. Booke (35), 300; 10 h.p. Wolseley (39), 295; 7½ h.p. Wolseley (40), 299; 10 h.p. Wolseley (41), 300; 10 h.p. Belsize (42), 300; 9 h.p. New Orleans (44), 299; 8 h.p. De Dion (47), 300; 12 h.p. Gladiator (51), 298; 10 h.p. Ariel (52), 252; 14 h.p. New Orleans (53), 300; 12 h.p. Century (54), 298; 7½ h.p. Germain (59), 300; 10 h.p. Peugeot (64), 299; 12 h.p. Brush (65), 222; 12 h.p. Humber (66), 294; 20 h.p. Wolseley (69), 300; 10 h.p. Mors (70), 300; 8 h.p. Wilson and Pilcher (71), 291; 12 h.p. Daimler (76), 298; 12 h.p. Daimler (77), 300; 20 h.p. M.M.C. (81), 300; 20 h.p. Maudslay (82), 298; 20 h.p. Pascal (84), 286; 22 h.p. Daimler (86), 300; 22 h.p. Daimler (87), 300; 15 h.p. Panhard (88), 300.

Sixty-two cars in all (eight absentees from Monday's roll) left the Palace.

Those which were disqualified, non-starters, and breakdowns on the day's run are included in the total.

NOTES ON THE TRIALS.

Many amusing incidents occurred during the first day's run. At Maidstone, an elderly lady watched the passing cars with evident interest until No. 86 saluted her with a couple of back-fires in quick succession. Whereupon the elderly lady gathered up her skirts and hastily retired to watch the remainder of the procession at what she, no doubt, considered a safer distance.

* * * *

The way in which the cars are marshalled and despatched each morning is a great improvement on previous events. Of course, previous trials have given experience, and there is no doubt that the Crystal Palace and the surrounding roads lend themselves admirably to the requirements, as the cars are formed up in a long tail down the great parade in front of the Palace, being driven out into position one by one from the garage, which is one of the long galleries under the main floor of the building, and ordinarily deserted, only coming into use at such times as the great national holidays or fêtes, when it is used as a gigantic refreshment room for those who come in from the grounds seeking food and drink. The hon. marshal, Mr. S. F. Edge, who turns the cars out promptly, afterwards proceeds by another road, if possible, to the turning-point, and here again he gets the cars into position and despatches them back to the Palace, meeting them there on their return, and checking them home.

* * * *

Among the cars shut out owing to late arrival was the new De Dietrich, built on the Turcat-Mery system This was very disappointing, as these cars have been so greatly improved of late that many were anxious to see them running, especially in the light of their recent performances in the Paris-Vienna and Circuit des Ardennes races. They appear to run very silently, and it would have been most interesting to watch their performances in comparison with those of the other cars taking part in the trials.

* * * *

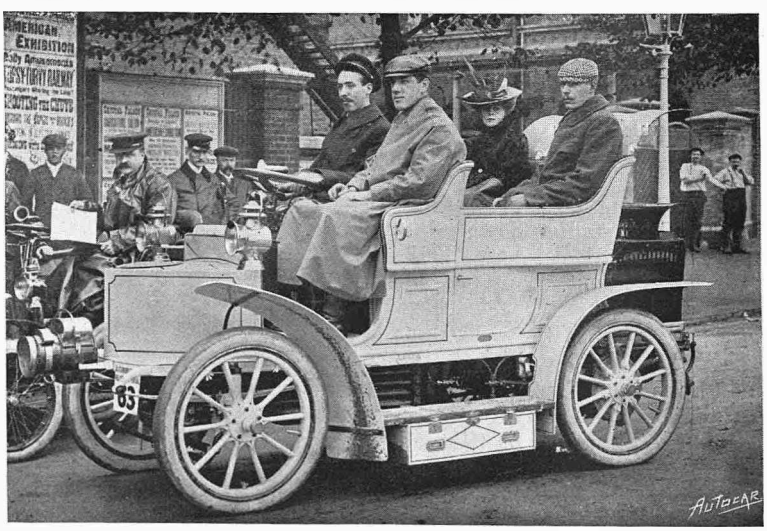
The performances of the Baby Peugeot are being watched with great interest by many, and we have been more than ever confirmed in our opinion that there is a great and growing demand for small vehicles of the sociable type.

* * * *

Though too late to take part in the trials officially, both the 16 h.p. Ariel and the 20 h.p. Star are running with the other cars over the specified route each day. The 20 h.p. Star could not be finished quite in time to reach town before the judges commenced their labours on Friday, and the Ariel was only finished a few hours before the start on Monday, as the vehicle which was to have been used was too badly damaged at Edinburgh, as recorded last week, for it to be possible to repair it in time.

* * * *

The number of farmers, horsebreakers, and others who brought out their young and nervous cattle to accustom them to motor cars was quite astonishing.



The 6 h.p. Gardner-Serpollet lonneau with side doors Specially built to the Speedwell Co.'s designs

Open places, by-roads, and fields were taken advantage of by wise owners, who recognised the fact that they would get more value in a couple of hours upon this occasion than they would in a couple of months in the ordinary way. We only observed one mishap, in which the driver of a young horse failed to reach an open space he was driving towards before the first of the cars arrived. The horse took its own way, and jumped a low hedge into a field, taking a light Canadian trap and occupants with it.

* * * *

Mr. W. Williamson, a director of the Rex Manufacturing Co., Ltd., Coventry, writes: "I should like to make public the reason our 9½ h.p. car is only following the 650 miles trial, and not an actual competitor. For some unexplainable reason the Automobile Club simply gave notice for the competitors to get into the Palace on Friday, the 29th ult., but mentioned no particular gate at which the cars were to enter. The Crystal Palace, as everyone knows, is several miles round, and our driver, who arrived at the Palace at 11.50 a.m., naturally tried every gate he came to, of which there are many, before he happened to hit on the right one. By this time it was 12.10 p.m., and he was not admitted, many others being in the same plight. The Rex car is consequently debarred from a trial which cost us £14 to enter, simply because our driver did not happen to be a thought reader."

* * * *

Messrs. Dennis Bros., Ltd., of Guildford, write:

"We shall be much obliged if you will kindly insert in your next issue the reason why the Dennis car will not run in the 650 miles reliability trials, for which it was entered.

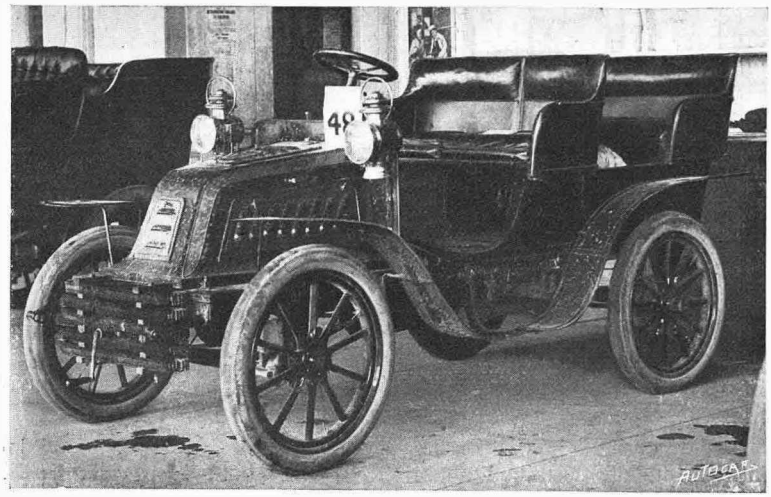
"The car, fitted with new tyres, on its way to the Crystal Palace on Friday morning, unfortunately punctured just outside Kingston; and this was of such a serious nature that, before effectually repairing, over an hour had passed away.

"The journey was resumed, and the car arrived at the Palace gates just ten minutes late (12.10 p.m.), with the result that the garage was locked, and we were informed by Mr. Johnson (secretary of the Automobile Club) that our entry could not be accepted, and that the committee would finally decide in the afternoon whether or not the car would be allowed to run.

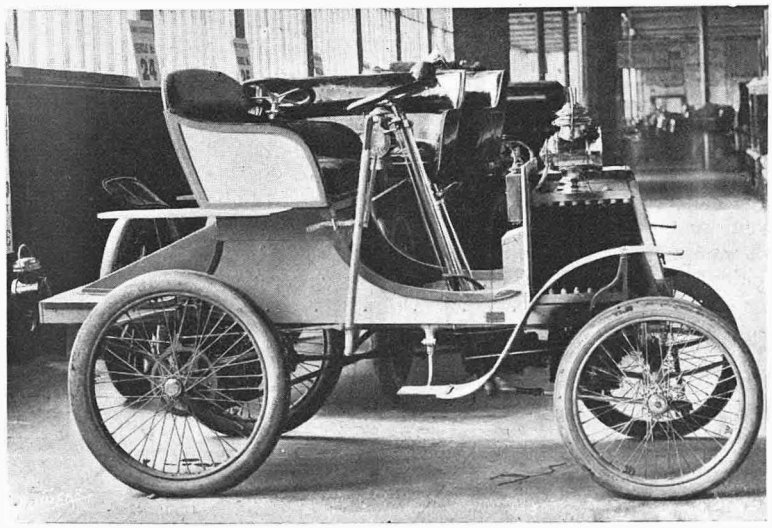
"The committee decided to disqualify the car, and, although we admire them for strictly upholding the rules, yet we do not see that this rule is of such great importance that the expense gone to by manufacturers in preparing for these trials should be absolutely ignored, as, from personal observation, the cars seemed to have no benefit in arriving on Friday at all (except cleaning), while the representatives simply whiled away the afternoon.

"Surely the time could have been extended to a later hour in the day, say 3 p.m., giving firms who had to send some distance better chance of arriving in time.

"To support our agents, however, and to prove to our numerous friends who will be eagerly looking out for the performance of the Dennis car—in which we have every confidence—that we could run a longer distance than the whole 650 miles without even stopping at all, we shall be pleased to meet the winning car of Class C (the class in which we had entered) for a trial run of reliability, both cars to start together over the same course, and the loser to be the first car which has to stop, except for tyre troubles, for a stake of £50 aside; and, if we prove successful, we shall be pleased to pass the amount over to any charitable institution recommended by the committee of the Automobile Club, or, failing the acceptance of the offer, we hope shortly to arrange a non-stop run from Land's End to John-o'-Groat's without stopping the engine."



