

The Motor

Vol. 10.—No. 247. October 16th, 1906.

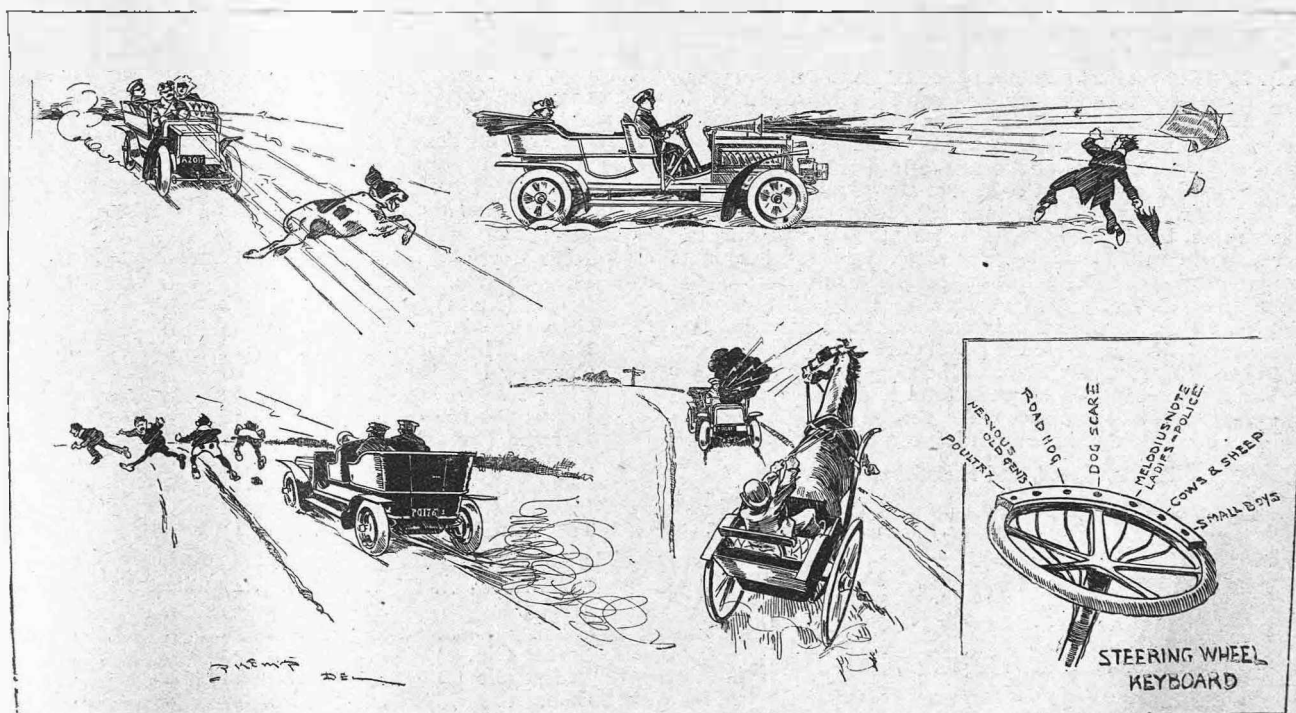
THE TOURIST TROPHY RACE. SOME COMPARISONS.

A FEATURE about the Tourist Trophy race which emphasises the difference between that contest and the Gordon-Bennett kind of event is the wide variation in chassis weight and the big difference that consequently exists in the racing weights of the cars. Under rule 10 the minimum weight of the chassis, including accumulators and other ignition apparatus, the tyres on the wheels, the bonnet, tanks and dashboard, had to be 1,275lb. It is a remarkable fact that only two cars in the race—the Siddeley cars—approached this minimum. In order to permit of a comparison, we give in the first table the chassis weights of the competing cars in their order of lightness, those above the line being the cars to finish and those below the line the cars that did not finish.

Chassis Weights.

1. Siddeley (No. 2)	1,360lb.
2. Beeston-Humber	1,497lb.
3. Rolls-Royce (No. 1)	1,537lb.
4. Darracq (No. 1)	1,613lb.
5. Arrol-Johnston	1,678lb.
6. Scout	1,712lb.

7. Coventry-Humber	1,903lb.
8. Berliet (No. 1)	1,937lb.
9. Clément	1,976lb.
10. Siddeley (No. 1)	1,357lb.
11. Argyll	1,471lb.
12. Rolls-Royce (No. 2)	1,541lb.
13. Darracq (No. 2)	1,646lb.
14. Swift	1,646lb.
15. Academy	1,694lb.
16. Berliet (No. 2)	1,710lb.
17. Climax	1,801lb.
18. Thornycroft	1,810lb.
19. Vici	1,837lb.
20. Star (No. 2)	1,913lb.
21. Star (No. 1)	1,925lb.
22. James and Browne	1,925lb.
23. Vinot	1,935lb.
24. Bianchi	1,939lb.
25. Minerva (No. 2)	2,103lb.
26. Minerva (No. 1)	2,136lb.



POSSIBLE ELECTRIC HORN DEVELOPMENT.

Why not a keyboard affording a variety of notes suitable to varying circumstances and different forms of obstruction? Why not! When in doubt, press the lot!

The Tourist Trophy Race.—Continued.

27. Deasy	...	...	...	2,141lb.
28. Hardman	...	...	...	2,180lb.
29. S.C.A.R.	...	...	...	2,184lb.

The next important series of weights are those for the bodies employed on the cars. There is no limit set on body weight in the rules, but as the total load must not be less than 1,125lb., and the weight of the driver, passenger, and ballast is not much more than 650lb., the body must weigh quite 475lb. Any deficiency had to be made up with lead, because no more than 300lb. of sand ballast was allowed to be carried, and in the following table we give the quantity of lead which had to be attached to the light-weight bodies. And it must be remembered that in order to attain the weight many of the bodies had already been weighted up before leaving the works.

Weight of Bodies.

1. Scout	...	478lb. + 29lb. of lead.
2. Rolls-Royce	...	483lb.
3. Berliet	...	496lb. + 5lb.
4. Beeston-Humber	...	501lb.
5. Clément	...	515lb. + 11lb.
6. Siddeley	...	511lb.
7. Coventry-Humber	...	570lb.
8. Darracq	...	595lb.
9. Arrol-Johnston	...	597lb.
10. Academy	...	337lb. + 105lb.
11. Minerva (No. 1)	...	386lb. + 121lb.
12. James and Browne	...	392lb. + 119lb.
13. Vinot	...	411lb. + 75lb.
14. Argyll	...	437lb. + 37lb.
15. Climax	...	451lb. + 32lb.
16. Vici	...	459lb. + 22lb.
17. Berliet (No. 2)	...	461lb. + 20lb.
18. Rolls-Royce (No. 2)	...	488lb.
19. S.C.A.R.	...	493lb. + 30lb.
20. Hardman	...	512lb.
21. Minerva (No. 2)	...	514lb.
22. Deasy	...	525lb. + 32lb.
23. Bianchi	...	526lb. + 22lb.
24. Star (No. 2)	...	532lb.
25. Star (No. 1)	...	537lb.
26. Thornycroft	...	537lb.
27. Siddeley (No. 1)	...	551lb.
28. Swift	...	570lb.
29. Darracq (No. 2)	...	579lb.

From the above table it is obvious that a reduction of 100lb. in the minimum load can be made with safety, whilst even 150lb. or 200lb. would not be too much to cut off, seeing that quite that unnecessary amount of deadweight could have been removed from each body with advantage. The variations in the weights of the drivers and passengers were responsible for the variations in the lead supply.

The next interesting set of figures shows the cars in order of total weight (which included fuel, tools, spares, passengers, ballast, clothes, and every item with which the car started on the morning of the race). In parallel columns we give the speed and petrol consumption in ounces of the cars that finished, whilst concerning those that did not finish we show in the second portion of the table what distance was travelled before the petrol gave out. Where a dry petrol tank was not the cause of the stoppage we are unable to draw any deduction between total load, speed, and consumption, so that those cars which retired through mechanical and other defects have been left out of the table.

Weight, Speed, and Fuel Consumption.

Car.	Total weight.	Average speed. m.p.h.	Ounces of fuel consumed.
1. Siddeley	2,647lb.	27.83	879
2. Beeston-Humber	2,754lb.	32.66	920
3. Rolls-Royce (No. 1)	2,766lb.	39.29	1,019
4. Arrol-Johnston	2,952lb.	30.02	1,021
5. Darracq (No. 1)	2,965lb.	34.18	1,029½
6. Berliet (No. 1)	2,973lb.	35.41	1,025
7. Scout	3,061lb.	23.16	1,018
8. Coventry-Humber	3,149lb.	32.13	1,027½
9. Clément	3,322lb.	33.64	985

It will be seen that the lightest car consumed the smallest quantity of petrol, but, at the same time, its speed record is

only moderate. The efficiency of the Rolls-Royce is brought out by this table, whilst that of the Clément is quite marked.

Car.	Total weight.	Distance travelled on 1,000oz. of fuel.
10. Academy	2,918lb.	131½ miles.
11. Darracq (No. 2)	2,924lb.	145½ miles.
12. Berliet (No. 1)	2,978lb.	160½ miles.
13. Thornycroft	3,146lb.	148½ miles.
14. Hardman	3,205lb.	138½ miles.
15. Star (No. 1)	3,216lb.	104½ miles.
16. Star (No. 2)	3,218lb.	98½ miles.
17. Vinot	3,286lb.	146½ miles.
18. Bianchi	3,302lb.	101½ miles.
19. S.C.A.R.	3,414lb.	108 miles.

It is very evident from this portion of the table that mere pruning of weight has no bearing on fuel consumption. For instance, the Berliet, weighing 60lb. more than the Academy, travelled 29 miles further on the same quantity of fuel, whilst the Stars, although they were not light (being 270lb. lighter than the heaviest car in the contest), covered scarcely five-eighths of the distance. In the latter case we should conclude, from the fact that, on our visit to Wolverhampton recently, work had only just been started on the Trophy cars owing to the press of orders, that there had been no time to tune up the carburetters.

Order of Merit in Speed for Each Round.

Car.	1st round.	2nd round.	3rd round.	4th round.	Final placing.
Rolls-Royce (No. 1)	1st	1st	2nd	2nd	1st
Berliet (No. 1)	4th	4th	4th	4th	2nd
Darracq (No. 1)	18th	3rd	3rd	3rd	3rd
Clément	7th	6th	5th	6th	4th
Beeston-Humber	9th	9th	6th	7th	5th
Coventry-Humber	6th	11th	8th	8th	6th
Arrol-Johnston	2nd	21st	1st	1st	7th
Siddeley (No. 2)	11th	19th	10th	5th	8th
Scout	25th	20th	11th	9th	9th

Position of the Cars in the Race.

Car.	At end of 1st round.	At end of 2nd round.	At end of 3rd round.	At the finish.
Rolls-Royce (No. 1)	1st	1st	1st	1st
Berliet (No. 1)	4th	3rd	2nd	2nd
Darracq (No. 1)	18th	11th	5th	3rd
Clément	7th	5th	3rd	4th
Beeston-Humber	9th	7th	6th	5th
Coventry-Humber	6th	9th	7th	6th
Arrol-Johnston	2nd	19th	11th	7th
Siddeley (No. 2)	11th	20th	14th	8th
Scout	25th	21st	15th	9th

The speeds of the cars were taken over four sections of the course, namely, from Douglas to Peel, 9 miles; Peel to Ramsey, 16 miles; Ramsey to Irongate, the highest point on the mountain road, 8 miles; and Irongate to the finish, 7 miles 500yds. The portion from Douglas via Peel to Ramsey presents little variation in gradients, so that we may combine these two sections. In the following tables we place the cars in their order of speed over the different sections.

First section of the course, Douglas to Ramsey, 25 miles. Average speeds over four circuits:

Rolls-Royce	40.73 miles per hour.
Darracq (No. 1)	39.37
Berliet (No. 1)	37.87
Clément	36.31
Beeston-Humber	35.25
Coventry Humber	34.68
Vinot	31.87
Berliet (No. 2)	30.68
Darracq (No. 2)	27.51
Arrol-Johnston	27.13
Scout	26.53
Siddeley (No. 2)	25.77
Thornycroft	25.33

The mountain climb. Average speeds over four circuits:

Rolls-Royce	31.47 miles per hour.
Arrol-Johnston	30.63
Siddeley	29.56
Berliet (No. 1)	27.36
Berliet (No. 2)	25.76
Clément	25.57
Beeston Humber	25.45
Coventry Humber	23.59
Darracq (No. 1)	21.43
Scout	13.83

The Tourist Trophy Race.—Continued.

From the top of the mountain down to Douglas. Average speeds over four circuits:—

Rolls-Royce	...	...	43.49	miles per hour.
Arrol-Johnston	...	...	43.27	" "
Siddeley	...	...	40.84	" "
Darracq (No. 1)	...	...	40.24	" "
Berliet (No. 1)	...	...	37.21	" "
Coventry Humber	...	...	35.36	" "
Clément	...	...	35.11	" "
Beeston Humber	...	...	32.64	" "
Scout	...	...	32.13	" "

These three speed tables are interesting, because they show how fast all round was the winning Rolls-Royce car. On the flat, up hill, and down hill it was able to show its heels to any other vehicle in the race. The Arrol-Johnston's average over the first section of the course was pulled down by its puncture delays.

THE SPEEDS UP THE MOUNTAIN,

it will be seen, place the cars in a different order to that gained by them over the ordinary give-and-take road from Douglas to Ramsey, and the times down the mountain show, for instance, the efforts of Mr. Pullinger on the Beeston Humber to economise his petrol, for his speed falls below that of the Coventry Humber.

FUTURE OF THE TOURIST TROPHY RACE.

Opinions of the Entrants and Competitors in the Recent Contest. The Value of the Race to the Trade. Desirable Improvements.

WE conclude this week the series of opinions of entrants and competitors in the recent Tourist Trophy race on the future of that competition. A summary of the opinions expressed will be found on our editorial page.

Mr. Tom Thornycroft, of Messrs. J. I. Thornycroft and Co., who was greatly hampered, not only in the race, but during the last and most valuable hours of preparation, by his injured leg, writes to say that he has answered our questions in the light of his experiences, and he thinks that the advertisement to the winner is certainly worth the cost and worth the risk of failure. As to the effect of the race upon the development of the motorcar, he points out that the object of the race is to develop an economical car, both in construction and service. With the minimum weight of chassis as low as 1,275lb. it, however, defeats this object and tends to encourage useless waste of money in the drilling and cutting away of every pound of material that is not absolutely necessary to complete the race. If the minimum chassis weight were raised from 1,275lb. to 1,600lb. and the load carried reduced from 1,125lb. to 1,000lb., it would encourage the evolution of a car of much more wholesome proportions. The race shows the public that, with care, they can get all they want out of a moderate powered car. The speed should not create a bad impression if it is pointed out that it is only obtained by running full speed down all hills and round nearly every corner, with the route efficiently guarded to prevent risk of accident to spectators. Whilst advocating the holding of the race again next year, Mr. Thornycroft urges that it should be at least six times round this year's course—that is, 240 miles, the petrol allowance being maintained at a gallon for every 25 miles. No fine should atone for late arrival. The rules should be left as at present, and nothing except cleaning and small adjustments should be allowed.

As to whether the race should be confined to standard cars, Mr. Thornycroft very wisely points out that if standard cars only were allowed to enter, the race could not possibly bring about new developments. On the matter of the date for the next race, Mr. Thornycroft does not favour the spring of the year.

Mr. J. Percy Dean, who has been the recipient of innumerable congratulations upon the performance of his Scout car in the recent race, writes to say that he is of opinion that the Tourist Trophy race is of great value to the manufacturers, not only to the winner (to whom he certainly thinks it must be worth the cost, without he lives on the course from one race to the next), but to every competitor who makes a good show. As for risk of failure being too great, this is certainly not the case, provided that the competitor can do the distance on his petrol allowance. The race no doubt is of great service in the way of helping the manufacturers in the development of their cars, as, if the manufacturer is running his standard touring car, it soon shows the weak points of the car—should there be any. He is of opinion that the race is of great service to the public, as it demonstrates the control one has over a vehicle at high speed, and it will certainly encourage some people to get the best results from their cars, although it will no doubt lead others to complain that they cannot get the result from their own cars. The speed proves to the public how strongly

touring cars are made to stand the severe strain. Mr. Dean sees no reason why the race should not be held next year, as great interest has been taken in it both by motorists and public alike. With regard to the rules, Mr. Dean considers there is room for considerable alteration. The distance of the race should not be less than 160 miles. The petrol allowed should be the same as this year—that is, 25 miles to a gallon; and he also thinks a fine should atone for delay in handing a car over to the Club, say, £5 for quarter hour, £15 for half hour, and £20 for an hour's delay. No adjustments should be allowed after the car has been handed over to the Club. Rules should be specially laid down regarding the body, so that the manufacturers would be forced to enter their standard cars. As to the weight of the body, he thinks the minimum should be reduced by at least 50lb., whilst the minimum weight of the chassis could be increased with advantage. As regards the race being held in May or June, this period of the year is not so convenient as in September, as it is generally the most busy time for the motor industry.

Mr. Harry Smith, the managing director of the Rover Co., Ltd., naturally makes an interesting communication, in view of the fact that his two cars, both of which were considered capable of winning the race, were barred from competing through the neglect of a workman. Mr. Smith regards the race of value to the trade and as an aid to development, but, whilst the risk of failure can be ignored, he is doubtful as to whether the advertisement to the winner is worth the outlay. As to the effect on the public, Mr. Smith is extremely dubious. The race might appeal to the sporting public, and it might, by creating motor talk, help to popularise the motorcar, but on the great bulk of the non-converted the race has little effect. However, Mr. Smith is in favour of the race being held again next year, and he supports the distance and petrol allowance that obtained this year. He is strongly opposed to any latitude being given to late arrivals. The time of arrival should be adhered to, and no fine should be allowed to atone for lateness. At the same time, no work of any kind should be permitted to be done on the cars between their production to the Club officials and the morning of the race. The competing cars should be absolute standard vehicles, and no alteration need be made in the present minimum chassis or body weights. With regard to the rules and the date for the next contest, these matters might with advantage be referred to the Society of Motor Manufacturers and Traders.

Mr. H. P. MacConnell, who did not have the best of luck in the Isle of Man, perhaps takes too pessimistic a view of the race in consequence, but the fact is of importance that he does not consider the race of any value to the manufacturer, because, whilst the advertisement is too costly and the risk of failure too great, the contest does not help the maker at all to develop his car. The race is apt to give quite a wrong impression, inducing the motorist to demand unreasonable efficiency from a car that is run differently to its fellow that (for instance) performs so well in the race, but Mr. MacConnell thinks that, as the high speed now attained is not misleading to the non-motoring public, it is quite possible that the motor movement may, to a certain extent, be advanced by the race. Under different conditions and new rules the race could with no disadvantage be held again next year, and he

Future of the Tourist Trophy Race.—Continued.

would advocate a distance of 250 miles. He would permit a late arrival, on payment of a fine, but would allow no work in the tents. The chassis should be absolute standard, and nothing that was not standard should be admitted, but so far as the body is concerned the weight limit might be reduced and the height increased. May and June being extremely busy months for the trade in selling and delivering cars, the first week in August is suggested by Mr. MacConnell as the most suitable period of the year for the contest.

Mr. A. C. Godwin Smith, managing director of Armadale Motors, Ltd., whose Armadale car was shut out of the race owing to its late arrival at the gates of the enclosure, writes:

We certainly think the Tourist Trophy race is of value to the manufacturer, as undoubtedly it brings prominently before the motoring public the various makes of cars. We consider that the advertisement to the winner and those who finish is well worth the cost. Undoubtedly the risk of failure is very great, particularly in this year's case, taking into consideration the small petrol allowance, and the arbitrary action of the Club in several matters.

We most decidedly think that the race is of no service to the public so long as nothing more or less than freak cars are permitted to compete. We are inclined to think that, run on its present lines, the race is certainly

LIKELY TO CAUSE OWNERS TO BE DISSATISFIED

with their cars, because they cannot get the same efficiency out of their cars as is obtained in this race.

We are in favour of the race being held again next year, and we think the course and distance should be the same as this year, as we are inclined to think it is an excellent all-round test. The old allowance of 22½ miles to the gallon should be made. Most certainly the payment of a fine should be quite sufficient penalty for arriving late at the enclosure. We feel most keenly in this matter, seeing that all our work, extending over many months, was thrown away, owing to the arbitrary action of the Club. We do not see what good it could possibly do the public to disqualify five cars from showing what they could do, for being a few minutes late two days before the race. We do not think the cars should be touched after once being handed over to the Club. We are emphatically of the opinion that makers should be compelled to compete only with standard vehicles. The idea of supposing that the public will purchase cars with seats both in front and in the tonneau, 7in. from the floorboards, is out of all reason. We consider that the bodies should be of a touring type, fully upholstered, and exactly the same as are listed for sale to the public by the entrant. The drilling of chassis should be absolutely prohibited.

