THE AUTOCAR

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

EDITED BY H. WALTER STANER.

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THE AUTOCAR.

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Notes.

American Petrol Cars.

We lately enjoyed a chat with a well-known member of the Anglo-American trade who has but lately returned from the States, and who has not only closely considered the automobile question as it presents itself to-day on the other side of the Atlantic, but has visited nearly every automobile works of any standing in the United States. He informs us that our American friends on the whole are still considerably behind this country and France in the construction of automobiles driven by explosion engines. He tells us that the motoring folk there are practically divided into two camps—one composed for the most part of the people who have grown into the industry from the gas engine and gasoline launch engine connections, and who regard themselves as absolutely up to date in their methods, and reject with lofty scorn the bare suggestion that they have anything to learn from us or from France with regard to automobiles. This section obstinately cling to the special American form of petrol car driven by a single cylinder horizontal engine set at the rear of the vehicle. The second—and what we must regard as the progressive section—are those who seek to imbibe their ideas from France and England, and who even make it a boast that they never take up an American automobile journal, but live in lively anticipation of the arrival of the French and English papers, and scrutinise them with the greatest care for every forward movement. Amongst the leading units of this latter cult are the manufacturers of the Peerless and the Winton cars, which are distinctly on old world lines, and have already done exceedingly well in recent American speed events. Indeed, we learn with pleasure that the Peerless people will in all probability build three cars for competition in the Gordon-Bennett race of next year. They do not wish to be thought desirous of making any Yankee boast as to "whipping creation" with these vehicles, but they hope they will, and they will be satisfied if they make a good and creditable show. We also learned from this gentleman, whose name we may not make public, that, notwithstanding the reports, Mr. W. K. Vanderbilt has not relinquished automobilism, as some folks would have it thought he has, on account of the late accidents in France to certain of his countrymen, but that he will be seen at the wheel again next year, and that his "crack" cars have not been disposed of, but are stored against the time when he will again take up the sport. Our informant also had something to say with regard to the very much discussed Edison accumulators. It would appear that the extraordinary claims made for the latest invention of the great American inventor have in no way been put forward by him, but are entirely the production of the sensation-mongering journals of the States. Edison is by no means ready to put his accumulator on the market; indeed, it may be some months—perhaps a year—before this is done.

Extraordinary Ignorance.

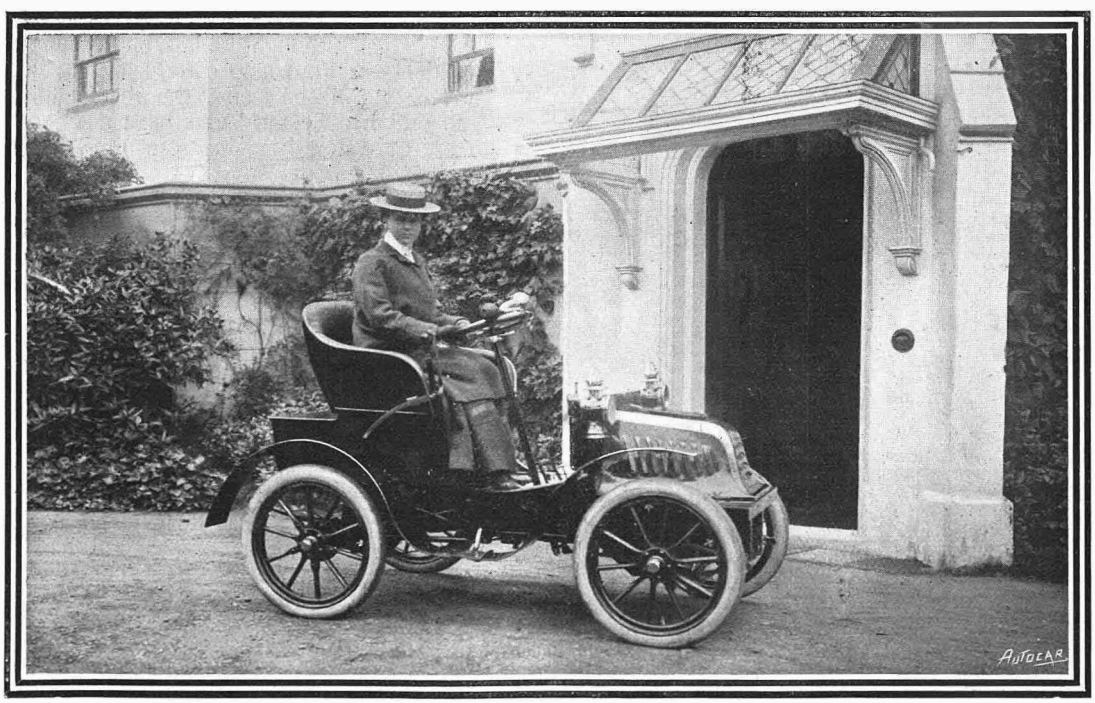
Last week we referred to the extraordinary ignorance exhibited by a clergyman who had been a member of a Highway Board, who had written to *The Times* and other papers, and had made the ridiculous statement that he estimated the damage done to the highways of Surrey, Sussex, and Kent at £1,056 5s., or 6d. per mile per motor car. The secretary of the Automobile Club did not allow this to pass, and some instructive correspondence between him and the self-styled expert ensued. When pressed, the reverend expert lost his temper

and said as far as he was concerned, Mr. Johnson, who had stated he had intended to consult several county surveyors on the matter, might refer to all the highway surveyors in England; and then he went on to talk about the action of the Reigate bench of magistrates, though what this had to do with the alleged wear of the roads we do not know. Letters were published in the *Club Journal* from Mr. E. P. Hooley, the county surveyor of Nottingham, Mr. R. Phillips, the county surveyor of Gloucester, and Mr. George Mawbey, the borough engineer of Leicester, disagreeing emphatically with the rev. gentleman's ridiculous estimate. We have also been in communication with Mr. Hooley on the subject, and he points out that if there was the least ground for the correctness in the 6d. per mile estimate, road maintenance, instead of costing between £60 and £100 per mile, would be at least £400 to £500 per mile per annum, as everyone knows that horse traffic and iron-tyred wheels do much more damage than motors, and, that being so, if motors cost 6d. per mile, it is almost impossible to calculate what would be the damage done on some roads by ordinary horse traffic. However, the thing is altogether too absurd for further attention to be devoted to it on our part, though, as we have already pointed out, it unquestionably misleads ignorant ratepayers and others, especially those residing in anti-motor districts.

The Census of Autocars in France.

The only way of getting an exact statement of the number of autocars in the hands of private owners in France is by means of the official returns giving the number of vehicles declared for taxation, but as these figures are always published an unconscionable time after their compilation, they only show how many cars were in use nine months previously, so that they are necessarily very much below the present numerical strength of the mechanical vehicle. In 1901 the official returns just published show that 5,386 autocars were declared for taxation, and of this number 1,149 were in Paris, being made up of 751 vehicles with more than two seats and 398 with two seats. In the provinces the 4,237 cars were composed of 2,142 cars with seating capacity for more than two and 2,095 vehicles with one or two seats. In previous returns it was observable that the autocar had a tendency to be centralised in the big towns, and at a time when the automobile was regarded as an instrument of sport and a luxury, it was only natural that this should be the case, but the growing utility of the autocar is clearly seen in the considerable number of vehicles being employed in the small towns with a population of 5,000 and less. Compared with the big towns the number is, of course, still small, but the fact that 1,853 cars should be scattered about in these little townships shows that the usefulness of the autocar is becoming increasingly recognised by people who have to travel a good deal in country districts. The total nominal force of the cars declared is estimated at 26,427 h.p. These figures give a very good idea of the growing importance of the automobile industry, but there must also be taken into account the considerable export trade, which during the first eight months of the present year amounted to close upon twenty million francs.

The Chief Constable of Huntingdonshire suggests twenty miles an hour as a "comfortable" speed for autocars, and states that he takes no proceedings against drivers who are within that limit. In view of the recent numerous prosecutions in Huntingdon this reads somewhat curiously.



Mrs. Mark Mayhew driving her Baby Peugeot A facsimile of the vehicle which earned the highest marks in Class A.

THE ROCHET TOURING CAR.

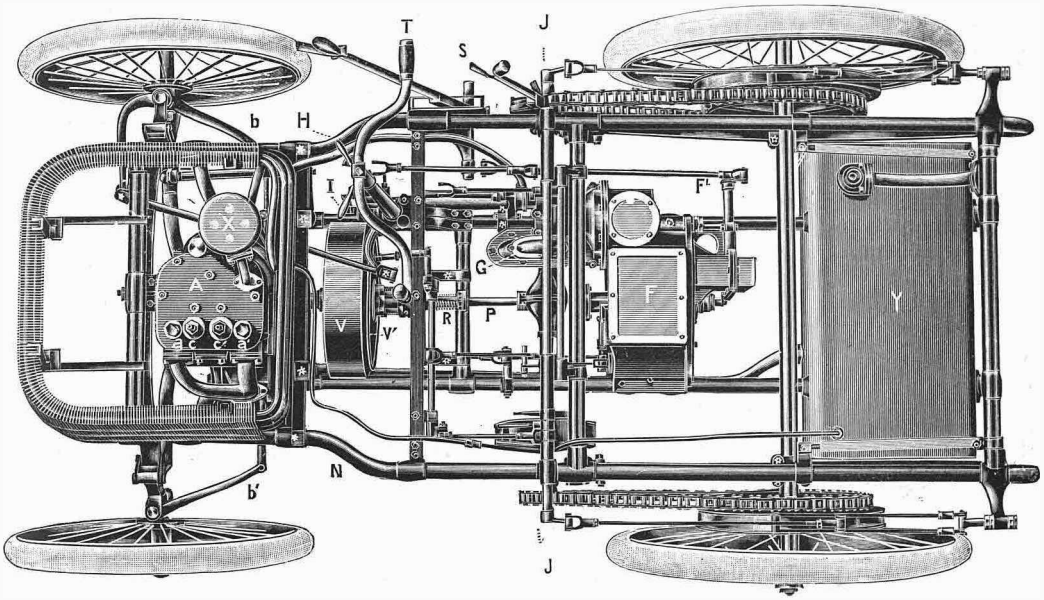


Fig. 1.—The Rochet chassis.

A, two cylinder motor.
a, a, valve caps.
b, b¹, steering connections.
c, c, sparking plugs.
F, gear-box containing speed changing gear.
F¹, connecting rod through which gears are changed.
G, extension of box F, containing bevel gear on to countershaft.
H, throttle lever.
I, sparking advance lever.
J, brake shaft.
N, upper frame.
P, clutch shaft
P, clutch spring.
S, brake lever.
T, steering handle.
V, flywheel of motor.
V¹, clutch.
X, water filling cap.
Y, water tank.

Upon previous occasions we have referred briefly to the Rochet-Petit cars, and in a recent issue we illustrated and described the ball thrust bearing fitted to the motor. We are now able to deal with the latest type of touring car as supplied by the British and Foreign Motor Car Co. of Liverpool, who are the sole agents for Great Britain.

Our first illustration gives a plan view of the chassis, from which the position of the various parts of the car's mechanism may be located by reference to the key. The general arrangement of such parts, it will be noticed, are in accordance with present-day practices. The frame of the car is constructed of weldless steel tubes in duplicate, the upper and lower frames being connected by suitable struts. The motor, gearing, tanks, etc., are carried by the lower frame, the carriage body being connected to the upper, the whole being carried on the axles by three semi-elliptical springs, one being transversely placed over the front axle, the others being the usual side springs. The chassis plan (fig. 1) does not depict the latest pattern, it being a lighter type of vehicle. The chief points of difference are that the frame is longer in the heavier pattern, inclined wheel steering replaces the handle-bar shown, and wood wheels are used in place of the cycle type. In other respects the cars are identically the same.

The motor is a two-cylinder one, the cylinders being in one casting, together with their water jacket. The head is a separate casting, the jacket of which is in connection with the cylinder jacket by ports. The motor develops 10 h.p. at 750 revolutions per minute, the cylinders having a bore of 104 mm. and stroke of 150 mm. As will be seen from the perspective sectional view (fig. 2), the cranks are set opposite to one another. The cylinders are bolted to a crank chamber A of aluminium, which is constructed in three parts, as will be seen by fig. 3, the bottom removable plate *o* (fig. 3) being, of course, another part. Electric ignition fires the charge in the cylinders, the speed of the motor being controlled by a centrifugal governor X X (fig. 2), which, acting through the lever L, shaft N, arm *b b*, and links to the diggers *f f*, cause the exhaust valves to remain closed, thus retaining the exploded charge, which acts as a check upon the speed. The half-speed shaft C (fig. 2) is contained directly within the crank chamber, the exhaust valve and commutator cams F F and G being part of the shaft. The pistons are of the usual trunk type, fitted with three rings, the lubrication of these being either by splash or automatic system, as preferred. The big ends of the connecting rods are well designed, and their adjustment is a very simple matter. For taking up wear, a number of thin plates are placed between the cap and the connecting rod, so that when adjustment is necessary it may be made by withdrawing the keeper pins and removing the nuts, when the cap may be lifted and the required number of making-up pieces removed. This effects the adjustment without any filing or scraping, as is generally required. The bearing is lubricated by recessed cups, which convey oil to the crank pins. The crankshaft bearings are exceptionally long, the forward one being 5in. and the back one 6in. in length. The flywheel, which weighs about 170 lbs., is bolted to a flange on the shaft end, the wheel being dished to bring the greater part of the weight more over the back bearing. A useful fitting is the gauge glass S (fig. 3), which shows the level of the oil within the crank chamber.

The motor is supplied with gas by a Rochet float feed spray carburetter (fig. 5). This is of the usual type, consisting of a float chamber containing the

float D, which through the levers and balance weights E E actuates the needle valve C, and regulates the flow of spirit into the float chamber and carburetter from the inlet pipe A, and reservoir B. The spirit is drawn by the suction of the motor through the nipple F. At the same time air is drawn in through the pipe G, and mixes with the spirit as it is projected against the cone H. The mixture of gas and air passes through J to the motor. In order to assist in the vaporisation, the nipple F is heated by a portion of the exhaust gases, which pass through the chamber K K. The water circulation is forced by a rotary pump driven off the fly-wheel, the water tank being placed at the back of the car and the radiators arranged in front. The petrol tank is carried beneath the seat, and will hold sufficient spirit for a run of about 250 miles.

Power is transmitted from the engine to the change speed gears by the usual conical friction clutch (which is largely built of aluminium) and flexible jointed shaft. The change speed gear is entirely different from any other system, and gives four forward speeds and a reverse. To understand the action of the gears, it will be necessary to carefully study fig. 6, which is a diagram of the gears, while fig. 7 gives a general view of them. In fig. 6, A is a spur wheel fixed to the clutch-shaft, and B is a similar wheel upon a shaft which drives the counter-shaft through bevel wheels not shown. The wheel B is free upon its shaft, and drives through a positive clutch which is kept in position by a spring. The use of this clutch will be described later. Mounted between two discs, which are rotative by a sector and pinion in connection with the speed-changing lever, and having the same axis as A, are five spindles carrying the gear wheels, C, C^1, C^2, C^3, and C^4. These are of such diameters that the distance between the centre A and the pitch line K is the same in all the gears. Four of these spindles carry double spur wheels of different diameters, through which the forward speeds are obtained. The fifth spindle carries a single wheel which gives the reverse; C represents this wheel in the diagram. The discs are kept in place by studs engaging in notches cut in their periphery.

In describing the action of the gears, we will follow the movements of the driver, and explain what happens subsequent to such movements. In putting in or changing the gears, the driver first depresses his clutch pedal, which first takes out the engine clutch, secondly removes the studs locking the gears, and thirdly removes the clutch from the spur wheel B. We now have the gears free of the engine through its clutch, and free of the momentum of the car through the clutch on B. Upon moving the speed-changing lever into the required notch, the discs revolve, carrying the gears with them, so that the required gear is rolled into mesh with B instead of being slid in, as in other gears. Thus, in the diagram, the larger spur wheel C (represented by the

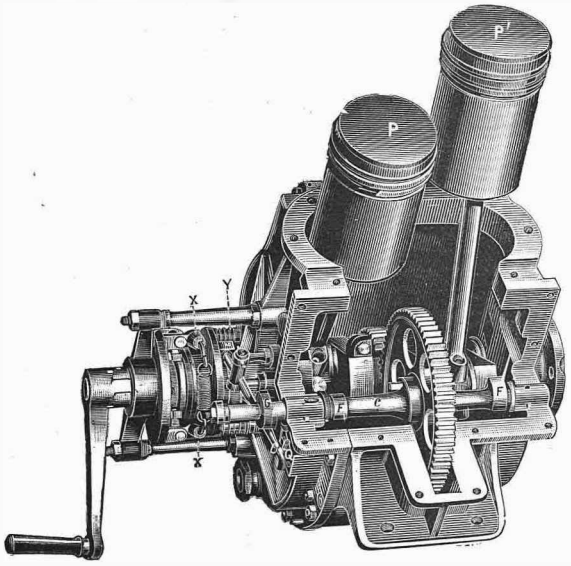


Fig. 2.—Perspective sectional view of the Rochet motor.