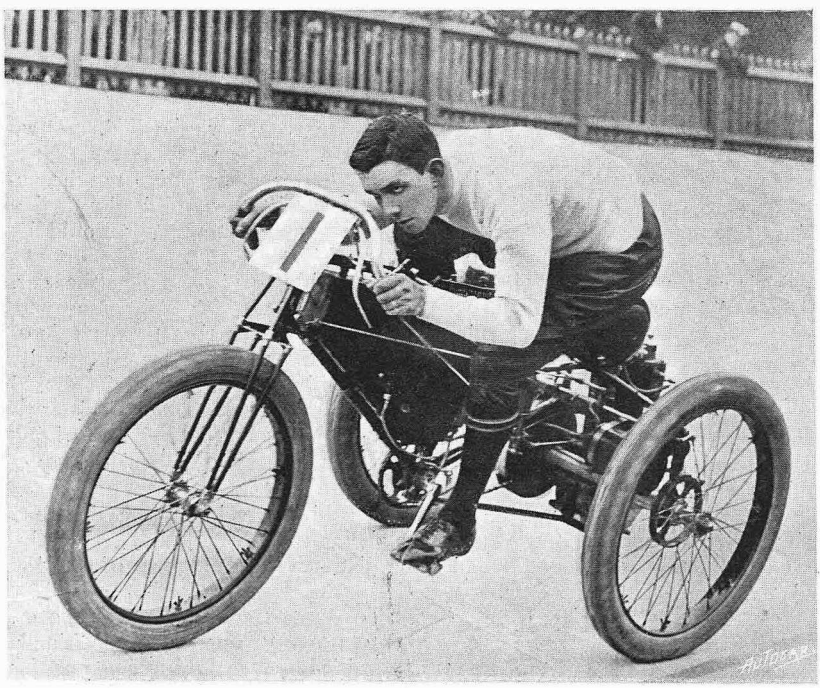
The 8 h.p. Clement.



The 4½ h.p. Renault.

ANNUAL MOTOR CYCLE MEETING OF THE AUTOMOBILE CLUB.

The annual motor-cycle meeting held by the Automobile Club to decide the one hour scratch and five miles and ten miles handicaps for *The Autocar*, *The Motor Car Journal*, and *The Automotor Journal* challenge cups respectively, was held on the Crystal Palace track on Friday last week before a large gathering of interested spectators. The entries were heavy, but there were for one reason or another a large number of non-starters. The handicapping of the five and the ten miles proved unsatisfactory. On form Hooydonk, on a 75 mm. by 75 mm. Phœnix-Minerva bicycle should have won both these events, whereas he could get no nearer than third, and even then was a very long way off the winner. Much sympathy was felt for E. H. Arnott, who travelled exceedingly well on his 2¼ h.p. Werner, and who luckily sustained no injury by his fall at the top bend, when within two minutes of the close of the one hour's scratch race. The ten miles handicap, which started after sundown, proved a particularly exciting race for the spectators (for the sixteen starters were wildly mixed up from start to finish), and provided one of the most exciting and ear-splitting contests ever witnessed. It says much for the skill of all the drivers that no accident took place, for the competitors were as often as not seen rounding the bends in compact bodies four and five abreast. Both the Hooydonk and the Singer travelled well throughout, but the winner, with 14 laps 490 yards start, could never be approached. It will be seen from the time, 9m. 38s., that the scratch man, on a 4½ h.p. Soncin, would have had to have travelled at over sixty miles per hour to have caught the actual winner. The meeting was exceptionally well handled by Lacy Hillier, the judge, and G. F. Sharpe, the hon. secretary, supported by a willing band of workers in divers capacities. The other chief officials were: Timekeepers, H. J. Swindley, hon. official timekeeper A.C.G.B. and I., F. T. Bidlake, R.R.A., and G. P. Coleman, N.C.U.; starter, Frank Smith.



C Jarrott going at full speed.

ONE HOUR SCRATCH RACE FOR MOTOR CYCLES (OPEN TO ANY MOTOR CYCLE) FOR "THE AUTOCAR" CHALLENGE CUP.

Holder: Chas. Jarrott.

J. Van Hooydonk, 2¼ h.p. "Phœnix" motor bicycle, 1; E. H. Arnott, 2¼ h.p. "Werner" motor bicycle, 2; W. Parry, 2¼ "Minerva" motor bicycle, 3 (disqualified for cutting in); Chas. Jarrott, 8 h.p. "De Dion" tricycle, stopped (steering-stem loose); J. J. Leonard, 2 h.p. "Werner" motocyclette, stopped ignition; F. W. Chase, 2¾ h.p. "Bat" motor bicycle; H. Martin, 2¼ h.p. "Excelsior" motor bicycle; T. H. Tessier, 2¼ h.p. "Clément-Garrard" motor bicycle; F. R. Wade, 2¼ "Daw"; A. E. J. Steele, 3¼ h.p. "Phœbus-Aster" motor tricycle (disqualified for pedalling). Hooydonk, on his "Phœnix," and E. H. Arnott, on the 2¼ h.p. "Werner," were the only pair that made anything of a race of it, for both drew away from the field from the start, their engines running perfectly. At the expiry of the first half-hour Hooydonk had exactly completed twenty-one miles, while Arnott was a bare half lap behind him. Hooydonk continued to creep away from Arnott, who was, nevertheless, travelling well, but who when two minutes from the call of time, for some cause or another, ran off the course, and fell, most luckily, without seriously damaging himself. Hooydonk completed 42 miles 290 yards in the hour, and up to his *débacle* Arnott had covered 39 miles 620 yards.

FIVE MILES HANDICAP.—Limited to motor bicycles with engines having a total capacity in which the diameter in mm. multiplied by the diameter in mm., multiplied by the stroke in mm., do not exceed 440,000, and motor tricycles in which the diameter in mm., multiplied by the diameter in mm., multiplied by the stroke in mm., do not exceed 576,000. The race was for the "Motor Car Journal" challenge cup. The winner of each heat and the fastest loser competed in the final.

HEAT 1.

	Cycle.	Motor.		Start.
F. E. Coles (1)	Brown Brothers M.B.	1¾ h.p. Brown Brothers	62 by 70	4 laps 300 yds.
C. A. Smith (2)	Ariel Full Roadster M.T.	2¾ h.p. Ariel	70 by 77	1 lap 470 yds.
Jas. Parsley	Minerva M.B.	2 h.p. Minerva	70 by 70	1 lap 470 yds.
S. A. Fairweather	Ariel Full Roadster M.T.	2¾ h.p. Ariel	70 by 77	1 lap 470 yds.
Wm. W. Genn	Genn M.B.	2 h.p. Minerva	70 by 70	1 lap 470 yds.
G. T. Vince	New Hudson M.B.	1¾ h.p. Minerva	65 by 70	3 laps 490 yds.

Coles led from start to finish, and won easily. Time: Coles, 7m. 19⅘s.; Smith, 7m. 32⅘s.

HEAT 2.

Edwin Perks (1)	Singer M.B.	2¼ h.p. Singer	73 by 70	1 lap	140 yds.
A. H. Bambridge (2)	Shaw M.B.	Shaw	76 by 74	1 lap	20 yds.
Stanley A. East	haw M.B.	Shaw	76 by 74	1 lap	20 yds.
A. B. Farhall	Phœnix	1⅜ h.p. de Jong	70 by 70	1 lap	470 yds.
James Adams	Ormonde M.B.	1⅜ h.p. Ormonde	66 by 76	2 laps	30 yds.
H. Starley	Starley M.B.	A. V. Motor	63 by 76	4 laps	150 yds.

The Singer machine ran excellently, and carried its rider through his field in excellent style. Time, 7m. 8s.

HEAT 3.

S. C. Holloway (1)	Minerva M.B.	1¾ h.p. Minerva	62 by 70	4 laps	300 yds.
A. G. Sidwell (2)	Force M.B.	1¾ h.p. Force	61 by 70	4 laps.	
W. Parry (3)	Minerva M.B.	2½ h.p. Minerva	75 by 75	—	440 yds.
J. J. Leonard	Werner Motocyclette	2 h.p. Werner	76 by 76	scratch	
Charles Tomlin	Westfield Autobike	1¾ h.p. Westfield	66 by 74	3 laps	60 yds.

Holloway was thrown in, and won easily. Times: S. C. Holloway, 6m. 28s.; A. G. Sidwell, 7m. 13⅘s.

HEAT 4

J. Van Hooydonk (1)	Phœnix M.B.	2¼ h.p. Phœnix	75 by 75	—	440 yds
W. J. Westfield (2)	Westfield Autobike	1¾ h.p. Westfield	66 by 74	3 laps	60 yds.
Bert Yates	Humber M.B.		76 by 76	scratch	
T. B. André	Mitchell M.B.	2 h.p. Mitchell	76 by 76	scratch	

Hooydonk was never approached. Bert Yates was disqualified for pedalling over mark. Times: J. Van Hooydonk, 6m. 58s. W. J. Westfield, 8m. 8⅘s.

HEAT 5.

F. R. Wade (1)	Daw M.B.	1¾ h.p. Daw	64 by 70	4 laps	
H. D. Davis (2)	Collier M.B.	2 h.p. R.M.M.C.	70 by 70	1 lap	470 yds.
Cecil Edge (3)	De Dion M.T.	6 h.p. De Dion	75 by 85	scratch	
George Petry	Sarolea	1¾ h.p. Sarolea	65 by 72	3 laps	360 yds.

Times: F. R. Wade, 7m. 20⅘s.; H. D. Davis, 7m. 28⅘s.; Cecil Edge, 7m. 43⅘s.

FINAL HEAT.

	Rider.	Motor.	Rider.	Motor.
1	S. C. Holloway	1¾ h.p. Minerva	F. C. Coles	1¾ h.p. Brown Bros.
2	F. R. Wade	1¾ h.p. Daw	E. Perks	2¼ h.p. Singer.
3	J. Van Hooydonk	2¼ h.p. Phœnix	A. G. Sidwell	1¾ h.p. Force.

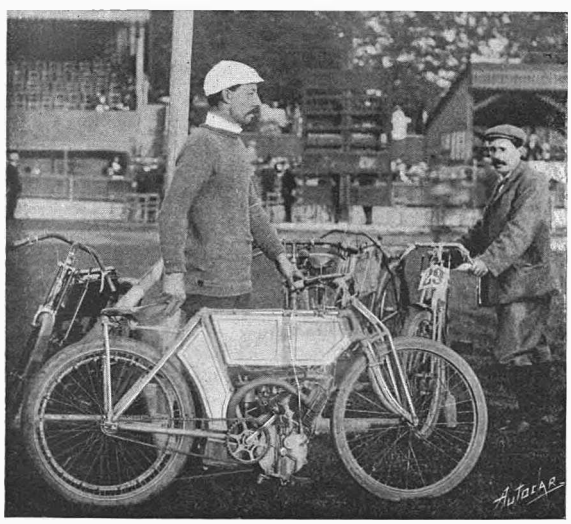
As the time shows, the winner won by streets, a close finish taking place between second and third. Times: S. C. Holloway, 6m. 26⅕s.; F. R. Wade, 7m. 7⅕s.; J. Van Hooydonk, 7m. 13⅕s.