Messrs. Aries, Limited, whose cars were withdrawn quite early in the history of this year's race, are not in favour of the race being repeated. They think that to the winner the advertisement may perhaps be worth the outlay, but it is questionable whether the remainder of the competitors feel any benefit. The risk of failure is great, and the contest gives no lead in the matter of car development. Neither do they consider that the effect on the public is a good one. Users of the makes of cars that do well in the race are led to complain because they themselves cannot get equal results, whilst the non-motorists, instead of being favourably impressed, probably obtain a wrong idea altogether on the subject of car speed, because the vehicles taking part are supposed to be ordinary touring cars. But if the race should be run next year, the

DISTANCE SHOULD BE NOT LESS THAN 300 MILES,

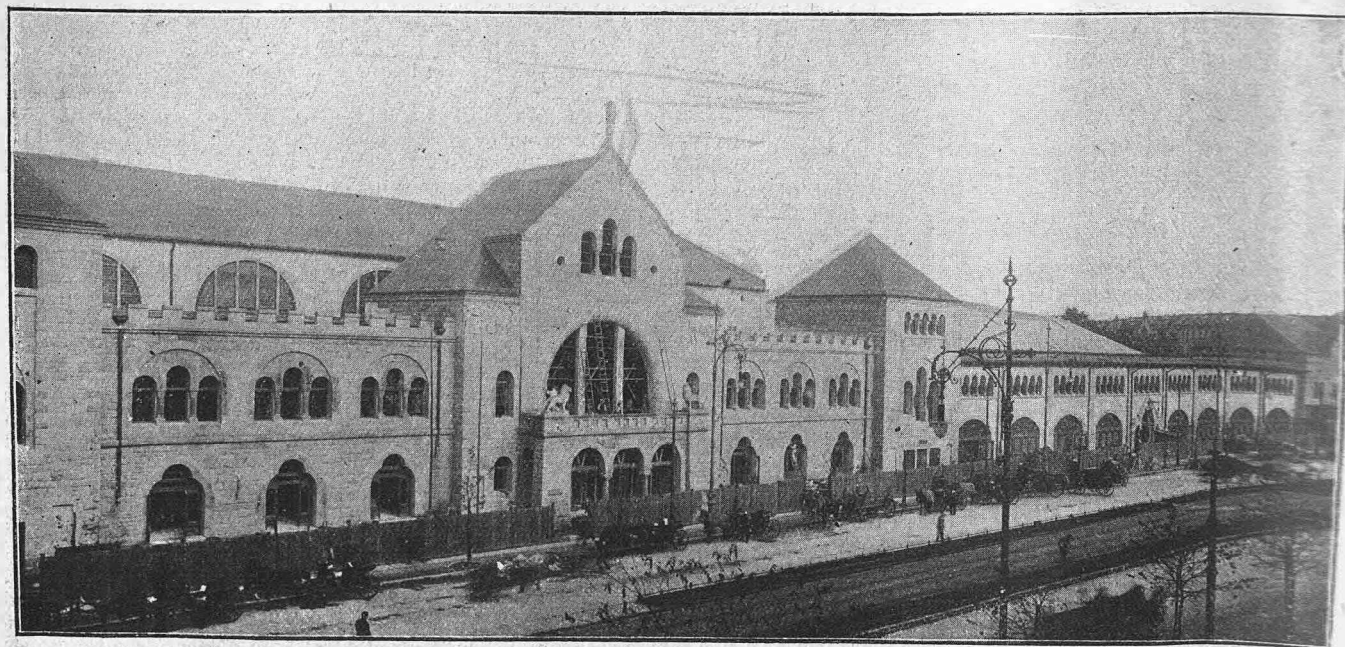
whilst the petrol allowance should be increased to a gallon for every 20 miles. No late arrivals and no work in the enclosure are points of emphasis, whilst competing cars should be absolutely standard, and, if possible, should be chosen from stock by the Club. The race could then be run early in the year.

We shall be glad to extend the hospitality of our columns to the opinions of representative members of the Automobile Club—that is to say, however, those who have had something to do with the Tourist Trophy race, for, in a case like this, unless one has felt the heat of the fire, so to speak, one is quite likely to venture upon arguments which experience has already proven to be futile. The Club looks at the matter from a different standpoint and takes a different point of view to that adopted by the trade, but the motive of both is the same—to place reliable information before the public and to

ADVANCE THE PROSPERITY OF THE MOVEMENT.

In the matter of details, these different view-points are apt to lead to differences of opinion, but a little give and take on either side can always effect a compromise. It is because those who are responsible for the rules lack the opportunity for venting their views that we should welcome their opinions in this general symposium, the object of which is to ascertain whether the Tourist Trophy race is a desirable fixture, and, if it should prove to be (and we think the consensus of opinion, judging from what has already appeared in these columns, is distinctly in its favour), to secure the best, most workable, and most acceptable set of conditions.

Mr. Wilson Noble, a member of the Club Committee and of the Competitions Committee of the Automobile Club, writes to say that he is not able to answer the questions put by us as fully as he should like, particularly in the matters of detail, because the whole question is being con-



The new building in which the Berlin Automobile Show is to be held; the building has exhibition space of 15,000 square metres.

Future of the Tourist Trophy Race.—Continued.

sidered by the committee, and, therefore, is not open for discussion on his part, but he is of the opinion that motorcars are now so firmly established that a race does not directly make them more popular, but a race like that for the Tourist Trophy is well calculated to improve the "breed" of touring cars and show what perfect machines they are becoming for their particular purpose, and, naturally, the more touring cars are perfected the more popular will touring become. In this way, he thinks, the race is well calculated to advance the motor movement.

It cannot be expected that in everyday use a car will show the same results as in a race, but the careful tuning and adjusting that a car goes through in preparation for a race should offer to the public an ideal to be sought for.

WITH REGARD TO SPEED,

he thinks that now obtained is too high. The non-motoring public does not realise that a car doing its 40m.p.h. in a race where the road is kept clear and all the circumstances are favourable is higher by perhaps 75 to 100 per cent. than the speed that would be reached by the same car on an ordinary road. Nor do they understand that these high speeds are only attained by the greatest skill on the part of the drivers, who, being skilled, are far less likely to drive at a furious rate or in a dangerous manner on a public road.

The race, if possible, should certainly be continued yearly, but as to the time of year this must necessarily depend on the Manx Parliament.

Mr. J. S. Napier.—We particularly welcome the opinion of the first winner of the Trophy, because he has in each of his essays shown a thoroughness of method and directness of purpose which have betokened great confidence in the value of the race. Mr. Napier confirms this by asserting as his opinion that the Tourist Trophy race is most decidedly of value to the manufacturer, the advertisement to the winner and those who finish being most distinctly worth the cost, whilst the risk of failure may be disregarded. Replying to the question whether the manufacturer is helped in the development of his cars, Mr. Napier says that he is, as witness the improvements that have undoubtedly resulted from the first year's race. In the case of the Arrol-Johnston cars an increase of five miles per hour in speed was attained in the recent race with the same engine capacity as was used in the contest of 1905. Mr. Napier does not feel so sure about

THE EFFECT ON THE PUBLIC.

He is not prepared to say that the race does actually help to popularise the motor vehicle or to advance the movement, nor to speak with any authority upon the question as to whether the non-motoring public gain a bad impression from the high speeds attained in the race, but as to the motorist he sees no reason why the intelligent owner should not get results from his own car almost equal to those secured in the Trophy race. Mr. Napier is strongly of the opinion that the race should be held again next year, over a distance of not less than 200 miles, with the petrol allowance to remain at its present figure. As to the acceptance of late arrivals and to granting permission for work to be done in the tents, Mr. Napier would have no objection to any alterations of the rules, provided it were the intention to enforce the provisions of the rules. As to the question of the pared-down chassis, Mr. Napier says that it is impossible to confine the race to absolutely standard vehicles, as scarcely two firms build a vehicle capable of fulfilling the conditions laid down. He doubts the need for a minimum chassis weight, but he agrees that a minimum body weight is necessary, and favours a lower minimum than that in force in the last race. Mr. Napier advocates the addition of a rule to

PROHIBIT PRACTISING ON THE COURSE,

except between daylight and 6 a.m., for, in his opinion, the competitors were a distinct nuisance to the inhabitants in their late practice runs. For instance, he advocates June as the period for the race, because it is daylight so early.

The Star Engineering Co. write us to say that, in their opinion, the Tourist Trophy race is of great value to the manufacturers as an advertisement, and is well worth a very considerable amount of money being spent to secure the first place. The risk of failure is not nearly so great nor so disastrous as is a failure in a reliability trial, where cars have to run a given distance within a given speed, with a possi-

bility of losing many marks purely through misfortune. The race undoubtedly helps manufacturers to develop their cars, and certainly is a big help for a manufacturer to compare his cars against other makers. In their opinion, therefore, the race should be held next year. The rules could be altered with advantage in several places. The distance, undoubtedly, should not be under 200 miles, with an allowance of not less than one gallon of petrol for 20 miles.

LATE ARRIVALS SHOULD BE DISQUALIFIED

without any option whatever. No work or adjusting should be allowed after the cars are in the hands of the Club. No cars should be permitted to run that are stripped and cut down—that is, the frames a mere network—and which are really not fit to be called touring cars. The minimum weight of the chassis should not be less than between 16cwt. and 17cwt., and the minimum weight of the body should be between 2½cwt. to 3cwt., but the body should be constructed so as to be far more comfortable than the majority of the cars in the Tourist Trophy race this year. The height of the seat from the ground should be not less than 34in., measuring underneath the seat; the height of the back rest should not be less than 18in.; the width of the seat in front should be limited to not less than 38in. inside the upholstery; the body length should be limited to 7ft. As regards the time at which the race is held, they are of opinion that early September would be a very suitable time if the Manx authorities would agree.

Mr. Mervyn O'Gorman writes us as follows, his views as a prominent honorary official of the Automobile Club having been requested:—

"As one of the organising committee of the 1906 Tourist Trophy race, I do not think I can reply quite fully to the five questions which you ask, but as I think that the discussion which you are encouraging is a very useful step towards the perfecting of the organisation, I have pleasure in stating that:—

"The risk of failure in the Tourist Trophy race should not, I think, deter manufacturers from entering. This race differs from many others in the fact that the number of placed cars is practically unlimited, and those who have followed the competition with understanding will be able to appreciate that, whereas a slight error of judgment on the driver's part may result in a car finishing, say, fifth, with a good balance of petrol in hand, the performance of the car may be as good or better than that of the winning car, though the performance of the driver may have been somewhat defective.

"I am convinced that every long-distance race which has been seriously competed for by the trade has been good for the technical development of the motorcar. I am one of those who deeply

REGRET THE ABANDONMENT OF THE GORDON-BENNETT RACE,

and, therefore, needless to say, I believe the Tourist Trophy to be of immense value. One of the best points about this competition is that its rules are to be remodelled every year, with a view to improving the type of touring car and with a view to securing that a useful type is brought prominently before the public. The number of miles run to the gallon of petrol is not really a matter of any serious consequence, this being merely a device adopted for keeping down the engine power to a size of engine which is commercially useful. No commercial car runs for 160 miles at an average of 40 miles per hour on 25 miles per gallon, because the road authorities do not allow of it, but there are no two parts of a modern car which are open to so much improvement by careful study as the carburetter and ignition, and there can be no doubt that, since the first Tourist Trophy race has been held, an amount of information on the subject of ignition and carburetters has been secured by manufacturers which would otherwise have remained unproductively locked up in the brain-pans of a limited number of non-manufacturing scientists.

THE RACE IS A SERVICE TO THE PUBLIC

because it incidentally insists upon the weight of the car being kept down. Considering that the cost of tyres is at present equal to all the other expenses of keeping a motorcar put together, and that the cost of tyres depends very largely upon the weight of the car, the financial service rendered to the public by the race is very considerable. Drilled-out frames are a perpetual source of ill-considered criticism and objection from some competitors. I believe that if only the buyers of cars did not generally select their vehicles from

Future of the Tourist Trophy Race.—Continued.

the appearance of the varnish, no car would ever be sold that had not got every particle of useless metal drilled, stamped, or punched out of it. The web of a girder happens to be a particularly visible store of useless metal, but it is by no means the only one on the modern touring car, and the public will gradually begin to add two and two together to the extent of noticing that (i.) the car they buy is relatively slow, heavy, and expensive in tyres, whereas (ii.) the car the same manufacturer puts forward in any competition is not slow, is not heavy on its tyres, and is not equipped with a lot of useless metal.

"When the relationship of these two facts has been pondered upon and digested, a demand for light cars, lightened without loss of rigidity, may assert itself; the Tourist Trophy will then have rendered to the public one of the services which it set out to perform.

THE HIGH SPEEDS OBTAINED

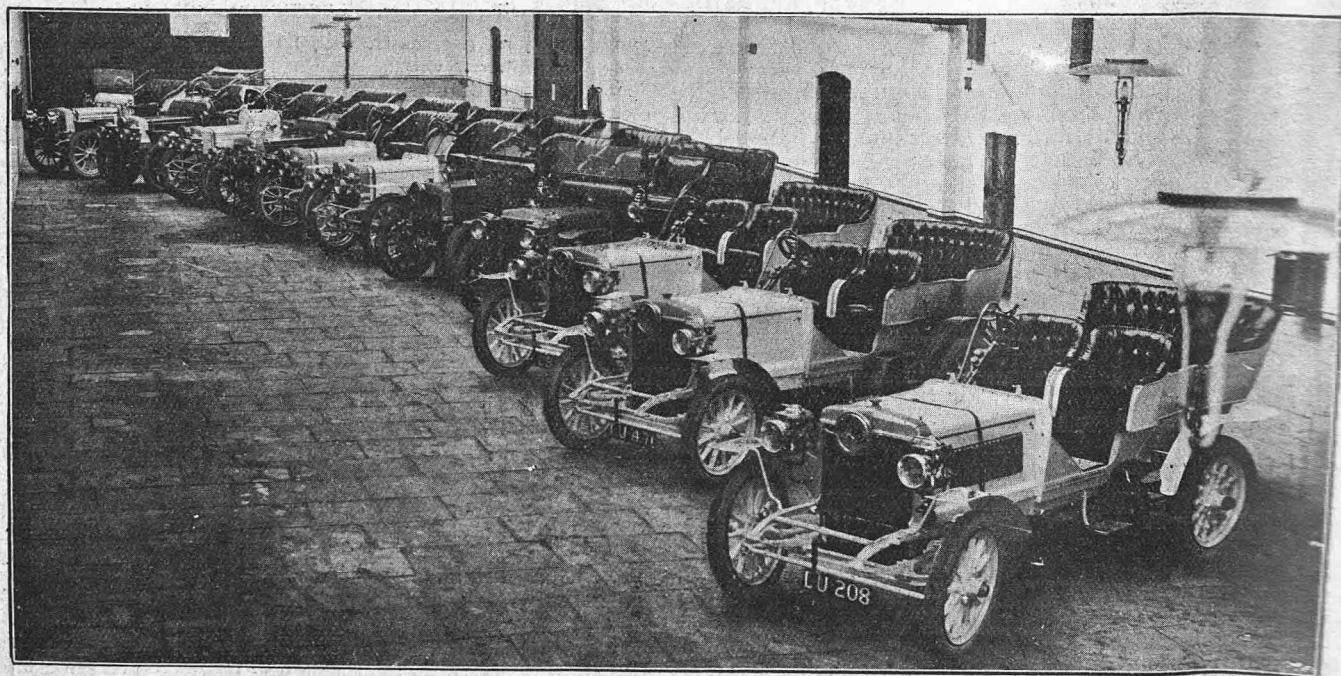
in this competition do not, in my opinion, create a bad impression on the non-motoring public. I believe it is of the utmost importance to educate the non-motoring public to the fact that it is possible for a car to be perfect even under the exciting conditions of a race at 40, 50, and 60 miles per hour without anybody being hurt. They will then slowly get to appreciate that speed in itself is not iniquitous, though inconsiderate driving always is.

"Needless to say, with the above opinions, I think the race should be held next year, that the distances should be as long as possible, that the distance demanded per gallon of petrol should be left to the decision of the perfectly impartial committee in whose hands it is, that late arrivals should result in absolute disqualification (for the very reason that, when this is understood, there will be no late arrivals), that the paring down of standard cars should certainly be permitted, as this is precisely the manner in which the manufacturers learn how much paring down may safely be effected, and, lastly, the best time for the race to be held must be left in the hands of the organising committee, because in this matter the Automobile Club is obviously receiving a concession from the authorities in whose territory the race is run, and the views of those authorities necessarily settle the matter."

Mr. Turberville Smith, who made a very favourable impression with the first appearance of the Academy car, is most emphatic in his contention that the sporting side of the contest must necessarily prevail, and that as there cannot be a multiplicity of winners, the risk of failure is more than counterbalanced by the possibility of business if the entrant should score. He is of opinion that the march of improvement is aided by the competition itself, and in preparing a car to meet the conditions. But—and here Mr. Turberville

Smith is in accord with many other entrants—the race cannot fulfil the intentions of the founders unless genuine and properly-equipped touring cars are exclusively entered, and such cars should be absolutely standard in every possible detail. To attain this end drastic alterations must be made in the rules. Mr. Smith makes the somewhat novel suggestion that the body weight should be in accordance with the horse-power. Cars entered should be those which can be regularly purchased from the manufacturers or the local agents, and it would be quite easy to ensure the proper carrying out of such a regulation by comparing with a similar make of car in the show-rooms. The allowance of 25 miles to the gallon Mr. Smith thinks about right, but is strongly inclined to have the distance of the contest increased to 250 miles, and to run it off at the commencement of the summer. The gates should be closed against all cars entering the enclosure at the minute stated in the regulations, but to counteract this competitors should be permitted to do any work desired on the cars, after being handed over to the Club, as the cars are now taken over for two complete days.

One of the cars which the British public saw for the first time at Douglas was the Hardman, driven by Mr. W. L. Hardman, which was in every sense of the word a fully-equipped touring car. Mr. Hardman is one of those who believe that the contest is of the greatest value to the industry and the public—to the first because a comparison is possible with other designs which no other form of competition could possibly provide, and to the second because the non-motoring section are drawn into the fold, and become buyers of those cars which do good performances and enable them to gauge the merits of particular makes. There can be no doubt that when carried out on closed roads and under the conditions prevailing in the recent contest, the public are educated to look upon these higher speeds than normal as something that can be eventually regularised. He joins in the almost universal chorus that only regular, standard, and bona-fide touring cars should be allowed to compete, and that it would be wise to cut down the minimum body weight. Mr. Hardman, although he does not say he will again enter, is doubtless satisfied with his experience, as he advocates the race being repeated in 1907, certainly not earlier than June. The petrol allowance could be on the existing basis, or if an increased mileage is thought desirable, not more than 28 miles to the gallon should be demanded, and the total distance could be increased up to 250, or even 300 miles. The definitions and regulations as to what constitutes a standard touring body should be more explicit, but on some points common sense would dictate the exclusion of cars having drilled or slotted frames. There should be a minimum distance from ground line to floor boards.



Some of the Daimler cars that competed at the Blackpool meeting. They were despatched by special train from Coventry.

CYCLOPS CAUTION

The Cording of Springs.

I was rather pleased to see that Mr. Sturme had last week dealt with a subject that he and I chatted over in the Isle of Man, namely, the wrapping of the springs with cord. I thoroughly agree with our esteemed chief contributor that the practice should only be indulged in on racing cars, and I would suggest that, even in their case, the cording should be undone and wound afresh just before the race, for it is rather important that the leaves of the springs should be occasionally inspected. A little while ago I happened, quite by chance (for, up till then, the importance of the matter had not obtruded itself upon me), when glancing over the offside rear spring of my car, to notice that the hexagon bolt that clamps the leaves together in the middle had become lost. I prodded down into the hole in the top leaf and could feel the other end of the bolt; the latter had broken at about its middle and the upper half had jotted out. As this bolt is only needed for the purpose of assembling, it seemed to me that the loss would not be very material unless and until it should become necessary to remove the spring from the axle, when the act of releasing the shackles would allow the blades of the spring to fly apart. But, curiously enough, within another two hundred miles, the top leaf of the spring cracked right across the bolt hole, and, to this day, I cannot help wondering if there could possibly be any connection between these two circumstances. Yet, I cannot see that either the absence or the presence of the bolt could either cause or prevent the breakage. I took the precaution to tightly screw up the nuts on the clamps, and the broken blade remained in use for over a fortnight before the opportunity for replacing it presented itself, and it gave no trouble at all during that time. In the Isle of Man, I was on a car that was travelling fairly fast round the course, and a sudden clattering in front turned out to be due to a broken top leaf of the near-side front spring. But, in this case, the rearward half of the spring, through the movement of the shackle, pulled out of the clamp and then bent upwards and kept banging against the frame. We got a new blade forged in Ramsey, and were on the road again in a few hours. Since these two incidents, I have made a practice of giving a glance along my springs when oiling up, and of occasionally testing the nuts on the clamps with a spanner and seeing that the metal clips (which modern practice has substituted for the studs and holes in the ends of the blades to keep the blades from separating) are in position. Cord wrapping may be effective, but I prefer to be able to see what is going on all the time, and I feel convinced that, but for the use of the cord, Mr. Northey would have discovered the broken blade on his car long before the day of the race.

Warming the Motor House.

With the winter season approaching, many a motorist will probably be in the possession of the same doubts that I have. A motor house that is warm and dry is the exception rather than the rule, and those that are built of wood will be a long way from the ideal so far as internal conditions are concerned. They may be strong and waterproof about the roof, sides and floor, but the cold and damp are certain to find their way in. What I want to find is a ready, simple and safe method of warming my motor house during cold or humid nights—and days. Unfortunately, I made the mistake of having my house built of timber, and, naturally, my choice of heating appliances is limited in consequence. I have studied the hot-water schemes that are made for greenhouses. There is a slow combustion stove to stand outside the building, a boiler and pipes to circulate hot water in the building. But this entails a lot of work, and I can picture a late arrival home one very cold or damp night, the servants in bed and myself trying to coax a refractory fire to light; and the colder or wetter the night and the greater the need for the warmth, the more refractory will be that wretched fire! Yet, I may be doing an injustice to the conservatory heating apparatus, and on this point I would therefore like some information. A gas stove—so it seems to me—would be more convenient, being always available and entailing no trouble or delay in light-

ing or extinguishing, whilst, being in the house itself, one would not get cold or wet in the process, and, moreover, if lighted, it would go without attention for hours—although I believe that the cost of heating by gas is rather excessive. Again, petrol fumes are so insidious that one hesitates to introduce a naked light into a house with the possibility that the vapour from the carburettor and from the petrol that frequently overflows into the screen may settle down towards the floor and gradually be drawn along towards the stove—for these would be the prevailing tendencies. The questions in my mind are: first, whether the vapour that might be expected to reach the floor from a car that has just come in off the road would not be quite incorrectly proportioned in its mixture with the air, and so be quite harmless in the presence of a naked light; and, secondly, whether the flame could be protected by gauze. If the latter were ample precaution I think the difficulty would be solved, and all that one would have to do would be to find the suitable stove.

A Good Yellow Goggle.