C, cam shaft.
F F, exhaust valve cams.
G, commutator cam.
P P, pistons.
X X, governor and weights.
Y, governor check springs.

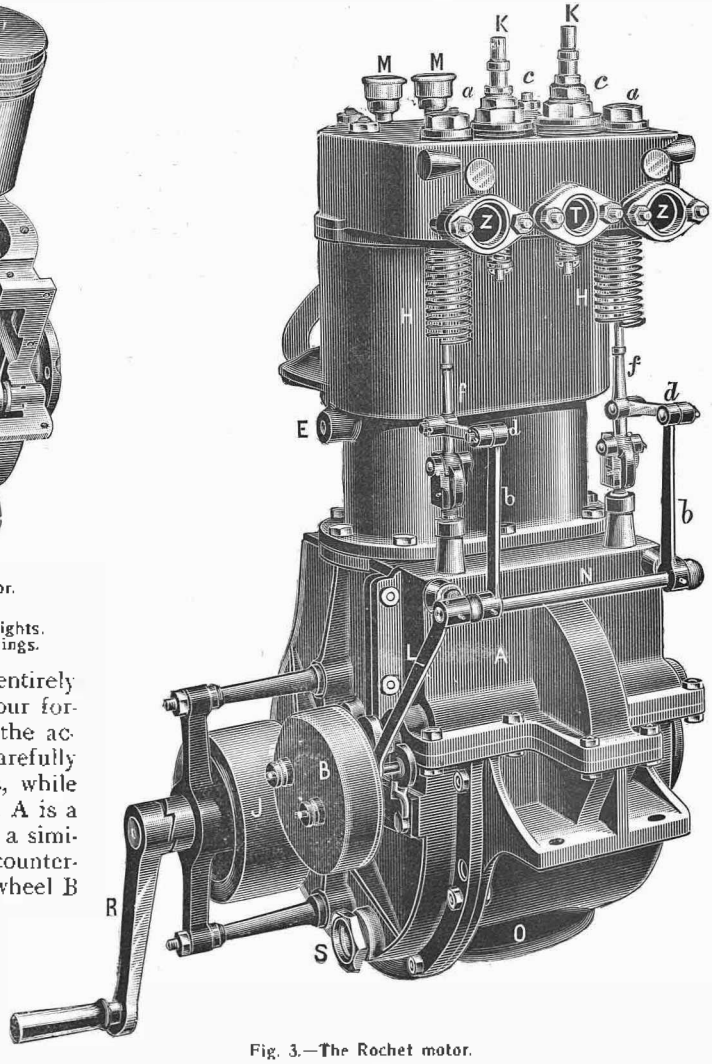


Fig. 3.—The Rochet motor.

A, crank chamber.
B, commutator.
E, cylinder lubrication connection.
H H, exhaust valve springs.
J, governor box.
K K, sparking plug terminals.
L, governor arm actuating N.
M M, cylinder lubricators.
N, governor shaft connected to L.
O, lid on crank chamber base.
R, starting handle.
S, oil level sight gauge.
T, gas inlet.
Z Z, exhaust outlet.
a a, valve caps.
b b, governor arms.
c c, sparking plugs.
d d, joints for links to diggers.
f f, governor diggers.

outer circle) is in mesh with A, while the smaller spur wheel (the inner circle) is in engagement with B. This is the first speed. Upon changing to the second speed, C^4 is carried round, engaging with B

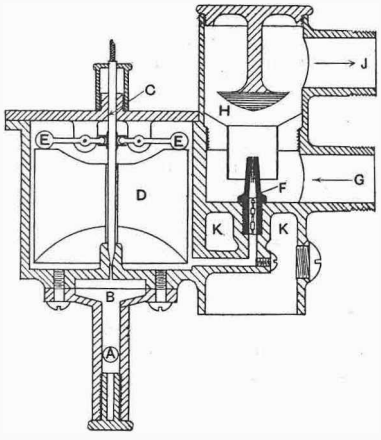


Fig. 4.—The Rochet carburetter.

A, spirit inlet.
B, reservoir below float chamber.
C, needle valve regulating spirit supply.
D, float.
E E, balanced levers actuating C.
F, spraying nipple.
G, air inlet
H, cone against which the spirit is projected.
J, gas outlet to motor.

on the pitch line K at K^4, the other gears being similarly operated. When the required gear is in mesh, the studs fall into their notches and lock the gear. As soon as this happens, the clutch pedal is allowed to come up, bringing with it the clutch on B, which

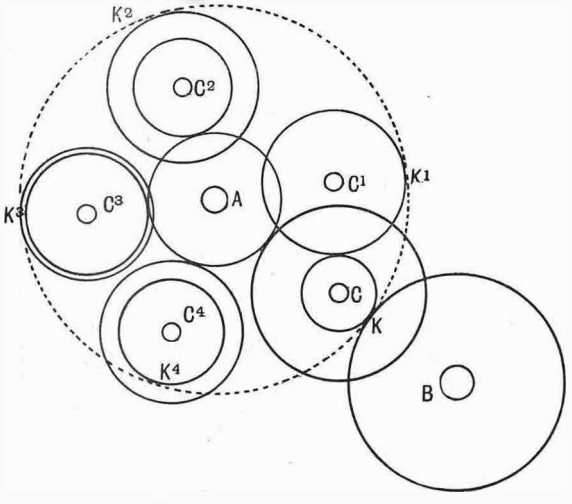


Fig. 5.—Diagram of the Rochet change speed gear.

A, spur wheel upon the clutch shaft.
B, spur wheel upon the shaft driving the countershaft.
C, first speed interposed between A and B.
C^1, reverse gear.
C^2, second speed.
C^3, third speed.
C^4, fourth speed.
K, pitch line
K^1
K^2 } engaging points on pitch
K^3 } line.
K^4

is put into engagement, the engine clutch following. So long as the gears are unlocked, it is impossible for either of the clutches to come into engagement. The rolling of spur wheels into mesh is not considered good practice, but with this gear there can be no objections against it, as neither the driver nor the driven is in connection with any source of power, as we pointed out earlier. The method of actuating the change of speed is good, as it appears to be impossible for the merest novice to smash up the gears. In every change sped gear there is some objection or another, and the one in this is the mass

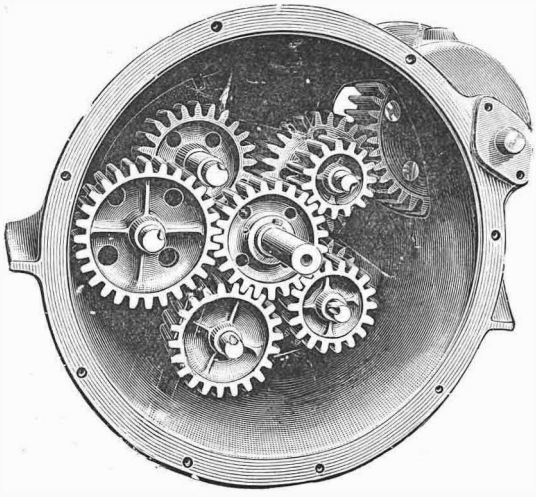


Fig. 6.—View of the Rochet change speed gear.

of gears which are revolving without doing any work, as to one set of gears which are doing work there are four others revolving doing nothing but causing friction. This, however, is reduced to a minimum, as the gears run in oil.

Retarding power is supplied by three double-acting band brakes of large diameter, one being on the differential gear and the others on the road-driving wheels. The application of either set of brakes withdraws the clutch, and to prevent running back a ratchet is fitted on the countershaft in addition to the usual sprag. The weight of the car complete is about 18 cwts.

It will be interesting to those in the Midlands and North who have not yet had the opportunity of seeing the Baby Peugeot to note that the little machine which gained the highest number of marks in Class F at the reliability trials is now being exhibited at the Sports Exhibition at the Bingley Hall, Birmingham. It will be remembered that it only lost one mark on the road in the six days, this being due to the motor being accidentally stopped.

* * *

A correspondent calls our attention to the antipathy towards autocars shown by the *Yorkshire Post*, as evidenced by the headings given to its report of a case of sideslip on some tramlines at New York, by which, unfortunately, a motor car was precipitated over a bridge, and the death caused of two of its occupants. The lines on the placard (of which he sends us a copy) are most sensational, and suggestive of vice on the part of the autocar. The motor car and its occupants were, unfortunately, the victims, but the cause of the accident was the deadly tramway. It is a pity that newspapers should show such animus against the new method of locomotion, which is in reality safer than any other.

USEFUL HINTS AND TIPS.

Electric connections should always be kept as clean as possible, and where not otherwise protected should be covered by wrapping with rubber tape, as supplied by any electricians.

Accumulators, when fully charged, will register 4.6 volts. This will soon drop to 4.4 volts, which is their normal capacity. They should never be run below 3.8 volts, or the plates are liable to become damaged by buckling. Always test with a voltmeter.

Tow and tallow make an excellent packing for the stuffing boxes of water-pumps.

A good temporary repair to leaking water pipes or radiators is effected by covering the pipe around the fracture or joint with white lead, and binding with tape. The tape should be well smeared with the lead as it is wound round the pipe, the edges of the bandage being well leaded. When dry this makes quite a good repair, and one which we have known last for a considerable time.

A greasy clutch leather should be well dressed with powdered chalk or fuller's earth. Either substance soaks up the oil and admits of a good grip being obtained. Resin on a clutch only causes it to grip fiercely, and eventually ruins the leather. The best leather dressing is collan or castor oil.

When a battery or accumulator becomes run down to such an extent as to refuse to produce a spark, an ignition spark of sufficient power may often be obtained by setting a passenger to vibrate the trembler with the fingers. Such a method has been found sufficient to run the car a distance of a mile or two.

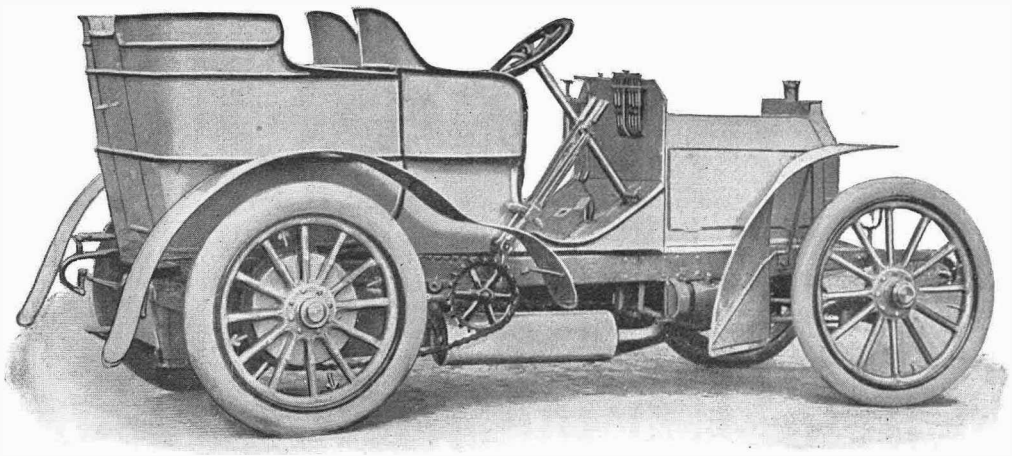
The "Ever Ready" electric torch is one of the most useful accessories in its way that we know of. For examinations at night time, where any lamp but a Davy would be dangerous, the electric torch comes in very handy, as it may be used in any position. Its value was first brought home to us when repairing a leaking petrol pipe joint on a pitch dark night.

If a leak in the petrol tank or connections is discovered at night the lamps should be put out at once, and care taken that no light is brought near the car. If it is impossible to rectify the leak without light, and no electric lamp or torch is available, the acetylene lamp may be lighted and placed t least four yards from the car. When the leak is stopped the escaped petrol should be wiped away, and a few minutes should be spent in waiting for what is lft to evaporate before attempting to light the lamps.

The 20 h.p. Wolseley car No. 69, which did so well in the Reliability Trials, was built for Baron Barreto, and immediately after the judges had released it it was driven over to the Baron's place at Lowestoft. Our illustration shows Baron Barreto, who is a pioneer automobilist, at the helm, with Girling, who ran the car through the trials, at his side.

So great has the demand for the Thornycroft motor lorries become that the Thornycroft Steam Waggon Co., Ltd., are building extensive works at Chiswick, by which, in conjunction with their existing establishment at Basingstoke, they will be enabled to largely increase their output. The uses to which these vehicles are now being put are very varied. The new works are expected to be completed in about two months, when we hope to have something to say concerning them.

THE MERCEDES SIMPLEX TOURING CAR.



One of the latest types of Mercedes-Simplex cars. We have often illustrated the 40 h.p. Mercedes-Simplex in its racing form, but this is the first time we have portrayed it as a touring car. Vehicles of this type are now being imported by the agents, Messrs. Mann and Overton, Ltd. The car is a remarkable hill-climber, and owing to the very smooth running of its exceptionally flexible engine, it can be driven with the utmost comfort at low speeds when desired.

THE UNCONTROLLABLE HORSE.

314 Persons Injured and 42 Killed by Horses in 26 Days.

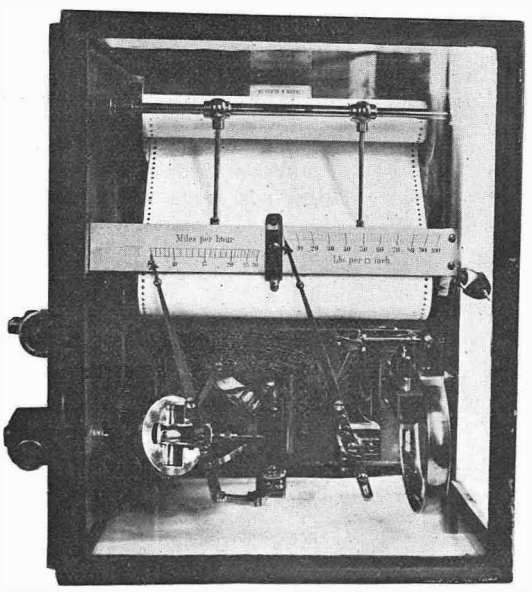
During the 26 days over which our record of horse accidents has extended, the number of casualties has been 42 persons killed and 314 injured. We must again explain that the record makes no pretensions at being complete, but only includes accidents which have come under our own observation in papers published in the United Kingdom. An exhaustive research would no doubt yield a much heavier death roll. It may also be safely inferred that many of those who are only set down as being injured die subsequently from the effects of their injuries. Thus in many cases the newspaper report states that a person is suffering from fracture of the skull, concussion of the brain, or other serious injury, and "lies in a very critical condition," or is "not expected to recover." Some of these would undoubtedly succumb, but they are only entered in the first column of the table. Another point that we wish to be clearly borne in mind is that this record is not compiled in any spirit of antipathy to the horse, but to show those who clamour for exceptional legislative restrictions against the autocar that special legislation for autocars is not needed any more than it is for the horse. The problem of traffic regulation should be approached in a broad spirit that will take account of dangers all round. If existing regulations were impartially enforced and more care taken by local authorities to render the highways clear of unnecessary obstructions, and if some means were adopted to ensure the competency of drivers of horse vehicles and the proper breaking in of horses, we venture to say that there would be far fewer accidents from any cause whatsoever.