TEN MILES HANDICAP.—For motor cycles of any power, for the "Automotor Journal" challenge cup. Holder, Chas. Jarrott.

S. C. Holloway (1)	Minerva M.B.	1¾ h.p. Minerva	62 by 70	14 laps	490 yds.
J. E. Ridout (2)	Minerva M.B.	2 h.p. Minerva	70 by 70	9 laps	220 yds.
J. Van Hooydonk (3)	Phœnix M.B.	2¼ h.p. Phœnix	75 by 75	7 laps	270 yds.
H. Martin	Excelsior M.B.	2½ h.p. M.M.C.	79 by 80	3 laps	240 yds.
T. H. Tessier	Twin-cylinder Clement-Garrard	2¾ h.p. Clement-Garrard	60 by 75	3 laps	240 yds.
A. E. J. Steele	Phœbus Aster M.T.	Aster	80 by 93	4 laps	150 yds.
J. J. Leonard	Werner Motocyclette	2 h.p. Werner	76 by 76	7 laps	270 yds.
Stanley A. East	Shaw M.B.	Shaw	76 by 74	7 laps	390 yds.
Edwin Perks	Singer M.B.	2¼ h.p. Singer	73 by 70	8 laps	240 yds.
G. T. Vince	New Hudson M.B.	1¾ h.p. Minerva	65 by 70	12 laps	500 yds.
F. R. Wade	Daw M.B.	2⅜ h.p. Daw	79 by 82	2 laps	570 yds.
E. T. Arnott	Princeps M.B.	3 h.p. Princeps	62 by 70	3 laps	240 yds.
T. B. André	Mitchell M.B.	2 h.p. Mitchell	76 by 76	5 laps	560 yds.
W. Parry	Minerva M.B.	2¼ h.p.	75 by 75	7 laps	270 yds.
George Petry	Sarolea	1¾ h.p. Sarolea	65 by 72	13 laps	110 yds.

Time, 9m. 38s.

To attempt a description of this event is altogether beyond the chronicler's ability. The sun had set behind the Palace ere the gun went, and the event was ridden in the quickly-gathering dusk.



J. Van Hooydonk and his 2¼ h.p. Phœnix motor bicycle. On Friday last he established a record for this type of machine by riding 42 miles 290 yards in one hour.

It was a wild, sputtering, bewildering medley from start to finish, and the lap scorers must have been blessed with more than the usual powers of human vision to have kept track of the men whose circuits they were scoring. To the outsider the whirling crowd of black figures suggested peril unutterable, but it was a good deal safer than it looked, which was proved by the fact that the event closed without mishap. Holloway won by whole streets, and the impossibility of his doing otherwise so long as he kept going is shown by the fact that the scratch man would have to have travelled at something considerably over sixty miles per hour to have caught and passed him before the finish.

The crowds of people who watched the Trials cars enter and leave Folkestone *viâ* the Leas were given a fine exhibition of the control under which the driver had his car. Entering Folkestone, many of the cars were slightly ahead of their time, so crawled at an exceeding slow speed along the Leas. In descending the hill to the harbour, a speed of from one and a quarter to one and a half miles per hour was indulged in, while in ascending many of the same cars ran up the one in eight and a half at from eight to twelve miles per hour, to the evident astonishment of a very large majority of the people.

THE UNCONTROLLABLE HORSE.

A Record of Five Days' Accidents with Horses. Five Persons Killed and Sixty-five Injured.

As so much has been written within the last week or two about motor accidents and so-called motor accidents which are not such at all, we think it advisable, in the interest of automobilism, to give a record of five days' accidents to horse-drawn vehicles. We have, therefore, kept all the reports which we have been able to come across, though there are undoubtedly many in local papers all over the country which have of necessity escaped our attention, and many more accidents that are not recorded at all. At any rate, it is obvious that those who clamour for new legislation in connection with the regulation of motor traffic should also, to be consistent, do the same with regard to horse traffic. As any interference with horse traffic would be looked upon as little short of ridiculous, we need hardly point out that it is most unwise at the present time to disturb the motor regulations. At any rate, those who talk of the dangers of the motor have only to read the incomplete summary below to form an idea of the unreliability of the horse and its driver, for although we hear so much about incompetent motor drivers no one ever says a word about incompetent horse drivers, which, as a matter of fact, are far more numerous in proportion. As we have so often pointed out the more logical lines for the Legislature to move upon in this matter would be to improve the facilities for travel on our highway, so as to accommodate the new form of traffic which has been legalised, and to frame regulations applicable to all forms of traffic alike. It will be noticed that the list includes some accidents caused by horses taking fright at motor cars, but our justification for noting these is to be found in the fact that horses ought to be properly broken in to these vehicles. It should be understood that we give this record impartially, and not because we are in any way prejudiced against the use of horses. All we ask is that the horse and the motor shall be treated in the same way, because it is obviously not equitable that the often uncontrollable horse should be allowed to be used free of restrictions imposed upon motors which are so certainly controlled, and the action of which does not depend upon the whims of a dumb creature.

AUGUST 26TH.

Collapse of a cab at Rotherham; cabman's leg broken.
Waggonette accident near Chester-le-Street; one man killed, nine or ten injured.
Fatal trap accident at Kirkby-in-Ashfield; pony shying at lights.
Two carts in collision at Salford; child injured.
Brake overturned at Stanford Rivers; twelve persons thrown out, six seriously injured.
Collision between two traps at Unthank, near Brechin; man seriously injured.
Carriage horses bolting on Tomnamoon Brae, Perthshire, precipitating driver and a lady and child into the road.
Trap accident at Heywood; two men injured.
Trap accident at Colchester, throwing out driver and a boy.

AUGUST 27TH.

Trap accident at Newbury, pony taking fright, and injuring a young lady.
Landau accident at Blackpool; horse took fright, injuring itself and driver and knocking down some palings.
Carriage accident at Dufftown; young lady injured.
Trap accident at Burgess Hill, Sussex; horse startled, collided with another trap, two ladies and gentleman injured and horses cut.
Carriage accident in Oxford Street, London; gentleman and lady seriously wounded.
Accident at Bedale, Yorks; horse killed.
Man killed at Sheffield; knocked down by a *char-a-banc*.
Miller's waggon at Coventry collided with a stationary motor car.

AUGUST 28TH.

Runaway horse with trap collides with dray at Burton; occupants thrown out.
Little girl knocked down by horse and waggon at Bradford.
Pony and cart overturned by tramcar at Bradford.
Pony (with trap) shied at motor car at Market Weighton.
Horse frightened at passing object at Lisnaskea, Ireland.
Cart upset at Arbroath; four young men injured.
Horse frightened at motor car at Truro; three injured.
Car horse frightened at Ballymena; lady injured.
Vehicle overturned by a horse at Cromer; two injured.
Boy killed by van at Bristol.
"Runaway" at Newport damaged a wall and hoarding.

AUGUST 29TH.

Horse took fright at motor bicycle at Annan.
Man thrown from waggonette at Northampton; arm broken.
Four-in-hand collided with tramcar at Edinburgh.
Horse frightened at gipsy's tent and fire at Sandy, Beds.; coachman lamed.
Pony shied at Romsey; man thrown out of trap, and plate glass window smashed.
Horse startled by steam roller at Whitby; heavy cart overturned.
Cab and butcher's cart collide at Birmingham, and bring down two cyclists; machines wrecked.
Farmer's horse frightened at motor car near Caithness and injured.
Van horse frightened by motor car at Lowestoft, and woman injured.
Pony took fright at Lewisham, and threw doctor and coachman out of trap.
Horse-drawn van furiously driven at Deptford; knocked down a boy.
One trap run into by another at Redditch, and driver of one seriously injured.

AUGUST 30TH.

Two boys injured by runaway horse at Irthlingborough.
Pony (with trap) startled, and collided with stationary cart; lady rendered unconscious.
Mayor of Evesham injured by pony being frightened at a dog.
Collision between two traps at Cropthorne, and boy thrown out.
Trap collided with motor car at Pickering.
Horse frightened at "something" at Retford, and bolted, colliding with other vehicles and causing much damage.
At Hope Horse Show one of the animals, while being judged, kicked a judge, and rendered him unconscious.
Waggonette collapsed at Tickhill; driver's leg broken and other people injured.
Child killed near Beccles by cart being overturned.
Horse attached to a hay-making machine took fright at steam-roller, and man injured.
Cabs collided in Sloane Street, W.; one overturned and driver and a lady injured.
Cab horse fell down on tramlines at Yarmouth.

We might go on indefinitely, but we think we have given a sufficiently long list to convince the ordinary reader that there is quite as much danger with horses as with motors.

Flashes.

The first of the fleet of Stirling motor omnibuses for the streets of London will be delivered from Messrs. Stirling's Granton factory in a few days.

* * *

A very comprehensive list of motor accessories and parts reaches us from Messrs. G. T. Riches and Co., of 4, Gray's Inn Road, W.C. It includes parts for Darracq, Delahaye, and Panhard cars, besides those for De Dion voiturettes, cycles, and motors.

* * *

It is not generally known that the Werner carburetter is protected. The number is 18,091. We are asked to state this, as one or two in the trade have attempted to copy it. The carburetter is giving great satisfaction, the chief claims being its reliability and regularity.

* * *

The Earl of Carnarvon has, we understand, given an order for a 60 h.p. Mercedes car to the Great Central Garage Co., of Marylebone Road. This vehicle will be of the new racing type, and Lord Carnarvon intends to drive it in the Nice competitions next April. The vehicle will cost £2,500.

* * *

We are sorry to see that in arguing in favour of the numbering of cars, the Automobile Club *Journal* should have seen fit to refer in contemptuous terms to those who are opposed to the measure. It is inferred in the club *Journal* that only a small section of automobilists, some of whom do not own cars, and perhaps do not drive fifty miles a year, are in opposition to the numbering proposals. This, of course, is absolutely incorrect. Moreover, it is not argument, and we are surprised it should have been introduced.