The yellow goggle was taken up in this country by Messrs. A. W. Gamage very quickly after it was first mentioned in these columns, and it is due to Mr. Vincent, of that firm, to say that he has devoted considerable time to getting the right thing. I think that in the new model, which he has recently sent me for trial and criticism, he has hit upon the happy mean. The glasses are only lightly tinted, and, whilst giving all the advantages of softened high lights and of a stronger contrast between the white road and the grass bank when travelling behind acetylene lamps at night, they are practically free from the objectionable "thunderstorm" effect. In the "map and goggle cupboard," between the two front seats of the car, I have placed two pairs of these goggles, so that there are seven or eight pairs in there altogether, and without saying anything to my various passengers, I have carefully watched for signs of favouritism, only to find that the light-tinted yellow goggle has now taken first place. I find that the curved glass is a great advantage. So, as this particular model is well made (and, moreover, is a London production), and not at all dear in price, I think it may be taken for granted that it is the "best yet."

The Uncertain "Scout."

As one who has consistently disapproved of the "scout" idea instituted by the Automobile Association, I cannot say that I have felt any indignation at Inspector Jarrett's countermove in personating the A.A. scout. It has always seemed to me to be placing a strong argument in the hands of our opponents when they see that motorists have an organised system of ascertaining when the road is clear. Such a system seems to point to a desire and an intention to go fast whenever there is a chance. I am not familiar with the instructions given to the scouts, but I have understood that these individuals were only supposed to give information to the motorists who sported the familiar brass badge of membership. Yet, I have often had mystic signs made to me by scouts whom I have passed, and yet never a sign of a police trap comes my way. The other week-end I was travelling along the Great North Road through Hertfordshire, and every few miles passed a constable by the roadside, who was obviously engaged in the process of noting my number and the time at which I passed him. I had passed three or four of these, and beyond Hatfield met a "scout," who held out a white badge to me. Disapproving of the idea, I paid no heed to the sign (I did not, in fact, know what the white badge signified until I enquired some days afterwards), but went on my way, saw another constable take my number, and further on stopped for some tea. Returning, I passed the same constables and the same scout, who again showed me the white badge. I have since learned that the white badge means "road all clear," whilst a red badge means "go warily: visions is about!" or something like that. Yet I was being timed by the police all the way, and I am now wondering if the "scout" was a police emissary.

WIND DEFLECTORS.

A Suggestion for Improving the Comfort of Open-carriage Bodies. Results of Interesting Scientific Experiments.

It is strange in these days, when the mechanism of motorcars has arrived at such a pitch of excellence that only ingenuity of the highest order can prove equal to the exacting task of creating improvements of any real value and merit, that the allied trade of carriage-building should still remain to such a large extent under the sway of rule-of-thumb methods. Your carriage-builder is an artist, and an ingenious one, too, but he, as much as the engineer, should welcome scientific aid in his work. Apparently there is no scope for it, and he should need only the artist's instinct and ingenuity. The more one thinks of the requirements which have to be attended to, the more it becomes evident how numerous are the difficulties which beset him in his designs. Yet he clears them all away. Comfort and roominess are demanded by the customer, lightness by the motor manufacturer or agent, and between these and elegance and strength a compromise must be made, agreeable to all, within the dimensions of the chassis. How satisfactorily he has met these demands, although working on ground hitherto strange to him, proves how much may be exacted from him. It is with confidence, born of this proof of his artistic adaptability, that I would, therefore, ask him to apply to open bodies the

RESULTS OF SOME SCIENTIFIC EXPERIMENTS

carried out not many months ago in France. The matter was raised by Mr. Henry Sturme in a recent issue of "THE MOTOR," where he drew attention to the discomfort caused by a back-draught in the well of an open-bodied motorcar. Limousines and landaulettes, of course, are beyond the range of this article, except so far as the wind-deflector is concerned.

It is quite an old complaint of passengers in the back of an open-bodied car that a rug spread over their knees tends to rise, thus depriving them to some extent of the warmth which they seek by its use. There is not the slightest doubt that this effect owes its existence to the partial vacuum created in the well of the body, owing to the passage of the car through the air. It is no phenomenon, as Mr. Sturme has called it, for an explanation can be found in perfectly natural and common causes. There is the air-exhausting effort created by the flight of a rapid current across the well as the car travels along the road, and there is also a weaker suction caused by the vertical obstruction in front, namely, the backs of the front seats and the bodies of those who are occupying them. These two combined produce the back-draught which tends to lift a rug from the knees of the passengers behind. The greater the speed, the more marked will this effect be. The size of the well, paradoxical though it may at first seem, is really but a very small factor, because, although the

DEGREE OF PARTIAL VACUUM IN A SMALL OPEN BODY

will be greater than in a larger one at any given speed, the area covered by the minus pressure in the former instance is small, and the total effect, therefore, not great, whereas, in a roomier body the suction acts over a large surface. The air required to counterbalance the partial vacuum descends slightly forward of the occupants of the back seats and, curling round, rises close behind the front seats, a smaller quantity curling in over the sides of the body. How these currents may perhaps be deflected will be shown further, but it is first necessary to review some experiments that have been carried out to determine the solution to a similar problem.

There is scarcely a single person unacquainted with the appearance of the captain's bridge on a steamer, and few will have failed to take note of the canvas sheet which in dirty weather is stretched round it to the height of an average man's eyes. That storm-screen is not designed to arrest any spray that might be carried up there, although it does serve that purpose, but its main object is to screen the draught and wind from the eyes of the men on the bridge. The wind striking the canvas rises up over it, leaving a

small calm region just above and behind the sheet. A small change in the conditions will considerably alter the extent and limits of this calm sphere, but the laws governing such changes had never been investigated until a French experimenter recently turned his attention to the problem. Finding no exact relation between cause and effect, he commenced a series of tests with screens of different patterns taking observations of the velocity of the air currents at different positions behind the shields by means of an anemometer. The results led him to the conclusion that for any given velocity of wind there is

A DEFINITE COMPOUND-CURVED SCREEN

which will be most efficient. For instance, in Fig. 1 the compound screen is shown by AC, the two portions AB and BC being hinged at B. The direction of the wind is indicated by arrows. As it strikes the shield it is deflected upwards parallel to the surface, and, reaching the top at C, bounds upwards and follows a curve similar to CD. Thus the eye, placed at E, can look along a straight line over the screen without any discomfort, as the region inside the

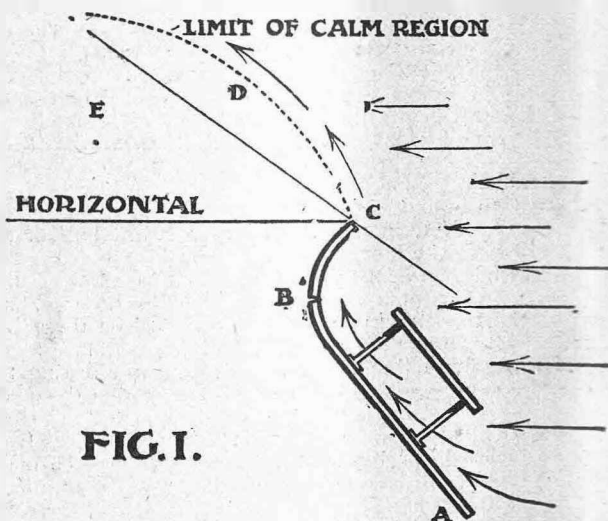


FIG. 1.

curve CD is quite calm. The boundary, however, is not clearly defined, as a small, more or less agitated, zone separates the calm from the wind. During the experiments it was also discovered that an auxiliary screen placed a little distance from the main shield, and parallel to it, increased the efficiency of the apparatus. It might be thought that, by using it to form a funnel with its neck close to the upper portion of the shield, this auxiliary plate might be more advantageously used, but, if I am not mistaken, this was found not to be true. Naturally, the upper element is the most important and needs most attention in the design.

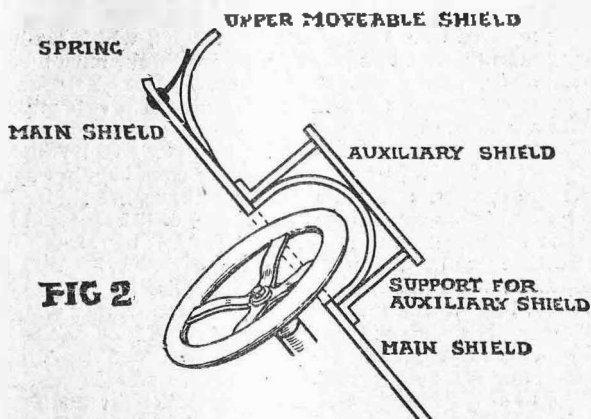
Though primarily intended to replace the present ship's storm screen, this apparatus might well be adapted as a wind screen for cars. Its present drawback is its ugliness and ungainliness. Right here is a disadvantage which a carriage-builder can remove. Before the thing could become popular it must be fashioned into an object of grace and elegance. There is no doubt about its possibilities, as not only will it

RENDER THE USE OF GOGGLES SUPERFLUOUS,

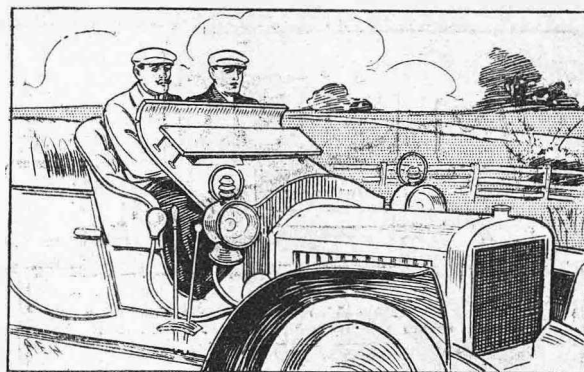
but in cold weather it will protect the driver and his companions from the cold. It occurs to my mind that the Lanchester car lends itself admirably to the use of this contrivance, as it would be easy to convert the present sloping windboard into the curved screen found so remarkably effective in these French experiments. In an ordinary car the

Wind Deflectors.—Continued.

steering wheel would have to be recessed in the screen, as shown in Fig. 2. It will be noticed that a spring is extended against the back of the upper element of the shield, as that portion can be made self-adjusting, according to the speed at which the car is travelling, or, in other words, according to the velocity of the wind meeting the shield. It must not be forgotten that if the upper portion is fixed to act efficiently at 20 miles per hour, for instance, it will not act well at twice the speed in the same position; therefore, there must be some contrivance to effect the necessary adjustment.



Perhaps it would further be found advantageous to construct a part or the whole of the screen in celluloid or transparent gelatine, since an opaque material would prevent the driver from being able to see close to the wheels. Some 12 months ago, down at Harrogate, I saw a car fitted with a rather similar screen, designed to the owner's ideas doubtlessly. It certainly struck me then that it was a most serviceable, if not very ornamental, arrangement, as the driver appeared quite comfortable in spite of the heavy rain falling at the time. The drawbacks of the glass screen are numerous, and it can always be a source of danger whilst reflections dance merrily on its polished surface and mist and rain obscure



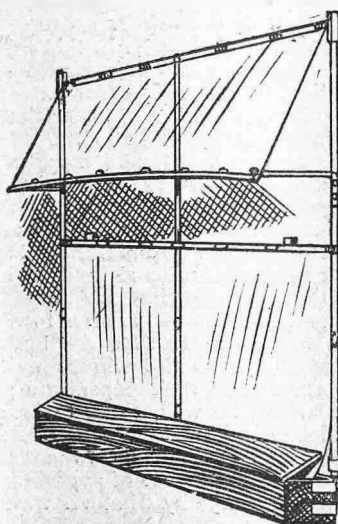
General appearance of screen on car.

its transparency. It is just to obviate these drawbacks that folding glass screens were introduced.

Returning to the problem of eliminating back draught in the body of an open car, it will be understood that some use can possibly be made of the foregoing ideas. It seems to me that if the backs of the front seats were fitted with one of these compound wind deflectors to elevate the current of air passing over the well of the body, the partial vacuum would never be so great, and the air near the floor would not be disturbed so much. The agitated region would be raised, and a rug on the knees would not then come so much under the influence of the back draught. To carry out the idea properly, similar deflectors would probably have to be fitted vertically at the sides of the front seats. Now, what is wanted is a thorough test of the possibilities of such a combination of deflectors, and if their use is found beneficial the problem will then be to conceal them in the carriage work. There is no doubt that a large amount of scientific investigation would enable a really comfortable, draughtless side-entrance open body to be built. Hitherto, carriage-builders have failed to make allowance for the wind and draught discomforts experienced in an open car at a fast speed, which are none the less objectionable that motorists have up to the present borne them without murmuring, under the impression that there was no cure. NEMO.

Proven Wind Screen.

The requirements of a motorist in respect to a wind shield are many and various, for whilst there must be a clear view ahead, the wind must be fended off, and it must be practicable to drive the car

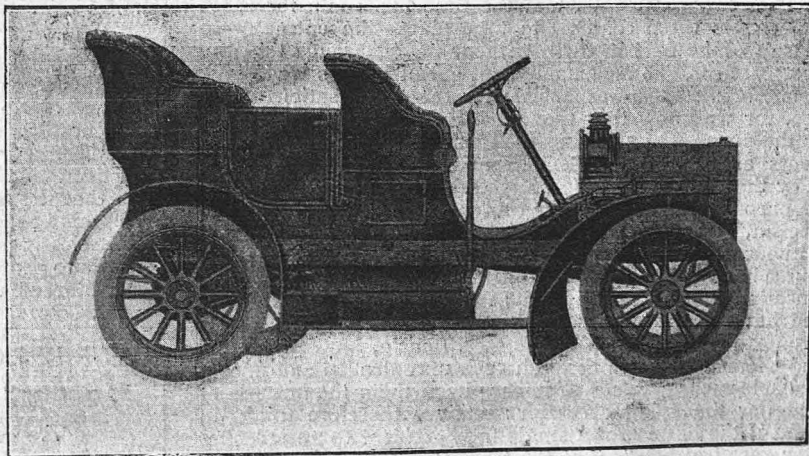


through heavy rain. The Proven shield endeavours to satisfy these conflicting ends, and at the same time does something more, for it can be entirely detached from the dashboard and packed away in a narrow box. This box can be carried on a convenient part of the car, and the screen can be re-erected in a very few minutes, should there arise a need to place it in position. The uprights are made of

cold-drawn steel tubing, and drop into sockets at either end of the dashboard, the sockets being the only things which are permanently attached to the car. The uprights are strengthened by cross tubes, which are hinged to the uprights. The screen itself is made of a fine quality of perfectly clear celluloid. One good feature is that the part in line with the driver's eyes can be set at a slant, leaving an opening through which rain cannot drive, and permitting the car to be driven in the heaviest storm. The device is well carried out, is priced moderately, and is sold by the Proven Company, 149 and 150, High Holborn, E.C.

New Adams-Hewitt Model.

The Adams Manufacturing Co., Ltd., who have hitherto confined their attention to one model, have just produced a new type of side-entrance body. The engine is a two-cylinder vertical, developing 12h.p. The transmission is through a propeller shaft to the live axle. Perhaps the most interesting feature of this new car is the arrangement of the epicycloidal gear. As our readers are aware, the single cylinder Adams-Hewitt car drives through an epicyclic gear giving two forward speeds and a reverse, and in the latest car the epicyclic gear is retained, but three forward speeds are provided,



New Adams-Hewitt model.

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Proprietors:
TEMPLE PRESS LIMITED,
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OPINION

Taxation Rumours.

THE subject of taxation is one that motorists will do well to consider with calmness. There is certainly no call for panic. The accredited bodies representative of automobilism have taken the matter in hand, and at the conference which will be held on November 14th, under the auspices of the Motor Union, the whole subject will be discussed and a line of action decided upon. Though we would not under-estimate the importance of prompt action, it is a fact that recent extravagant rumours are largely conjecture, and have no foundation in fact. We think, therefore, that the result of the impending conference should be awaited, and certainly the best course will be for the motorists' case to be presented by the representative bodies after the real position has been revealed, and the whole subject dispassionately discussed.

Harmful Racing.

THE question arises—and inevitably so—as to whether the Vanderbilt Cup race has not, after all, done more harm than good to the motor cause. A shock is given even to the unprejudiced motorist, the one who can regard wild exaggerations with the calmness that is born of true knowledge, when the morning paper is opened, and confronting him are the flaring headlines, "Great Motor Race! Frightful Accidents! Spectators Mangled!" If the shock is great to him, what must it be to those who are unconverted to the movement! It is impossible to gauge the harm that the defects in the management of the Vanderbilt Cup race have done on two continents, and the time has come for those who enable these contests to take place—the entrants—to refuse to take part in them without the assurance that the spectators shall be reasonably kept out of harm's way. We do not blame those responsible for the organisation of the race, for we know that they have each year visited Europe for the purpose of studying the methods of organising such events as the Gordon-Bennett and the Grand Prix. We know that they have used every endeavour to get troops for the purpose of guarding the course, and that, owing to red tapeism, it has always been impossible to get the troops. Without the authority of a uniform those set to line the course have been powerless to hold in check the seekers after sensation who have crowded at the most dangerous spots and have struggled for the best coigns of vantage. It is wrong to ask such men as Wagner, Lancia, Jenatzky, Heath, and Clément to drive through such uncontrolled and uncontrollable mobs: wrong to impose upon them the hazards of dodging the flying spectator; and we therefore think, in view of the harm that a single fatal accident to an onlooker of a race can effect, that the trade itself should boycott ill-managed events. With the time approaching for the consideration of a new Motor Cars Act this country can afford

least of all such catastrophes, and it has always seemed particularly hard that, whilst races and trials have been conducted in these islands without a single fatal accident, those that have occurred abroad have been, to a very large extent, responsible for the present restrictions on motoring. Thus the ill-fated Paris-Madrid race certainly brought about the present repressive state of the law, and one regards with a certain sense of relief the fact that no more big races will be held before the new Bill comes to be considered.

Opinion of the Tourist Trophy Race.

THE two batches of opinions upon the usefulness of the Tourist Trophy race and upon the conditions of the projected third contest for the trophy, which we have published in the last two issues, will, we think, have thrown a flood of light upon the prospects in connection therewith. We must say that these opinions have been a revelation to us, for we were quite prepared to find a certain amount of diffidence on the part of makers. Two years of trying and two years of failure, whether partial or complete, are apt to blunt the desires, and we should not have been surprised had a number indicated their disapproval of the race and intimated their intention to stand down from it in future. But the reverse has been shown to be the case. With very few exceptions, the trade has asserted its belief in the value of the race, both to the manufacturer and the public, whilst it is abundantly apparent that under the conditions of the race the benefits are shared by all who make a good show in the contest, and are not monopolised, as is usually the case with a race, by the winning car. It is practically the unanimous opinion that the race should be run next year, whilst as to the conditions of the next event the majority are evidently in favour of a longer distance, say, from 200 to 300 miles, with a petrol allowance of a gallon to about every 25 miles. We are rather glad to note the universal disapproval of the admission of late arrivals, even under a heavy fine, and another strong voice is registered against any work on the cars whilst they are in the Club's charge. In view of this, we would urge the Club to rearrange its methods of weighing, so that the removal of steps, guards, brackets, etc., from the chassis shall be avoided. It is also the wish of the trade that the weight of the body shall be reduced and the dimensions increased, whilst an increase in the minimum chassis weight is also generally desired. Opinions are mixed on the subject of date, but Mr. J. S. Napier puts a strong argument forward in favour of the month of June that is favoured by the Manx people. With daylight at 2.30 or 3 a.m. all practising can be completed before the people are about, for undoubtedly, as he says, practising at any time after, say, 7 or 7.30 a.m., is a great nuisance to all.

Daily Papers and Prejudice.

WITH reference to our recent remarks in this column regarding the discussions now being carried on in two London dailies on the subject of motorists and the public, it is pointed out to us by a reader that his letter on behalf of motorists duly appeared in the "Daily Telegraph." It was a good letter, too, and more of the same kind would help in some measure to combat the flood of prejudice which is represented in the majority of the letters published. In the case of the "Daily Mail" several readers have pointed out that their pro-motoring letters have been suppressed. It is the sensational, exaggerated, and altogether irresponsible twaddle that is wanted to make this sort of discussion attractive to the class to which it appeals. No doubt in a very short time the business representatives of these and other dailies will be waiting upon the motor trade to show why their papers are good advertising mediums. It would be well, then, to bear in mind that the recent publication of hundreds of anti-motoring letters has proved to the hilt that the bulk of the readers are hopelessly prejudiced. What is the use of appealing for business to people who have no sympathy whatever with the motor movement?

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SPECIALS of

The Motor

in connection
with the

OLYMPIA SHOW

will be published on

Tuesday - Nov. 6th.

Tuesday - Nov. 13th.

Tuesday - Nov. 20th.

respectively.

FINANCE AND BUSINESS.

As has already been broadly hinted by "THE MOTOR," the results of the past year's trading by the Daimler Company will prove highly satisfactory reading to the shareholders of that concern. The balance-sheet is expected within the next few days, and, while we cannot give the precise amount of the profits earned, we think we will be found to be very near the mark in stating that last year's profits have been more than doubled. We do not believe, however, that any sensational dividends will be declared, as our knowledge of the characteristic forethought which has actuated the management of this successful concern prompts us to anticipate that large provisions will be made for the future stability of the company in the matter of reserve.

A change in the personnel of the well-known North of England firm, Newton, Bennett, and Carlisle, Ltd., is about to take place in the withdrawal of Mr. R. H. Carlisle from the business. We understand that the Argyll Company have decided to open a wholesale depot in Manchester, and, while Messrs. Newton and Bennett, Ltd.—as the new style of the firm probably may be—will retain their Argyll agency, Mr. R. H. Carlisle will confine himself solely to the interests of the Argyll Company. The dissolution of partnership, we understand, was carried out in the most amicable way, to the entire satisfaction of the principals concerned.

This business, which has developed enormously in recent years, has control of the leading motorcar agencies for Manchester and district, and claims to have the most commodious show-rooms and carries the largest stock of cars of any similar business outside London.

A very general volume of business during the week has resulted in a marked advance in the price of several securities. Humbers have again been the centre of operations. Buying orders came on the Birmingham Exchange in thousands, and the ordinary shares quickly rose from 18s. to nearly 22s. A rumour got into circulation that, after paying off the arrears of preference dividend, the Board intended paying a 10 per cent. on the ordinary, with the result quoted above. Later in the week the reaction set in, and, with several large holders unloading and taking their profit, the price receded. Nevertheless, at the time of writing the shares are in great demand. Daimlers are firm but quiet. Argylls keep weak, and are now on offer. We hear that the Swift report will be a very interesting document, and that the company will maintain its old position amongst the dividend-paying concerns. Another advance has taken place in Star shares, and our forecast of a few weeks ago will be found to be very near to the mark when the report is issued.