	Injured.	Killed.
Brought forward from last week	243	32
SEPTEMBER 11TH.		
Two fatal accidents		2
SEPTEMBER 12TH.		
One accident causing injuries	2	
One other accident in which no person was injured		
SEPTEMBER 13TH.		
One fatal accident		1
Ten accidents causing injuries	11	
Nine accidents in which no persons were injured		
SEPTEMBER 15TH.		
Seven accidents causing injuries	10	
Two accidents, no injuries		
SEPTEMBER 16TH.		
Two accidents, resulting fatally		2
Eight accidents causing injuries	14	
Three accidents, none injured		
SEPTEMBER 17TH.		
Two accidents, resulting fatally		2
Eight accidents causing injuries	8	
Five accidents, none injured		
SEPTEMBER 18TH.		
Four accidents causing injuries	7	
One other accident, none injured		
SEPTEMBER 19TH.		
One fatal accident		1
Eight accidents causing injuries	10	
Three accidents, no persons injured		
SEPTEMBER 20TH.		
Two fatal accidents		2
Seven accidents causing injuries	9	
Two accidents, no persons injured		
	314	42

THE RESISTANCE OF ROAD VEHICLES TO TRACTION.

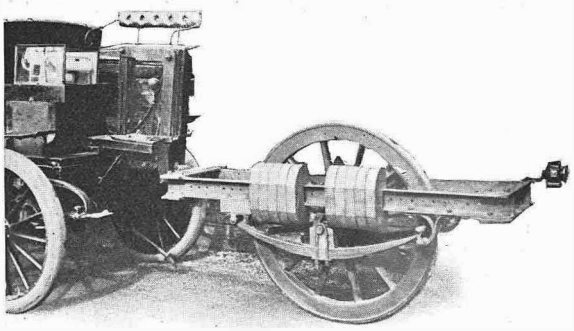
The car with the tractive resistance recording instrument attached. It will be noticed that a voiturette type wheel is in the frame. Note the number or weights as compared with the heavier load on the wheel below.

As many of our readers are aware, a committee of the British Association is at present carrying out a series of experiments in order to find the resistance of road vehicles to traction. By the courtesy of Professor H. S. Hele-Shaw, who is the secretary to the committee, we are able to give some illustrations of the instruments used in making these tests. The apparatus consists of a steel frame capable of taking wheels varying in diameter from 18in. to 5ft.



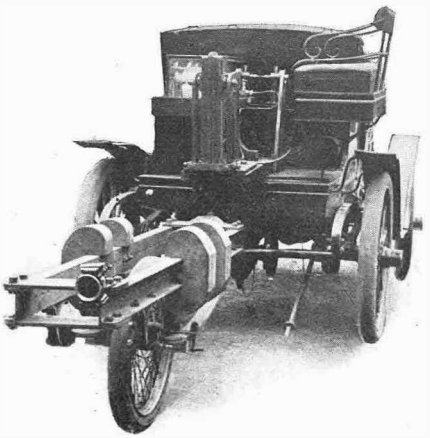
The recording instrument. The scale on the left registers the miles per hour, that on the right the pull in lbs. to the square inch.

The load is placed upon the wheel by a number of 56 lb. weights, and can be increased as required up to one ton. The tractive force required to draw the wheel undergoing the test is transmitted through levers to a small hydraulic ram, to which is connected a pressure gauge, and as the tractive force varies so does the pressure on the enclosed fluid. All the variations of pressure in the gauge are registered by a pencil bearing against a drum, over which a strip of paper is being pulled at a speed in



An iron-tyred wood wheel in the testing frame. Stronger springs and extra weights are used in conjunction with this wheel.

accordance with the speed of the car, which is also registered. The resulting graph shows the tractive force required at all parts of the route.



A rear view of the car and testing apparatus. It shows the construction of the wheel frame, the position of the recording instruments, and the observer's seat.

It is particularly interesting to note that, so far as the tests have reached, the results are very close to those obtained by M. Michelin in 1896, results which, at the time of their publication in *The Autocar*, were very much doubted in some quarters. The testing machine will not only be used to ascertain the efficiency of tyres of different diameters under varying loads up to the maximum of a ton per wheel, but experiments will be made to show the effect on efficiency of different pressures of tyre inflation, strength of springs, and last but not least how traction is affected by gradients and road surface.

THE A. G. INDUCTION COIL.

So much has been said and written of late of the failure of certain coils to act satisfactorily with high speed engines that the trembler detail diagrams of the above coil, together with the enumeration of the claims made for it, will be interesting. The maker of this coil claims that, while the ordinary trembler can only be got to vibrate about 140 times per second, the compound trembler fitted to the instrument under review will tremble at the rate of 800 in the same space of time. Again, coils with ordinary tremblers serve but for motors running at from 800 to 1,000 revolutions, whereas the special construction of this new device enables it to do efficient duty with engines running at much higher speeds. Also it renders starting immediate and easy. As can be seen from the diagrams figs. 1 and 2, the former is a transverse section through the trembler bridge and tremblers,

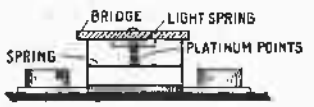


Fig. 1.

while the latter (a side elevation of the same) shows the trembler or "rupture breaker" to be formed of two steel springs—one held between the underside of the bridge of the block and the other underneath the first, secured in a slit in block. Both these blades are provided with platinum studs, as shown. The upper spring is always hard up against the underside of the bridge, but when the coil core is

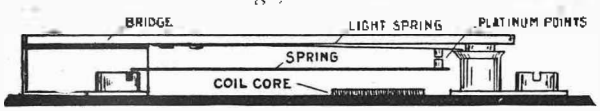


Fig. 2.

magnetised the lower spring blade is attracted downward, and is followed by the upper one still in contact therewith, until its free end lodges on the shoulder turned for the purpose on the stud seen on the right of fig. 3. The break between the two platinum studs then becomes instant, and it is this rupture of contact entire and actual which it is claimed makes so largely for the efficiency of the coil, as the intensity of the induced or firing current depends so largely upon the briskness of the break. The mean intensity of the induced current can be regulated by affixing the trembler bridge over the end of the soft iron core, so that the same is farther removed from, or nearer to, the free end of the lower vibrating spring. In order to show more clearly the difference in the construction of the old and the new tremblers, a diagram of the old pattern is given in fig. 3. From this it will be seen that the trembler blade is much thicker than in the new type, and that it carries a block at the end opposite the core of the coil. The stopping and starting again of this single

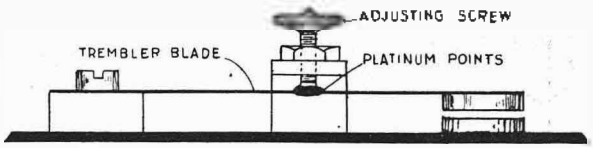


Fig. 3.

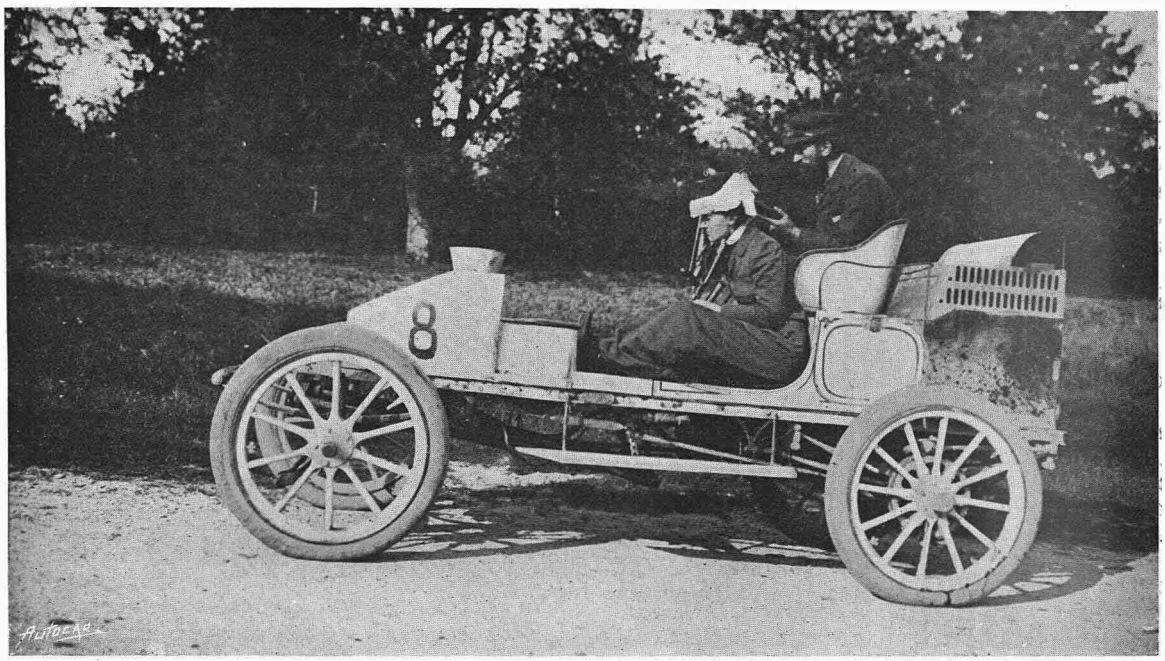
thick spring accounted for its slow vibrations, and to overcome this slow action the double light spring trembler described above was designed. We are informed that Mr. André A. Godin, of 9, Little James Street, Grays Inn Road, W.C., who is handling this coil in this country, is prepared to allow any automobilist of repute a trial of the same in comparison with any other coil. We hope to test it on one of our own cars at an early date.

LIVERPOOL SELF-PROPELLED TRAFFIC ASSOCIATION.

Mr. E. Shrapnell-Smith, at the request of the council of the association, has consented to continue in office as acting hon. secretary for the present. It will be remembered that when he became connected with the motor industry, Mr. Shrapnell-Smith sent in his resignation. Since July 1st the association has had a club reading-room and smoking-room reserved at the Exchange Station Hotel, Liverpool. Here all the leading automobile papers of the world are taken, as well as numerous weekly illustrated journals. This arrangement has provided a means of intercourse between the members, which appears to be very much appreciated. Members also enjoy certain advantages so far as the hotel tariff generally is concerned, and the management undertake to send out for petrol and other stores which may be required by automobilists using the association rooms.

The first 12 h.p. Gladiator in the Sunderland district has just been purchased by Mr. P. Turvey, who is shown at the helm of his new car.

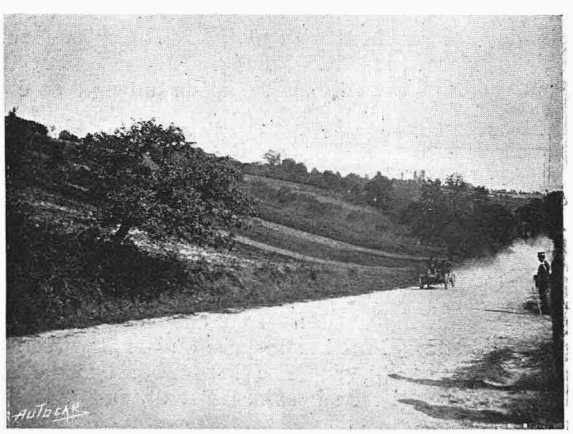
CONTINENTAL NOTES AND NEWS.



M. and Mme. Le Blon on their Gardner-Serpollet, which won the Gaillon climb.

The Gaillon Hill-climbing Trials.

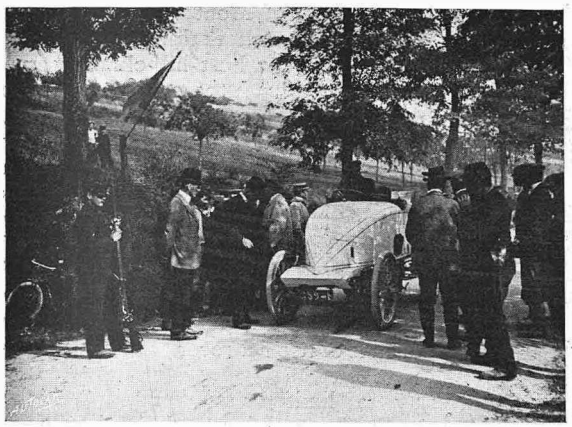
The fall of the year is bringing quite an abundant crop of autocar events, there being no fewer than four hill-climbing trials in as many weeks, and makers are beginning to think that this multiplicity of meetings is not without a certain inconvenience. In taking part in trials, the manufacturer after all consults his own interests, which are to show the progress being made in his cars in particular, and to assist in popularising the automobile in general, but it is clear that this can be done quite as well with one hill-climbing test as with a "triple event" all crowded in the space of three weeks. The effect of this rivalry and splitting up of interests was seen in the annual hill-climbing competition at Gaillon on Sunday. This event was founded four years ago by the proprietors of *Le Vélo*, and until recently it was regarded as the principal climbing test of the year, when between one and two hundred cars gathered at the foot of the famous gradient, and some thousands of spectators were attracted by the great interest of the meeting. But this year the rival publication, the *Auto-Vélo*, has carried war into the enemy's camp by organising identically similar events. When therefore the one paper announced the date of the annual Gaillon trials, the other undertook to promote a meeting on the same gradient the following Sunday, and at the same time hoped to diminish the interest of Gaillon by holding a similar test concurrently at Château-Thierry. This competition was avoided by changing the date of Gaillon, which took place on Sunday last instead of in October, as previously arranged. The change, however, did not save the meeting from losing a good deal of its old prestige and importance, though the absence of novelty and the small number of competitors were partly compensated for by the splendid performances of the Serpollet cars and the excellent display of motor cycles, to say nothing of the attraction afforded by the magnificent weather, which alone made the outing a very agreeable one. The hill, known as the Sainte-Barbe, is situated about a mile outside Gaillon on the road to Rouen. The gradient is perfectly straight, and rises a little more than nine per cent. most of the way, and eases off at the top for about two hundred yards. After the experience of former years, it was



Baras on the Darracq at the bottom of Gaillon Hill.

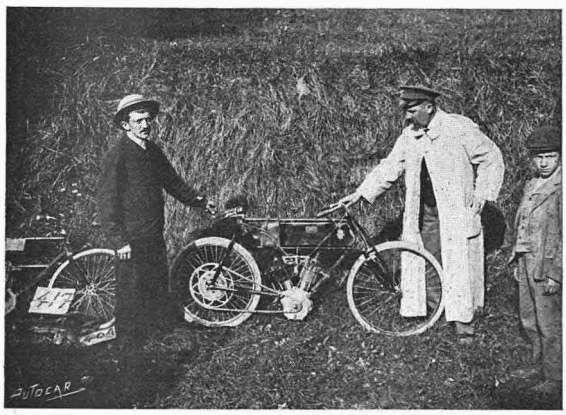
rather disappointing to find so many absentees among the makers who had entered for the trials. There were only two big cars (both Gardner-Serpollets), four light carriages, two voiturettes, and a dozen motor cycles. If quantity was lacking it was fully make up for by quality, and the records for nearly all classes of vehicles were thoroughly beaten. The first attempt was made by Baras on a light Darracq, who did an excellent performance by

mounting the kilom. gradient in 46 3-5s., as against the previous record of 1m. 5 3-5s. made by Théry last year on a Decauville. Baras was in high glee at the prospect of winning the gold medal offered by the Minister of Agriculture for the fastest vehicle using alcohol, but his satisfaction was not of long duration. M. Le Blon, accompanied by Madame



Starting M. Serpollet up Gaillon.