* * *

A particularly neat little car at a very moderate figure is the Rochet voiturette, as supplied by the British and Foreign Motor Car Co., of 27, Islington, Liverpool. The framework of the car is of tubular construction mounted upon cycle tyre wheels and laminated steel springs; vibration is further reduced by fitting the wheels with large diameter pneumatic tyres. A very neatly-designed body gives seating accommodation for three persons, the whole of the underneath portion of the double seat being available for luggage. The motive power is supplied by an Aster water-cooled engine of 6 h.p., and fitted with radiators, etc. The usual system of electric ignition is used, the battery and coil being kept as close to the engine as possible to obviate long lengths of wire. The transmission is direct by gearing of a most economical and simple method, two speeds being provided. Two powerful brakes act upon drums on the back wheel hubs, being applied through a side lever; a pedal actuates a third band brake upon the differential gear box drum. The steering of the car is by an inclined wheel, beneath which the controlling levers are placed, the speed-changing lever being on the right of the driver. The price of the voiturette complete is £145, and it strikes us as being good value for the money, particularly as regards the mechanism.

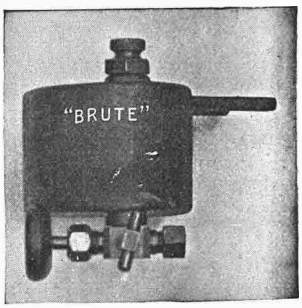
The Automotor Accessories Co. have opened a place at 23, Southampton Row, Holborn, for the sale of motor parts and accessories, more especially for the sale of the Timken roller bearings, Midgeley tubular steel wheels, Bell odometers, auto-tyres, etc. A supply of sparking plugs, bells, accumulators, and motor spirit will also be stocked for the accommodation of customers.

* * *

Mr. M. Grahame White writes acknowledging the kind service rendered to him by Mr. G. H. Warne, of Worthing, in coming out some four and a half miles to his (Mr. White's) assistance, and towing his motor car into Worthing, when it had, unfortunately, broken down. The remarkable feature of the incident was that only a 2½ h.p. "Ariel" tricycle was used as a tug, but after it had received a good start from a dozen boys it went along all right.

* * *

Messrs. F. Wilkinson and Co., of 25a, Cornbrooke Road, Manchester, who are the sole agents for Great Britain for the Steamobile car, are marketing a useful-looking steam cylinder lubricator, which goes under the name of the "Brute." The lubricator holds nearly a quart of oil, which is sufficient for one hundred miles. A lubricator of this type is an undoubted advantage on a steam car, and yet it is only this season that any importance has been attached to it.

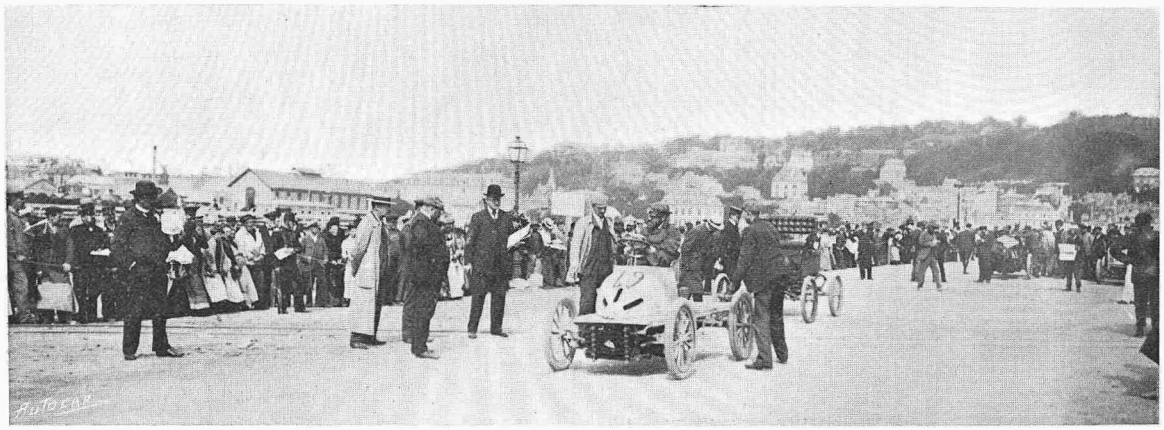


* * *

At the depot of the Bradford Motor Car Co., on Monday, Mr. Albert House offered for sale by auction over a hundred lots of motor cars, motor cycles, engines, and accessories. This was the first auction sale of the kind held in the city, and it attracted a good deal of attention. There was a large attendance, including some visitors from places as far distant as Newcastle, Manchester, and Sheffield. Some of the second-hand lots were offered practically without reserve, and though many of the lots were not sold, and some cheap bargains were got from the others, the general result was considered very satisfactory for a commencing sale. It is intended to hold these sales periodically, and there are already consignments in hand towards the next sale. The best figure obtained was £330 for a Wolseley 10 h.p. car. A Loidis car with tonneau body realised £298. An 8 h.p. Pieper, with two cylinders and Michelin tyres brought £255. A well used old 6 h.p. Daimler waggonette, with movable 'bus top, sold for £128. An 8 h.p. Gladiator, two-cylinder, sold for £108. Two 3½ h.p. Benz cars went for £42 and £28. A 2¾ h.p. De Dion tricycle fetched £22 15s. Bicycles of the Pieper, Minerva, and Farnell types realised from £18 to £25. One of the earliest tube ignition Beeston tricycles was sold for £9 5s. These give a fair indication of the sort of prices obtained. Engines of various kinds were disposed of, and some leather clothing also.

THE MEETING AT DEAUVILLE.

Some Phenomenal Speeds.



The starting point.

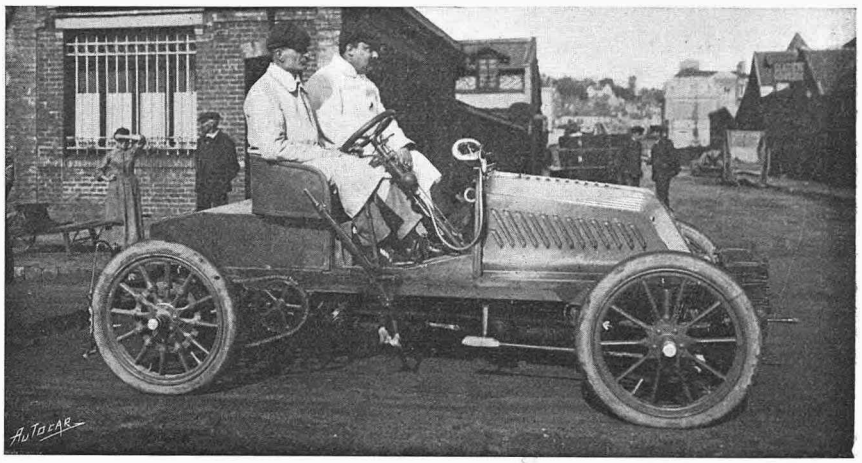
When the kilometre test was inaugurated at Deauville last year by the proprietors of the *Auto Vélo*, under the patronage of the Mayor (M. Le Hoc), automobilists were inclined to criticise the track on the ground that, not being a perfectly straight road with irreproachable surface, it was not altogether suitable for vehicles travelling at their highest speeds, and as the breaking of records scarcely seemed possible on such a course, it was doubtful whether Deauville would ever become so successful, for example, as Nice. Last week this criticism was effectually disposed of by such a smashing of records as we have rarely seen, and alike from the point of view of the makers and the public, it was one of the most successful speed tests that have yet been held. To begin with, it was known that several firms had prepared new vehicles for this meeting, which were expected to do remarkably well in the way of speed over the kilometre course. These cars were the object of a good deal of curiosity on Monday of last week, when they were weighed at Deauville, and quite a large number of prominent makers and automobilists were present to see the vehicles pass through the weighing yard.

Victor Rigal, the record breaker, and winner of the tricycle class, on the 8 h.p Buchet, weight 205 kilogs.

The motor cycles were first taken in hand, and a remarkable collection they made, there being a far larger variety of motor bicycles than we have seen at any previous meeting, while the powers have been increasing at such a rate that it was found necessary to divide them into two classes—one of less than thirty kilogs., and the other of between thirty and fifty. This increase in the power and weight of the bicycle is undoubtedly the outcome of the efforts that have been made to get the highest possible speeds out of the mechanically-propelled single-track machine for pacing purposes on the cycle tracks. The light bicycles were nine in number, and there were fourteen heavy bicycles, and altogether fourteen different makes of machines. The bicycle of Bruneau et Cie., of Tours, is a machine which has done very well in the races in which it has taken part during the past twelvemonth, and has already got a fair number of wins to its credit. There were two Bruneau bicycles—one in the light and the other in the heavy class, the former being propelled by a single-cylinder vertical motor carried in the place of the bottom bracket by forked tubes, and the latter a two-cylinder motor arranged V fashion, the drive in both cases being taken direct from the crankshaft to the rear driving wheel by means of a chain. Clément et Cie. had four bicycles in the two categories, the heavier ones being fitted with four-cylinder motors. The new Chapelle has been strengthened with a large box-shaped bottom bracket bored to receive the bottom of the cylinder, the crank case being underneath. The old system of pulleys of equal diameters has been abandoned in favour of the ordinary system of belt transmission. The Impetus is another belt-driven bicycle, with a huge vertical motor held in the place of the bottom bracket by curved pieces on the ends of the tubes.