Whatever may be the result of the past year's trading of Humbers, Ltd. (and we believe that when the report is issued the information given in this column from time to time during the last few months will be found to be far more accurate than the wildly sensational reports to which certain daily papers have given publicity during the week), there is no doubt that the management intend leaving no stone unturned to ensure a record season in 1907. About ten days ago we had a look round the Coventry works, and these hives of industry impressed us more than anything we have witnessed for some months. On Thursday we visited the Beeston works, and here we found a bustle and energy not associated with that old-established factory within the recollection of the writer. Mr. Pullinger is whole-hearted in everything he does, and every employee appears desirous of emulating his untiring efforts. Such united zeal is certain to command success, and, when the Shows come round, we believe that the models from both Beeston and Coventry—both motors and cycles—will make 1907 a memorable year for Humbers, Ltd.

The report of the London Motor Omnibus Company had been awaited with a great deal of interest, and even anxiety in certain quarters. A distribution of 10 per cent. per annum, making a dividend of 10 per cent. for the year (with the interim paid), should satisfy those critics who have not failed to forecast all kind of difficulties for the new company. The one item in the report that seems to cause some uneasiness is that dealing with the sum allowed for "repairs and depreciation." Considering that it is the first full year's working, it is rather difficult for the Board to arrive at an amount that fully covers the depreciation, and we shall be in a better position 12 months hence to decide whether the sum now provided covers the actual wastage.

Capt. H. H. P. Deasy has resigned his position as chairman and director of the London Power Omnibus Co., Ltd., owing to the demands on his time due to the increasing business of the Deasy Motor Car Manufacturing Co., Ltd., in which he is so largely interested.

Some months ago a well-known firm of importers in the City formed the intention of introducing into this country a new Swedish car, which is held in high esteem in its native land. When the proposal first came to our ears, we were sceptic about the success which would attend the products of a country which has hitherto been ignored by the motor market, and apparently this consideration has had its weight with the firm in question, as it has been decided to allow the scheme to drop. The new cars were to have been exhibited at Olympia next month.

A company has been formed with a capital of £20,000, half of which is to be called up, to take over and develop the sale of Dennis cars in the London district. This arrangement will not affect the commercial vehicles, which will continue to be handled from Guildford.

We learn that a well-known firm of motorcar manufacturers in the North are within a week or two going to the public for capital. It will make an attractive proposition, and we hope to give fuller details next week.

"THE MOTOR" SHARE LIST.

The Prices recorded in the end columns are those ruling on the Stock Exchange at Midday on Monday last, Oct. 15th.

Except where otherwise stated the face value of the share is £1 fully paid

SHARES.		NAME.	Dividend.		Previous Prices.		Prices	
Issued Capital.	Paid Up.		Last.	When payable.	Highest.	Lowest.	Highest.	Lowest.
50,850 (in 45 shares)	£3	Alldays & Onions...	5%	Mar. and Nov.	3	2½	3½	—
50,000 (in 45 shares)	£5	" " Cum. Pref. 6%	6%	Mar. and Nov.	5	4½	5½	—
250,000 (in 45 shares)	£1	Argyll Motors, Ltd.	10%	Nov.	30/-	23/3	30/9	17/3
100,000 (in 45 shares)	£5	" " Cum. Pref. 6%	6%	Nov.	5½	—	5½	4½
75,000 (in 45 shares)	£5	Brampton, Cum. Pref. 6%	6%	Oct.	4½	3	4½	3½
100,000 (in 45 shares)	£1	J. B. Brooks & Co.	5%	Mar./Nov.	24/-	20/-	22/-	20/3
100,000 (in 45 shares)	£5	" " Cum. Pref. 5%	5%	Mar. and Nov.	5½	4½	5½	5½
100,000 (in 45 shares)	£5	Brown Bros., Cum. Pref. 6%	6%	Apr. and Oct.	4½	4½	4½	4½
200,000	£1	Clement & Gladiator	nil	—	7/-	9/6	6/6	3/6
100,000	£1	" " Cum. Pref. 6%	—	Feb.	12/6	9/6	10/-	7/6
82,368	£1	Daimler	6% ^a	Nov.	57/-	20/3	75/9	77/6
95,000	10/-	" " Cum. Pref. 6%	6% ^b	Mar. and Nov.	46/3	15/-	67/6	60/3
275,000	£1	Darracq (1905)	—	June and Nov.	31/6	22/6	50/-	30/-
375,000	£1	" " Pref. Ord. 7%	—	Ap./Nov.	22/6	20/3	24/6	20/6
98,787	£1	Deasy Motor	—	—	—	—	5d. p.	15/-
999,003	£1	Dunlop Tyre, Cum. Ord., 8%	4%	Nov.	9/-	4/9	10/-	6/6
984,990	£1	" " Cum. Pref. 5%	5%	Nov.	14/6	10/14	15/9	12/-
1,000,850	£1	" " Deferred	nil	—	2/-	1/-	2/4½	1/1½
58,595	10/-	Enfield Autocar Co.	—	—	—	—	1/- p.	6/6
99,977	£1	Enfield Cycle Co.	6%	Oct.	18/-	9/4½	25/-	17/3
24,985	£1	" " Cum. Pref. 7%	7%	Feb. and Oct.	23/6	19/-	23/6	22/6
49,907	£1	French Dunlop	10%	Feb.	31/-	16/3	25/-	21/6
49,900	£1	" " Cum. Pref. 6%	6%	Feb.	18/-	12/6	17/5	15/6
250,000	£1	Hummer	nil	—	6/-	1/7½	18/6	5/4½
250,000	£1	" " Cum. Pref. 6%	3% ^c	—	12/7½	5/3	21/6	12/7½
100,000	£5	J. Lucas, Cum. Pref. 5%	5%	Feb. and Oct.	5	4½	5	—
75,000	£1	Rover	10%	Nov.	30/-	5/9	35/-	20/-
70,000	£1	Star Cycle Co.	—	—	4/1½	1/6	11/6	4/-
50,000	£1	" " Cum. Pref. 7%	—	—	10/-	4/7½	20/9	10/-
55,210	£1	Sunbeam M.C. Co.	7½%	Oct.	13	13	35/6	30/10
40,000	£1	Swift	10%	Nov.	21/-	11/9	30/-	26/9
100,000	£1	" " Cum. Pref. 6½%	6½%	June/Nv.	16/10	11/-	18/9	16/3
148,500	£1	Thornycroft, J. I. & Co.	nil	May	18/9	16/10½	17/6	8/-
108,000	£1	" " Cum. Pref. 6%	6%	May and Nov.	21/3	17/6	20/-	13/9

^a Plus bonus, making 10%. ^b Plus bonus, making 14%. ^c This 3% pays to end of August, 1903.

SPEEDY MOTORING AT BLACKPOOL.

BAD WEATHER ON THE FIRST DAY, BUT PLENTY OF GOOD SPORT, AND BIG CROWDS WATCH THE RACING.



MOTOR racing on a fine promenade, wide, of good surface, and affording ample accommodation for a large concourse of spectators: motor racing with the low murmur of the waves as a soft accompaniment to bind together the violent phases as the cars go roaring by at intervals; motor

racing conducted by a crowd of enthusiasts with plenty of money to "do the thing" well; in these circumstances it can be a most enjoyable pastime. But in October, with a north-west wind, with some damp in it, with heavy and threatening clouds constantly bustling across the sky, it is rather a trying experience. The fine weather that prevailed in the early part of the week unfortunately gave out immediately prior to the meeting, and the early part of the proceedings were, in a small measure, spoiled. The track becomes greasy when rain falls, and brings to light the presence of the layer of road dirt that has got blown on to the promenade. The surface with merely clean rain water is not in the least slippery, and this is an argument in favour of the sweeping and washing of roads, and the employment of waterproof surfaces to permit thereof, not only because of the greater safety of a clean road, but because of its improved sanitary condition. However, the rain that fell on Thursday quite spoiled the prospects, and when practice was indulged in on Friday morning the order was virtually "go warily," and, as a consequence, much of the value of the work was lost.

The Competitions Committee of the Blackpool and Fylde District Motor Club, with the active assistance of the Blackpool Corporation, has worked exceedingly hard in order to secure

A LIVELY AND ATTRACTIVE MEETING, and we would give them every praise for the manner in which they have organised and carried out the affair.

The local arrangements have been exceedingly well carried out. There is an air of business about the officials, the details are well considered, and an abundance of enthusiasm is carrying everything through with a finish and with a strong air of sport which are rare at such meetings. Only on two points can any criticism be urged. One is in connection with the first set of plans, and the other is in the difficulty which has presented itself in avoiding the favouring of a certain make of car. Our local correspondent gave, in our last issue, the grounds for complaint against the Automobile Club as seen by the organisers of the meeting. Only the one side of the matter was given,

and as it was virtually an *ex parte* statement, one had to accept it as such, expecting to find that the governing body was

NOT SO BLACK AS IT WAS PAINTED.

Of course, the whole trouble arose through the inexperience of the Blackpool club. It had, no doubt, gone to infinite labour in making its plans, when, if it had had experience in the conduct of automobile meetings, it would have known that the rules governing the sport covered many of the points. In justice to the local club let it be said, however, that very few organisations indeed have had this experience, and therefore it would have been better had the help of some official of the Automobile Club been secured in the first place. Then the whole matter would have gone through smoothly. But with certain breaches of rules that have been planned to protect competitors in all open events, it was obvious that the Automobile Club could at any moment, even at the eleventh hour, step in and insist upon the necessary alterations. We have had the opportunity of going into most of the complaints

against each side, and our own opinion is that the breaches were created solely through inexperience, and that the governing body would have been lacking in its duty had it affected to ignore them. However, tact and skilful diplomacy was at work on both sides, so that

THE DIFFICULTIES WERE OVERCOME

before they had assumed importance, and we believe that any repetition of the meeting at Blackpool will be all plain sailing.

The other matter is the strong Darracq element in the meeting. With Mr. Huntley Walker as the presiding genius of the meeting, it was obvious that the event would be well supported by this famous Anglo-French concern. No less a sum than £560 actually was given to the prize fund by the company and individuals interested in it. Most of the ideas and much of the skill in carrying them out came from the Darracq camp, so that the Darracq element largely permeated the meeting, and the feeling existed beforehand that favouritism would be found to be at work all the time. However, we say, after examining the prevailing conditions in a



A quarter of the grand stand at Blackpool.



NOVELTY AT BLACKPOOL RACES.

Race between two Crossley char-a-bancs, each carrying 22 passengers.

Blackpool.—Continued.

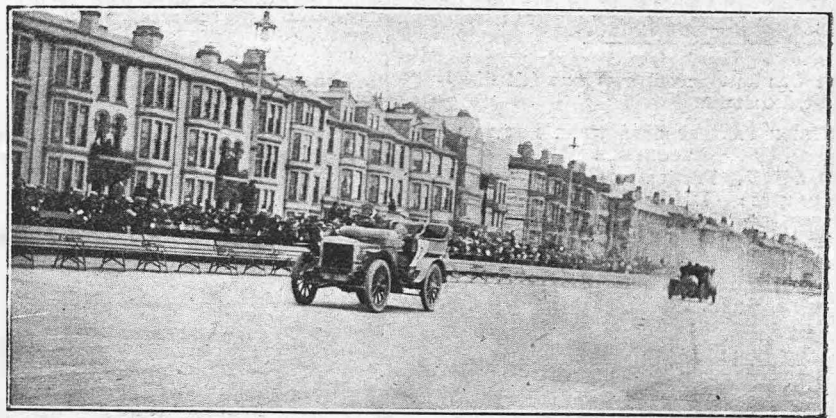
most critical spirit, that the general good sportsmanship of Mr. Huntley Walker, Mr. Warwick Wright, Mr. Rawlinson, Mr. Guinness, Mr. Smith-Winby, and Mr. Cooke has prevented anything approaching favouritism or a monopoly. And that this fair dealing was expected by the trade is shown by the fact that the entry has been large and most comprehensive. No firm of note with the least desire to be known as the producers of a speedy and efficient vehicle has stood out of the programme. Hence the events have filled, and in many cases filled well. The Daimler Co. has sent quite a fleet of cars down. Napier, Humber, Clement-Talbot, Rover, Minerva, Belsize, Argyll, Germain, Thornycroft, Rapid, F.I.A.T., Itala, Mercedes, Ariel, Rochet-Schneider, De Dietrich, Crossley—these are some of the names to be found on the programme, and it must be admitted that they are fairly representative of the industry. As a matter of fact, we noticed more than one instance where the chance of a Darracq car was thrown away, the one who had to drive being at the time occupied in some important work, or engaged in settling some difficulty. This is the reason why Mr. Huntley Walker was so often a non-starter.

Blackpool: The First Day's Racing.

With such a magnificent prize list the entries would, naturally, be expected to be very numerous. The entries for the first day's racing totalled 163, although this does not represent the actual number of vehicles employed, because, in the racing car classes, of which there were six, a car could compete in three or four. An enormous crowd had gathered to witness the racing on Friday, the barriers being lined, on an average, four deep for over a mile. The grand stand, on the other hand, was but sparsely occupied, except in the cheapest priced seats. The stand, however, was well placed, giving an excellent view of the cars approaching the finish, over half a mile of the track being in sight.

THE GENERAL ARRANGEMENTS

for the conduct of the meeting were good, except at the start, where a small army of "marshals," with their names on the programme and red badges on their coats, failed to do anything in the way of marshalling the cars. In fact, but for a little firmness on the part of the starting time-

**RACING AT BLACKPOOL**

G. Burton, on his 28h.p. Daimler, leading H. P. MacConnell on 40h.p. Rapid.

keeper, chaos would have reigned supreme. One or two men who had had experience at the work came to the assistance of this official, carrying out the task, and leaving the be-decorated individuals to enjoy their chatting and their smoking and their hindering. It is always a difficult problem to find posts for those whom it is desired to compliment, but as so much of the success of a meeting depends upon the rapidity with which the cars are "fed" up to the starter, ready with numbers and qualified to start, experienced officials only should be deputed to carry out this work. Cars, unlike bicycles, cannot be readily placed to one side if they are not ready to start, so as to make room for those that are ready, hence the delays that seem to be inseparable from motor meetings, but which could, we feel sure, be entirely prevented by experienced officers.

The rain deprived the day's meeting of much of its interest and excitement, for whilst the £900 class was being contested rain fell, and continued almost throughout the trials of the unrestricted class. After the motor omnibus event, Mr. Huntley Walker took his light racer along the course at

A FIFTY MILES AN HOUR BAT,

in order to test its condition. He was followed by one or two others, including Lee Guinness on the 200h.p. Darracq, but it was obvious that none of them was let-

ting his car out. Opinion, as the result of these tests, was very mixed among the racers as to whether an attempt should be made to run off the racing car classes, and had not those who had made the trial essays confessed that showers of dirty water smattered the goggles and made it difficult to see, some would have taken the risk, and have trusted to skill to counteract any ill effects from skidding. However, the wisest course was taken, and the racing events were postponed until the morrow.

The rain that fell overnight and in the early morning had checked practising, but, long before noon, the rain had ceased, and the cold north-west wind that blew almost with the force of a gale straight down the track soon dried up the surface, although its strength precluded any possibility of fast times. The meeting opened with a couple of motorcycle events—a standing mile handicap for touring machines and a one mile scratch race for machines of unlimited size and weight. The first was run off in four heats and a final, R. M. Brice, on a 3h.p. Brown, winning, his time being 1min. 29½sec., second place falling to F. Hulbert, on a 3h.p. Triumph. Giuppone and Cissac, with their 14h.p. Peugeotts, were expected to outshine the English riders on their 6 or 7h.p. machines, but W. W. Genn won his heat against Cissac, and ran second to Giuppone in the final. Giuppone covered

THE MILE FROM A STANDING START IN 1MIN. 0½SEC.,

or nearly 60 miles an hour, and, owing to the wind, this was the fastest speed recorded during the day.

The car events on this the first day were all over a standing mile, and all cars had to be fitted with standard touring bodies and silencers, and carry four people. The first of them was for cars having a chassis price of not more than £300. Nine cars competed in heats of three, the winner being the 14h.p. Vulcan, driven by Mr. T. Rimmer, whose time was 1min. 37½sec. (37m.p.h.), the second being Mr. Ashford's 10-12h.p. New Eagle, time 1 min. 49½sec. (32½m.p.h.), Mrs. D. Reid's 10h.p. Darracq being third in 2min. 9½sec. (28m.p.h.).

For cars having a chassis price of not over £450, event number four had drawn 29 entries, and there were only two non-starters. The races were again run in heats of three, and only two of the heats had any excitement, A. E. George, on the much-debated Tourist Trophy Argyll, fighting out a close finish with Mr. May's 12-16h.p. Clement-Talbot; whilst the Humber, Germain and Minerva were only separated by three-fifths of a second between the first and the last. Thus, after all the heats had been run off and the re-



The racing cars ready to start at Blackpool.

Blackpool.—Continued.

sult was announced, everyone felt disappointed that the

THREE FASTEST CARS WERE NOT PUT TOGETHER

into a final. For instance, on time the result was: 12-16h.p. Clément-Talbot, driven by H. G. Day, 1min. 20 $\frac{3}{4}$ sec. (42m.p.h.), first; 16-20h.p. Beeston Humber, James Reid, 1 min. 27sec. (41 $\frac{1}{2}$ m.p.h.), second; and 22h.p. Minerva, M. Ross Browne, 1min. 27 $\frac{3}{4}$ sec. (41m.p.h.), third. These three cars would obviously have made a fine race, but the opportunity was not grasped, and thus the meeting never lost its tameness.

In the event for cars having a chassis price of not more than £650, 17 cars competed in pairs, no excitement resulting. The placings were: Warwick Wright's 20-35h.p. Darracq, 1min. 18 $\frac{3}{4}$ sec. (46m.p.h.), first; A. Lee Guinness's 20-35h.p. Darracq, 1min. 18 $\frac{3}{4}$ sec., second; and Tom Thornycroft's 30h.p. Thornycroft, 1min. 18 $\frac{3}{4}$ sec. (45 $\frac{1}{2}$ m.p.h.), third. The final here would have been a good race. The 20-35h.p. (130 by 130) Darracs showed up well in this race, and so did the 40-45h.p. New Eagle, the 40h.p. Bianchi, and the 28h.p. Daimler, driven by Mr. Instone.

In the £900 class, again run off in pairs, a fine race was seen between the eventual winner, A. Rawlinson, and his opponent in their heat, but the former rapidly drew away, winning, on his 40h.p. Darracq (160 by 140), in 1min. 2 $\frac{3}{4}$ sec. (57 $\frac{1}{2}$ m.p.h.). E. M. C. Instone, on a 35h.p. Daimler (134 by 150), rode alone and scored second fastest time, 1min. 9sec. (52 $\frac{1}{2}$ m.p.h.), whilst the next six places fell to 35h.p. Daimlers, R. S. Grigg being third in 1min. 9 $\frac{3}{4}$ sec.; Albert Farnell fourth in 1min. 9 $\frac{3}{4}$ sec.; F. A. Bolton fifth in the same time, H. F. Newsum sixth in 1min. 11sec.; G. D. Powell seventh in 1min. 15 $\frac{1}{4}$ sec., and E. P. Prestwich eighth in the same time. This was rather a remarkable record. The class for cars unrestricted as to price produced 11 starters, and was won by A. Rawlinson on the car that won the previous race, his time being 1min. 2 $\frac{3}{4}$ sec., whilst second place fell to E. E. Wadcoat, on a 100h.p. Mercedes (160 by 145), in 1min. 8 $\frac{3}{4}$ sec., and third place to Arthur Birtwhistle's



A. LEE GUINNESS,
who beat records at Blackpool on the
Darracq racer.

45h.p. Daimler (150 by 150) in 1min. 9 $\frac{1}{4}$ sec.

Rain had by now thoroughly soaked the track, whilst the cold wind had chilled the spectators to the marrow, but with umbrellas up few left their posts. The motor omnibus event was to be a kind of speed-cum-appearance competition, the speeds attained being kept back. The first heat was between the 24-40h.p. F.I.A.T. and the 40h.p. Ryknield, each with 22 passengers up. The former won by a hundred yards. Then a 35-40h.p. Crossley beat a 35h.p. Leyland, and finally one 40h.p. Darracq-Serpollet beat another of the same race. The public took a keen interest in these three heats, whilst the passengers on the Crossley and Leyland (with char-a-banc bodies) entered into the spirit of the race, and when the former had reached the finishing line its load stood up and waved and cheered with excitement. The placings were: Darracq-Serpollet, first; F.I.A.T. second, and Darracq-Serpollet third. As already related, the racing car events were abandoned after a dreary wait of over an hour and a half.

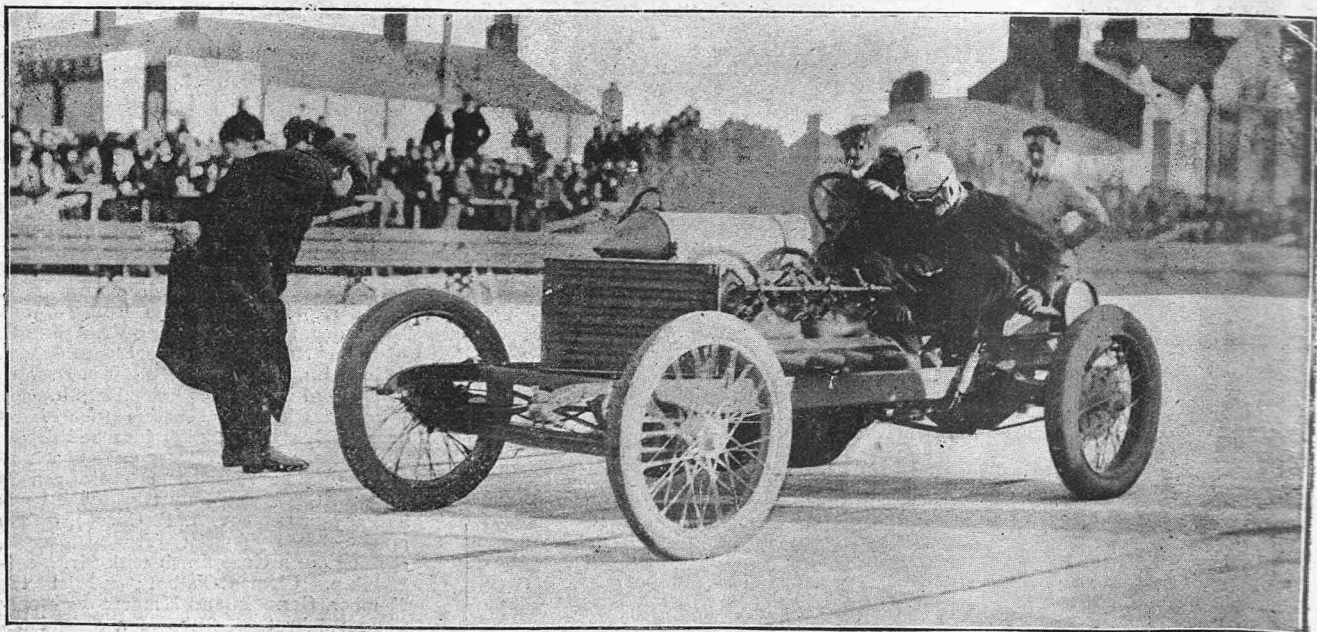
The Second Day's Events.