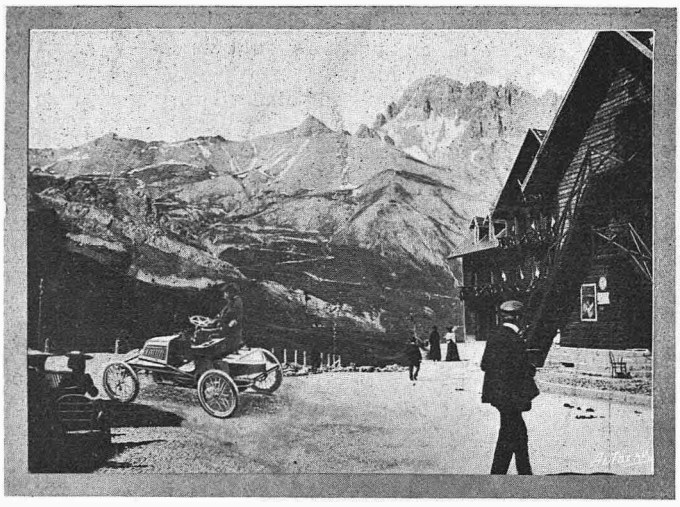
Le Blon, drove his big Gardner-Serpollet up at a terrific speed. The patchy surface of the road caused the car to jump and sway from side to side, and it passed like a whirlwind, disappearing in a cloud of dust over the top of the hill, with the squeaking of brakes as the vehicle was brought to a standstill a long way past the finish. His time was 40 4-5s., which is at the rate of fifty-five miles an hour. On the lower part of the hill M. Serpollet seemed to be doing as well, if not better, with his famous 12 h.p. Whale, in which he was using alcohol as fuel, but he mistook the ridge of the gradient for the finish, and had his brakes down before he reached the timekeepers. His time was, nevertheless, 41 2-5s., so that it may reasonably be



M. Bruneau and his motor bicycle.

supposed he would have beaten Le Blon's record had his speed not been checked during the last hundred yards. The previous best on Gaillon was accomplished last year by S. F. Edge on his Napier, when he covered the kilom. in 1m. 3 3-5s. This record, however, still stands for big petrol cars. Le Blon also drove a light Gardner-Serpollet in 42 4-5s., so that these vehicles not only won in the light carriage and big classes, but carried off the Minister of Agriculture's gold medal—a series of successes at which M. Serpollet was, naturally, highly elated. Two other light carriages competed—De Richemond on an Aster, doing 1m. 45 2-5s., and Valentin on an Ader, 1m. 58 3-5s.—while the two voiturettes were a Passy-Thellier, driven by R. Hanriot in 1m. 12 3-5s., and a Locomobile by Abbott in 1m. 31 2-5s. The motor cycles were divided into three classes, there being only one machine in the tricycle category, driven by Demester, who took 46 1-5s. This machine, as well as the bicycle of Lamberjack, is a Griffon fitted with a huge Soncin motor. This engine has a smooth cylinder with ports just above the piston when at the lowest point of its travel. This would seem to present a double advantage—first, in giving a rapid clearance of the burnt gases by the incoming charge, and, again, any burnt gas left in the cylinder is necessarily compressed up against the live charge, so that the spark traverses the fresh gas instead of a more or less imperfect mixture. When, moreover, the piston rises above the ports air is drawn in to cool the crank case, but at the same time the ports allow of the lubricating oil escaping in such a way that the machine is very soon smothered. The system may be a good one for engines of 6 and 8 h.p. and more especially as it means a great diminution of weight by the suppression of water jackets and cooling ribs, but it does not seem to have been applied to motors of smaller power. In both of the bicycle classes the best times were done by the excellent machines of P. Bruneau et Cie., 12, Rue Victor-Hugo, Tours, which, it will be remembered, showed remarkable speed qualities by winning the two events at Deauville, and their performances at Gaillon proved that as hill-climbers they are equally noteworthy. The heavy Bruneau bicycle has two cylinders, and the light machine a single cylinder, the latter bicycle weighing 62 lbs. stripped. In both cases the motors are carried in the place of the bottom bracket, and are held by forked ends of the tubes bolted on to the crank case. The cylinders are bored out of steel, and a peculiarity about them is that the thin cooling ribs half-way down the cylinder appear to have been turned out of the same piece, so that a considerable weight of metal is cut away. The cylinder ends are cast, and held by four vertical studs screwed into the crank case. The drive is taken direct from a small pinion on the crankshaft by a chain to a large chain wheel on the driving wheel. There were no pedals on the machines at Gaillon, so that the hill performances were the more creditable, but according to our recollection, the bicycles at Deauville were fitted with pedals behind the crank case, and apparently these are always fitted to the

Madame Jolivet on the Pécourt motor bicycle.



The Georges Richard at the top of the Lauteret after its successful climb.

Bruneau touring machines. What struck the observer at Gaillon was the absolute smoothness with which the bicycles ran. There was no misfiring and no jumping, and the Bruneau machines went up the hill in a way to suggest that the whole of the power was being used effectively. The following were the times of the bicycles: Class of thirty to fifty kilogs. Barré (Bruneau), 57s.; Lamberjack (Griffon), 1m. 4 1-5s.; Carreau (Carreau), 1m. 7 3-5s.; Labitte (Werner), 1m. 17 4-5s.; Péron (Werner), 1m. 19 2-5s.; Robin (Lamaudière), 1m. 19 3-5s.; Ardiot (Lamaudière), 1m. 23 2-5s.; Madame Jolivet (Pécourt), 1m. 53 1-5s. Class of less than thirty kilogs.—Barré (Bruneau), 1m. 44 1-5s.; Breuil (Breuil), 1m. 45 3-5s.; Remay (Pelletier), 1m. 45 4-5s.

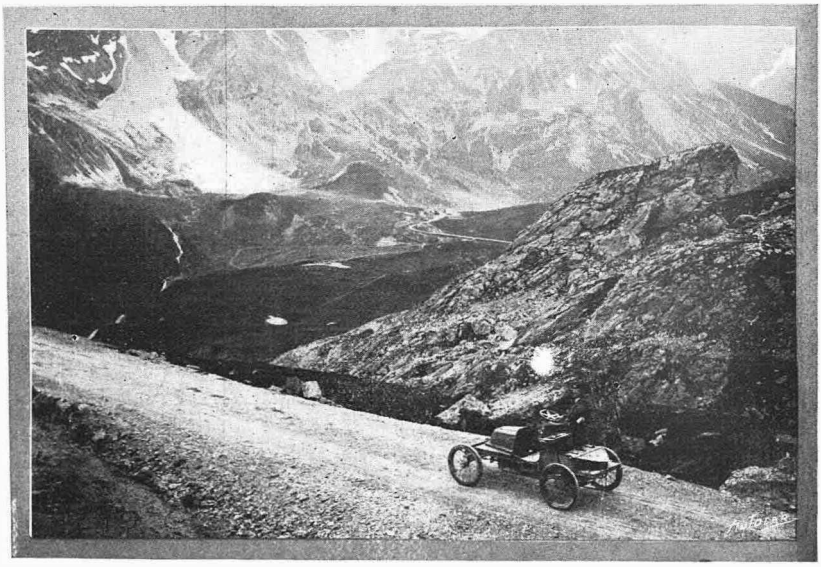
The Mont Ventoux Climb.

The Provence meeting, organised by the Automobile Club of Salon, terminated on Sunday of last week with a climbing test on the Mont Ventoux, one of the peaks of the Alps rising to a height of about 5,000ft., and offering a straight gradient thirteen and a half miles in length. The average incline is eight per cent., but for about a thousand yards the rise is thirteen per cent. The selection of such a mountain would have been regarded as absurd not more than a couple of years ago, when it was supposed that no motor could have been capable of giving its maximum power under the worst conditions of cooling for more than a mile or so without over-heating. A car which went up a kilom. hill in less than two minutes was regarded as doing a very meritorious performance, but this rate has been exceeded on a mountain road twenty times the length, not by one car, but by several. This fact alone demonstrates the wonderful strides made in the designing and building of engines the last year or two. There were sixteen vehicles and cycles competing in the Mont Ventoux climb, and only one failed to get to the top, this being due to a broken valve, which compelled the driver to return to the bottom. M. Paul Chauchard, on his 70 h.p. Panhard, followed up his success in the Salon-Arles race by getting to the top of Mont Ventoux in 27m. 17s. This is a really remarkable performance, and is undoubtedly the best hill-climbing run yet accomplished; though the course was by no means straight, it was, comparatively speaking, much less devious than those of most other climbs. The next best time was by Juvanon on a Rochet-Schneider, who took 31m. 47 3-5s. This vehicle is in reality a light carriage, but as the weight exceeded the limit it had to be classed as a big vehicle. The Turcat-Méry cars did well, but the great success of the day was for M. Clément, who carried off all the other five events, which is of itself a record for a manufacturer.

Though only a limited number of vehicles competed, the organising club and the makers were delighted with the experience gained in this climb, and it is extremely probable that the Mont Ventoux event will become an annual fixture, when it may be expected to receive much greater support. These mountain competitions are becoming very popular not only in France, with Laffrey and Mont Ventoux, but also in Italy, where the Mont Cenis climb held recently is to be followed by another to the Col du Stelvio on the Italian and Austrian frontier, where the road has a length of about fourteen miles. The first entry for this event has been received from Mr. S. F. Edge, and Darracq and other French cars will be competing, to say nothing of the Fiat, Rosselli, Marchand, and other Italian vehicles.

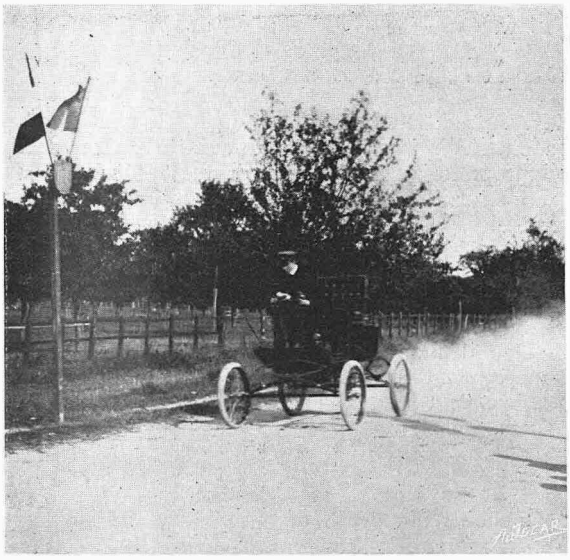
Details of the Climb.

Owing to late arrival, we could not insert in our last issue the following report from our corre-



A 70 h.p. Georges Richard climbing the Lauteret. The Lauteret is one of the highest peaks of the Alps in the neighbourhood of Laffrey beyond Grenoble.

spondent, which was written at Avignon on 16th September: "To-day has taken place the hill contest up Mont Ventoux, organised by our French contemporary *L'Auto-Vélo* and the Automobile Club-d'Avignon. The route selected for that purpose is certainly the steepest road for its length in France. It is twenty-two kiloms. from Bedoin (a little village from which the vehicles started) up to the terrace of the Observatory on the summit, where the finishes were made, and there is a 1,600 metres rise in this distance, that is, 5,250ft. vertical lift in thirteen and a half miles. The gradient, however, is not constant. There are some level stretches, but little by little the incline increases. The road is covered with small stones, which are rather unstable in the turnings, many of which were quite sharp. In the cases of exceptionally sharp bends, red crosses were painted on the rocks, or on small sign-boards, for the drivers to slacken their speed. The course is too narrow for two vehicles to drive side by side, so that in case of a much faster car, it would have been well-nigh impossible for the one behind to get ahead. Therefore, at the request



Mr. Abbott on the Locomobile finishing the Gaillon Climb.

of the drivers, it was decided to give the start according to probable speed, with ten minutes interval between each car. In spite of the length of such proceedings, it was considered safer to avoid the risk of accidents, the road being on the mountain side, and therefore dangerous. At 10.30 the start was given to Chauchard, with his 70 h.p. Panhard, and away he went full speed from Bedoin. The Clément racer followed, and two of the Darracq fliers which took part in the Paris-Vienna race were next. After these cars the bulk of the less-powered cars started, the first of which was a 24 h.p. Turcat-Méry. In order not to delay matters too much the interval between the starting of each vehicle was reduced to five minutes. At last all were started, including the motor bicycles. From the Observatory, where we enjoyed a most delightful view, we awaited the arrivals. We could see a large part of France as on a big relief map. From the Mediterranean on the south up to Mont Blanc all the Alps' summits were covered with snow, and below the roads and rivers, which seem small silver ribbons, stretched across the country. But we were all intently looking on the road with our field glasses, and suddenly we saw a little cloud of smoke just as if some gunpowder had been ignited on the road. Round and round the turnings came the smoke, disappearing and reappearing, till suddenly we clearly saw the 70 h.p. Panhard, with its big bonnet, running at thirty miles an hour up that steep hill—so steep, indeed, that it looked like a flight of stairs. Enthusiastic cheering greeted Chauchard when he alighted, after having won the race in 27m. 27s. It takes seven hours for horses to complete the journey. We then waited for the others, and while they came at a fast speed, they did not create the same impression as Chauchard, although the Turcat-Méry (which is small when compared with the big Panhard) and the Clément and Rochet cars were each greeted with applause on account of the excellence of their performances." The times in the different categories were as follow:

CARS OF MORE THAN 13 CWTS. AND LESS THAN 20 CWTS.—(1) Chauchard, 70 h.p. Panhard, 27m. 17s.; (2) Juvanon, 30 h.p. Rochet, 31m. 47s.; (3) Méry, 24 h.p. Turcat-Méry, 35m. 35s.; (4) Rougier, 16 h.p. Turcat-Méry, 39m. 1s.; (5) Richard, 12 h.p. Richard, 2h. 27m. 45s.

LIGHT CARS OF MORE THAN 8 CWTS. AND LESS THAN 13 CWTS.—(1) Barbaroux, Clément, 33m. 19s.; (2) Hémery, Darracq, 35m. 49s.; (3) Pichat, Luc Court, 1h. 18m. 25s.

LIGHT CARS WITH FOUR PEOPLE.—(1) Clément, Clément, 48m. 24s.

VOITURETTES OF LESS THAN 8 CWTS.—(1) Volatum, Clément, 43m. 35s.; (2) Hanriot, Passy-Thellier, 45m. 43s.; (3) Journu, De Dion-Bouton, 49m. 38s.

VOITURETTES WITH FOUR PEOPLE.—(1) Oury, Clément, 1h. 56m. 45s.

MOTOR BICYCLES.—(1) Derny, Clément, 41m. 51s.; (2) Labitte, Werner, 1h. 29m. 3s.

A banquet served in the open air to the guests of the Automobile Club d'Avignon closed the proceedings. Toasts were drunk to Chauchard (the winner), to M. Clément (whose cars won in five series), and to Méry (whose performance with a car not intended for racing was much admired).

For the second time recently Mr. R. M. Wright, of Lincoln, has successfully defended a charge against him of exceeding the legal speed limit.

* * *

The police got scent of the Midland Automobile Club's run to Stratford on Saturday last, and as a result there was a measured quarter-mile trap just outside Kenilworth. Mr. E. M. C. Instone, the commercial manager of the Daimler Motor Co., who was driving the 22 h.p. Daimler which took part in the Welbeck trials, was amongst the victims. On board with him were Mr. Martin (works manager), Mrs. Martin, and a member of *The Autocar* staff. After Mr. Instone had given his name and address, he turned back and warned his brother automobilists of the trap which was laid for them. When the 22 h.p. car again passed the uniformed officer, that estimable gentleman called out: "You've spoilt one," meaning that Mr. Instone's timely warning had prevented a capture. Mr. Instone has never before been summoned in this country or in France, and he has done a great deal of driving, and has had the honour of being at the helm with the King on board. He is not the man to take or cause risks, as all who have seen him drive are well aware.

Flashes.

The Aster Manufacturing Co., of St. Denis, the makers of the Aster motors, ask us to announce positively that their sole agents for Great Britain are the Begbie Manufacturing Co., of Cumberland Park, Willesden Junction, N.W. They tell us that other houses are passing as their agents who are not authorised by them.

* * *

Users of Panhard cars in this country will be glad to learn that Messrs. Panhard and Levassor, of 14, Regent Street, S.W., are now in a position to do any repairs and make any replacements at their works, Kimberley Road, Edgware Road, W. There is employed a thoroughly competent staff of English and French mechanics, capable of grappling with any difficulty. The company have already taken to a further area, and, owing to increase of work, are extending their establishment in order that they may deal with all other makes of automobiles.

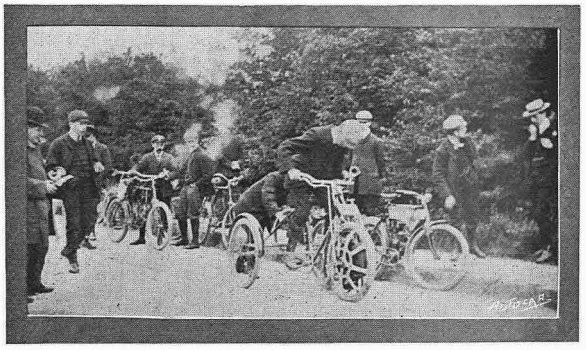
* * *

The United Motor Industries, Ltd., of Great Castle Street, W., inform us they are frequently receiving urgent telegrams from automobilists who are touring in different parts of the country asking them to send on various parts and fittings by next passenger train to addresses they give, and they beg us to explain that it is impossible for them to send things to utter strangers to temporary addresses unless the money to cover the articles required is telegraphed at the same time. They tell us they would not be so strict as to this rule if experience had not proved to them that quite a number who have obtained requisites in the way we have mentioned have forgotten all about the circumstances afterwards, and have omitted to forward the cash in payment, and owing to the fact that the addresses they have wired have only been temporary ones, it has in many cases been impossible to remind them of their forgetfulness, and, consequently, the United Motor Industries are still without the money.