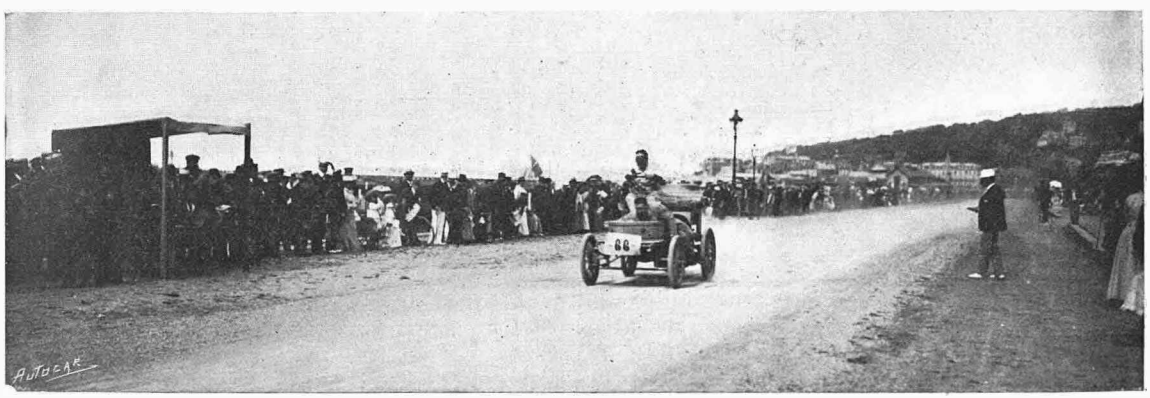
A broad belt driving on a wide-flanged pulley. It was said that the motor developed 16 h.p., which is manifestly an exaggeration, though in size it differs little from the 12 h.p. pacemaking bicycle built for Jacquelin, and as we are on the subject of motor bicycles, it may be interesting to give a description of this machine as showing the lengths to which makers are going, though it was not ready to put in an appearance at the Deauville meeting. The De Dion motor of 12 h.p. is carried on a double frame, and develops, Jacquelin assures us, 14 h.p. To the head tube are brazed a couple of short cross-pieces, and from the ends of these the four tubes forming the frame curve out each side, and are connected behind with the diagonal. The motor is fixed to the lower set of tubes, and the petrol tank is suspended from pieces of steel strip across the top pair. On the rear hub is a big aluminium-flanged pulley, carrying a broad belt from the crank-shaft. The bicycle is steered by a wheel behind, with the usual rod connections to the front wheel. The driver has a wind shield in front, which curves well out behind him, and it is easy to see that a cyclist would have a powerful aid to speed in such a remarkable instrument. It does not appear as if it has yet been fairly tried on the track, but if the machine is as fast as it looks it must be capable of attaining wonderful speeds.

Coming back to Deauville, we found that the Société des Téléphones et Automobiles Ader had a bicycle with one of their well-known two-cylinder motors carried in a curved frame with belt transmission, and most of the others, such as the Larquin et Caudert, Labbé, and Française, were variations in the method of fixing small motors to ordinary frames with belt or chain transmission. It will thus be seen that on the whole there is a decided tendency to make the motor an integral part of the machine, in such a way, however, that it can be easily removed, and in many cases the belt is replaced with the chain. Motor cyclists in France are beginning to show something of a prejudice against the belt. It cannot be used slack, and if tightened up there is not only considerable friction on the pulleys, but it has a tendency to break, while in the case of big motors, where the belts have to be as taut as possible, the side thrust on the bearings must be enormous. Some of the makers are therefore using the chain, and they were chain-driven bicycles which won in both categories at Deauville. So far as can be judged from recent developments, the chain is likely to prove a serious competitor to the belt in the early future. The saddles were placed right behind the back wheels to allow of a crouching position, and in nearly all cases the pedal gear was dispensed with.



The new 30 h.p. Gladiator. Weight 955 kilogs. (1 kilog.= 2·2 lbs.)

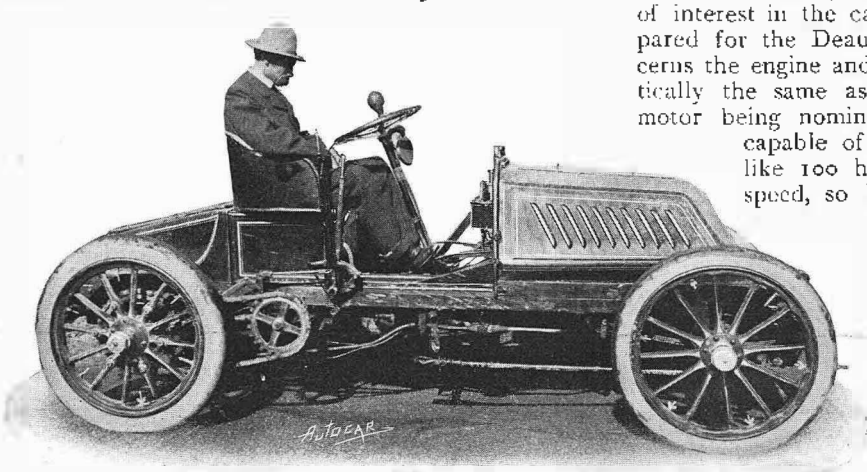
There were only half-a-dozen tricycles; three of them with Buchet motors, huge two-cylinder engines declared to give 8 h.p., but certainly developing much more. The spectators laughed sarcastically when Buchet's representative at the weighing officially announced the motors as of 8 h.p. The crankshaft is geared by spur wheels on to the differential, and heavy lead weights are fixed to the head tube to prevent the front wheel from jumping under the influence of the enormous impact of the pistons. Osmont had a tricycle with a De Dion smooth-cylinder motor of 8 n.h.p., and the Clément



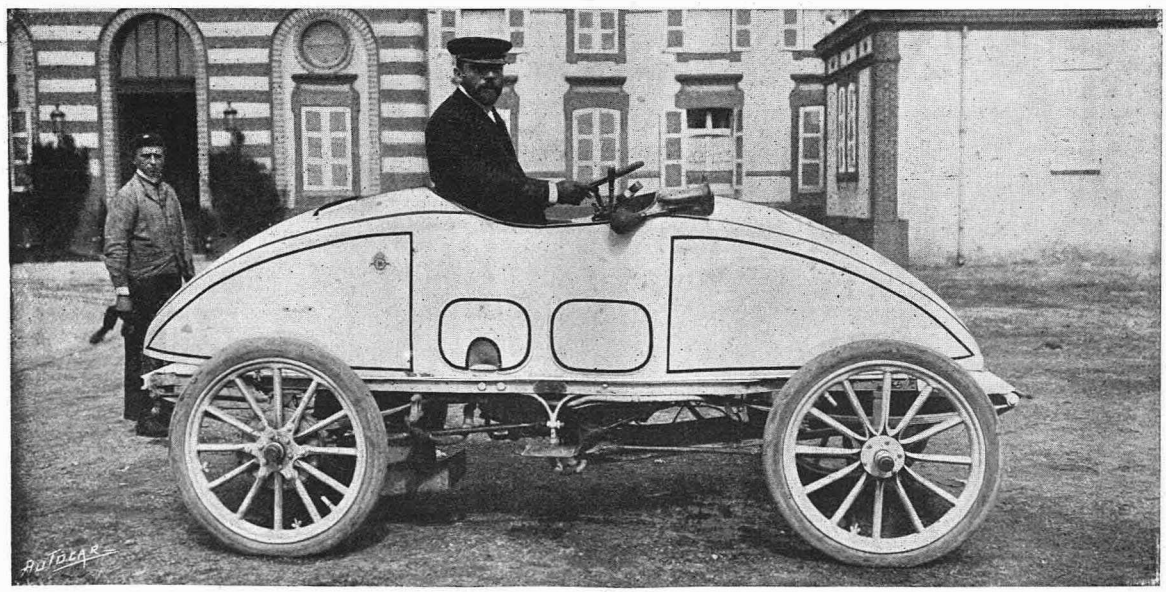
Rutishauser crossing the starting line on his 12 h.p. Serpollet light car. Weight 640 kilogs.

tricycle was the lightest of the lot, being little more than half the weight of the Buchet ridden by Rigal.

Among the cars there were several novelties. The Passy-Thellier voiturette is propelled by a two-cylinder Buchet motor with shaft transmission, and the car was stripped of everything for the trial, even to the band brakes on the wheels. M. Hospitalier aptly described it as the "maximum of the minimum," and thought the suppression of the brakes was highly dangerous. M. Deschamps reassured him. "There is a wall to stop him at the end of the course," he said. M. Filtz is a motor engineer who has on two or three occasions during the past few years adapted his motor to vehicles, but for some reason or another no serious attempt has been made to take up its manufacture on a large scale, and at Deauville the maker had a new type of vehicle, which is of an entirely different design from anything he has previously turned out. It is a fine, rakish-looking car propelled by a four-cylinder motor of essentially up-to-date design, with the valve gearing and everything enclosed, and developing 30 h.p. It has the usual system of variable gear, and transmission by universal jointed shaft. A feature of the vehicle is the live back axle, which is contained in two long cones, with the apices at the hubs, and joining at the middle over the differential. This arrangement seems to be a particularly good one, as it strengthens the back axle at the point where it is most needed. In view of what M. Serpollet did at Nice in the spring, and of his well-known anxiety to get back the kilom. record, there was, naturally, a great deal of interest in the car which he had specially prepared for the Deauville meeting. So far as concerns the engine and driving-gear, the car was practically the same as the famous Easter Egg, the motor being nominally of 12 h.p., though it is capable of giving an effort of something like 100 h.p. during the short bursts of speed, so long as an exceptionally high pressure can be kept up in the boiler. In his new vehicle M. Serpollet has been chiefly concerned in reducing the air resistance, and he has, consequently, tapered the car off at both ends, thus giving it an appearance which has earned for it the name of the Whale. Having about the highest efficiency that can be obtained with his engine and driving-gear, M. Serpollet attaches a good deal of importance to wind resistance, which is a much greater factor in speed tests than is generally supposed, as was abundantly proved at the Deauville meeting. It is calculated that in an absolutely calm atmosphere a car travelling at something like seventy-five miles an hour has to employ, roughly speaking, 50 h.p. in overcoming air resistance, and it is therefore easy to see what a considerable saving in power can be obtained, as well as, of course, higher speeds for the vehicles, by reducing this resistance as much as possible. M.

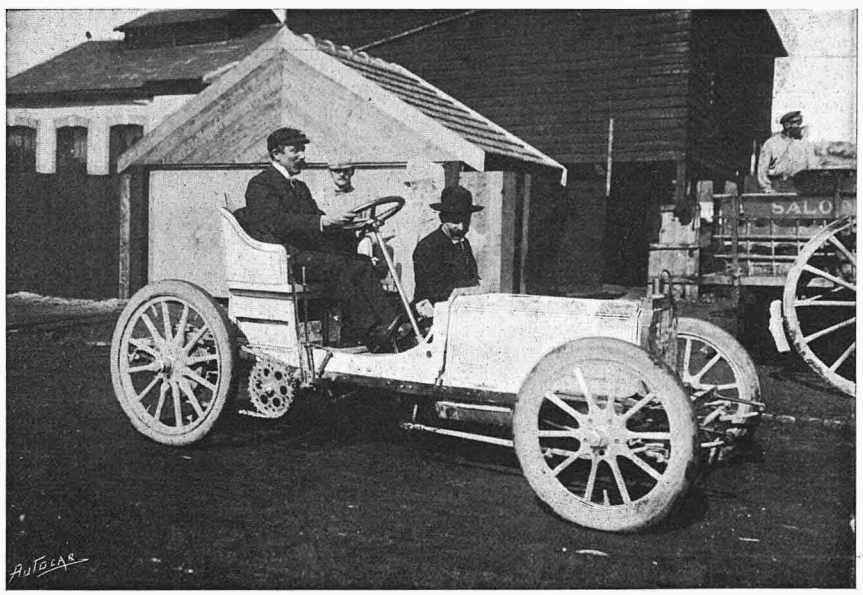


Levegh on a 60 h.p. Mors. His appearance in this event was the first since he drove in the Gordon-Bennett Cup race last year.