The night turned out wet and miserable, whilst a fine period at about 8 o'clock on Saturday morning was followed by a heavy downpour, which continued until about 11 o'clock, and a postponement was generally considered inevitable. Some members of the Blackpool Corporation met and considered the possibility of allowing the track to be used on the Monday, but this project was declared not to be feasible, and finally it was decided to go through the programme as well as was possible. The track dried up during the two flying kilometre touring-car races, which were first run off, and then, taking advantage of this fact, the racing-car events left over from the previous day and the motorcycle events were run off. Then followed some of the flying kilometre racing car spins, next the balance of the touring-car events over the same distance; then the motorbus contest; then a hailstorm; then the local handicap and the Darracq Cup contest; and, finally, three racing-car events rolled into one. It was getting dark during the Darracq Cup event, and the racing cars made their final essays between 6 and 6.30 p.m., when it was quite dark,

THE MASS OF FLAME SHOOTING OUT

from the open exhaust ports adding to the extreme weirdness of the effect.

For the sake of clearness, we will give the results in some sort of order. Thus, to deal with the touring-car events (flying kilometre) the £300 class was won by the 14h.p. Vulcan in 1min. 3 $\frac{3}{4}$ sec. (35 $\frac{1}{2}$ m.p.h.); 10-12h.p. Humber being second, 1min. 4 $\frac{3}{4}$ sec., and another of the same make third in 1min. 12 $\frac{3}{4}$ sec. The £450 class (which brought out some of the Tourist Trophy cars) was won by the 18h.p. Germain, driven by H. Ramoisy, his time being 51sec. (44m.p.h.); the 16-20h.p. Rover, driven by Philip Graham, being second in 53 $\frac{3}{4}$ sec., and another Germain third in 54 $\frac{3}{4}$ sec. The T.T. Argyll was fourth, and a 15h.p. Darracq was fifth. Other cars that did well were J. Newton's Rover, M. Ross Browne's Minerva, the Clément-Talbot, the Beeston Humber, and E. Lisle's Star. The £650 class was won by the 40-45h.p. New Eagle (much to the joy of its driver, Ralph Jackson), which covered the distance in 43 $\frac{3}{4}$ sec. (51m.p.h.), second place



Mr. A. Lee Guinness starting on his Darracq in his successful effort to lower the standing kilometre record.

Blackpool.—Continued.

going to Warwick Wright's 30h.p. Darracq in 45½sec., and third place to Tom Thornycroft's 30h.p. Thornycroft in 46sec. The fastest 20-35h.p. Darracq was that driven by Lee Guinness, whose time was 48sec.

The £900 class was won by the 40h.p. Darracq driven by A. Rawlinson, whose time was 33sec., and speed 67½m.p.h. The next eight places were filled by 35h.p. Daimlers; A. Farnell's time being

driven by Gabriel was disappointingly slow, whilst J. E. Hutton's 135h.p. Mercedes was too highly geared for such a short course. The 16-20h.p. Argyll had been entered in the light racing car class against cars of 50 and 80 h.p., and, to get inside the weight, it was stripped to its bare chassis, with a microscopic seat for the driver. It was surprisingly fast.

Miss Dorothy Levitt's essay on the six-cylinder Napier to establish a ladies' record evoked very great interest, and the announcement of her time was received

Won standing mile event for heavy cars, 45½sec. (½sec. slower than world's record).

Won flying kilom. event, 21sec. (106.4 miles per hour), English record.

Fastest time and second place in standing mile handicap, 45½sec.

Cecil Edge's 90h.p. Napier:

Time—Sec.

Second in standing kilometre event, after tying with 200h.p. Darracq 33½

Second in standing mile event for heavy cars ... 51½

Second in flying kilom. event ... 24½

Miss Levitt's two runs, each ... 24½

Second fastest time and third place in standing mile handicap ... 46½

Warwick Wright's 100h.p. Darracq:

Won standing kilom. event for four-cylinder cars ... 35

Won standing mile event for four-cylinder cars ... 51½

Won flying kilom. event for four-cylinder cars ... 26

Fourth place in standing mile handicap.

Huntley Walker's 80h.p. Darracq:

Won standing kilometre event for light racers ... 41½

Won standing mile event for light racers ... 57½

Won flying kilometre event for light racers ... 30½

Second in standing mile event for four-cylinder cars ... 54½

Huntley Walker's 100h.p. Darracq:

Third place in standing kilom. event for four-cylinder cars ... 39

Fourth place in standing kilom. event for any cars ... 39½

Third place in standing mile event for four-cylinder cars ... 56½

Second place in flying kilom. event for four-cylinder cars ... 26½

Third place in flying kilom. event for any cars ... 27

Sixth place in standing mile handicap ... 56½

J. E. Hutton's 135h.p. Mercedes:

Fourth place in standing mile event (four-cylinder cars) ... 58½

Second place in standing kilom. event (four-cylinder cars) ... 38½

Third place in standing kilom. event (any cars) ... 38½

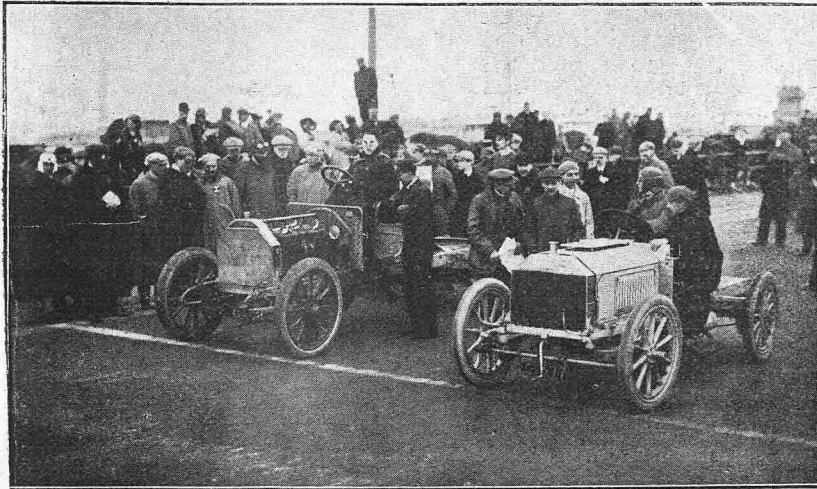
Third place in flying kilom. event (four-cylinder cars) ... 27½

Fourth place in flying kilom. event (any cars) ... 29½

A. E. George's 16-20h.p. Argyll:

Fourth in flying kilom. event for light racers ... 45½

Won standing mile handicap (40sec. start) ... 43½



The 80h.p. Napier and 50h.p. Itala, starting at Blackpool.

33½sec., E. M. C. Instone's 35½sec., and F. A. Bolton's 36½sec. Rawlinson's Darracq also won the unrestricted class in 32½sec., his time thus improving slightly. Huntley Walker's 100h.p. Mercedes, driven by his mechanic, filled second place in 33sec., whilst 45h.p. Daimlers occupied the next three places. P. Martin's time being 33½sec., de Martino's 33½sec., and A. Birtwhistle's 34½sec.

THE STANDING MILE HANDICAP,

for touring cars belonging to members of Lancashire clubs, was won by Havelock Lonsdale's 30h.p. Daimler, Gordon Chapman's similar car being second, and H. Hollingdrake's 15-20h.p. De la Buire being third. The Darracq Cup (standing mile open to any type of Darracq touring car handicapped according to horsepower) was contested by 22 cars, ranging in power from the little "tens" to the new 20-35h.p. machines.

The motorbus competition was a repetition of the previous day's contest, the public taking a great interest in the event. Cissac won the motorcycle scratch race in 29sec., and H. Reed, on a 5h.p. Peugeot, the handicap.

To deal with

THE RACING CAR EVENTS

at length would be needless. The cars went singly over the course, and the same cars were seen so frequently that each race was closely like another. The fastest cars were Lee Guinness's eight-cylinder 200h.p. Darracq, which hurtled along the track at what looked a terrific pace. Cecil Edge's six-cylinder 90h.p. Napier was next in speed, although it tied with the big Darracq in one event. The smooth, quiet running of the Napier is most deceiving, its pace being much greater than it seems. Huntley Walker's light 80h.p. Darracq, driven by himself, and the 100h.p. Darracq driven by Demogeot were very fast, but the surprise amongst the Darracq cars was the big four-cylinder car driven by Warwick Wright, with only a water tank erected in front of the engine, radiation being dispensed with. The De Dietrich

with delight, for it was seen that she had covered the flying kilometre in 24½sec., thus equalling Cecil Edge's time. She made a second attempt, and might have done a shade better, only the front part of the bonnet of the car became unfastened and swayed in a most dangerous manner. Had it come off, it must have killed the driver, but fortunately its one remaining bolt held until the car was pulled up beyond the tape. The two attempts were each timed at 24½sec., or 90½ miles an hour.

THE RESULTS OF THE RACING CAR EVENTS

are perhaps best set out so as to show the performances of each car:—

A. Lee Guinness's 200h.p. eight-cylinder Darracq:

Won standing kilometre event, beating world's record, time 32½sec. (110.4 kiloms. or 68.7 miles per hour).



The Mercedes car which was smashed in a collision with Mr. A. Lee Guinness's 70h.p. fouring Darracq.

Blackpool.—Continued.

Breezes from Blackpool.

The display of silver cups, numbering in all about 50, was most dazzling. The Lee Guinness 100-guinea cup is a perfect work of art.

The success of the meeting is due to Mr. Huntley Walker and a very willing band of enthusiasts. The utmost courtesy was shown to everybody, and there was a complete absence of red tape, and none of those dreadful secrets about some detail or other that the Automobile Club is so fond of.

Darracqs were pre-eminent in the racing classes. Fourteen wins, two world's records, and one British constitutes what is known in sporting parlance as "scooping the pool." The success reflects creditably on the Dunlop Co., as these well-known tyres played their part nobly in all the important events.

An interested spectator, who keenly followed the arrangements, was that prince of organisers, Mr. Robert J. Smith, of Glasgow. Asked what he thought of the meeting, Mr. Smith said, "It's a perfect marvel of organisation." Praise from Sir Hubert is praise indeed, and one could even detect the blushes behind the mud-stained face of Huntley Walker.

Starter Ebbelwhite came through the fire of his arduous duties both figuratively and literally, and if he had not sent off the pair of Darracq-Serpellet buses 15 seconds before he intended, he might have been badly scorched in the discharge of his duties. To stand between two steam omnibuses whose burners were flaring out on both sides of him was the nearest approach to Dante's Inferno Ebbelwhite has experienced.

Mr. Huntley Walker was ubiquitous, and soon established himself prime favourite by his breezy good-natured manner. Nothing seemed to trouble him. He was even cheerful with the rain trickling down his neck, his suit thickly coated with liquid mud, and his face as black as the ace of spades. Mark Tapley was second-hand goods compared to him. Some humourist suggested that the style of the well-known Darracq and Minerva agency should be altered to "Huntley Wright and Walker, London, Ltd."

Miss Dorothy Levitt gave a fine exhibition of pluck and nerve in her two attempts to establish a ladies' record after the flying kilometre race.

"Dare-Devil" George is how the Argyll Tourist Trophy driver is referred to. His performance on the Argyll light racer (the Tourist Trophy car stripped to its bare boards) was one of the best at the meeting.

One objectionable feature about the morning practising was the noise from the open exhausts, particularly of the racing cars. We think that, for the peace of the inhabitants, all cars should be effectively silenced whenever they are not actually racing.

"Two world's and one British are not the only records broken to-day," said Mr. Alfred Bird. "I would add three more—a record meeting, a record prize collection, and a record in hospitality." And so said all of us.

The head wind on both days not only compelled passengers to crouch down in the tonneaus, but many of the drivers adopted an attitude that savoured of an afternoon siesta. The driver of one of the official runabout cars thought it effective to copy them, and he was promptly dubbed "the sloppy driver" by the occupants of the Press stand.

Early-morning practice used to commence at about 5.30, when it was still dark, the light coming about six o'clock. On the Saturday morning Lee Guinness was on his 70h.p. touring car, and an 18h.p. Mercedes (non-competing) was turning on to the end of the course as Guinness approached at high speed. Skilful driving averted a smash, but the Darracq had its wheels shattered.

Modesty is one of the most conspicuous accomplishments of Mr. Lee Guinness, whose popularity was unmistakably demonstrated at the Darracq dinner, where he timidly answered the imperative demands for a speech. It was obvious that Mr. Guinness is more at home on his 200h.p. Darracq than in after-dinner oratory. After a few attempts to strike on a theme, Mr. Guinness naively finished his effort by remarking, "I do hope it won't rain to-morrow!" a sentiment acclaimed by uproarious cheering, in the midst of which the blushing record breaker sank to his seat and safety.

Consistent running was shown by the 90h.p. Napier, which, including Cecil Edge's drive, clocked 24 $\frac{1}{2}$ sec. the distance respectively on three consecutive attempts.

Mr. J. E. Hutton, chatting about the Blackpool meeting, ascribed the non-success of his 135h.p. Mercedes to the fact that the car was too high-g geared for a short distance event.

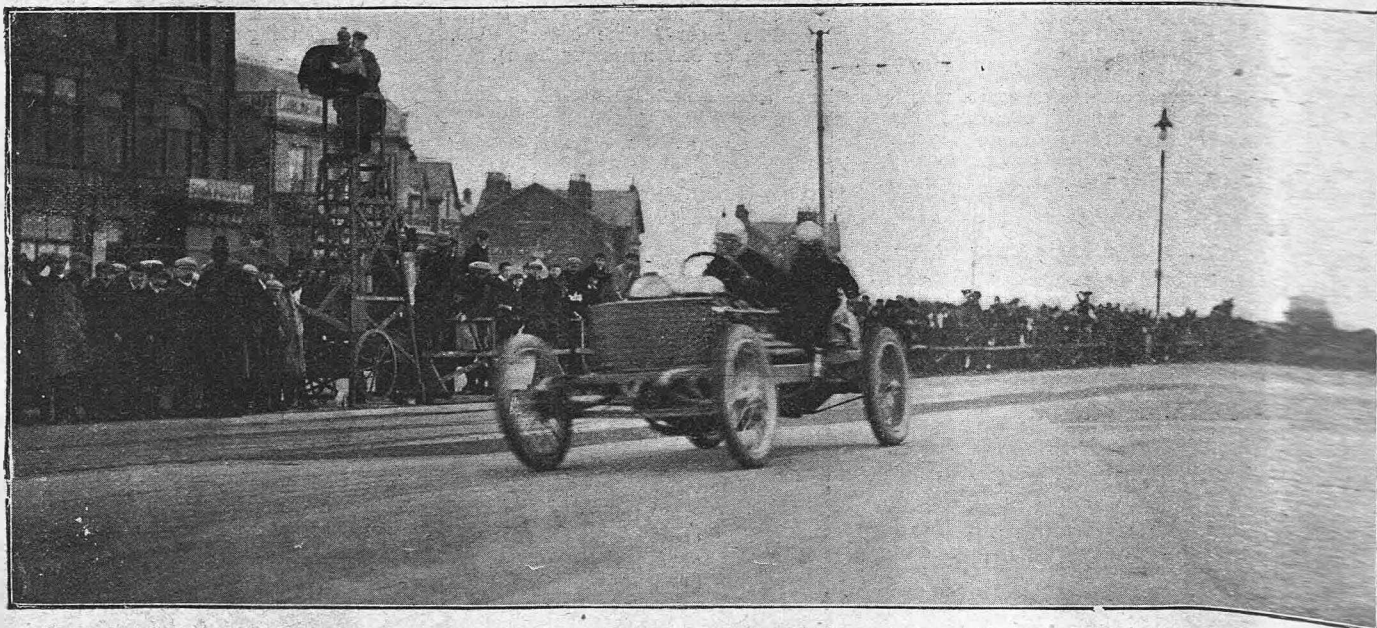
The festivities were a dinner by the Darracq Company, with Mr. J. S. Smith Winby in the chair, and one by the Competition's Committee, with Mr. Huntley Walker in the chair.

Mr. "Itala" Pope has had his license suspended for 12 months for driving at the rate of 39 miles per hour, according to the Maidenhead police. The suspension, however, did not prevent him driving at Blackpool, owing to the meeting being held on a private track.

The Darracq cars now hold nine world records, namely, the flying and standing miles and the flying and standing kilometre for light racers (up to 650 kilograms) and the same for the heavy racers (up to 1,000 kilograms), the ninth being the two miles record of Demogeot's.

Mr. Paul Brodman drove up to Blackpool on his 30h.p. Daimler, and related an amusing incident which occurred on the fork roads outside Warrington. Asking the direction, Mr. Brodman was told one way by one pedestrian and another by a second; a third man who came on the scene confirmed No. 1's opinion, while still another road straggler gave his verdict in favour of adviser No. 2. The argument between the four geographers became so heated that eventually they resorted to fisticuffs, and were hard at it when Mr. Brodman left to make enquiries further on.

A very curious fact was the sudden rending of number cards from the car as they reached the grandstand. Card board numbers were altogether too flimsy for the work, and the methods of fastening were open to improvement. Caps innumerable went overboard as drivers and passengers sat up and caught the full force of the gale after passing the tape. Warwick Wright jolted the cushions from the mechanic's seat of his 100h.p. Darracq, and a few yards further on a whole lot of stuff went overboard.



Mr. A. Lee Guinness beating kilometre record on his Darracq racer at Blackpool.

News

The Blackpool meeting was a success.

The weather spoiled the conclusion of the first day's racing, and all were glad to get shelter.

A police trap is working on Kingston Hill, and motorists driving in the vicinity should beware.

Carl Vincens, who was pitched out of Director Sierke's car near Tegel, in the Berlin Balloon Pursuit, has succumbed to his injuries. He had fractured his skull. Herr Vincens was the Berlin representative of Hamburg rubber works and well known in sporting circles. He leaves no family.

We understand that the Macintosh Company are extremely well pleased with the results of the tests under which the Macintosh motor tyre has gone, and that we shall hear considerably more of this brand of pneumatics in the motor world very shortly.

From many quarters we are receiving notifications of tyre improvements, and we may possibly see a boom in detachable rim flanges for the 1907 season, and the forthcoming Olympia show will reflect this in the tyre section, which promises to be more interesting than usual.

The Chateau-Thierry hill climb has had to be abandoned this year on account of the awkward bend being too dangerous for present speed rates. The fixture, however, is not to fall through, as the organisers are going to bank the corner, and propose holding the contests next spring.

Town Carriage Competition.

This contest, promoted by the A.C.G.B.I., commenced yesterday by the official examination of all the vehicles at the Niagara Garage at Westminster, which will be continued to-day, the actual driving tests occupying the whole of Wednesday. The entries are divided into two classes, Class A, up to £600 value, having six, and Class B, over £600 value, 18 entries. In Class A there are 10h.p. Adams-Hewitt, 12h.p. Georges Richard, 6h.p. Opperman, 14h.p. Georges Richard, 14h.p. Unic, and 14-18h.p. Spyker. In Class B there are 16-20h.p. Beeston Hummer, two Krieger electrics, 12-16h.p. Wilson-Pilcher, 20h.p. Pilgrim, two Whites, two 20h.p. Lanchesters, four Electromobiles, 20h.p. Dennis, 14h.p. C.G.T., 14-16h.p. James and Browne, 28h.p. Ariel, 24h.p. Germain, and 40h.p. Napier. The cars will be submitted to inspection under a number of heads, such as emission of smoke, noiselessness, comfort, body finish, etc., etc., and will be driven through the streets of London for a 30 miles test under traffic conditions.

In the list of entries of the vehicles entered for the Town Carriage Competition, no mention is made of the six Argyll earriages, due to the fact that no official intimation of these was sent to us by the Automobile Club, we only learning, by the merest accident, yesterday, that they were competing. In the official list in the "Automobile Club Journal" of last week the Argyll cars are omitted. The six cars are a 16-20h.p. limousine, £850; 16-20h.p. landaulette, £820; 14-16h.p. limousine, a new short chassis, £650; 14-16h.p. three-quarter landaulette, £820; 14-16h.p. double landaulette, £620; and 14-16h.p. Argyll cab, £425.

The German pace-follower Robl's new 50h.p. Opel has been wrecked near Prosen, in Saxony. He was on his way to Dresden for a big cycle meeting there, and at the place mentioned had to swerve suddenly to avoid running over a woman and her dogcart. The car collided with a tree, and by the force of the impact Robl and his manager were flung headlong into a field, where they lay unconscious.

The Dumbartonshire police have been recently very vigilant upon the Glasgow and Stirling road through the parish of Cumbernauld, between Mollinsburgh and Castlecary, where there is a detached portion of that county. There are several measured distances between Condorrat and Eastfield and Cumbernauld, and between Cumbernauld and Castlecary. No warning is given at the time, and the timing is done by men in plain clothes.

Accident Near Epping.