Owing to very great pressure on our columns, we are again compelled to withhold all correspondence. We hope to be able to resume the feature next week.

* * *

Mr. E. Cragg, M.D., hon. secretary of the Lincolnshire A.C., suggests in regard to police traps that "confetti" should be scattered near the trap, so that passing automobilists might know of its whereabouts.



Mr. W. B. Crawford starting in the Glenamuck Hill Climb on his 2¼ h.p. Singer tricycle, on which the fastest time in the competition was made. Our illustration is from a photograph kindly placed at our disposal by Mr. H. Crawford.

Mr. Alfred Dunhill, of 145-147, Euston Road, London, N.W., is well known to autocarists for what he appropriately calls his "Motorities." He has just issued a beautifully illustrated price list of all his specialities, which include lamps, pumps, aprons, overall suits, gaiters, and all sorts of clothing for ladies and gentlemen who participate in automobilism. Amongst the articles is the newest Parisian clothing made by Messrs. Strom et Fils, of Paris, Mr. Dunhill being this firm's sole English manufacturing agent. Autocarists should apply for one of these excellent lists, which contains much of interest to them.

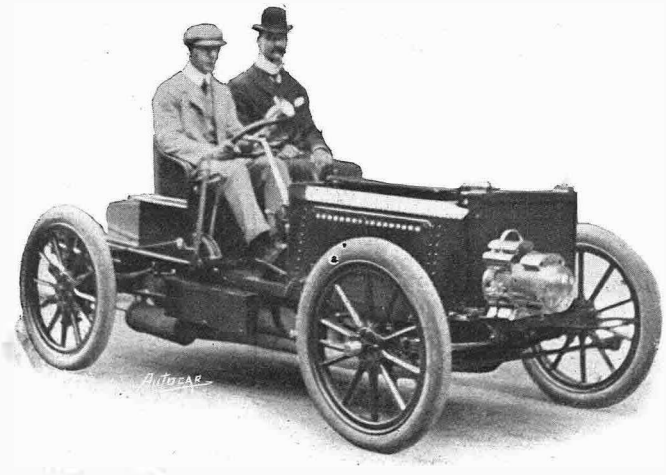
* * *

At an inquest at Aldershot the other day touching the death of a child who was killed by a brewer's dray while playing in the road, the Coroner (Mr. Roumieu) wisely observed that it would be a very great deal better if parents looked after their children instead of complaining of the speed of motor cars. The public highway was not a playground for children.

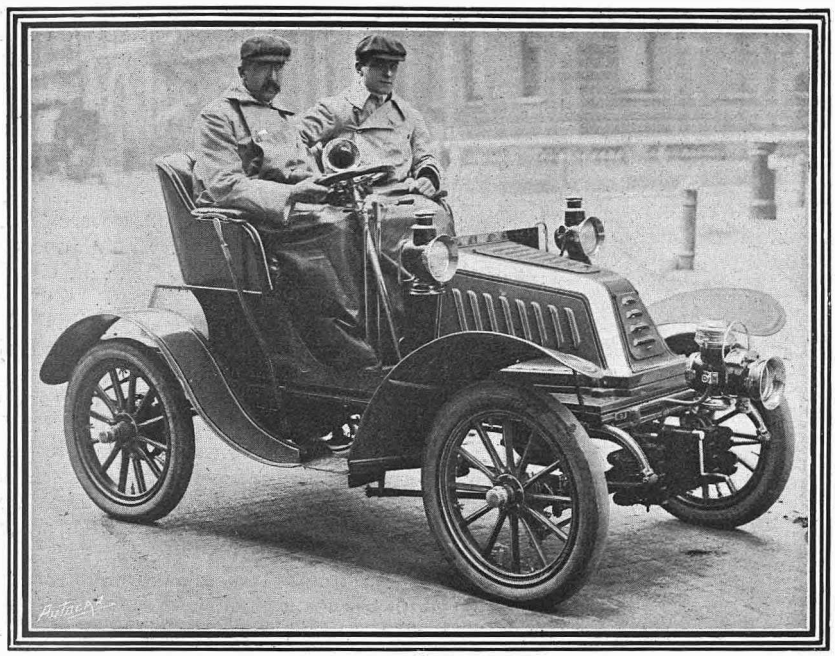
* * *

We have received a prospectus of Messrs. Weller Bros., Ltd., of Thomas Place, Norwood Road, West Norwood. The capital is £3,000 in ordinary £1 shares, but only 1,100 shares are issued, the purchase price for the motor car business at Norwood having been fixed at £1,700, which the vendors accepted in fully-paid shares. It is said that the business has been somewhat hampered in the past for lack of working capital, but it is believed that the sum applied for will result in largely extending the scope and of making it thoroughly profitable. The company also have under construction two types of car—one 8 h.p. and the other 20 h.p.—as well as a motor bicycle.

THE GORDON-BENNETT WINNER AND ITS NEW OWNER.



This illustration shows Mr. S. F. Edge's Gordon-Bennett Napier in its finished state. It has, as we recorded some time since, been bought by Mr. Arthur Brown, of Luton, and he will be recognised at the wheel



The latest pattern 8 h.p. De Dion. This photograph shows Mr. Walter Munn's carriage, which is fitted with one of Mr H. J. Mulliner's detachable tonneaus. When the photograph was taken the tonneau was removed and a box put in its place as the car was starting for the Dashwood Hill climb, which was postponed. This being the case, Mr. Munn and his friend (Mr. Olley) went on to Cheltenham, where they stayed the night. Next day they drove *viâ* Oxford to Hitchin, and on the following day they accompanied Mr. Edmund Payne, the well-known comedian, almost the whole of the way during a twelve hours' bicycle ride he was making, and they returned to London the same night, having covered about 450 miles in the two days and a half. The photograph, which we reproduce below, was kindly placed at our disposal by Mr. A. Hoffmann. It shows the same car with its tonneau fitted.

Mr. Chas. Miller, of 97, Reade Street, New York, informs us that he has taken a large space at the automobile show to be held at Madison Square Garden, New York, and suggests that this would be an opportunity for English manufacturers to show goods. He will be pleased to hear from any such with best terms quoted.

* * *

In a speed case at Scarborough a police sergeant swore that Mr. Frank Moore, of Bradford, covered a mile in 37s. The method of timing was that two police officers hid themselves in the hedge a quarter of a mile apart armed with stop watches, which they stopped as the car passed them, and afterwards compared times. Mr. Philip S. Deering, writing to the paper in which the case was reported, pointed out that the speed worked out at over ninety-seven miles an hour, and caustically added that Mr. Moore no doubt would have come out with flying colours in the last Gordon-Bennett race. Several other autocarists were fined at the same time, though their speeds did not approach anything like that credited to Mr. Moore.

* * *

Mr. Jas. A. Walker, of 18, Leicester Grove, Blackman Lane, Leeds, writes: "A few days ago I passed a motor car travelling at a very fast rate, and soon after found a parcel at a bend in the road, as though it had been swished off the car in question at the bend referred to. The parcel consisted of three new air tubes. I have made the find known locally, but without effect, and should take it as a favour if you would mention it in *The Autocar* next issued. Failing a claimant, I purpose disposing of them shortly."

Mr. Edward M. Iliffe was on Wednesday last fined £5 and costs for an alleged excess of the speed limit on an absolutely deserted stretch of road near Worthing. The "offence" was committed on the occasion of the Worthing run of the recent reliability trials. Mr. Iliffe was not competing, and, consequently, did not leave with the trial cars, the drivers of which were all warned of the trap into which he fell. Colonel Wisden, the chairman of the Bench, incidentally stated his opinion that it would be a good job if the motor industry in this country should die.

* * *

An interesting table has been prepared by Mr. Carmen, the secretary to the present proceeding tyre trials, and posted up in the hall of the Automobile Club, which shows that up to Friday night last the set of Dunlop tyres T1, on the car driven by Mr. Moss, had only lost thirty-three marks during the three weeks running, while the Collier tyres on the Napier car, driven by Mr. Cecil Edge, had lost but one point more, viz., thirty-four points. Up to Tuesday morning last the Collier tyres had lost another three points, making thirty-seven in all, while the above-mentioned Dunlop set had failed to hold their lead, being then one point worse off than the Colliers. The Martin and Goodyear trial sets have been withdrawn, as is the case with one set of Maison-Talbot tyres, due, we believe, to the breakdown of the car running upon them. Four sets of Dunlops, one set of Colliers, one set of Maison-Talbot, and Mr. Midgley's experimental set are still continuing the struggle. The marks down on this table as lost are deducted in the ratio of one mark for every minute's stop, and are for inflations and repairs. The awards, when they come to be made, will be based on the condition of the tyres at the close of the trials as well as the marks lost as above.

A car is reported to have run into a ditch and upset in the Manchester district. It is stated that it then caught fire, and the car, valued at £700, was completely destroyed. No particulars are available at the time of going to press.

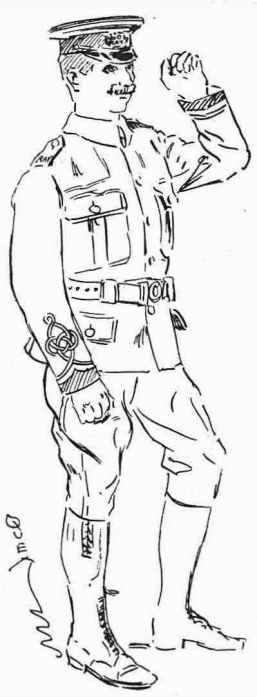
* * *

Messrs. Friswell, Ltd., inform us that they have arranged with the Maison Peugeot to take their entire output of their Baby Peugeot voiturettes. After the Baby's performance in the trials, we have no doubt that Messrs. Friswell will find the demand for this little machine will fully justify the step they have taken.

* * *

A provisional protection for an electrical speed indicator has been taken out by Mr. H. W. Wilson, of the East Anglian Engineering Co., Ltd., Stowmarket. The idea is to use a small dynamo, driven from the countershaft or road wheel, the output of which would be indicated by a voltmeter, and the dial of which would be marked with miles per hour instead of volts. The indicator is not an absolutely new idea, as others have thought of this simple adaptation of the principle that the pressure generated by a dynamo is in proportion to the rotation of its armature. However, the thing has never been carried through, as the retail figure of such an instrument would work out at from £8 to £10—an amount to which few automobilists would go simply to know the speed at which they were travelling at the moment. For scientific purposes and racing cars, the instrument would probably be of use, as its accuracy, if directly driven, could be relied upon. Automobilists who are prepared to fit this instrument to other refinements upon their cars should communicate with Mr. Wilson.

* * *



The uniform of a private of the Automobile Volunteers. See *The Autocar* last week, page 313.

The West Riding Police at Selby have been devoting their attention to automobilists in the district. Only the other day Mr. A. F. Burton, of Turnham Hall, was stopped on the Doncaster Road between Brayton and Selby. The police were provided with a common watch, with which they seemed to imagine they could take accurate times, and they declined to believe that a small car laden with four persons, dog, game, and guns could travel at less than twenty miles an hour.

* * *

Lord Kitchener was the guest of the Prime Minister at Whittinghame last week-end. He travelled from Aberdeen with his host, but the distinguished gentlemen forsook the railway at Edinburgh and finished their journey on Mr. Balfour's Napier.

The 7½ h.p. Germain which earned the highest marks in its class in the reliability trials has been purchased by Mr. Stewart Noakes, of Selsdon Park, Surrey, while the 15 h.p., which only dropped three points during the entire week, and that for a faulty sparking plug, has been purchased by Mr. M. D. Rucker, Ifield Park, Sussex.

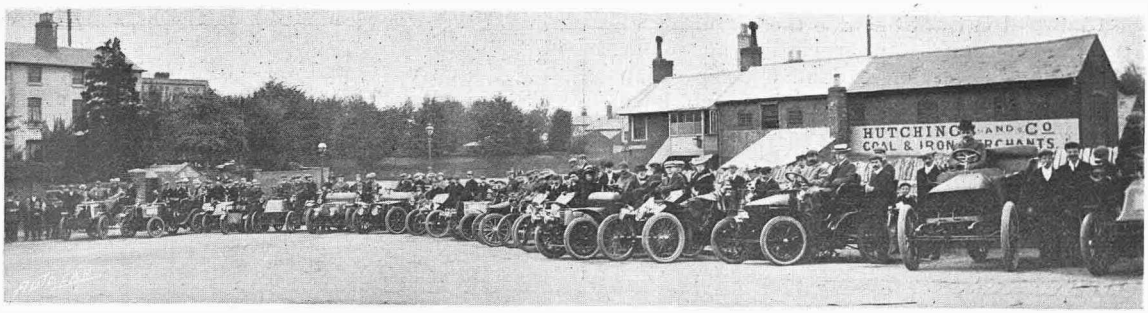
* * *

At Messrs. Davis, Allan, and Co.'s establishment in Singer Street, Tabernacle Street, we were lately shown a giant Goodyear tyre 36in. × 6in., one of a set of four about to be supplied to Mr. Alf. Charles Harmsworth for his 12 h.p. Serpollet. This car Mr. Harmsworth makes large use of for his Continental tours, and in addition to it being fitted with a heavy and luxurious canopied barouche body, the car has to carry considerable loads of baggage on the roof. Indeed, we remember that when driving on Mr. Harmsworth's first Serpollet from Dieppe to Rouen, a very pyramid of baggage was stacked on the roof—so much, indeed, that the vehicle, although perfectly safe, presented an extraordinarily top-heavy appearance. Up to the present, Mr. Harmsworth has found this car very extravagant in tyres, and if the giant Goodyears now about to be fitted carry her satisfactorily the feat will be quite a notable one.

* * *

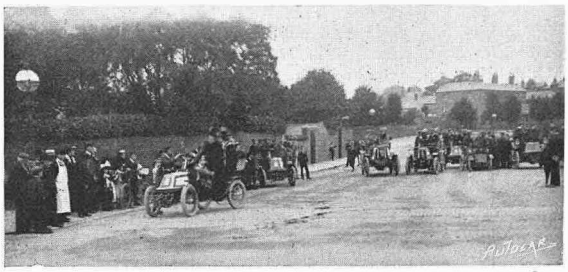
Among the most remarkable advertisements which we have come across of late is one which appeared in the *Daily Graphic* on Thursday last week under the heading of "The Most Successful Motor and Cycle Firm in Britain," and which gave particulars of some wonderful dividends, ranging from 800 per cent. to 1,800 per cent., stated to have been earned by a concern retailing cycles, and about to embark on the motor trade by offering "a handsomely upholstered vehicle to seat two persons, which only costs £5 a month, or somewhere in the neighbourhood of £70 cash." It is further stated that great business is expected "when dainty driven governess carts, racing cars, and light motor cars, with free instruction provided and competent drivers willing to be engaged, are offered for sale at a few pounds per month." We are also informed that, although as much as £50 has been offered for immediate delivery, the company do not intend to place the cars on the market for a fortnight or three weeks. Whether this means £50 for the £10 racing car or £50 premium, we are not informed. An illustration of some roofing is labelled the Alpha Motor and Cycle Works, but we are not told exactly where these works are. It is a pity that the *Daily Graphic* should insert announcements of this kind, particularly as they are put in the news portion of the paper, and are not marked advertisements, so that we should imagine many readers would regard the descriptive matter about the "most successful motor and cycle firm in Britain" as being endorsed by the *Daily Graphic*. We consider the practice of inserting advertisements which can be mistaken for news, as indulged in by some of the daily and other papers, a very objectionable one. It misleads no one when the announcement refers to someone's pills, but when it comes to industrial enterprises for which capital is required, there is a strong probability of people misunderstanding the exact position of affairs.

THE MIDLAND AUTOMOBILE CLUB.