M. Serpollet on his latest 16 h.p. racing car, "The Whale."

Serpollet has tried to attain this by offering the least possible obstruction to the air, and a good many people thought that under favourable conditions his new vehicle would be able to cover the kilom. course at the rate of something like ninety-five miles an hour. Some attempt at solving the problem of wind resistance was also made by other firms, such as Gobron-Brillié, who had the front part of the light car fitted with a wind shield, and the Delahaye, which has a sort of wedge-shaped front, while the driver sits low down with his head only just emerging from the top of the motor bonnet, the levers being grouped between his legs. As is well known, the new Delahaye has the horizontal motor in front, with the cylinder ends forward, but the system of belt transmission is practically the same as on the older types of vehicles. At the time of the Paris Show last year we illustrated and described the Fouillaron system of transmission, consisting of a triangular section leather belt running on expanding pulleys, and since then the system has been put to a thorough test on light vehicles, apparently with successful results. The Fouillaron transmission has now been applied for the first time to a big car, and fitted with a four-cylinder Buchet motor of 20 n.h.p. The driving-gear, it will be remembered, is an extremely simple one, consisting, as it does, of a motor gearing down on the shaft carrying the first pulley, while the second pulley is on the driving axle, the speeds being varied by increasing and diminishing the diameters of the pulleys, which is done by drawing the two parts of each pulley, composed of triangular pieces, away from each other or bringing them together. Darracq and Co. have also entered the ranks of big car makers by constructing a vehicle which is practically a large copy of their light carriage. The motor was declared to be of 20 h.p., but it is clear that it develops considerably more. The car has a very long wheelbase, being certainly not far short of 9ft. The body is suspended from the axles at each end by pneumatic checks or buffers, almost exactly the same as in the Mors system. The transmission is, of course, by a cardan shaft. The Peugeot vehicles were represented by a couple of 16 n.h.p. light carriages of the type that took part in the Paris-Vienna race, and also by a new 24 h.p. car externally bearing a close resemblance to the Mercedes. It is propelled by a four-cylinder vertical motor, with induction valves actuated mechanically, and appears to have a rather longer stroke than the majority of other motors, and, consequently, runs more slowly. The transmission consists of the usual fixed and sliding trains of wheels, and the ends of the countershaft carry pinions connecting with the driving wheels by chains. At the front of the motor bonnet there is a tubular water tank of the well-known Mercedes design, which has been adopted by several French makers. The Gladiator Co. are another firm who presented a big car which is almost identical with their light carriage, except that the Aster motor has four cylinders and develops 30 h.p., and everything is, of course, proportionately strengthened. Brouhot and Co., of Vierzon, who have been engaged for some years in the construction of autocars, have not taken part in many speed tests, as their vehicles are designed solely for touring, and the firm give more attention to economy than speed. Their four-cylinder vertical motor of 16 n.h.p. is a comparatively slow-running engine, and the special feature of this motor is the patent Brouhot carburetter, which allows of remarkably good results being obtained in consumption, at the same time that it works equally well with alcohol as with petrol. Power is transmitted from the counter-



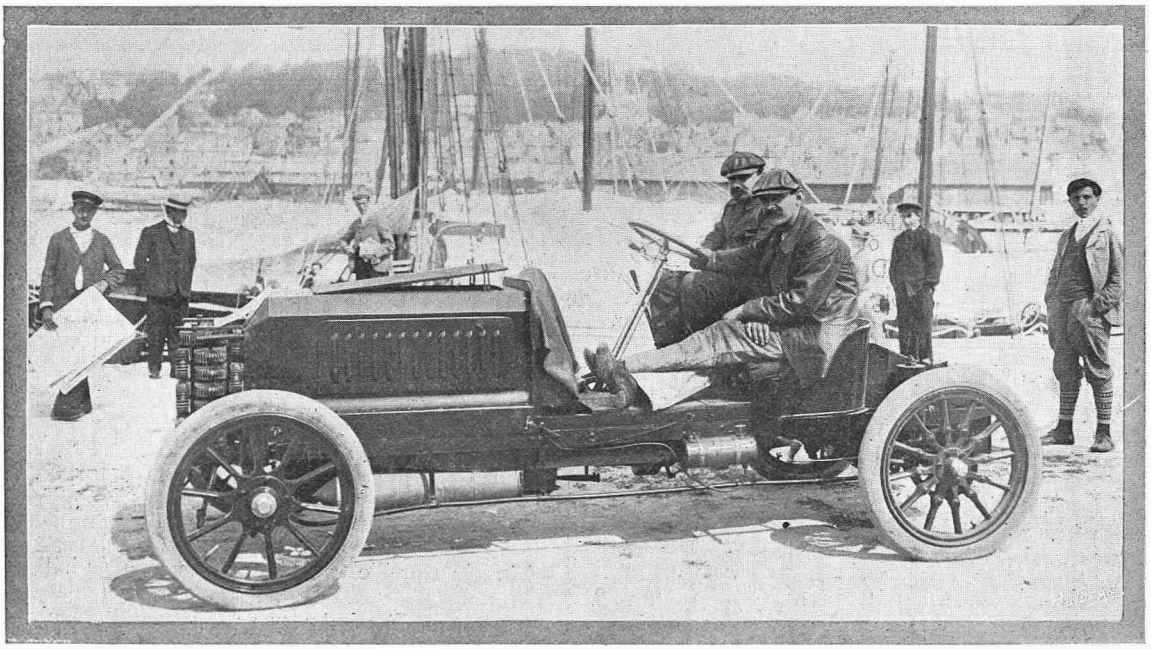
Millet on a 16 h.p. Peugeot light car. Weight, 645 kilogs

shaft to the rear axle by a single chain running on a large sprocket. There is no differential, as the hubs of the driving wheels are fitted with clutches in the form of a ratchet and pinion arrangement. The Vinot and Deguingand car is another new big vehicle turned out by a firm who have hitherto been building light carriages, and this vehicle was driven in the Deauville trials by a former music hall artiste known as Mme. Bob Walter, who has now entered the automobile industry as Vinot and Deguingand's agent. The Mors were represented by four cars of the Paris-Vienna type; there was, however, only one Panhard vehicle, and that was driven by Mr. P. Chauchard.

The course of Deauville has a total length of about a mile and a quarter, bordered on one side by villas and gardens, and on the other by the dunes descending to the sea. No better situation could be selected, owing to the fact that the traffic can be totally suspended without causing the slightest inconvenience, and while the inhabitants are exceedingly pleased with the gratuitous enter-

tainment offered them, and have not the slightest idea of obtaining perpetual injunctions against the promoters, the dunes will comfortably provide room for tens of thousands of spectators. But against this must be set off one or two small drawbacks. The track bends slightly at about two-thirds of the distance. The competitors can therefore scarcely be expected to drive with so much confidence as if they were able to see the whole length of the course. Nor is the surface absolutely smooth. Here and there are little depressions and rough patches, which would be scarcely observable when travelling at ordinary speeds, but they become magnified tenfold as the cars fly along the road at eighty miles an hour. Again, they have only 600 yards in which to get up full speed before crossing the line, which is not always sufficient for heavy vehicles, and they have less than this distance in which to pull up before reaching a wall where the road turns off at a right angle. Despite these little shortcomings, the course is one of the best that can be obtained, for there are very few semi-private places where a clear mile and a half stretch can be secured. The Mayor, M. Le Hoc, has all along been taking an active part in the arrangements for the meeting, but he is at the same time closely concerned for the interests of visitors, and a law has been enforced in Deauville restricting the speed of autocars to twelve kiloms. an hour, while along the sea front the cars were only allowed to be tested on the day of the trials. The meeting had to be terminated by six o'clock, and after that time anyone travelling at more than the statutory limit of speed was liable to a summons. As a matter of fact, while some hundreds of cars were at Deauville, the police had no cause whatever to interfere, and the attitude of the automobile visitors, as well as of the drivers of racing machines, was exemplary. A little toleration on the part of the local authorities in the way of sanctioning occasional speed tests undoubtedly facilitates the regulation of automobile traffic in general.

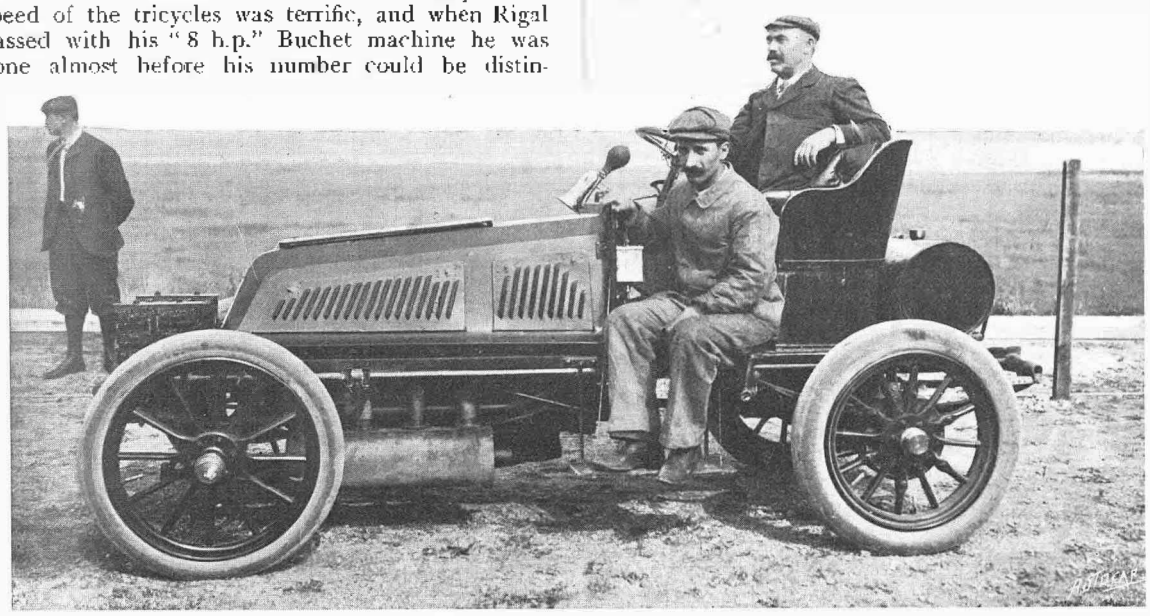
The police, the marines, the soldiers, and the customs officers were all employed to keep order, but with even such a big force it was by no means easy to prevent the public from getting on the wrong side of the temporary barrier a mile in length. The fashionable crowd, with multi-coloured toilettes, gracefully retired before the polite requests of the policemen, and when the representatives of the law had passed on they returned to their former places. The weather was very cloudy, and threatened rain, but, fortunately, it merely had the effect of preventing the drivers from being troubled with the sun, which would otherwise have been in their eyes, while a good breeze was blowing straight down the track behind them. It is difficult to say how much this may have been responsible for the speeds, but it may reasonably be expected that it made a difference of a second or two over the kilom. course. Promptly at one o'clock the start was given to the motor bicycles. They had to start by their own means, without being pushed, and as very few of them had pedals, it was a matter of great difficulty to get the big motors running. Some of them were a long way over the line before the motors could be started, and this accounts for the slow times of some of the machines. The Clément two-cylinder bicycles went remarkably well, while a Lamaudière machine had a tremendously high gear, which allowed of the pedals being used at the top speed. Some curiosity was caused by the appearance of Madame Jolivet, who, it will be remembered, rode a Pécourt bicycle at the Deauville meeting last year, and on the same type of machine she covered the kilom. in the very creditable time of 58s. By far the best performances were accomplished by