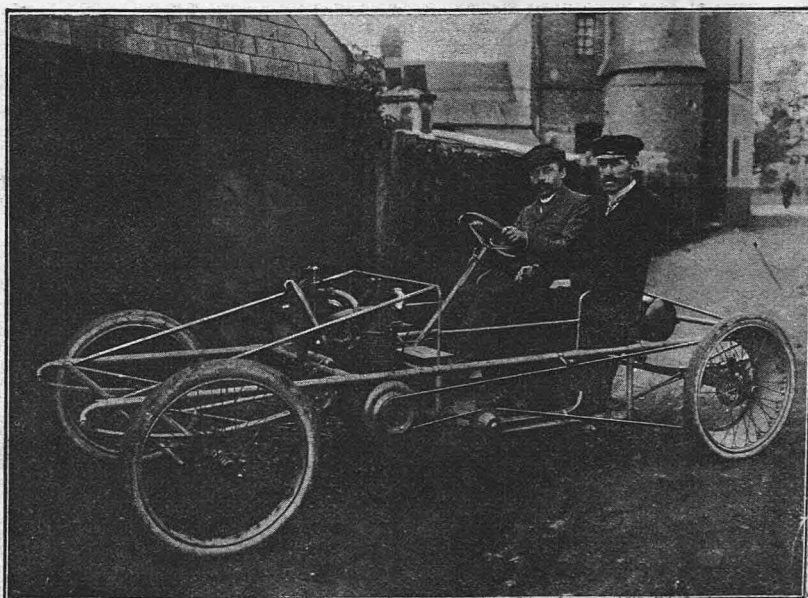
On Saturday night an accident occurred close to the Wake Arms on the London-Epping road, about 10p.m. A car was being driven from Newmarket to London, and when near the place named collided with a heavy pair-horsed market wagon which was returning empty from London. The lady and gentleman in the car were thrown out, the lady escaping with a few bruises, but the gentleman was badly cut about by broken glass. His wounds were attended to by a local surgeon, and he was able to leave the neighbourhood at a later hour. The near-side fore wheel of the car was smashed when it overturned and the front axle was broken. We cannot learn the cause of this accident, but those who know the road from Woodford through Epping and onwards, with the procession of unlighted market carts and sleepy drivers, will have no difficulty in surmising where the blame is to be placed.

"THE MOTOR" Show Specials will appear on Tuesdays, November 6th, 13th, and 20th next. They will be novel issues.

Autumn is now with us, and, however tempting the weather may appear, it should not be forgotten that the sun has little warmth, and motorists should therefore be fully protected by extra clothing against north-east winds.

The Argyll Co. and the Automobile Club: A Settlement.

We believe we are right in saying that the Argyll Co. has handed to the Automobile Club an apology in terms which have satisfied the Club, whilst at the same time the position of the Argyll Co. in the matter is made abundantly clear. There were faults on both sides, and, for that reason, we are glad that the whole matter is settled and an unpleasant business is at an end. The Competitions Committee of the Club had no right to disqualify the Argyll on mere hearsay as to loss of ballast and a rough viewing of the tonneau, for Rule 29 of the Tourist Trophy regulations distinctly lays it down that every car which finishes the course (meaning, obviously, completing the distance) shall be driven to the club enclosure under supervision, and there re-weighed. If, after such weighing, the weight of the load carried is found not to conform to the regulation, the car shall be disqualified. This was entirely overlooked, and, instead, the car was ignored and treated as if it had dropped out of the race after the second round. That the car was exceedingly fast is shown by its performance at Blackpool, where, stripped, it covered the standing mile in 1min. 23½sec. (43½ miles an hour), and won the handicap and a £50 cup against the 200h.p. Darracq, the 100h.p. Darracq, the 135h.p. Mercedes, the six-cylinder Napier, and the 120h.p. De Dietrich.



The illustration depicts a gearless car, the product of a French maker, J. Corine. Mounted on a tubular frame are two independent 4h.p. air-cooled Buchet motors driving each wheel separately by long V belts adjusted by jockey pulleys; no differential gear is fitted. It is apparently quite an experimental type of vehicle, but it is stated that it can be driven up to 80 kilometres (50 miles) per hour.

NEWS.—Continued.

We are informed by Mr. F. B. Grundy, 141, Mayor Street, Bolton, that he has found a tail lamp lost by one of the competitors in the Rivington Pike hill climb. He will be glad to return same to owner on hearing from him.

Aids to Cleanliness in Driving.

There are several messy little jobs connected with motor driving which every practical motorist would gladly dispense with if possible. Among them may be mentioned that of "tickling" the carburetter when starting, a little operation which invariably involves the opening of the hood and diving into the more or less grimy mechanism hid therein. This, of course, can be obviated by fitting some special device, such as the "Bowden carburetter agitator," which enables the necessary "tickling" to be done from any position on the car.

World's Championship for Taximeters.

Six auto-taximeter cabs lined up at the Rue Royale on Friday morning last to contest what was termed the world's championship over the "Circuit de Paris," through the Place Concorde, Boulevard Saint Germain, Boulevard Henri IV., and the grand boulevards, the three laps making a total of 31 kilometres 500 metres (about 19½ miles), the result being as follows:—

(1) Louis Jamois (four-cylinder Chenard and Walcker 14-20h.p.) in 1hr. 3min. 35sec.—average per hour 18½ miles.

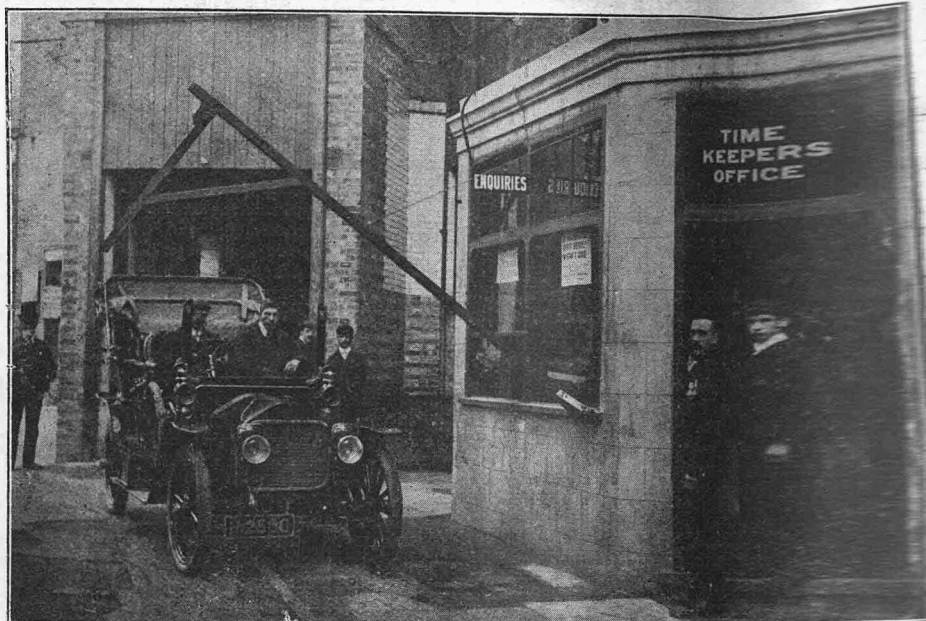
(2) Boutin (two-cylinder Tony Huber 10-12h.p.) in 1hr. 6min. 24sec.

(3) Galome (two-cylinder Renault 9h.p.) in 1hr. 7min. 10sec.

(4) Heret (three-cylinder Panhard-Levassor 8h.p.) in 1hr. 9min. 9sec.

(5) Quercy (two-cylinder Bayard 8h.p.) in 1hr. 11min. 59sec.

The drivers of the various vehicles exhibited great skill in handling the motor-cabs, particularly so seeing that within a year ago some of them were handling horse-driven vehicles. The race proved very exciting, the first two to finish being within a yard of each other. At the end of the contest the fares registered were as follows:—Bayard, 10 francs 15; Panhard, 10fr. 15; Renault, 11fr. 15; Tony Huber, 14fr. 55; Chenard, 14fr. 95. Boutin, the Tony Huber driver, made the fastest lap, viz., 20min. 50sec.

**TO CHECK CHAUFFEURS.**

The Wolseley Co. have erected the barrier shown above at their garage at Westminster. It is raised by a cord in the timekeeper's office. Every chauffeur must obtain a pass on leaving the garage, giving his number and the exact time of departure and return.

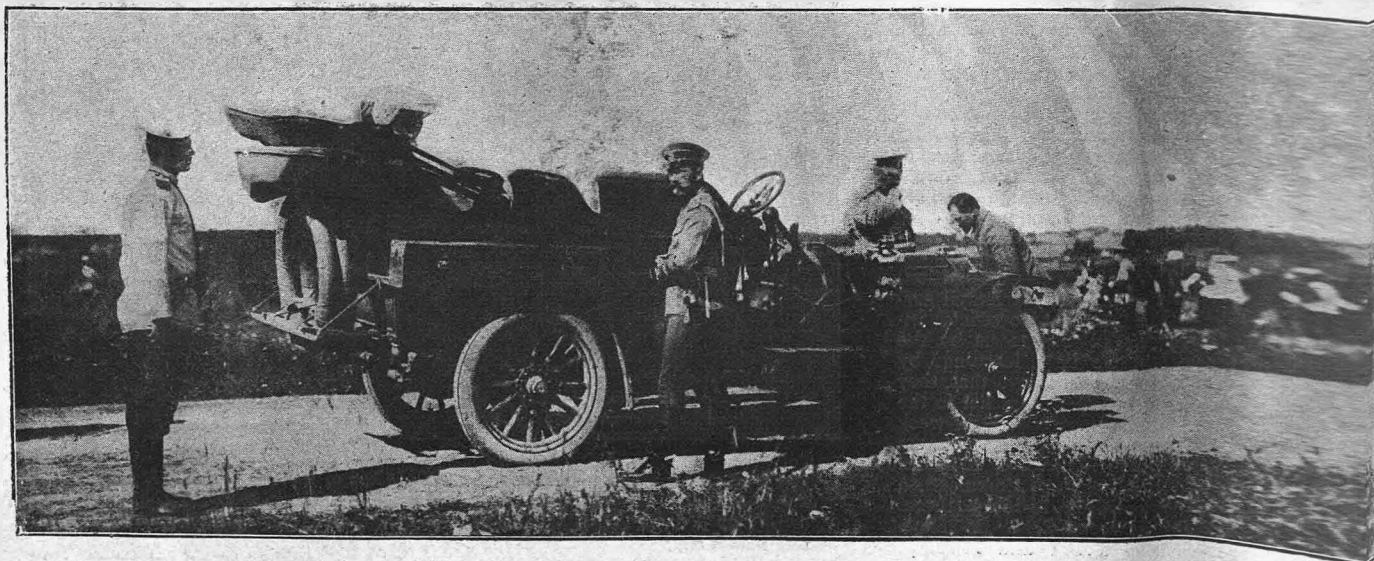
James and Browne in the T.T.

Messrs. James and Browne write as follows:—"We notice in the official returns of the Tourist Trophy race that our car is set down as having retired from want of petrol. This is, however, an error, as the facts are as follow:—Owing to an accident to the water pump on the Monday previous to the race, a cylinder water jacket was cracked. This was temporarily repaired, but as the car had to stand for two days in the club enclosure, without water in the jacket, the joint dried up, so that when Mr. Cattell started in the race it was leaking badly, and caused him to stop four times in each round he completed, to fill up, so that the times published are most misleading as regards the capabilities of the car. For the same reason he was eventually compelled to abandon the race in the third round. As regards petrol consumption, from the practice tests taken before the race, and from the amount left in

the tank when the race was abandoned we have every reason to believe that it should have completed easily on allowance." Our perambulating representative saw Cattell filling up with water on the mountain road, and he told us he intended to retire after the second round.

A Correction.

Messrs. C. S. Rolls and Co. write us as follows:—"I notice in your excellent account of the Tourist Trophy race some remarks concerning the ill-luck of one of the Rolls-Royce cars last year, in which you say that: 'A breakage of the gears was brought about at my starting down the hill without having the gears in mesh and then trying to get them into mesh while the car was in motion.' I hardly say that this is perfectly incorrect and that the second speed was in gear before the car started at all, and it was not till after the change from the second to the third speed that the breakage took place."



Czar of all the Russias, up-to-date in one thing, attends military manoeuvres on a motorcar. The Czar is in front of the picture, and is observing the doings of the camera man.

About Roads and Road Making.

Interesting Opinions on Highways, Road Construction, and Dust.

WITH the object of bringing the very important question of the roads into prominence, the Society of Motor Manufacturers and Traders held a dinner at the Hotel Cecil last Wednesday, followed by a discussion on "Highway Control and the Dust Problem." There was a very good attendance of the membership, but the speaking was mainly confined to visitors. Mr. Sidney Straker, the President of the Society, occupied the chair, and, announcing that the matter was of the deepest interest to the British public and of great importance to the industry, called on the Hon. Arthur Stanley, M.P., to open the discussion.

The Hon. Arthur Stanley mainly discussed the provisions of his own Bill, which he introduced into Parliament, largely at the suggestion of the Roads Improvement Association. The Bill, he said, aimed at bringing the public to realise that the roads were meant for traffic and should no longer be considered as playgrounds for children. Traffic was returning to the roads, and the principle must be revived that the roads were a means of communication between one place and another, and must be adapted to the traffic coming upon them. It was, he said, no use decrying motorists. We were obliged to go forward, and mechanical traffic was going forward with very large strides, so that the roads must adapt themselves to the traffic and not the traffic to the roads. He would welcome expression of opinion concerning the Bill, of which he read the chief provisions and touched on each. A central department for

DEALING WITH THE ENTIRE ROAD QUESTION was necessary, and this conclusion had already been arrived at by the London Chamber of Commerce and the Royal Commission on Motor Cars, and concerning the report of the latter, he hardly approved of the recommendation that the proceeds of licenses upon cars should be devoted to road improvement. The more enlightened men of the present Government, and especially Mr. John Burns, were not going to be held back by those who did not like motorists, so that he did not think we need have any misgivings on that point. If all the money derived from road users, as well as what was known as the "whisky money," which was now granted to local authorities, were administered by a central body for the improvement of the roads, all the money needed for that purpose would be found. He suggested that an influential deputation should be arranged to wait upon Mr. John Burns to see if the Government could be persuaded to take up the Bill, because, unless this could be done, they had little chance of success, for it was practically impossible to-day to get any private Bill through the House. He thought such a deputation would have little difficulty in proving that a tax upon horse-power is not a scientific basis of taxation. Finally, he thought that no Chancellor of the Exchequer would do anything so foolish as to hamper practically the only new industry of the present time.

Mr. Hooley, the well-known inventor of Tarmac, said if motorists only knew the difficulties which county surveyors had to contend with, they would not look upon them as such terribly benighted people as appeared to be the case at present. The benefit of most Acts of Parliament was upset by some small and ap-

parently insignificant clause, and on this point he would only mention that the Great North Road was

CONTROLLED BY NO LESS THAN 72 ROAD AUTHORITIES.

He need say no more as to the impossibility of anything like a uniform system under such conditions. He would like to know how many such authorities there were in London. Under present conditions urban authorities could retain the management of their own main roads and send in the bill to the county authorities, which was rather an impossible position. He had tried to introduce new systems of road management in his own district, but, whilst it is possible to make good roads, it is not possible to do so under the present system. He took exception to the report of the Royal Commission in that it recommended the system of construction with granite and grit, for he said the theoretical mosaic of closely-packed granite was impossible to attain under the present conditions. A square yard of granite road surface would absorb one inch of water in a single night, and he need not point out the effect upon the road when such absorption was followed by frost. Our present system of patching roads was very bad. It was not system, but a want of system. Abolish patching, said he, but coat the roads all over when they need it. Surveyors should hold their hand for 12 months when patching was needed, and then do the work thoroughly by a proper new top dressing. He invited members to come and see the roads in the Nottingham district, and he thought he could show them something which would interest them. He asked all not to theorise until they had seen something of the practice. Tar treatment of roads should not be applied only to the surface, but the road metal should be thoroughly treated throughout, so as to waterproof the whole of road top and prevent the moisture going into the road, which system would result in

NO MUD IN THE WINTER, AND BUT LITTLE DUST IN THE SUMMER,

concerning which latter he would only say that it was impossible to abolish dust entirely, so long as horses were used upon the roads.

Lord Montagu said no one could help being convinced by the quality of Mr. Hooley's roads. Concerning finance, even on the scale recommended by the Royal Commission, viz., an expenditure of £300,000 a year, the dust question could be practically solved. If the recommendations of the Royal Commission were passed as a Bill, it would meet the wishes of motorists and do all that was necessary to alleviate the dust trouble. Dust at present was our greatest enemy. He knew places on the Bath road where men had been driven out of their homes, as the dust in such places was intolerable, and such men formed a subterranean volcano, and would certainly insist on taxation—and heavy taxation—if something were not done. A tax based upon horse-power was the worst system possible to adopt. It was much fairer to take the weights of

cars unladen for taxing purposes, in illustration of which he quoted the light two-seated 50h.p. racer, which should be taxed as heavily as a touring car of less horse power but greater weight. He would suggest that

A BETTER BASIS OF TAXATION

would be one combining seating capacity and weight, 5cwt. per seat being allowed as the approximate weight of a car, and taxation should be based upon any excess of this. The dust question was being taken up in very influential quarters, and real efforts were being made to overcome it, and he advised motorists to get as many friends on Highway Boards as possible, in order to convince the rest that dustless roads spelt economy.

The Marquis of Winchester, an ex-member of the Royal Commission—who said that he was voicing his personal opinion only, and not necessarily that of the Commission—said that the efforts of the Commission were based on the idea of bringing motorists under the ordinary laws of the country. It had been said that money derived from fines should also be allocated to road improvement; but it did not seem possible to differentiate between the treatment of proceeds from fines for different offences. It had been said that the Commission was

HARD UPON THE COMMERCIAL VEHICLE,

but he thought it only fair that the commercial vehicle should pay for its use of the roads. He defended the recommendation of the Commission on the subject of granite roads on the ground that the recommendation was based upon experience of a particular road; but it was not haphazard granite construction, but construction with hand-picked granite and proper foundations which was recommended. The Local Government Board were very averse to granting loans for road construction, and if they did they required repayment in ten years. Mr. Stanley's suggestion with regard to the "whisky money" was not possible, as this was already earmarked for other purposes. Whatever views may be held as to the future of the motor industry, he was certain that motor traction would bring prosperity to many remote localities.

Sir John Macdonald said people did not complain of mud, because it was always with them, but they complained of dust because motors threw it up more than other vehicles. This would not be the case if the dust were not there. He had recently been over the road between Preston and Warrington. This was probably the vilest piece of road in the kingdom, but there were no more motors there than elsewhere, and their condition was just the same before motors were heard of, so that was proof that the dust and bad roads were not produced by motor traffic. A central authority to deal with the entire road system of the country was badly needed. The cost of maintenance of the roads would be reduced 50 per cent. if the roads were made properly waterproof in the first instance. He thought that whatever taxation may be made upon cars in the future, such taxes should not be levied upon doctors, or upon those who use their cars for professional or business purposes. Finally, he would like to say to the farmers that if they had not to keep their horses—sometimes for many months practically idle—on the produce of the land, the land devoted to horse keep could be used for the production of other foodstuffs which they could sell. Perhaps the farming element had not looked at the matter from this point of view.

A vote of thanks to the chairman concluded the business of the evening.

The Motor Boat.

The only journal devoted to motor boating.

Every Thursday.—ONE PENNY.

DARRACQ

Blackpool Successes

Two New World's Records.

A. LEE GUINNESS on 200 h.p. Darracq. Standing Kilometre in 32 $\frac{3}{4}$ secs.
HUNTLEY WALKER on 80 h.p. Darracq. Standing Mile in 54 $\frac{3}{4}$ secs.

New British Record.

A. LEE GUINNESS on 200 h.p. Darracq. Flying Kilometre in 21 secs.

Racing Car Events.

Standing Kilometre (Light Cars)
Huntley Walker on 80 h.p. Darracq **FIRST**
Standing Kilometre (Heavy Cars)
Warwick J. Wright on 100 h.p. Darracq **FIRST**
Standing Kilometre (4, 6 or 8 Cyls.)
A. Lee Guinness on 200 h.p. Darracq **FIRST**
Standing Mile (Light Cars)
Huntley Walker on 80 h.p. Darracq **FIRST**
Standing Mile (Heavy Cars)
Warwick J. Wright on 100 h.p. Darracq **FIRST**

Standing Mile (4, 6 or 8 Cylinders)
A. Lee Guinness on 200 h.p. Darracq **FIRST**
Flying Kilometre (Light Cars)
Huntley Walker on 80 h.p. Darracq **FIRST**
Flying Kilometre (Heavy Cars)
Warwick J. Wright on 100 h.p. Darracq **FIRST**
Flying Kilometre (4, 6 or 8 Cyls.)
A. Lee Guinness on 200 h.p. Darracq **FIRST**

Touring Car Events.

Standing Mile (Cars up to £650)
Warwick J. Wright on 30 h.p. Darracq **FIRST**
A. Lee Guinness on 30 h.p. Darracq **Second**
Standing Mile (Cars up to £900)
A. Rawlinson on 40 h.p. Darracq ... **FIRST**

Standing Mile (Unlimited Touring Class)
A. Rawlinson on 40 h.p. Darracq ... **FIRST**
Flying Kilometre (Cars up to £900)
A. Rawlinson on 40 h.p. Darracq ... **FIRST**
Flying Kilometre (Unlimited Touring Class)
A. Rawlinson on 40 h.p. Darracq ... **FIRST**

Total: 14 Firsts and 3 Records!

A. DARRACQ & Co. (1905), Ltd.
Walnut Tree Walk Kennington, S.E.

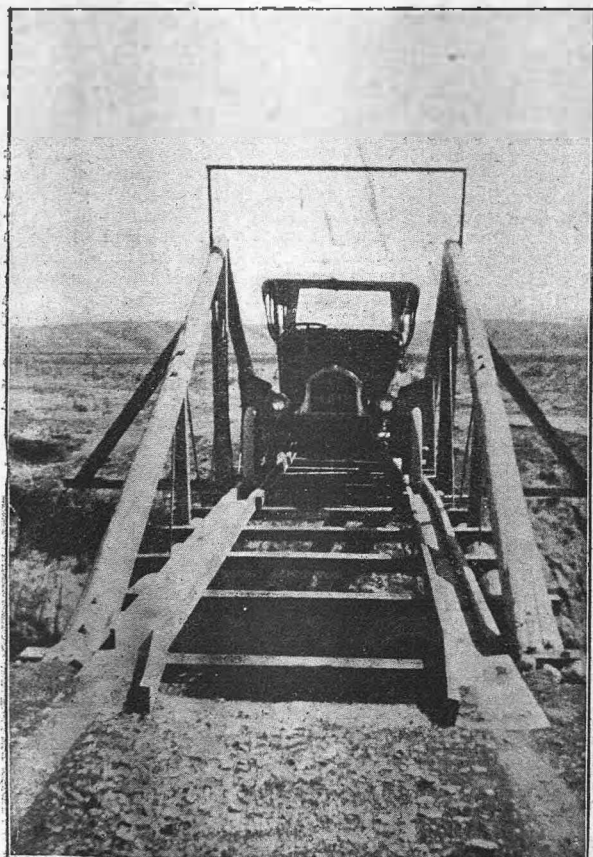
NEWS.—Continued.