The cars grouped on the open space by the river bridge, Stratford-on-Avon

This body had a very successful run to Stratford-on-Avon on Saturday afternoon last, over twenty cars taking part in the event. The day was an ideal one for autocaring, and as a result everyone experienced a most enjoyable time. Most of the cars had arrived at Stratford by five o'clock, and after being grouped for a photograph their occupants adjourned to the Shakespeare Hotel for tea. After this the party broke up, the cars speeding away in their several directions. The police made themselves obnoxious near Kenilworth on the outward journey, amongst the victims being Mr. E. M. C. Instone, the commercial manager of the Daimler Motor Co. He was accused of covering a measured quarter of a mile on a 22 h.p. Daimler in thirty-five seconds, and will no doubt have to answer to a charge of furious driving. During the last six years Mr. Instone has had considerable experience in automobilism, and has never before been stopped by the police in this country. Amongst the cars at Stratford we noticed five Lanchesters, four Wolseleys, two M.M.C.'s, four Daimlers, one Alldays and Onions, four Progress, and one Panhard.



The cars released after the photograph.

At the meeting of the Midland Automobile Club at Stratford-on-Avon last week, the extreme handiness of the Traveller voiturette was demonstrated in rather a practical way. When the cars had been run into the yard of the Shakespeare Hotel, the Traveller was pocketed behind a big car, and to save the owner of the latter the trouble of moving his vehicle the driver of the Traveller picked his little two-seated machine up, first at the back and then at the front, and in less time than it takes to tell it he had moved it round the big car and had started off on his homeward journey.

* * *

Our friends the Americans are keen on having a share of the English petrol as well as the English steam car trade. The Oldsmobile we have already with us, and shortly the Rambler Automobile will be put upon this market by a small importing syndicate. The Rambler, so far as outward appearance goes, is somewhat on the lines of the Oldsmobile, but is a larger and heavier vehicle, the body being carried on four elliptic springs. The engine is a single-cylinder horizontal motor, with bore of 4½in. and stroke of 6in., developing over 4 i.p. at 600 revolutions. It is water cooled by natural circulation. The car has two speeds forward and one reverse, the engine driving direct by a chain on to the back wheel by means of a chain on the high speed. The first speed and reverse are obtained through Crypto gears. The differential gear is of the spur-wheel type, and the engine is controlled as to speed by a throttle valve. Direct lubrication is fitted, and electric ignition with dry batteries is used. The wheels are cycle built. The vehicle seats two.

The Woodstock Manufacturing Co., of 68, Broad Street, Birmingham, inform us that they now stock petrol, lubricating oils, and grease.

* * *

Users of Singer motor cycles will be pleased to note that the new edition of the motor instruction book has just been issued by the Singer Cycle Co. It is a useful little handbook, and should be obtained by all who use the Singer motor wheels.

* * *

The extreme partiality of the police for selecting the Worthing road for their traps has led Mr. G. H. Warne, a well-known local motorist, to place a warning board at a convenient spot advising drivers not to exceed the legal speed limit on the run into Worthing. That this warning is not unnecessary is evinced by the fact that on several occasions motorists have been fined by the local magistrates for alleged excessive driving on that particular road.

An incident of the trials—one of the very few

PROPOSED TRIAL OF LIGHT MOTOR DELIVERY VANS.

As we announced some months since, the Automobile Club had in contemplation the organising of a trial to demonstrate the suitability of motor vehicles for the delivery of loads of not more than about a ton. It is felt that the trials which have been held by the Liverpool branch of the club and by the War Office have already fully demonstrated the thoroughly practical character of motor lorries and similar vehicles for the transport of heavy loads, but that the requirements of the many business houses whose work is of a much lighter description have not been considered, and it is proposed to hold the trial some time in 1903. A circular letter on the subject has been sent by the secretary of the Automobile Club to a number of firms and individuals who are commercially interested in the development of the motor movement, and we quote the greater portion of it hereunder:

Some commercial houses have been induced to use motor vehicles for delivery purposes, with the result that they have come to the conclusion that motor vehicles are useless for this purpose, owing to the fact that they have been supplied with vehicles, the engines, frames, and gears of which were originally designed for luxury carriages to carry four persons, but which have unthinkingly been adapted for the far more trying work of delivery vans by the simple substitution of a van body for a passenger body.

Such experiments are doomed to failure, seeing that considerable strain is imposed upon a delivery van by the frequent stopping and starting, and also in consideration of the fact that it is not likely to receive as delicate treatment at the hands of a van driver as it would receive at the hands of a private owner.

The majority of makers have had their works fully occupied by making cars for passenger vehicles, and have not given attention to the important branch of the motor business connected with light delivery vans. It is believed, however, that if a serious trial of delivery vans be announced to take place, say, about twelve months hence, and makers be supplied with specifications of the two or three classes of delivery vans which are required by the big houses in various parts of the United Kingdom, they would be willing to turn their attention to the design of manufacture suitable for vehicles for the purpose.

The Club Committaee suggest that the cheap and rapid transport of articles is of such vast importance to many large commercial houses in this kingdom that it would be to their advantage to co-operate with the club in arranging a thoroughly effective trial, and I am, therefore, directed to approach you, in common with many other large commercial houses in the United Kingdom, to enquire whether you can see your way to co-operate in this enterprise, as follows:

(1.) By considering what should be the requirements of the vehicles.

(2.) By sending a representative fully instructed with your views in the matter to attend a conference of the representatives of some of the big commercial houses to be held at the club next November.

(3.) By agreeing to contribute to a trials fund, so that really substantial prizes may be offered for the vehicles which may be considered to be the best in their classes at the trial, and also in order that funds may be provided for making the trials thoroughly practical and effective.

It is suggested that no trial can be thoroughly satisfactory unless the vehicles are tried in actual service, carrying loads daily over a period of not less than three months.

It is proposed, by means of the trials fund, to engage independent and trustworthy observers, who may travel on the cars in their daily journeys throughout this period, and that cars when not on service should be kept under lock and key, so that the club may obtain reliable records of the cost of fuel, repairs, time spent on repairs and adjustment, etc.

It is thought that some of the leading firms might be willing to co-operate by agreeing that the trial vans should be run during the trial in connection with their respective businesses. Up to now, the proposed trial has only been incidentally mentioned in the *Automobile Club Journal*, but even this casual mention has already brought an offer from Messrs. Cadbury Bros. to co-operate in every way and to subscribe to the trials fund. Encouraged by this offer, the Automobile Club express the hope that they may receive your hearty co-operation, and that you will kindly favour me with the views of your company in this matter.

There is no doubt that, as stated in the Automobile Club circular quoted above, considerable harm has been done by the transforming of pleasure carriages into delivery vans; but at the present time we think, to some extent, scant justice is done to those makers who are giving proper attention to this question, and have turned out machines in every way suitable for commercial work. Moreover, there are certain cars which, although they are only pleasure cars with a delivery van body and a low gear, are giving satisfaction to their users. It should be understood that we do not make this criticism in any carping spirit, but as it must be at least twelve months before the results of these proposed trials can be given, every care should be taken that no impression is created among business people that up to the present time the reliable delivery van has not been made.

Sir Archibald Macdonald, Bart., is having a 22 h.p. Daimler of the same size as that supplied by the Daimler Co. to the King, but the body, which is a special type, will be different from that of the Royal car.

* * *

A very pleasing ceremony took place at the General Wolfe Hotel, Coventry, on Friday evening last week, when Mr. P. Martin, the works manager of the Daimler Motor Co., was, in honour of his recent marriage, presented by the staff and employees of the company with a very handsome reading lamp and a drawing-room fender, fireirons, etc. Mr. A. Bush (chief of the testing department) occupied the chair, and he was supported by Mr. E. M. C. Instone (the commercial manager), Mr. E. W. Lewis (chief engineer), Mr. W. H. Proctor (assistant works manager), and other prominent members of the staff. In a very appropriate speech, Mr. Proctor made the presentation. He stated that Mr. Martin had only been with them about twelve months, but during that period he had completely gained their confidence. He thought that the value of Mr. Martin's work would be known when the final results of the recent trials were officially published. Mr. Martin's health having been toasted with musical honours, that gentleman, arising amidst much applause, thanked the company heartily for the handsome gifts they had bestowed upon him. He assured them that none of the presents received by Mrs. Martin and himself would be more prized and valued. As for the Daimler Company, he was sure everyone had worked hard for success, and he felt confident that when the results of the recent trials were made known they would be able to pat themselves on the shoulder and say, "We have done well." Mr. Instone eloquently but humorously proposed the toast of "The Daimler Company," and shortly afterwards the evening was brought to a close. The various toasts were sandwiched by some excellent musical items.

THE 650 MILES RELIABILITY TRIALS.

On pages 334 and 335 we publish a summary of the official figures. In this summary we deal with marks alone, the other details of the cars under the headings of number of passengers carried, number of cylinders, bore and stroke of cylinders, weight, fuel consumption, etc., having been given in the comprehensive table published in our issue of Sept. 13th, pages 276 and 277. We repeat the marks for each day, because not only have certain corrections been made by the club officials, so far as the daily earnings of the cars are concerned, but the earnings of the motor cycles have now been compiled. The totals, it will be understood, have been made by adding together the marks earned by each machine under the headings of A, B, C, D, E, and F, and the system is fully explained in *The Autocar* of September 13th, page 278, and September 20th, page 298, but to make the two-page table we publish to day abundantly plain, we give a brief recapitulation of the rules referred to in the marks summary on the two following pages.

A. RELIABILITY.—RULE 29.

A maximum number of three hundred marks for reliability was given for each day's run, one mark being deducted for every minute the vehicle was at rest from the time of starting to the conclusion of the run, excepting three compulsory stops per day for refreshments. These stops may only be made at specified places given in the programme, the total time of these stops amounting to one and a quarter hours. During such stops the engine was stopped, and no adjustments or replenishments were allowed to be made, excepting during the midday stop of three-quarters of an hour. Stoppages due to traffic, accidental détours, and for lighting carriage lamps did not count.

B. HILL CLIMBING.—RULE 32.

The marks awarded for the hill tests were calculated by a formula in which the horse-power is multiplied by one hundred thousand and divided by the price in £ multiplied by eight for every shilling's worth of fuel consumed during the day's run. The full formula was given on page 216 of *The Autocar* of August 30th. It will be seen from this that the fastest car in the hills did not necessarily obtain the highest marks, and that is where the hill trials differed from an ordinary race, in which speed alone is the only qualification considered. For a full list of speeds accomplished on the hills, see *The Autocar*, September 20th, pages 298 and 299.

C. HORSE-POWER AND WEIGHT.—RULE 47.

The marks for horse-power, as shown by performance in proportion to the weight and to the number of passengers carried, are arrived at by multiplying the horse-power, as shown by performance, by one hundred and by the number of passengers carried, and dividing by the weight of the car in hundredweights, without passengers.

D AND E. STEERING GEAR AND BRAKES.—RULE 48.

Marks may be deducted by the judges or the car disqualified if, in the opinion of the judges, the steering gear or brakes are insufficient in design or material. The maximum marks for both parts are 250 each. The results of the brake trials were given on page 231 of *The Autocar* of September 6th.

F. CONDITION OF CAR AT THE END OF TRIAL.—RULE 49.

The maximum marks allotted in respect to the condition of the car after the trial was five hundred, and marks were deducted by the Judges' Committee for parts replaced.

To prevent misunderstanding we should add, although there is no doubt as to the earnings of each vehicle in each class, the judges' awards have not been announced, as there is a proviso that the gold and silver medal for the machines in each class which have earned the highest total of marks may be withheld if the judges should decide that any of the machines are not worthy to receive them. We believe there is no likelihood of such withholding of the awards, but until the judges' final decisions are given, it is useless to speculate as to what they may be. In any case, the promptness of the judges and trials committee in publishing the official figures is to be commended, and if the judicial findings are speedily arrived at, the record for promptness, considering the necessarily complicated nature of the rules and some of the headings under which marks were earned, will be a notable one.

TRIALS NOTES.

The 12 h.p. Brush car No. 65, whose performances we summarised last week, did not lose 397 marks, as we stated, but 166. This was due to a misunderstanding as to the marks on Friday, the hill-climbing and consumption day, which were held over, and for which day we gave no credit. As a matter of fact, it earned within sixteen of the maximum, and only lost points for stopping to adjust clutch spring and wipe off grease during stops on Westerham. As we explained last week, the loss of marks on the other days was almost entirely due to the coil used proving defective, as well as a couple of refractory plugs.

* * * *

Last week, when referring to the behaviour of the car No. 36 in the trials to which the 8 h.p. Simms motor was fitted, we inadvertently did the driver an injustice, and considering that he was Rowbottom, of a 1,000 miles fame, we should be very sorry that any wrong impression concerning his handling of the motor should be fostered, so we may make it plain that the missing of the gear as well as the "fiddling" at which we caught him on the road were due to no fault of his, but simply to defects in the car. The engine itself behaved admirably, and was not touched throughout the week, the car being regarded as a mere shell in which it could be tested.

* * * *

The ten marks lost by No. 26, the White car, were due to stops on the road to take in water and fill up cylinder lubricator. Sixty-eight marks were deducted for putting in a new boiler on the Sunday. Both this car and No. 29, which secured 1,799 marks, we understand, only arrived in London the day before the trials, so there was no opportunity of testing them before going into the trials. In coming across the Atlantic the machine had got knocked about somewhat. There was nothing broken, but certain adjustments were required, and after they had been made, No. 26 ran the last four days of the trial without a stop. No. 29, it seems, was more gently dealt with by the shippers. Previously this car was credited with being a top-marker, but the revised road marks show a loss of one for excess time in cleaning in the garage.

THE 650 MILES RELIABILITY TRIALS. TOTAL MARKS EARNED BY EACH CAR.

CLASS A.—Vehicles (cycles or cars) declared at a selling price of £150 or less.

Official No.	Description of Car.	Selling Price.	A.—Reliability. Maximum marks, 300 per day. Rule 29. Sept. 1	Sept. 2	Sept. 3	Sept. 4	Sept. 5	Sept. 6	Total.	B.-Hill-climbing Marks. Rule 32. River.	Westerham.	C.-Horse power and Weight. Marks. Rule 47.	D.—Steering. Maximum Marks, 250. Rule 48.	E.—Brakes. Maximum Marks, 250. Rule 48.	F. Condition. Maximum Marks, 500. Rule 49.	Total Marks.
		£														
1	3 h.p. chain-driven Humber bicycle	60	300	295	300	300	300	300	1795	418	ped'ld	100	250	250	430	3243
2	2 h.p. chain-driven Humber bicycle	50	300	298	292	300	282	300	1772	pushed		—	200	250	325	2547
4	5 h.p. Century tandem	145	294	300	296	300	300	300	1790	137	—	70	250	125	500	2872
5	5 h.p. Baby Peugeot	150	299	300	300	300	300	300	1799	125	130	78	250	250	425	3057
6	1¾ h.p. Werner motocyclette	45	300	—	—	—	—	—	300	—	—	—	250	—	—	—
7	1¾ h.p. Ormonde bicycle	42	300	282	270	300	270	295	1717	—	—	—	250	—	225	2442

CLASS B.—Cars declared at a selling price of more than £150, but not more than £200.

		£														
8	4 h.p. Oldsmobile	185	Broke	down	—	—	—	—	—	—	—	—	250	250	—	—
9	5½ h.p. Locomobile	200	273	262	283	277	298	293	1686	57	61	99	250	200	400	2753
10	5½ h.p. Locomobile	200	289	293	284	291	284	295	1736	47	42	79	250	150	450	2754
11	4½ h.p. Swift	184	299	282	295	295	b. d.		1171	—	—	—	250	200	—	—

CLASS C.—Cars declared at a selling price of more than £200, and not more than £300.

		£														
12	8 h.p. Parr light car	265	288	broke down	—	—	—	—	288	—	—	—	250	200	—	—
19	7 h.p. Star	300	273	297	291	294	300	263	1718	35	38	77	200	200	300	2568
20	5½ h.p. Locomobile	300	292	283	295	290	290	272	1382	39	35	73	250	150	350	2279
21	5½ h.p. Locomobile	300	296	295	296	298	298	297	1780	36	39	89	250	150	440	2784
22	4½ h.p. Renault	245	267	258	295	300	287	217	1624	55	—	57	250	250	485	2721
23	8 h.p. M.M.C. voiturette	255	266	295	295	295	300	300	1751	52	60	119	250	250	500	2982
24	6 h.p. De Dion-Bouton	245	268	299	282	300	300	286	1735	84	87	118	250	200	440	2914
26	6 h.p. White steam car	300	226	296	300	300	300	300	1722	53	32	67	250	125	500	2749
29	6 h.p. White steam car	300	300	300	300	299	300	300	1799	53	63	72	250	125	500	2862

CLASS D.—Cars declared at a selling price of more than £300, and not more than £400.