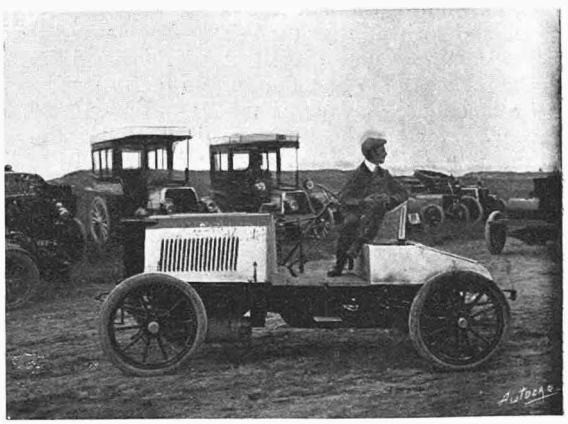
The new 24 h.p. (nom.) Darracq. Weight, 974 kilogs.

the Bruneau chain-driven bicycles, which, in the light class, covered the kilom. in 49 3-5s., representing forty-five miles an hour, while the two-cylinder motor bicycle took only 43 1-5s., which is equal to 51.74 miles an hour, beating the huge pacing machine ridden by Lamberjack. Some of the bicycles travelled at a very fast speed, and fairly jumped in the air at times, due as much perhaps to the big motors as to the occasional roughness of the road, and under these conditions the steering of bicycles at forty-five and fifty miles an hour was a matter of no small difficulty. The speed of the tricycles was terrific, and when Rigal passed with his "8 h.p." Buchet machine he was gone almost before his number could be distinguished. His time was 28 4-5s., which is equal to 77.62 miles an hour. This beats the tricycle time at Deauville last year by nearly ten seconds. Rigal, however, could not start his motor, and he was pushed off, contrary to the regulations, and it is probable therefore that he will be placed in a separate category. Osmont, on his 8 h.p. De Dion tricycle, covered the kilom. in 33 4-5s., which is also the time of the Demester on his big Demester-Lamberjack machine.

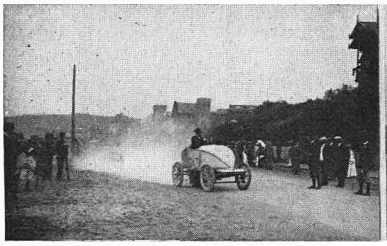
A Clément voiturette had a somewhat narrow escape through the inevitable dog, which got in a direct line with the approaching vehicle, and the animal, as well as the car, were only saved from destruction by the driver swerving round at top speed at great risk to himself. Both Cléments ran well, and were only beaten by Rigal on a new Buchet, whose time was 41s., or fifty-four and a half miles an hour, which is remarkably good for a voiturette, and is 2 2-5s. better than the record time at Deauville last year. The Thellier-Passy cars performed well, and a 4½ h.p. Locomobile got well within the minute. The cars were all being sent off with praiseworthy promptitude, for no sooner had the arrival of one been telephoned than the bugle at the other end announced the start of another, and thus the procession was kept without a pause all the afternoon. After the two-seated voiturettes it was the turn of the four-seated cars, and as the Clément passed there was nothing to show that the tonneau was occupied except for the occasional bobbing up of a head. The passengers were crouching down at the bottom. The Darracq had no tonneau at all, but just a couple of light seats for the passengers, who got shelter behind the men in front. The light carriages made a brave show, and Rigolly on his Gobron-Brillié was expected to have a specially good chance, but he was beaten by a Decauville driven by Théry, and by the Serpollet of Rutishauser, the former doing the kilometre in 30 1-5s., or at the rate of seventy-four miles an hour. Baras was believed to have beaten these times on a Darracq; but as he stopped on a first attempt, and, returning, started again under another number, it is almost certain that he will be disqualified. The first six light carriages beat the record made by Rigolly at Vienna in 34 3-5s., and probably never before had the records received such a shaking. But something better was to come. When it came to the turn of the big cars interest got very high, and as the bugle sounded the start of each vehicle everyone strained forward to see Serpollet come round the bend. No one doubted but that the Whale would do something



M. Filtz on his new 30 h.p. Filtz car.

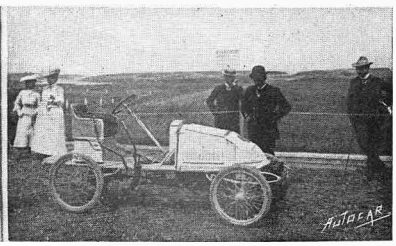


The 30 h.p. Fouillaron-Buchet car



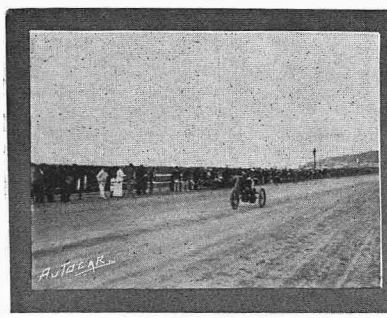
M. Serpollet in trouble

Comte de Rougemont on his 40 h.p. Mercedes.

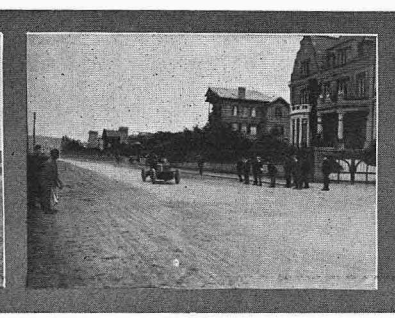


A Thellier-Passy voiturette

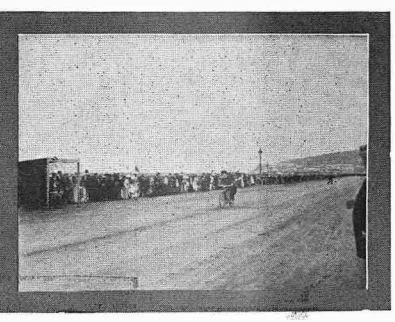
sensational. First the Mors flew down the course, one driven by Gabriel and another by Levegh, the old professional driver, who for a year past has had to stand aloof from the sport through illness, and each car as it passed gave an idea of some light substance blown along by a hurricane. All sense of weight was lost in these vehicles, which bounded along with their wheels constantly leaving the road, as if they were as light as air. And then it was announced that Gabriel had done 26 2-5s., which is equal to 84.67 miles an hour, and M. Paul Chauchard on his Panhard narrowly missed a dead heat, for he only took one-fifth of a second more. The performance was a stupendous one. Nothing like it had ever been done on the road, and it may be doubted even whether there is any authenticated instance of its being done on the rail, or if such speeds have been attained by locomotives on the level, their superiority will soon be lost when automobiles get to the 150 kilometres, which it is fully believed they will do before long. It was hoped even that M. Serpollet would reach this figure. When he flew over the line he certainly seemed in a fair way of doing it, and during the first half of the distance his speed seemed to be higher than that of any other vehicle. On coming round the bend he slowed down, and then it was seen that the bottom of his burners had broken loose, and was banging on the ground. M. Serpollet could be no more disappointed than the spectators, but he has not lost hope, and has fixed his mind on covering the kilometre at the rate of ninety-five miles an hour, and after what was seen at Deauville no one doubts but that he will do it. The reputation of steam was, however, well upheld by one of the big Serpollets, driven by M. Leblon, who was accompanied by Madame Leblon; but several of the petrol cars failed to give any great impression of speed, notably the Filtz, probably because it ran very silently, and Werner's Mercedes travelled badly. By comparison with the high-powered cars the vehicles with 20 to 40 h.p. motors could not be expected to show up very prominently, and the experience at Deauville has taught that power means speed on good level roads—a fact which we have been inclined to qualify somewhat since the failure of the high-powered cars under the extremely hard conditions of the Paris-Vienna race. The driver of the Fouillaron car stated that his vehicle would have done better if the motor had not been continually misfiring, and this is probably the case with many other competitors, for the slightest irregularity of the motor may mean all the difference between good and bad times over such a short course. And now that the meeting is over, some of the makers themselves are beginning to marvel at the performances of the cars. They think that the records have been broken with too great a facility, but, after all, this may be sufficiently explained by the excellent conditions under which the tests were held In any event, the times will not



Rigal at top speed.



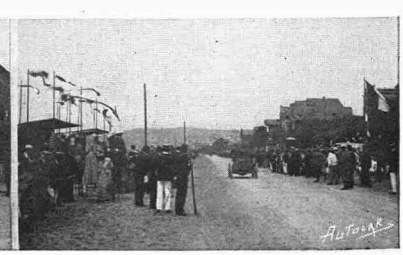
The Filtz in flight.



Mdme Jolivet on her Pécourt bicycle.

The 20 h.p. Clement.

Gabriel on his Mors.



The finish

be officially accepted until a re-measurement of the track and an examination of the time sheets place their accuracy beyond all doubt, but in the meantime we think there can be little question but that the cars have fairly done what they are credited with.

The following are the times as they were returned after each test:

BIG CARS (TWO SEATS).