Celebrating the Motor Car Act.

The arrangements for the great dinner which is being organised by the Motor Union to celebrate the tenth anniversary of the Act legalising the motorcar are now practically complete. The dinner will be held on November 14th at the Wharfedale Rooms, Hotel Great Central. The Hon. Arthur Stanley, M.P., chairman of the Union, will occupy the chair, and many distinguished public men will be present. Tickets (which are 7s. 6d. each) and any further information can be obtained from the secretary of the Motor Union, Mr. Rees Jeffreys, at 1, Albemarle Street, London, W. Ladies will be welcome at the dinner, and will add to the brilliancy of the scene.

The Leicester A.C. Hill-climb at Kettleby.

Mr. G. H. Wait writes as follows:—"I notice that the advertisement relating to the performance of a certain car in the above hill-climb is so worded as to lead the public to believe that that car made the best performance in the above event, and I should be glad if you will allow me space to state the actual facts. Silver medals were presented in Classes A, B, and C, which included cars of varying power. These were taken, by myself on a 7.8h.p. Clyde car, Mr. T. H. Woollen on a 16h.p. Clement-Talbot, and Mr. J. Doran on a 22h.p. Minerva respectively, whilst the Clyde was awarded, in addition, the silver cup and special silver medal for the best performance under the formula in any class. The competing cars ranged from 6h.p. to 40h.p."



A NOVEL BRIDGE.

The daily mail, and passenger, automobile line between Roswell and Torrence, New Mexico, is over sandy deserts, and crosses only one stream in 101 miles. J. W. Stockard, manager of the company, has invented and built a unique automobile bridge to span the Macho. Like other mountain streams it changes from barely a spot of water to a roaring torrent in a few minutes when the deluge from a sudden storm miles away comes down. The bridge is constructed without floor or supports in the bed of the stream. The first quality protects it absolutely from all travel, and keeps off the herds of cattle that live on the plains, and also insures it against washouts. Thus it solves two important questions for automobiles in the south-west.

Vanderbilt Cup Mems.

"Red Devils."

Jenatzy and his mécanicien soon gained the title of "Red Devils," both wearing long red coats. At the end of the third round Wagner, Jenatzy, and Lancia passed the grand stand within 40 yards of each other, when a dead silence reigned supreme.

Lancia, Jenatzy, Le Blon, and Wagner were communicated with by means of large telegraph boards, indicating not only their position at each lap, but also how far they were in advance of those behind them, and the retard on those in front.

"Race of His Life."

"I have ridden the race of my life," said Wagner after the finish; "Duray, Lancia, Jenatzy, and Clément certainly caused me to have some anxious moments, but my even running motor seemed to give me confidence, and at no period of the race did I let it go all out. I am now content, as I have been driving many years and patiently waiting for a classic victory."

Wagner's Lap Times.

Out of the ten laps Wagner made the fastest time in the first, second, third, sixth and seventh laps, his respective times throughout being 28min. 26sec., 27min. 56sec., 28min. 17sec., 27min. 42sec., 32min. 9sec., 27min. 22sec., 27min. 41sec., 30min. 45sec., 27min. 54sec., and 31min. 58sec.

About Wagner.

The motor man of the moment is Wagner, the winner of the Vanderbilt Cup, who for many years has been associated with the famous Darracq firm. Owing to his superior intelligence in the workshop, 1902 saw him transferred into the racing team, and during that year and the year following he annexed all world's records on the Darracq voiturettes, winning the Circuit des Ardennes twice in succession. In the eliminating trials for the Gordon-Bennett

Cup over the Auvergne circuit he showed considerable skill, and in this year's Circuit des Ardennes he beat the 100 kilometres record.

His Victorious Car.

The Darracq four-cylinder 1906 model was put through the Sarthe and Ardennes circuits before being shipped over the Atlantic. Bore 180, stroke 150, 1,200 revolutions per minute, and giving 125h.p. Simms-Bosch ignition, Grouville and Ar. quembourg wind shield radiator, three speeds, Darracq carburetter and cardan transmission. It was the lightest car in the contest, weighing 1,892lb. Wheel base 9ft. 4in., and track 4ft. 5in.

"At School."

W. K. Vanderbilt, the donator of the cup, said: "We have been at school to-day, but in future no person shall have access to the course." The committee of the cup race insured the competitors for 100,000 dollars, and above this Fitz-Shephard insured himself for 25,000 dollars.

American Autodrome.

After the Vanderbilt Cup accidents, the Automobile Club of America have decided to commence building an autodrome at once, so that next year's contests can be decided without any interference either by spectators or Government officials. It is proposed to build a track 20 to 30 miles to the lap, situated within 100 miles from New York, and a syndicate is already formed with the necessary funds for the new venture, which is to be situated on private ground. An endeavour will be made to construct the artificial road on the lines of the ordinary high way, with hills, corners, and long straight-away stretches.

Every motorist wants a handy tool-kit. For this purpose there is "nothing like leather." We have tried boxes, cloth bags and hand-bags, but for ease of handling and packing the new "Autoolkit," just brought out by the "Leatheries" people of Birmingham, is one of the best things we have seen. It is a large leather wallet, and will hold about 20 tools, the strap fastenings at either side being in the form of the well-known push-button glove fastener, so that any tool is easily taken out without disturbing the remainder; there are also a couple of pockets at the last fold for the many small odds and ends.



NEWS.—Continued.

An open hill climb will be held under the auspices of the Crystal Palace Automobile Club, at Capt. Kidd's Hill, Hartfield, near East Grinstead, Sussex, on Saturday next, October 20th. Entries have already closed.

Auto-Cycle Club.

The Club will have a busy day next Saturday, as three competitions will be conducted simultaneously. First, there will be the usual quarterly trial of all types of motorcycle and open to any entrant; second, a trial of passenger motorcycles, also open; and, third, a consumption trial for members of the Auto-Cycle Club only. For private members, unconnected with the trade, special certificates will be awarded. The trials start from Uxbridge at 9 a.m. on the 20th inst.

American Failure in France.

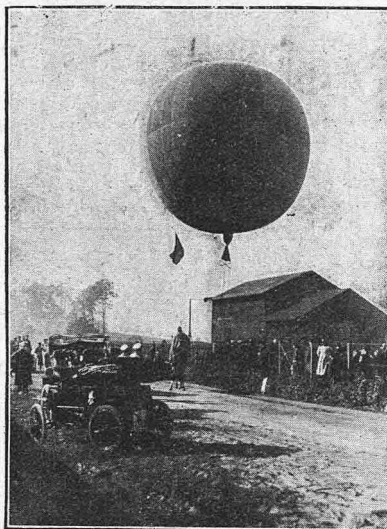
The closing down last week of an important American automobile agency in Paris is but another of the many American firms having tried and failed to obtain a footing in France. The curious thing about these repeated American failures is that no sooner does one firm go under than another comes forth and makes exactly the same mistakes as its predecessor. Inability to build a good car cannot be put forth as the reason for the American failure, many of the machines being of excellent construction and enjoying a good reputation over the water. To succeed in France special business methods are necessary; much natural prejudice has to be overcome, all spare parts should be readily obtainable, and a very active management is essential. Already White, Locomobile, Columbia, and Oldsmobile have attempted an invasion and have all failed, except the last-named. Cadillac just peeped in last year, but wisely walked away after a very timid attempt at doing business. Pope-Toledo had hopes of establishing an agency before their defeat in the Gordon-Bennett race. If rumour is to be believed the Pope Company are contemplating a second attack, and the Winton Company, very successful in England, would like to cross over to French soil. This pushfulness and failure on the part of Americans contrasts strongly with the attitude of British firms. English constructors have never displayed any great anxiety to get on the French market, yet one home machine at least is a pronounced success over here, and another British firm did not second their Paris agent's efforts.

Balloon Pursuit by Motorcars in Berlin.

By way of opening the festivities in connection with the Berlin Aeronautic Society's twenty-fifth anniversary, the officials hit upon a balloon pursuit by the Volunteer Motor Corps. A big crowd had scattered themselves in the vicinity of the starting-place—to wit, the Military Balloon Section's quarters at Tegel. Amongst the notables who assisted actively or passively at the pursuit were the Chief of the Transport Department, Major-General von Werneburg, and his staff; Field-Marshal Hahnke, Geheimrat Buseley, president of the society, and professor of naval technics at the Charlottenburg Technical College, also a keen mo-

tor. The difficulties of the ground and the balloonists' group got clear away, Herr de la Croix could claim a capture—indeed, the sole capture—according to the rule of the chase, which prescribed that a car must reach its balloon within half an hour of landing. Hence victory lay on the side of the aeronauts, three of the balloons having escaped capture. It must, however, be mentioned that, in addition to the unfavourable nature of the country to be traversed by the cars, a high wind was blowing; the aeronauts moved off at a great pace in a north-westerly direction, occasionally travelling at some forty miles an hour. The worthy president, Geheimrat Buseley, was one of those who abandoned the chase on account of rough ground. He followed the "yellow," entrusted to First-Lieutenant George.

Unfortunately, the pursuit did not end off without accident. Director Sierke's car was wrecked by colliding with a tree, two of the occupants sustaining rather serious injuries; while a motor cab driven over Captain Hildebrandt's foot just before the ascent. The prizes were distributed in the restaurant of the Zoological Garden in the evening by Professor Buseley, who had previously formally welcomed guests in the hall of the Technical College at Charlottenburg. Contrary to expectation, the German Emperor, who is a strong financial supporter of the society, did not put in an appearance at this ceremony.

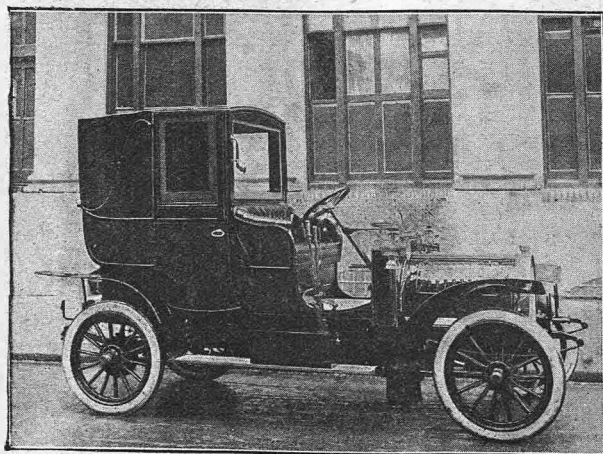


Balloon pursuit by automobiles at Berlin.

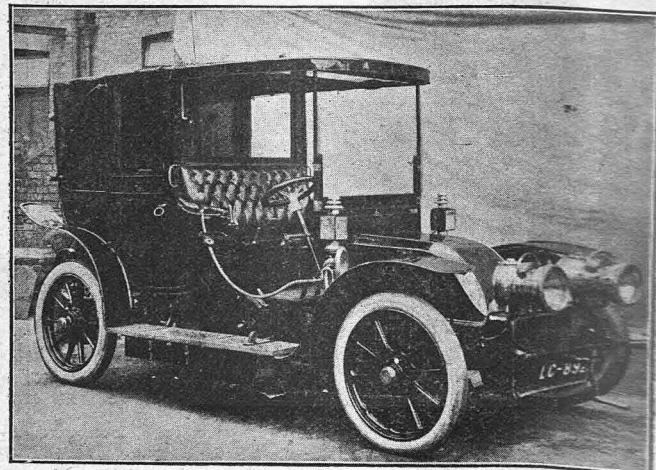
tist; Duke Adolf Friedrich of Mecklenburg; Comte de la Vaulx, of Paris; Mr. Rotch, of Blue Hill Observatory, Hyde Park, Massachusetts; and most of the sporting "big guns" in Berlin. Four balloons constituted the "game," each chased by a group of from four to five cars, carrying the white, red, yellow, or blue flags of their respective balloons. Count Brandenstein and the Duke Adolf Friedrich occupied one of the cars told off to follow Captain von Schulz's balloon, which bore a white flag. Herr de la Croix, the Count's successor at the Imperial Motor Club, chased the "blue," in charge of First-Lieutenant Schoof; and, while the Count gave up owing to the dif-

Gordon-Bennett Balloon Race.

There is rather a chastened spirit in the Aero Club of France as the result of the Gordon-Bennett balloon race. Many wonderful deeds have been done by French pilots in long-distance contests, but it was fully expected the cup would be secured for France. That America should obtain first place, Italy the second, and that the third place should be so closely contested by the Hon. C. S. Rolls as to cause doubt concerning third and fourth positions, is a sore defeat. Should it be proved that the English champion landed further from Paris than Comte de la Vaulx, France's first position will be at fourth place—rather humiliating for such veteran balloonists. Much disappointment is felt at the failure of Jacques Balsan to get further inland than Singleton. Regarding next year's contest, hope is expressed that America will consent to start the race from some European city, preferably Paris, in order to obtain an increased number of entries.



Spyker, entered by British Automobile Commercial Syndicate Ltd., 14-18h.p., four seats.



C.G.V. entered by London Motor Garage Ltd., 14h.p., five seats

THE TOWN CARRIAGE TRIALS.

NEWS FROM PARIS.

The Future of Motor Racing in France. Interesting Discussion.

(By Our Own Correspondent.)

Leon Bollee's Six-cylinder Car.

ANOTHER important French firm has been converted to the six-cylinder idea. After Clément-Bayard and Hotchkiss, it is the old firm of Léon Bollée which will bring out "sixes" for next season. We are informed by one of the heads of the firm that the new model, which will develop 70h.p., is well in hand, and we have been promised particulars of it at an early date. It is quite likely that within the next few weeks other firms at present working quietly on their next year's designs will announce their adoption of the six-cylinder principle.

Speed Tests at Dourdan.

This year's Gaillon hill climb will be preceded by straight-away speed tests at Dourdan. On Sunday the 21st inst. the Dourdan meeting will consist of mile standing and kilometre flying speed contests for both racers and touring machines. A week later the flying kilometre will be disputed on the hill at Gaillon. Touring machines entered for Dourdan and Gaillon must run in the two events in exactly the same condition. After having run on the level at Dourdan, it will be forbidden to gear down a car for the Gaillon climb. This, of course, is as it should be, for no touring machine can change its sprockets in ordinary work in order to tackle a difficult hill, and the contests should be run as much under ordinary conditions as possible. Full liberty will be allowed the racers to make whatever change in gearing they desire.

Racing Prospects for 1907.

Shall there be an automobile race in 1907? Under what regulations shall it be run? Who shall pay for it? Such is the triple question which the Automobile Club of France has before it, and to which an early reply must be given. On the first point it is safe to predict an affirmative reply. An anti-racing section exists, with a no less important personage than the Marquis de Dion at its head, but is largely outnumbered by the supporters of speed contests. The usual arguments against racing are brought forth, such as excessive cost of organisation, inability of the racer to improve the genuine touring machine, but against these the upholders of speed maintain that in the past racing has constantly brought about mechanical perfections, that speed alone can test the value of a machine, and that racing interests the public at large in a way that the best endurance on touring cars can never do. Most powerful of all is the argument that if the French club should not organise a race other nations would do so. French manufacturers would certainly compete, and the national club would suffer a loss of prestige. As to the conditions under which the next race shall be run there is a diversity of opinion. A few manufacturers would leave things as they are on the plea that what has worked fairly satisfactorily in the past is good enough for the future. A larger number recognise the defects of the present system of weight limit, and admit that it has brought about wonderful improvements in metallurgy, but very few in the motor. Out of 1,000 kilos. dead weight can now be produced monsters of 150h.p., limited only in their speed by tyre resistance, but at the same time showing a glaring disproportion in speed in comparison with machines of more moderate horse-power. Two methods of limiting the engine power

are proposed, one being a classification according to bore of the cylinder, the other a limited cylinder capacity. A few would prefer a limitation of the fuel supply; supporters of the Tourist Trophy idea, however, are not very numerous.

The Financial Side.

The financial question is one of extreme delicacy, and is likely to occasion ill-feeling between the French club and automobile manufacturers. This year's race on the Sarthe circuit left the club with a deficit of £3,000, and it can be readily understood that, after such an experience, the committee is anxious to find some system of a less costly nature. Manufacturers absolutely refuse to contribute more in the shape of higher entrance fees, and maintain that a body existing for the development of the motor industry should not grudge spending the Salon profits on an important road race. The club declares, "You, the motor manufacturers, reap large profits by the increased business which the race brings you, and you should be prepared to meet the expenses." The manufacturers reply, "You obtain big profits on the Salon, you exist solely for the benefit of the industry, and you should not object to a financial loss so long as the motor industry is benefited." A charge of extravagance might justly be brought against the French club in the organisation of its road races. No one can deny that a large amount of money was needlessly expended last year on the Sarthe circuit in the fitting up of luxurious grandstands, reception rooms, etc. It is estimated that £48,000 has been spent during the last three years on preparing circuits in the Ardennes, Auvergne, and the Sarthe, and at the present moment the club does not possess an inch of prepared road, has no grandstands, or any of the fittings necessary for the holding of a big speed contest. If, instead of a fresh district each year, a permanent

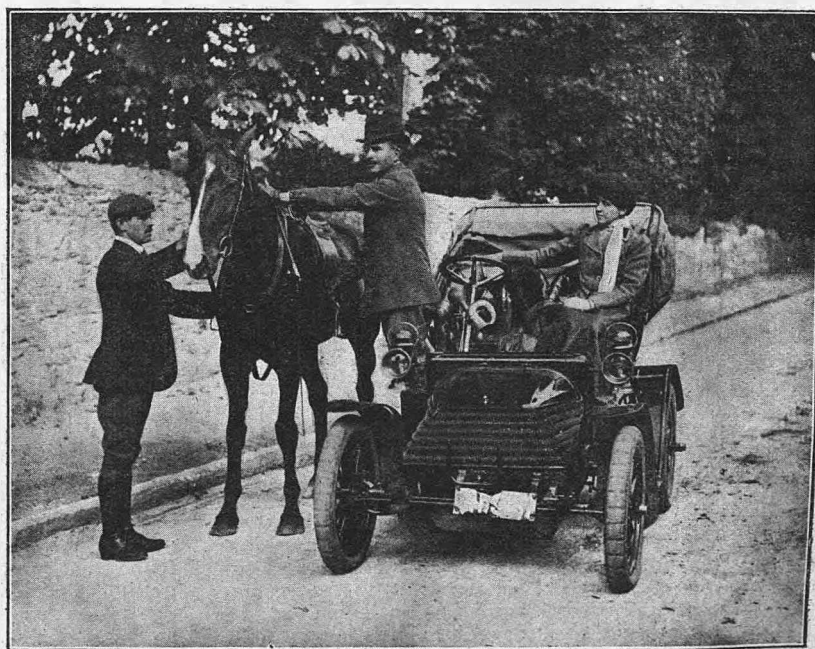
track had been selected, a tremendous saving could have been effected and a large annual expense avoided.

Important Discussions.

Two important meetings have been held at the Automobile Club of France this week to discuss the future of road races. The first was that of the Sporting Commission, which, after a short discussion, decided to submit the question to the full club committee. When this body met, M. René de Knyff, president of the Sporting Commissioners, proposed, in the name of his committee, that the A.C.F. should organise a race next year. Immediately the Marquis de Dion objected, declaring that racing is not only useless, but dangerous; that all the advantage it can give has already been obtained; that, from a commercial standpoint, France should be content with her past victories, and that a defeat would only give other nations an advantage at their expense. "Hold touring competitions over long distances," said the Marquis, "but let us have no more races which call forth abnormal monsters."

Messrs. René de Knyff and Brasier took an opposite view, maintaining that racing is still necessary, and that abstention would be more dangerous than a defeat at the hands of some foreign nation. After a lively discussion, it was unanimously decided to submit the question of a speed contest for 1907 to the Chambre Syndicale de l'Automobile (manufacturers' section). It will be remembered that last year a similar difficulty presented itself, and on the question of an annual race being put before it the Chambre Syndicale voted unanimously in favour of a speed contest.

So far as can be gathered by the confused discussion at the club meeting, a very short circuit, a minimum weight of 1,200 kilos., and a limited cylinder capacity will be the main features of next year's contest. Objection is made to the use of dismountable rims, on the plea that they do not tend to improve tyre manufacture, and it is not unlikely that their use will be forbidden. This year's system of confining all work on the car to driver and mechanic will probably be maintained.



The horse shown in the above photo used to be quite terrified when he first met a motorcar. He is now quite resigned to them and will allow his owner to mount from the step of the car whilst the engine is running.

MY WAY OF THINKING

BY HENRY STURMEY

MOST mails bring some correspondence for me to "THE MOTOR" Office—not that I particularly covet anything of the kind—and I had quite got into the habit of expecting some; so when, for a few weeks past, I found practically none awaiting me, I was half inclined to conclude that this page had ceased to interest. Upon my return from the Isle of Man, however, I was confronted with a whole pile of belated correspondence, which had been carefully "cache'd" by an office boy who "thought," and as some of this correspondence dates to so far back as the middle of July, there will be quite a number of my readers who will have been wondering why, either per these pages, or through the post, no apparent attention had been given to their communications. This paragraph will, I think, explain the seeming neglect, and an apology from me, under the circumstances, will hardly be needed, but I will ask my numerous correspondents to take this note as an acknowledgment of their communications.

Charges for Repairs.