		£														
31	10 h.p. Georges Richard	360	297	293	300	300	291	b. d.	1481	45	—	136	250	not tested	—	—
32	9 h.p. James & Browne	400	300	296	295	300	295	290	1776	40	47	123	250	200	465	2901
33	12 h.p. Gladiator	400	300	300	300	300	289	300	1789	48	23	125	250	50	500	2785
35	10 h.p. Brooke	395	289	298	286	299	300	300	1772	25	32	86	250	250	470	2885
36	Light car fitted Simms 8 h.p. motor	375	299	298	38	300	294	297	1526	47	—	99	250	—	—	1922
38	10 h.p. Star	400	292	Broke down		—			292	—	—	—	250	200	225	—
39	10 h.p. Wolseley	380	300	300	295	300	166	290	1651	—	—	—	250	250	495	2646
40	7½ h.p. Wolseley	325	300	299	300	300	289	297	1785	28	—	99	250	200	500	2862
41	10 h.p. Wolseley	380	300	300	295	300	300	300	1795	49	61	126	250	200	500	2981
42	12 h.p. Belsize	385	300	300	300	300	300	295	1795	40	39	88	250	200	475	2887
44	9 h.p. New Orleans	315	295	299	300	300	300	300	1794	53	51	115	250	200	485	2948
47	8 h.p. De Dion-Bouton	328	270	289	300	300	300	299	1758	51	46	127	250	250	500	2982
48	8 h.p. Clément	365	248	293	293	263	287	294	1678	31	—	40	250	250	425	2674

CLASS E. Cars declared at a selling price of more than £400, and not more than £500.

Official No.	Description of Car.	Selling Price.	A.—Reliability. Maximum marks, 300 per day. Sept. 1	Sept. 2	Sept. 3	Sept. 4	Sept. 5	Sept. 6	Rule 29. Total.	B.-Hill-climbing Marks. Rule 32. River.	Westerham.	C. Horse-power and Weight. Marks. Rule 47.	D.—Steering. Maximum Marks, 250. Rule 48.	E.—Brakes. Maximum Marks, 250. Rule 48.	F.—Condition. Maximum Marks, 500. Rule 49.	Total Marks.
		£														
50	10 h.p. Decauville	410	295	295	280	300	300	300	1770	25	31	112	240	250	440	2868
51	12 h.p. Gladiator (4 cylinder)	500	196	298	300	249	300	300	1643	40	42	174	250	50	495	2694
52	10 h.p. Ariel	450	279	252	285	273	287	272	1648	40	32	114	250	250	480	2814
53	14 h.p. New Orleans	500	299	300	300	300	b'ke	do'n	1199	—	—		250	250	—	—
54	12 h.p. Century	420	250	298	6	300	298	300	1452	66	59	115	150	—	240	2082
56	14 h.p. New Orleans	500	299	broke down			-	—	299	—	—	—	250	200	—	—
57	10 h.p. M.M.C.	450	292	269	290	300	284	299	1734	24	31	103	240	200	415	2747
59	7½ h.p. Germain	450	297	300	300	300	300	294	1791	25	24		250	250	490	2912
60	20 h.p. Georges Richard	480	broke down		—	—	—		—	—	—	—	250	—	—	—

CLASS F.—Cars declared at a selling price of more than £500, and not more than £600.

		£														
62	6 h.p. Gardner-Serpollet	600	300	297	233	288	300	295	1713	38	29	204	250	150	495	2879
63	6 h.p. Gardner-Serpollet	600	291	278	298	300	300	294	1761	39	29	201	250	150	500	2930
64	10 h.p. Peugeot	600	299	299	300	295	300	300	1793	56	42	247	250	250	475	3113
65	12 h.p. Brush	550	300	222	236	292	284	300	1634	25	5	108	250	200	465	2687

CLASS G.—Cars declared at a selling price of more than £600, and not more than £700.

		£														
66	12 h.p. Humber	700	300	294	300	300	300	300	1794	26	30	122	250	200	470	2892
67	12 h.p. Humber	700	174	broke down			—	—	174	—		—	250	250	—	—
69	20 h.p. Wolseley	650	300	300	300	300	300	300	1800	34	41	210	250	200	495	3030
70	10 h.p. Mors	660	255	300	274	300	b. d.	-	1129	—	-	--	250	250	—	—
71	8 h.p. Wilson and Pilcher	650	300	300	300	295	292	300	1787	26	10	105	250	250	500	2928
74	15 h.p. Germain	700	300	297	300	300	300	300	1797	36	40	174	250	200	465	2962
75	16 h.p. Clément	700	293	262	179	274	300	266	1574	29	35	197		250	130	2465

CLASS H.—Cars declared at a selling price of more than £700, and not more than £800.

		£														
76	12 h.p. Daimler	750	297	298	296	300	300	295	1786	28	30	166	250	250	475	2985
77	12 h.p. Daimler	750	296	300	300	300	b'ke	dwn	1196	—	-		250	200		
81	20 h.p. M.M.C.	800	300	300	15	300	280	300	1495	20	6	142	250	250	250	2413

CLASS J.—Cars declared at a selling price of more than £800, and not more than £1000.

		£														
82	20 h.p. Mandslay	840	300	298	300	300	299	300	1797	26	27	115	250	200	500	2915
83	20 h.p. Pascal	860	276	290	265	299	295	291	1716	28	25	186	250	200	450	2855
84	20 h.p. Pascal	860	294	286	300	300	300	300	1780	22	28	140	250	250	475	2945

CLASS K.—Cars declared at a selling price of more than £1,000, and not more than £1,200.

		£														
86	22 h.p. Daimler	1150	300	300	300	300	295	297	1792	28	33	179	250	250	500	3032
87	22 h.p. Daimler	1150	300	300	300	300	163	300	1663	21	—	206	250	150	500	2790
88	15 h.p. Panhard	1150	300	300	299	300	300	300	1799	41	37	212	250	250	500	3089

ADDITIONAL CAUSES OF LOST MARKS.

In addition to the list of cars and the causes of their loss of marks which we gave on page 295 of last week's *Autocar*, we give herewith a list of those omitted in our previous report on account of details not being to hand. The following details are taken from the Automobile Club's official list:

No. 1.—The 3 h.p. Humber motor bicycle lost five marks only, this for the rider dismounting on Westerham Hill on Tuesday. On Friday it did fastest time, but as it was pedalled on the steepest part of the hill, no marks were awarded for the climb.

No. 2.—The 2 h.p. Humber motor bicycle lost twenty-eight marks, all through ignition troubles.

No. 6.—The 1¾ h.p. Werner motor bicycle has no returns, owing to Mr. Arnott's accident.

No. 7.—The 1¾ h.p. Ormonde motor bicycle lost twenty-eight marks through ignition troubles, fifteen for walking up Westerham, thirty for walking up both Westerham and River Hills, and five for stoppage.

No. 8.—The 4 h.p. Oldsmobile broke down on Monday through breaking a lug on the transmission gear.

No. 9.—A 5½ h.p. Locomobile lost thirty-nine marks for taking in water, forty for chain troubles, twenty-nine for broken chain, one for tightening brake, and five for changing a tyre on the road.

No. 10.—A 5½ h.p. Locomobile lost thirty-three marks for taking in water, three for relighting burner, eight for refitting pinion stud, five for broken chain, and one for tightening up differential.

No. 11.—The 4½ h.p. Swift lost a single mark on the first day for a removal of the suction pipe. On Tuesday and Wednesday twenty-three marks were lost for dismounting on the hills, and on Thursday five marks were lost due to sparking trouble. On Friday some teeth of the gear gave way, and the car was withdrawn from the run.

No. 12.—The 8 h.p. Parr light car lost twelve marks the first day through a broken chain. The second day the car broke down, and retired from the trials.

No. 22. -The 4½ h.p. Renault lost 116 marks during the first and last days' runs, owing to ignition troubles, five were lost through a puncture, three for stopping on a hill, and eleven for passenger walking Westerham.

No. 26.—A 6 h.p. White steam car put in a new boiler on the Sunday, for which sixty-eight marks were deducted, and ten were lost during the runs for taking in water and filling cylinder lubricator.

No. 29.—The 6 h.p. White steam car, which was given as a top marker, actually lost one mark for being one minute in excess of time allowed for cleaning, etc., in the garage.

No. 31.—10 h.p. Georges-Richards lost nineteen marks up to Saturday through replenishing fuel tank, tyre trouble, and by being helped up Westerham Hill. On Saturday the differential seized, and the car was put out of the run. This was also the cause of the poor performance on Westerham.

No. 38.—The 10 h.p. Star lost eight marks on the first day's run through a slipping clutch and for lubricating. On Tuesday the car did not complete the course, owing to a breakdown, after which it was withdrawn.

No. 47.—The 8 h.p. De Dion lost forty-one marks in the garage for excess time in adjusting throttle valve and brakes and in repairing the water tank. As reported last week, the car lost but one mark on the road.

No. 53.—A 14 h.p. New Orleans lost but one mark up to Friday, on which day an axle fractured, and the car retired.

No. 56.—A second 14 h.p. New Orleans was put out of the run on Tuesday when a bevel wheel broke. On Monday one mark was lost.

No. 60. The 20 h.p. Georges-Richard broke down on the first day.

No. 67.—A 12 h.p. Humber broke a lug on the back axle on the first day, and had to retire on the Tuesday.

No. 70.—The 10 h.p. Mors, after losing seventy-one marks on the first and third days for ignition troubles, broke down on the Friday through a split pin coming out of the nut on the mainshaft; the nut unscrewing, caused a bearing to seize.

No. 77.—A 12 h.p. Daimler broke its differential on the Friday, up to which day only four marks had been lost for putting a new washer on induction pipe.

STEAM CARRIAGES.

It must have been highly amusing to the ordinary individual to read in last week's issue of your paper a letter from the Weston Motors Co. regarding the reason why they did not enter their cars in the reliability trials. Our apology for asking you to insert this letter in your paper is because we feel—as everyone else would do who reads it that it is directly pointed at our Locomobile steam carriage. No doubt every manufacturer received a copy of the rules and regulations months ago, giving every detail regarding the rules for entering cars in these trials. I maintain that rule 10 is so plain that no one could mistake the rendering of this. It is as follows:

"A competitor in sections I. and II., in entering, shall state the price at which he guarantees to provide to the public exact duplicates of the vehicle or part entered for trial, provided that the order be received before the first of December, 1902, with a deposit of one-third of the value.

"The classification for privately-owned cars shall be (a) if the vehicle is made in the United Kingdom, by the manufacturer's list price; (b) if it be made abroad by the list price of the authorised agent in this country, or failing that, the actual price paid by the purchaser to the seller."

We feel sure that every manufacturer or selling agent in this country, after he had carefully gone through the rules, felt that this was the biggest test run that any vehicle had been asked to enter, and the first question that he had to decide was, "Am I manufacturing or selling a car which is sufficiently reliable to stand these tests?" After he had decided the thing was simple. If he had,

A Locomobile with ordinary tanks.

he entered his car, or cars, fully appreciating the seriousness of entering, and doing all he knew to get through with losing the least number of marks. If he had not a reliable car, the best thing to do was to sit quiet until the trial was over, and then explain to the public why he did not enter. From our past records we were sure that we had a car that would successfully go through these trials.

I am sending you a photograph taken of car No. 21. Each of our cars was fitted in exactly the same manner. Now, sir, it is absolutely absurd to talk about any steeple-like structures on this carriage. It is equally absurd to imagine that the Locomobile is limited as to the number of miles that it will run with water and petrol; the limitations lie in the tanks, and numbers of our customers have paid extra for additional water tanks and additional petrol tanks, as we have found that the success of our business has been in giving the public what they want. Therefore, if a man wants a car that will run forty or fifty miles on one tank of water, he has got to pay extra for a water tank. We have cars here that will run one hundred miles on petrol, and will carry sufficient water for a run of thirty to fifty miles. I fully appreciate the fact that when we started in England with the Locomobile the longest distance that you could run was about eighteen miles on water, but although we gained the gold

medal in the last year's Glasgow reliability trials, if we had attempted to enter the same car as we entered last year in this year's reliability trials we should not have ever hoped to have gained the success which we have gained in the 650 miles trials.

We think it is hardly fair that this attack should have been made upon our cars. We have never yet entered a competition which has not been open to all manufacturers and sellers. Every steam carriage manufacturer or agent has the same opportunity of entering in any test trials or speed competitions that we enter in.

This company entered four carriages—two in class B at a selling price of £200, and two in class C at a selling price of £300 or less—and we shall be pleased to supply exact duplicates of these cars at the above-mentioned price to any intending customers. And though we ourselves have no cause to regret that the marks deducted for stoppages were so few, still we are sorry that this should have been the cause of the correspondence.

For the LOCOMOBILE CO. OF GREAT BRITAIN, LTD.,
W. M. LETTS,
Managing director.

Locomobile with extra water tank at back and spare petrol tank above footboard, as used in Reliability Trials.

TYRES RUNNING IN THE 3,000 MILES TRIAL. THE THIRD WEEK'S RESULTS.

DISTANCE, 751 MILES. TOTAL DISTANCE COVERED, 2,185½ MILES.

(For the first week's results see "The Autocar," Sept. 13th, page 275.)
(„ second „ „ „ „ 20th, „ 302.)

Official No.	H.P.	Car.	Tyres.	Weight. Laden. Tn. cwt. qr. lbs.	Weight. Unladen Tn. cwt. qr. lbs.	Marks lost during week.	Cause of loss.	Total Marks lost.
T 1	12	Panhard.	Dunlop.	1 11 2 0	1 5 1 0	6	Pumping.	33
T 2	11	Napier.	„	1 11 0 0	1 5 1 0	4	Pumping, extracting nail.	56
T 3	10	Panhard.	„	1 4 3 16	0 19 3 0	5	Repairing cut, pumping.	60
T 4	10	Wolseley.	„	1 6 0 0	1 0 1 0	59	Changing over back to front near side tyres, nail catcher, off hind tube nipped, puncture, pumping.	200
T 6	16	Clément.	Maison-Tlb't	1 1 2 0	0 15 3 0	44	Tyres refitted, new inner tube, new plug in valve.	119
T 7	11	Napier.	Collier	1 11 1 0	1 5 0 0	25	Puncture, new inner tube.	34
T 8	12	M.M.C.	Martin.	1 10 2 0	1 4 0 0	—		
T 10	10	Wolseley.	Goodyear.	1 6 3 0	1 0 2 0	474	Changing four inner tubes, patching, garage, road repairs, new valve, pumping, burst, nails.	825
T 12	16	Napier.	Midgley's.	1 16 2 0	1 11 1 0	7	Pumping, nail took off cover.	38

NOTE.—T8 was withdrawn after eleven days running. T10 was withdrawn after fifteen days running. T6 has 417¼ miles to make up during trials.

The following were the runs: Monday, Banbury (151 miles); Tuesday, Oxford (155 miles); Wednesday, Maidstone (139½ miles); Thursday, Canterbury (152¼ miles); Friday, Newmarket (153¼ miles).

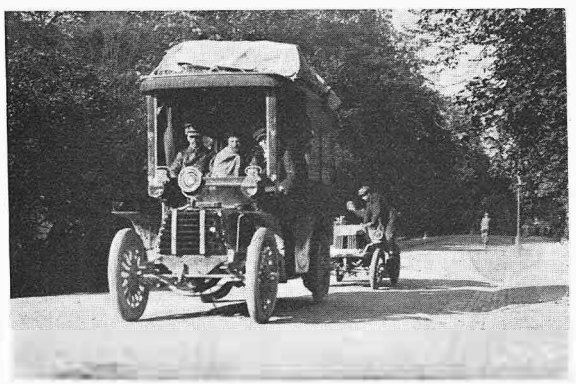
Three journalists—a Frenchman, a Belgian, and an Italian—have crossed the Stelvio Pass in the Tyrol, they being the first to negotiate the Fredinskhöhe Pass (2,814 metres high) in an autocar. When they arrived at Stelvio, the tourists staying there gave them a splendid reception.

ROUND THE WORLD ON A MOTOR CAR.

Log of the Passe-Partout.

In former issues we have given an outline of the progress of the Passé-Partout, and the Argyll car accompanying it, on their tour round the world. A further instalment of the log is to hand this week, written by Mr. H. P. Kennard. The other occupants of the car are Mr. MaxCudell and Dr. E. E. Lehwess.