	M.
Gabriel, 60 h.p. Mors	26
Chauchard, 70 h.p. Panhard-Levassor	26 3/5
Le Blon, 12 h.p. Serpollet	27 1/5
Levegh, Mors	28
Marquis de la Ferté-Mun, Mors	31
Augières, Mors	31
Baron de Forest, 40 h.p. Mercedes	32
Ribeyrolles, 24 h.p. Darracq	32 4/5
Count de Rougemont, 40 h.p. Mercedes	32 4/5
Renaux, 40 h.p. Peugeot	33 4/5
Gray Dinsmore, 40 h.p. Mercedes Simplex	39
Mme. Bob Walter, 16 h.p. Vinot & Deguingand	40
Tourand, 16 h.p. Brouhot	40
Charin, 30 h.p. Fouillaron-Buchet	40 3/5
Filtz, 30 h.p. Filtz	44 3/5
Guigou, Locomobile	48 4/5
Ehrensperger, 12 h.p. Hertel	1 7 1/5
Mercier, 30 h.p. Gladiator	1 8

BIG CARS (FOUR SEATS).

	M.
Pannecake, 70 h.p. Panhard-Levassor	28 4/5
Charley, 40 h.p. Mercedes	34

LIGHT CARRIAGES, 650 KILOGS. AND LESS (TWO SEATS).

	M. S.
Théry, 20 h.p. Decauville	30 1/5
Rutishauser, 12 h.p. Serpollet	31 1/5
Rigolly, Gobron-Brillié	32 4/5
Barbaroux, Clément	33 3/5
Edmond, Darracq	34 1/5
Rigolly, Gobron-Brillié	35 2/5
De la Touloubre, 16 h.p. Decauville	37 2/5
Millot, 16 h.p. Peugeot	37 3/5
Tart, Clément	40
Mestayer, 16 h.p. Decauville	41 2/5
Legras, 24 h.p. Boyer	43 3/5
Comte du Bois, Delahaye	44 1/5
Mauselin, 20 h.p. Darracq	56
Hertel, 9 h.p. Impetus	1 23 1/5

LIGHT CARRIAGES, 650 KILOGS. AND LESS (FOUR SEATS).

	M. S.
Millot, 16 h.p. Peugeot	39 1/5
Tart, 20 h.p. Clément	40
Ravenez, Decauville	41 3/5
Hanriot, Deckert	47 1/5
Gasté, 12 h.p. Automotrice	58 3/5
De Clesles, Thellier-Passy	1 12 1/5

VOITURETTES, 250 TO 400 KILOGS. (TWO SEATS).

	M. S.
Rigal, 12 h.p. Buchet	41
Voulatum, 10 h.p. Clément	42
Oury, 10 h.p. Clément	42 2/5
Thellier-Passy, Thellier-Passy	45
R. Hanriot, Thellier-Passy	48 1/5
Guigou, 4½ h.p. Locomobile	55 1/5
Vilain, Prunel	1 6 2/5
Hemery, Darracq	1 34 2/5

VOITURETTES, 250 TO 400 KILOGS. (FOUR SEATS).

	M. S.
Houry, 10 h.p. Clément	45 1/5
De Clesles, Passy-Thellier	48
Hemery, Darracq	49

MOTOR TRICYCLES.

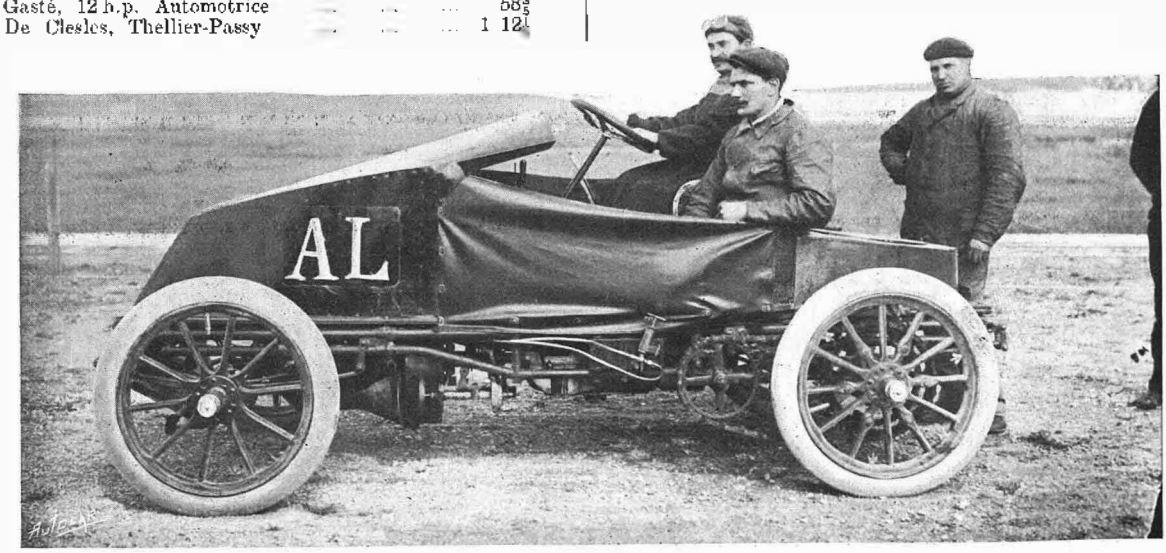
	M. S.
Rigal, 8 h.p. Buchet	28 4/5
Osmont, 8 h.p. De Dion	33 4/5
Demester, Demester-Lamberjack	33 4/5
Loste, Buchet	37 3/5
Fristot, Buchet	42 1/5
Derny, Clément	59 4/5

MOTOR BICYCLES, LESS THAN 30 KILOGS.

	M. S.
Barré, 2 h.p. Bruneau et Cie.	49 2/5
Derny, Clément	1 5 3/5
Muller, Clément	1 5 4/5
De Kostka, La Française	1 5 4/5
Pelletier, Pelletier	1 6 2/5
Coudert, Lurquin et Coudert	1 7 2/5
Breuil, Breuil	1 11 1/5
Labbé, Labbé	1 22
Pelletier, Remay	Stopped

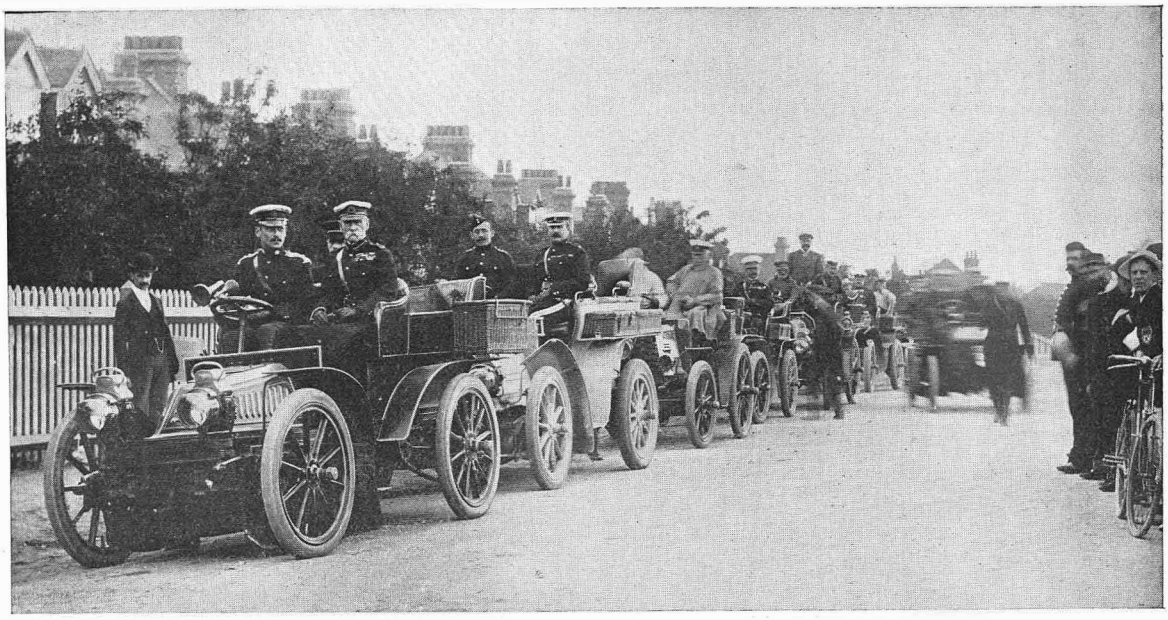
MOTOR BICYCLES, 30 TO 40 KILOGS.

	M. S.
Barré, 5 h.p. Bruneau et Cie.	43 1/5
Lamberjack, Lamberjack-Demester	44
Labitte, Werner	47 2/5
Derny, 2½ h.p. Clément	47 4/5
Fontaine, Ader	52 3/5
Bucquet, Werner	53 1/5
Robin, Lamaudière et Cie	54 1/5
L. Jolivet, G. Pécourt	55 2/5
Madame Jolivet, G. Pécourt	58
Rolle, 2½ h.p. Chapelle	1 0 1/5
G. Pécourt, G. Pécourt	1 0 4/5
Lurquin, Lurquin et Coudert	1 7 2/5
Muller, Clément	1 9
Cissac, 2½ h.p. Chapelle	Stopped



Rigolly on the 20 h.p. (nom.) Gobron-Brillié light car, weight 646 kilogs.

LORD ROBERTS AND HIS STAFF.



Lambert Weston & Son, Photo. *Folkestone.*

Mr. Mark Mayhew, the Hon. C. S. Rolls, Mr. W. M. Letts, and several other members of the automobile world placed their autocars at the disposal of the military authorities last week, and conveyed Lord Roberts and his staff officers from point to point in their inspection of the military stations on the Kentish coast. Lord Roberts expressed himself to the effect that had such machines been available in South Africa, in addition to the heavy tractors which were employed, they would have been of invaluable service over certain stretches of the South African veldt. That this is not mere theory is amply proved by the remarkable work accomplished by Lieut. Walker's little Locomobile, the record of which we gave some time since. Mr. Mark Mayhew, an enthusiastic volunteer officer, arranged the demonstration, and was ably and warmly aided in the most practical manner by the automobilists who took part, as most of them placed their cars at the disposal of the War Office at very short notice—indeed, setting out for Shorncliffe within a few hours of the telegram from Mr. Mayhew telling them what was required. Lord Roberts and Mr. Mark Mayhew will be easily recognised in the first vehicle, and Capt. Geo. Ducros (another well-known volunteer officer) in the second.