After a tedious journey of twelve days from Paris to Berlin, it was found absolutely necessary to take a rest, and so it came to pass we did. We were nine weeks three days passing through Berlin; it's a good way of seeing the chief cities of the world. I do not wish people to be under any misconception with regard to this expedition. It was not brought into being in order to show the superiority of the automobile as regards locomotion over the poor played-out train. No such thing! If 'twere so, people wishing to come from London to Warsaw would be fully justified in taking the train—or walking.



The Passe-Partout and its tender, the 8 h.p. Argyll.

This expedition has many objects. One is to show the possibilities of automobilism, and the following figures demonstrate beyond dispute the immense staying power of, at any rate, our automobile—the Passé-Partout—this power being especially marked in towns like Berlin and Paris.

Another of the most striking possibilities, as regards the Passé-Partout, is its transformation into a sleeping apartment. When acting in this capacity one of the most *moving* spectacles in connection with our automobile is afforded. But, to be serious, whether we delay or not, we invariably "get there," and after having transacted all the necessary business in Berlin and settled satisfactorily the thousand and one details in connection with Russia and China, needing lengthy correspondence with the authorities all along the route, we glided gracefully out of Berlin on the night of September 1st at 11.50, having dined previously in a style befitting the occasion. Nocturnal automobilism has a fascination all its own, and, but for the fact that there was a slight fog, there was nothing to mar our progress.

At 1.35 a.m. (twenty-six kilometres from Berlin) we stopped on the road to sleep. We started again at 5.50 a.m., and, passing *en route* to Frankfort-on-the-Oder numerous detachments of soldiery on their way to take part in the Posen manœuvres, arrived at the former town at 8.40 a.m. (ninety-four kilometres from Berlin). Here we breakfasted, and started again at ten, stopping a few minutes outside the town to photograph a motor waggon made by the English firm of Thornycroft, and being used for military transport.

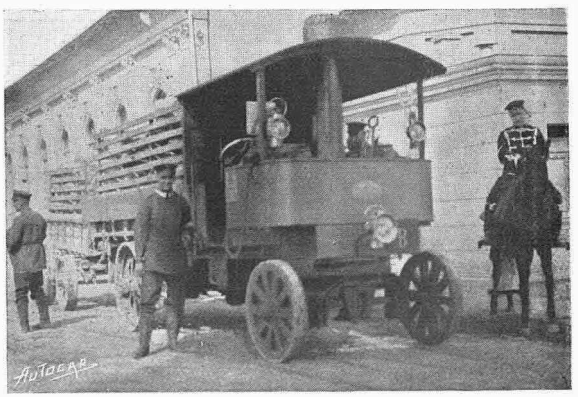
A good road aiding us, we sped merrily through Reppen, Sternberg, and Schwiebus. Here an inner tube burst completely in twain, and we had hardly started again when another tube played us the same trick. We were thus delayed in all an hour and fifty minutes. We lunched at Brätz, and shortly after leaving there, reached our two hundredth kilometre from Berlin.

We arrived at Pinne at 6.50 p.m. Here we began to notice the gradual admixture of Poles with Germans. The shops had all their inscriptions written in Polish and German. One also observed the paintings outside the various shops, denoting in picturesque form the wares therein sold. This custom is absolutely necessary, so few of the Polish peasantry being able to read, so that they look at the pictures of loaves, meat, boots, and what not to inform them where they can purchase the necessaries of life. Polish Jews in this district became much more in evidence.

After leaving Pinne at 10 p.m., having dined, we drove on till 2.10 a.m., and retired to rest again.

Time elapsed since Berlin ...	26h. 55m.
Stops	12h. 45m.
Running time	14h. 10m.
Kilometres	275.1 = 180⅝ miles.
Average per hour	22.2 kiloms.

We departed at 5.5 a.m. on September 3rd, and arrived at Posen at 5.25 a.m., our route being through triumphal arches profusely decorated with flowers, streamers, and mottoes of welcome to the Emperor, who to-day, with his staff and several English generals (Lord Roberts amongst them), attended the Posen manœuvres. We left Posen at 9 a.m., lunched at 1.25 p.m. at Siedlic, a little Polish village, and at 2 p.m. started again. During the afternoon two more inner tubes burst, delaying us respectively 1h. 28m. and 22m. We arrived at Wreschen at 6.25 p.m., and at 7.20 p.m. passed the German frontier into neutral territory. We arrived at the Russian frontier at 7.30 p.m., our arrival at this spot being practically demonstrated to us by the fact of there being a strong chain across the road from side to side, and behind this, in the middle of the road, a sentry-box tenanted by a soldier with fixed bayonet. After much altercation and persuasive eloquence on the part of Dr. Lehwess, whose knowledge of Russian proved of great service, we were permitted to drive the cars within the barrier, and so at 7.50 p.m. we first touched Russian soil. Having shown our passports, we were compelled to drive to the Custom house at Slupca about a mile away under strict military surveillance. Here, having deposited the cars in the Customs yard, we turned our attention to the inner man, and shortly afterwards retired to rest, Mr. Whitehead and myself sleeping on the



One of the German War Department's Thornycroft wagons.

top of the car in the Customs yard, the rest of the party at the village inn.

Time elapsed	15h. 10m.
Stops	12h. 46m.
Running time	2h. 24m.
Kilometres	70.9.
Average per hour	29.8 kiloms.

Suffice it to say that, having changed our plans as regards route through to Warsaw, and so having crossed the border at a spot different from that originally intended and arranged for with the Russian authorities, we were detained in Slupca pending enquiries for five whole days.

On the evening of the 8th inst., having had wires from St. Petersburg giving orders to the Slupca authorities to permit us to go on, we proceeded gaily on our way at 6.4 p.m., went thirty kilometres, and dined at Koniu; roads rather bad. We departed at 9.8 p.m. The route lay through hilly country, and the roads were muddy and very badly constructed. Going all night, we arrived at 9.15 a.m. at Lowicz, 158 kilometres, or very nearly a hundred miles from Slupca. After having breakfasted, we departed at 10.45 a.m., and, passing on a good road through Sochesczszen, Blonie, and various other small Polish villages, arrived on the outskirts of Warsaw at 5.5 p.m. Wending our way through the cobbled streets to the centre of the city, we arrived at the Hotel de l'Europe at 5.50 p.m. The Argyll car, with its Motor Manufacturing Co.'s engine, had bravely weathered all the roads, and arrived in great form with the Passe-Partout.

Time elapsed	23h. 36m.
Stops	4h. 37m.
Running time	18h. 59m.
Kilometres	238.8 = 149½ miles.
Average per hour	12.6 kiloms.

BERLIN TO WARSAW.

Time elapsed (on road) ...	65h. 41m. (and five days at Slupca).
Stops	30h. 8m.
Running time	35h. 33m.
Kilometres	593.6.
Average per hour	16.6 kiloms.

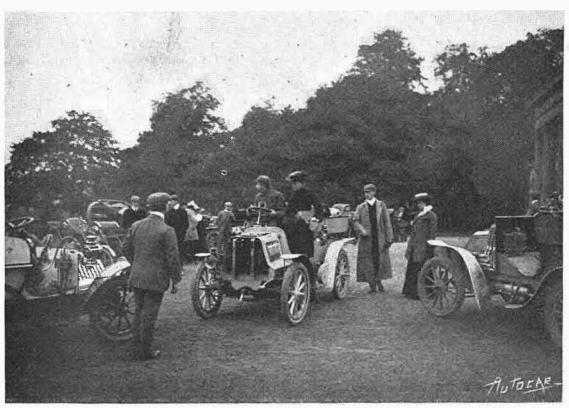
GRAND TOTAL.

London to Warsaw—2,199.6 kiloms. = 1,374⅜ miles.

Time elapsed	3,175h. 40m.
Stops	3,043h. 35m.
Actual running time	132h. 5m.
Average per hour	16.65 kiloms. = 10⅜m.

MANCHESTER AUTOMOBILE CLUB.

On Saturday last, the 20th inst., for the second time this season, the club had a run to Nantwich under most favourable conditions, the roads being in just the proper state to allow the members to extract the maximum of enjoyment out of their cars. This run is quite a favourite one with the club not only because of the easy distance of Nantwich from Manchester, but also on account of the number of routes available, the surface of all the roads being unexceptionable. The objective at Nantwich was the Brine Baths Hotel. This hotel, besides



The meet at the Brine Baths Hotel.

being very comfortable, stands in the midst of spacious grounds, with a circular drive in front, affording ample accommodation for between thirty or forty cars.

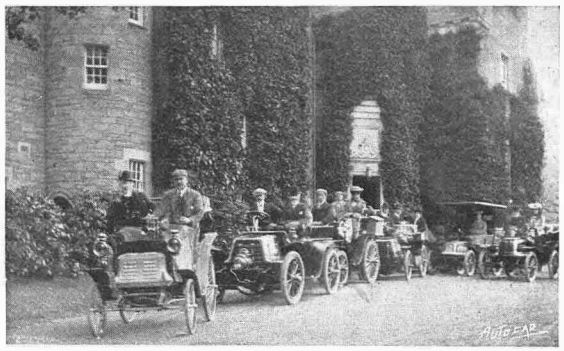
According to information received by the secretary, it was expected that members and their friends would attend to the number of thirty, but a pleasant surprise awaited him when the total was found to be double that number. This occurrence severely taxed the resources of the hotel, as dinner had only been ordered for the smaller number.

Mr. W. E. Rowcliffe (chairman of the committee), who is seldom absent from the runs, was on this occasion the victim of adverse circumstances, and did not appear. It seems that, having by accident taken a wrong turning, he found himself about ten miles out of his proper course, and to make matters worse, the packing of his cylinder was blown out when near Congleton. Even this did not suffice to complete the chapter, for having been forced to abandon the idea of getting to Nantwich, and making for Buxton to spend the week-end, he had the misfortune to lose one of his driving chains.

Most of the members delayed leaving Nantwich until after 8 p.m., relying upon the prophecy of the weather wise among them that the moon would then be shedding its silvery light around. In this they were not wholly disappointed when *en route* for their destinations.

THE SCOTTISH AUTOMOBILE CLUB.
(WESTERN SECTION.)

A "meet" of members of the club took place on Saturday afternoon last. The rendezvous was Aberfoyle, a little hamlet on the borders of the Highlands and in the Rob Roy country. There was no organised procession of cars, each making its own way to secure arrival at 3.30. There was a very good turn-out, nineteen cars in all (carrying over fifty ladies and gentlemen) being noted among the arrivals. The party were received at the Bailie Nicol Jarvie Hotel by Mr. John Adam (the chairman of the section) and by Mrs. Adam, of Larchgrove, Shettleston, whose guests the club were for the afternoon, and



Some of the cars.

who were indefatigable in their efforts to secure the success of the meet. The hospitality of the host and hostess was cordially acknowledged by Sir. J. H. A. Macdonald (the Lord Justice Clerk of Scotland) in one of his characteristic speeches, after which the company returned to their several destinations. The day was fine, and the roads were in good condition, and the outing was a complete success. No mishap of any kind occurred, and although the police were said to be lurking by the way, no evidence of them was discovered.

The Americans have recognised that the motor car will never be of any use until it has roads to run on. They propose to make a great road between New York and Chicago especially for automobiles. It will be 900 miles long—one-third of the way across the vast North American Continent.

* * *

The Arundel county magistrates showed their antipathy to motorists the other day by fining a motor cyclist 20s. and 13s. costs for an alleged offence of not giving audible warning of his approach. It appears that the motor cyclist overtook a police superintendent, who was driving in a trap, and that although other witnesses on the road testified that he sounded his horn, the magistrates convicted him, and the chairman took the opportunity of showing his dislike of motor cars by lecturing the defendant on the subject, and giving "public warning to motorists that unless they changed their ways very much some serious accident would occur some day."

TWO LONG TOURS.

Mr. Chas. J. Glidden, of Lowell, Massachusetts, U.S.A., arrived in Paris last Saturday, having driven a 16 h.p. Napier car over five thousand miles, one of the longest continuous tours recorded. The tour commenced in London, and the driving days numbered thirty-eight. The car was transported across the Channel from Newhaven to Dieppe. The route covered extended across Northern France to Metz, down the valleys of the Saar and Moselle, up the Rhine to Bingen, through the Black Forest *viâ* Heidelberg and Baden, Baden to Neuhausen, and Constanz to Bachs, across the Rhine to Austria, over the Arlberg Pass to Innsbruck, the Brenner Pass to Verona, Venice, the Italian Lakes, Aprica Pass, and St. Gotthard Pass into Switzerland, the Brunig Pass, Mount Vaud, Col de la Vaucelle to Geneva, around Lake Geneva to Chamounix, over the Haute Bassee and Maritime Alps to Monte Carlo, across Southern France and the Pyrenees to San Sebastian in Spain; thence north to Trouville and Paris, passing 1,700 cities and towns.

The summary of miles driven is as follows:

England	132
France	2,700
Germany	608
Austria	250
Italy	508
Switzerland	897
Spain	30
Total	5,125

Mr. Glidden was accompanied for 1,000 miles by Dr. F. L. D. Rust (secretary of the Massachusetts Automobile Club of Boston), 3,500 miles by Mrs. Glidden and Mrs. Waters, and 4,000 miles by Mr. Dudley E. Waters, of Grand Rapids, Michigan. Mr. Glidden drove the car the entire distance, and it was kept in excellent order by his engineer, Mr. Chas. Thomas, of London. There were sixteen tyre punctures, and to keep moving twelve tyres were required, eight of which are in good condition to-day. Mr. Glidden reports excellent roads, except about 200 miles in Germany and 300 miles in Southern France.

Since the above was written we have heard that Mr. W. Bramson (a well-known member of the Stock Exchange) and party, who set out for a six weeks' continental tour on two 16 h.p. Napiers, have just returned. It will be remembered that we referred to this tour a few weeks back (see *The Autocar*, August 2nd, p. 108). Mr. Bramson and party averaged one hundred miles per day over all sorts and conditions of roads through eight countries. Amongst others, these staunch cars were driven over the passes of the Col de la Croix-Haute (3,325ft.), between Grenoble and Nice, the Col de Braus (3,280ft., very steep), between Nice and Cimeo, the Simplon (6,590ft.), and the Brunig (3,295ft.) Altogether the distance covered amounts to 4,000 odd miles, since when Mr. Bramson has driven about 500 miles in England with these cars, and says that throughout this big mileage the engines have never once been touched. Amongst the towns visited during the trip were Folkestone, Boulogne, Amiens, Paris, Dijon, Grenoble, Lyons, Nice, Cimeo, Novarro, Turin, Arona, Palanza, Brigue, Geneva, Chamounix, Territtet, Interlaken, Lucerne, Zurich, Bâle, Strasburg, Coblentz, Cologne, Frankfurt, Ems, Aix-la-Chapelle, Liege, Brussels, and Calais. Mr. Bramson expresses his entire satisfaction with the running of the two cars.

TO CORRESPONDENTS.

This week the following correspondents have been, or will be, replied to by post:

Chas. Watson and Co. (Maidstone).
H. E. Scott.
L. N. Terence (Lyme Regis).
R. S. K. Eyre (Crowborough).
T. A. Page (Banbury).
H. C. Watkins.
S. R. Couron.
G. W. J. Wade.
S. Brown (Alnwick).
A. Martini (Liege).
A. Thompson.
T. C. H. Everitt (Cambridge.)
The Vauxhall Ironworks.
G. Art. Wingfield.
Messrs. Marshall and Forman (West Australia).
G. G. Smith.
W. Toogood (Limerick).
L. L. Vassall (Plymouth)
W. Windham.
Bobart.
S. Barberton (Cirencester).
Leal.
Mangem.
M. J. S. Brigg.
W. H. W.
S. R. Roberts.
Harat.
W. G. W.
H. L. G.
J. W. Hunter.
W. H. Davies.
C. W. Payne.
O. H. B.
P. L. H.
L. Carr.
H. T. Lock.
R. J. Hunter.
H. Fraenkel.
G. P. H.
J. H. S. Asquith.
J. P. (West Norwood).
C. H. Richards.
C. F. F. (Forres).
A. Marriott.

Our thanks are due to the following for items of news and various topics of interest which have been or will be dealt with: A. S. Deering, A. J. Hornsey, H. B. Widdows, A. F. Burton, H. Bright, H. H., A. Hoffmann, H. S. Streatfield, and others.

NOTICES.

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