My recent article under the above heading seems to have attracted a good deal of attention, both amongst the trade and also the general readers of this paper. One of the latter writes me in criticism, pointing out that I have omitted to take account of any profits obtained for the sale of cars, and upon a basis of calculation dealing with the sale of a dozen new cars and as many second-hand ones in the year, he thinks an establishment such as that described should show a very decent profit even at the lower rate of charging for time or repair work. In answer to this I would say that, whilst it is quite true that the profits of an establishment may be very possibly increased by an occasional sale of a car, I was dealing particularly with a business laid out essentially for repairs. If car sales and dealings in second-hand vehicles are to be considered, it requires quite an additional organisation to handle it, and much additional accommodation, as well as more capital than would be dealt with by such an establishment as that I have indicated, and there would have to be, especially with the second-hand cars, a good many risks taken, for which no allowance is made in the calculations. But even supposing that the proprietor were able to add to his profits by conducting what really amounts to a separate business, that is no reason why he should carry on his repair department at a loss. We all know the story of the travelling fair follower, who explained the way he made both ends meet by saying: "What we loses on the cocoanuts we makes up on the roundabouts," and, although this give-and-take sort of arrangement may enable a trader to "pull through," and possibly even to make a little profit, it is not business, and no one department of a business should be run at a loss because another earns sufficient profits to balance it, and I am afraid this kind of hit-and-miss sort of reckoning has been responsible for more failures to make a success of business than we have any idea of.

About Establishment Charges.

This whole question of establishment charges is one which is, I am afraid, not fully understood by many traders, even by those who should know better, and there is a great deal of rough reckoning, instead of exact calculation, which leads to trouble in many ways. I fancy few who are without experience in the matter have any idea what a large proportion their establishment charges take in relation to their labour expenditure. Of course, circumstances alter cases, and the unproductive charges of a factory or business differ a great deal, according to the nature of the business done, and also, of course, very largely according to the management. In estimating and preparing costs and making prices, some people are right enough as far as ascertaining the exact direct cost—"shop cost"—of goods, but they go wrong in the proportion of establishment charges which each article should bear. Again, some get their factory establishment charges all right, but ignore the selling and general costs, which are often very much more than the

staff expenditure. I believe it is general in engineering shops to reckon that establishment charges, in round figures, just about equal the labour expenditure, in other words, that the net cost of goods can be taken broadly as 100 per cent. on labour, plus material. As showing how management can affect this very important item, I may mention that in the early days of the Daimler Motor Co.—when I was a director of it—when Mr. Critchley was in charge of the shops, the establishment charges at the works worked out at only about—if I remember rightly—37 per cent. on labour, whilst, after he left and during the troublous times when the company went through before the present board and management came into office, the same charges went up close on 120 per cent.! All this shows how very car manufacturers, repairers, and traders generally should be ascertain definitely their costings in every department. We should certainly see fewer failures made if this were done more systematically than is often the case.

That Slow Test.

Reverting once more to the Tourist Trophy race, I see that one critic speaks of the slow test as an exceedingly severe one, and thinks the test should not have been held in such a prominent place as the promenade at Douglas, because it was not likely to create a favourable impression on the public to see and hear the cars crawling by with many bumps and spasmodic vibrations. Now, I was able to watch the performance of all the cars, for I went round of this test as observer upon Mr. Pullinger's 20h.p. Humber, and my journey was pleasant enough, although Mr. Pullinger had promised me an unpleasant one, as, although he accomplished the feat on a square drive with heaps to spare, he was exceedingly nervous about doing it. In this case there was no "waggling the carburettor," but the car went straight through, throttled down just as low as she'd pull. I can only imagine that the jump and unpleasant method of progression referred to by the critic related to those high-g geared cars which got through the test by throttle manipulation, and the very low speed which some of them attained only goes to emphasise the fact which I referred to last week, that this test ought to be made without throttle manipulation of the kind referred to.

A Trial of the Method.

On the above subject, it will be remembered that I saw I was informed by a leading member of the Technical Committee of the Club that "waggling the carburettor" was a perfectly reasonable thing to permit, because cars would be able to obtain any advantage in slower running than by close throttling down, because if they tried it they would stop their engines, and so put themselves out of the race. I didn't accept this statement as being anywhere near the mark, so when I took my car out one day last week I took the opportunity of a stretch of level road to put my views to the test. The car was 30-35h.p., weighing, with load, well over 30cwt., and will do about 44 miles per hour by speedometer on the top gear. First of all, I throttled down till she'd only just run, and I found I could get her down (by speedometer) to a shade over nine miles per hour. Then I tried throttle dodging, closing the throttle and letting the car run a few yards, then opening it again so as to start the engine, giving her a hit up in this way and then shutting off power again. The progress was decidedly unpleasant, and, doubtless, a bit rough on the engine machinery, and moreover it was by no means even, but I found that, working in this way, I had no difficulty in getting a showing on the speed indicator varying from five to seven miles per hour, the average being about six, so that I proved that it was possible in this way to get a better of the test by about 30 per cent., all of which goes to emphasise my point that, if this slow test is again proposed with any idea of checking high gearing, not only should the speed required be reduced considerably from 44 miles per hour, but throttle waggling, as well as clutch

My Way of Thinking.—Continued.

brake manipulation, should be prohibited. I would give each competitor three chances, that is to say, if he throttled down so low, that his engine stopped I would let him try again twice, but it must be a clean, straightaway through drive from start to finish.

The Angle of Steering Wheels.

There seems to be a call now amongst some motorists for steering wheels with a very steep slope, and I saw it stated quite recently that the proper angle for a steering wheel was that affected by the racing man. Could anything be more absurd? The angle of the steering wheel on a racing car is ruled, not by any particular desire of the drivers for greater verticality of angle, but simply by their position on the car. With the driver sitting practically over his back axle, with a long wheel base, and with the ordinary system of steering, the steering post rakes away at a great angle to the front, and as the steering wheel is set at right angles to the steering post it will be seen that it is the set of the steering post which decides the angle of the wheel. Now, when we come to a touring car, the conditions are entirely different, for the driver is placed some feet further forward, and it is quite impossible, even if he wanted it, to get the same rake on the steering post, and hence the same angle on the wheel. The demand for an excessively steep set of steering wheel is based upon a confusion of cause and effect, although I am quite willing to admit that there is a medium in all things, and that too flat a wheel—that is to say, too vertical a steering post—is undesirable; but, between the absolutely vertical post, with horizontal wheel, and the extreme angles of post and wheel on racing cars, there is a marvellous amount of difference, and the motorist must be reasonable in this as in other things, and not be carried away by a mere idea, or base wrong deductions upon the usages of the racing car.

Wheel Steering Without Backlash.

Since writing an article recently upon the features, beneficial and otherwise, of wheel steering, in which I pointed out the drawback of backlash and lack of means of adjustment, I have had my attention drawn to two forms of steering gear in which adjustability and absence of backlash are the salient features. One of these is an American gear known as the "Gemmer," in which wear, and consequently backlash, can be readily taken up by the simple act of tightening a nut, whilst the other is a British construction found in the details which characterise the Phoenix Quadcar. This is a very simple construction indeed, and also possesses the feature of tensional connections throughout. The bottom of the steering post terminates in a small chain-wheel, around the bottom of which is passed a length of strong pitch chain. This chain passes over rollers higher up on each side, and from thence travels to the two arms of the steering wheels, where the rod to which they are attached is spring held and adjustable. The result gives an exceedingly easy, steady and firm steering, and although there is no non-reversing gear, the leverage of the hand-wheel over that of the chain-wheel is so great that the driver has full command over his steering at any time. The device is good, and at the same time one of the simplest things in the way of steering gear I have yet seen.

Cui Bono?

The Vanderbilt Cup race, the big speed scramble of America, has come and gone, and the result has been pandemonium so far as the spectators were concerned, and death and injury to a number of people. The race was run at an average speed of over 60 miles an hour by the winner, but this is no faster than has been accomplished on other circuits in Europe and, so far as can be ascertained, absolutely nothing whatever has been learnt by the race, except that in this particular side of motoring the American manufacturers are still as much behind Europe, either as manufacturers or drivers, as they have ever been. I believe one of the principal objects of the race was to enable the American manufacturer to show his ability to equal the product of European factories in the building of this class of car. If that has been its object it has lamentably failed, for none of the five home representatives finished, and the race was a victory, all along

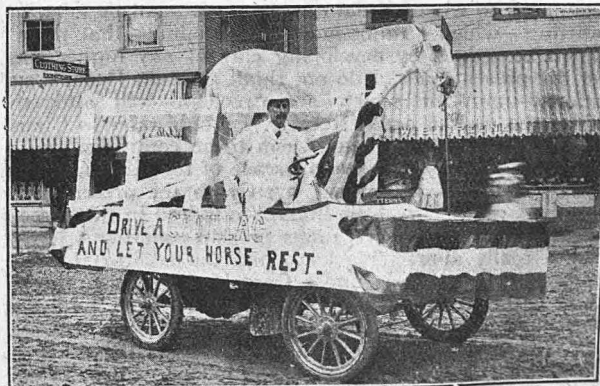
the line, for those foreign cars which competed. Of course the competitors were not responsible for the fatal and other accidents to spectators which took place, because it was the part of the officials and the authorities to keep the course clear, but when all is said and done, and when we think of the dead and injured, surely we can ask *cui bono*? Is this sort of thing *any* good at all? If it is, is it worth the sacrifice of life and limb? I think few reasonable men will agree that it is.

Working an Engine Hot.

In a recent note I mentioned the very much improved running shown by a car on one of the very hot sweltering days of the late summer. A reader of "THE MOTOR," Mr. R. E. Garvin, of Ballymena, now writes me in reference to this giving an experience which bears on the same point. He says that in 1901 he bought an 8-h.p. single-cylinder car with a belt-driven pump; the belt came off frequently, and he was always made aware of the fact by an increase in the speed of the motor for half a mile or so, until the engine, getting overheated, pulled up. Mr. Garvin says that this increase of speed was so marked, and the belt came off so frequently, that he fitted an ordinary water tap, of the same size bore as the pump outlet, between the pump and the water jacket, so that he could regulate the flow of water to the jacket by a thumb-screw on the dashboard. Experimenting with this he found that he had to cut off the water supply in cold weather and to open it more fully in warm to keep up the liveliness of the engine, and at the same time he found a marked decrease in the amount of petrol used. Mr. Garvin asks if I think the idea worthy of a trial on a more extended scale, and as it is a very simple trial to make it would, I think, be well worth experimenting with. The experience he relates goes to show, what I have before held in this column, that motorists generally are very much too anxious about the water in their tanks boiling and that, in general practice, motors are kept a great deal cooler than they need be, and a great deal cooler than is necessary if the very best results are to be obtained. I think the very high efficiency of the engines in a well-known American car with which I have had a good deal of experience, in which the water jacket was very small indeed, and every effort was made to run the engine as hot as it was possible to work it without seizing, all go to prove this, and as I believe Mr. Garvin has also had experience with the car referred to, he will doubtless recognise the force of the contention. I may have something further to say on this engine cooling question later.

A Nice Car.

When in the Isle of Man, after the race for the "Graphic" Cup, I had the pleasure of a drive back from the course into Douglas on the new six-cylinder Humber, and I was much taken with its nice running. There was a steady, easy pull about it, with a comfortable purring of the engine which made riding on it very pleasurable, and the full and entire control which the driver had over his car, largely through the engine alone, was very noticeable. Although my run upon the car was a short one, it was quite sufficient to show me that the Beeston people have produced quite a successful car in this new design.



A NOVEL ADVERTISEMENT.

Horse on a chassis, which was entered in a recent parade in America and caused considerable notice.

A REPLY TO CAPTAIN DEASY.

By HENRY STURMEY.

THE letter by Captain Deasy, which was published in "THE MOTOR" last week, raises several points in connection with the Tourist Trophy which will doubtless be carefully considered by the Automobile Club. Matters concerning the details of a contest such as this, in view of future improvement in the conditions, are best considered whilst all the incidents of the race are fresh in the minds of all concerned, and Captain Deasy's letter and the other views published by "THE MOTOR" suggesting prompt consideration comes opportunely, and I have every reason to believe that prompt consideration of the subject will be given—indeed, must be given—to it by the Club. I understand that it is very unlikely we shall again get permission from the Isle of Man authorities to hold the race so late in the year, and, therefore, if anything in the way of serious modifications of present rules are contemplated, the sooner they are discussed and finally arrived at the better. In my observations upon the race I said that I considered the race a success and a failure—a success in producing a very fine car, but a failure in its having produced a car of a very much higher grade than that for which the trophy was originally instituted, and that this view is held in other quarters, although it is not stated in so many words, seems to me to be shown by the fact that in two places the suggestion has been made that the Tourist Trophy competition of today should be supplemented by two other contests, one for a grade of car higher still than the Tourist Trophy car of today—the 30-40h.p. vehicle—and the other for smaller cars; in other words, so far as this second supplementary race is concerned, what is being advocated is, to all intents and purposes, a race for cars such as the Tourist Trophy conditions were originally framed to produce. Now, it seems to me that, supposing these three contests are inaugurated, irrespective of whether they all take place at the same time or are held upon different days, the nett result comes to pretty much the same thing, and that is what is

VIRTUALLY A GENERAL RELIABILITY TRIAL,

taking in practically the whole range of touring cars, but in which speed, and speed alone, is the deciding factor of merit. Now, apart from the purely sporting side of the question, and looking entirely at its utilitarian aspect, I cannot think that this speed deciding point is either wise or desirable, and I know that many of the leaders of automobile opinion in the Club hold, as I hold, that the speeds attained in the Tourist Trophy contest just held were altogether higher than desirable to be developed, and that it is really not the speed vehicle which it is the desire of the Club, and of automobilists generally, to encourage, although the contest is developing such a car. Any race on similar lines for larger-engined cars must, I think, necessarily produce still higher speeds, and I am satisfied that an average pace of 40 miles an hour all round, if the general public accept it as the usual speed of a touring car, will be detrimental to the movement, and

DO MUCH TO FOSTER AND INCREASE PREJUDICE

against automobilism generally. Apart, however, from the question as to whether one race or three shall be held, and admitting—which I think most people admit—that there is little to be gained by developing cars of any higher speed than the present ones, I do not think Captain Deasy's suggestions—many of which are excellent—will altogether achieve the desired end. Notably, I would refer to Clauses 1 and 9, which, at any rate, seem to be contradictory. In the first place, the suggested increase of the minimum chassis weight to 2,000lb. would, even with the present petrol allowance, make very little difference indeed in the speed of the cars, because the cars, under present conditions, have to carry a really appreciable load, and the additional weight required in the chassis under Captain Deasy's suggestion would be but a small percentage of the whole, whilst the effect upon the resulting car would be to give us altogether a heavier and larger type of vehicle than the Club has hitherto been catering for, and one, indeed, which, in point of price, would appeal to a very much smaller number of automobilists than do even the present type of Tourist Trophy vehicle. And when Captain Deasy suggests that the allowance of petrol should be increased it is plain

that, all other things being equal, this means larger engines, because if big engines as used to-day can get through on the present allowance, a larger fuel supply would enable larger engines to be used, seeing that the difference in nett weight would be but small, with the necessarily following result that higher speeds still would result from the contest. With what I may call the minor points in Captain Deasy's letter I will not deal, but when he suggests an increase of the minimum width of wheel track, I would ask why the Club cannot take the bull by the horns and go the whole hog at once on this question, and call for the standard wheel track of 4ft. 7½in. or 4ft. 8in., which is universal in all vehicles in America, and is equally universal with other vehicles than motorcars in the Colonies, and the adoption of which would materially help the sale of British cars in Colonial markets, where, as we have already been told by a Colonial correspondent in "THE MOTOR," American cars are largely patronised because of this very feature. Upon Clause No. 8 of Captain Deasy's letter I am certainly with him, because the body dimensions of last month were

SIMPLY ABSURD FROM A PRACTICAL POINT OF VIEW,

whilst the body weights were equally absurd, as was pointed out to the committee by the few practical members of the trade whose position enabled them to have any voice in drawing up the regulations, though their counsel was not followed, with the result that, as Captain Deasy says, we had the absurdity of cars with bodies of the usual strength supplied by the trade having to be weighted up with strips of lead on the floor. It seems to me that on this point a very considerable improvement could be made, which would vastly simplify the work of the officials, if body weight were ignored and the cars required to carry a total weight, including body, passengers, and ballast, to whatever figure the committee may ultimately decide. Seeing what happened to the Argyle car in the last race, it will readily be seen that, with an ample total weight requirement, there would be absolutely no advantage to the manufacturer in using an exceptionally light body, which the original rules were, I believe, intended to prevent. Indeed, all his interests would be centred in making an extra strong one. The cutting down in height of body dimensions in the race that has gone was due to a desire for decreased windage, and altogether the nett result, so far as the body was concerned, was entirely different to what the committee of the Club intended, for in specifying minimum body measurements it was part of the general scheme to produce an efficient touring car—such a car, in fact, as, after the race, there would be spirited bidding for—I mean the identical vehicles—by purchasers desiring to secure really first-class touring cars. I am inclined to think that both body weight and windage—seeing that most of the bodies hitherto have been quite impractical—would be equally well dealt with by the use of a platform with iron ballast in the one case and with a uniform wind screen in front of it in the other, and this would place all cars in these respects on an equality.

With Captain Deasy,

I THINK THAT ANY FUEL SHOULD BE USED.

If a maker can get better results by using alcohol, or kerosene, or acetylene, or one of the hydro-carbons, and wins the race handsomely by so doing, it will have done more than anything else, perhaps, to bring home the practicality of other fuel to the motoring public, and thus to break down the monopoly of the Oil Trust, so far as motorists are concerned. I can quite see the difficulty, however, which comes in upon this point, namely, that a uniform standard of measurements would not be calculated to give approximately similar results, and upon this point I feel very strongly, and that is that speed limitation by fuel limitation is wrong, and has entirely defeated the object for which it was introduced. It was introduced to limit the speed of cars, but it has done nothing of the sort, or only to a very slight degree, and I am inclined to think that the race would be a very much fairer race, as a race, if some form of cylinder measurement were taken as the basis of limitation. With cylinders of the same total area, or total capacity, and with cars weighing approximately the same, we should have matters upon a very much fairer basis for all competitors.

OTHER PEOPLE'S VIEWS

NOTE.—These columns are set apart for the discussion of motor topics by bona-fide readers of "THE MOTOR," and trade letters containing veiled advertisements are not admitted. The Editors are not responsible for opinions expressed by correspondents in this section. Correspondents are asked to keep their letters as short as possible.

Traps in Canterbury District.

I wish to warn other motorists that traps are working round Canterbury, on main road, and also at Bridge Hill and Sturry.
A.B.

The Stitch-in-Time Vulcaniser.

I should be much obliged if any reader of your paper who has used the Stitch-in-Time vulcaniser would kindly inform me through your columns if it can be relied upon to satisfactorily repair small car tyre punctures and bursts of inner tubes and covers.
J. HIBBARD, JUNR.

Danger Sign Wanted.

May I ask you to draw attention to the want of a danger signal at the corner between Lindfield and Hayward's Heath, on the road to Scaynes Hill? We have several times nearly had an accident whilst driving in our (horse) carriage. There is also a very dangerous corner in Lindfield.
A. D. BRIDGMAN.

Adjusting Trembler Coil.

I think it would be of great interest to your many readers if Mr. R. E. Faithfull Davies would explain the use of an ammeter for making trembler adjustments. I conclude from his description that this instrument will decide the best result from trembler regardless of tone.
ARTHUR CAYLEY.

Accessibility in Epicyclic Gearing.

A great deal of notice seems to have been taken lately of epicyclic change-speed gears, and I was interested to read the letter of Mr. H. W. Prance in the issue of October 2nd. He, however, seems to imagine that the idea of the sliding pinion type of gear, with its "rectangular box," is more simple and accessible in practice than the concentric epicyclic gear, with its "numerous pinions." Now, in the first place, let me point out that the idea of the sliding pinion type of gear is so easy for the mind to grasp that, at first sight, and to one not used to the motions set up in the epicyclic gear, it seems rather complex in comparison. Numerous pinions are employed, and a further idea of complexity conveyed simply because the designers of these gears duplicate or treble the planetary pinions to make the gear balance, and also to double or treble the strength in a gear of any given dimensions. I have protected an epicyclic gear with only seven essential toothed wheels, giving three speeds forward and a reverse, and there have been patented gears, giving four forward speeds and a reverse, and having only five essential pinions, but other mechanism. It will be seen, therefore, that these gears have really the advantage over the ordinary type even in this respect. Now, as to accessibility. When the inspection cover of an ordinary gear-box has been removed one can only inspect. It is necessary, as a rule, to take down the whole box, taking out many bolts, etc., and connections, to really get at it. It was with Mr. Prance's idea of accessibility that I designed my epicyclic gear, as it can be taken clear out of the chassis, providing it is fitted with universal joints, say, of the Speedwell type, in half a minute, by undoing a spring clip, then by taking out four set

screws on the inspection cover, the whole of the gear can be taken to pieces without the use of further tools—a thing that should not often be required. One has only to look at the record of a Lanchester gear and try the driving of this beautifully-made piece of mechanism to understand the advantages of this type of gearing.
HEBER.

Experiences of 6h.p. Wolseley Car.

I have driven one of these cars for over two years over some of the worst roads in this land of bad roads without requiring a single renewal, except broken gear-box bolts, and that fault I have overcome, so that I have no cause of complaint against it, only for the noise, and it is an exceptionally noisy car. A year ago I asked through your columns for an effective silencer for the exhaust, and was advised by one of your correspondents to get a Radio silencer. I did so, and the exhaust noise is cured. But there is another noise equally troublesome. When the automatic inlet valve closes, there is a deep-toned noise like the grunt of a pig in trouble. I have never heard the like in any other make of car, and conclude it is due to the driving back of the air current through the induction pipe, for closing the air inlet stops it. If any owner of one of these cars has found a remedy, I shall be thankful to hear of it, for, only for the noise, I don't want a better vehicle for bad roads and rough work.
ID99.

A Question of Safety: Newspaper Criticisms.

A correspondent recently wrote to the "Daily News" complaining of persecution of L.C.C. tram drivers by the police for exceeding legal limit. This he calls "intolerable police interference." The probability is that the police recognise the dangerous nature, and comparative uncontrollability of these ponderous machines, in which respect they are wiser than "Ratepayer." No doubt this correspondent would be amongst the first to protest against excessive speed of motor-cars or motorbuses, even although they are far more powerfully braked in proportion to weight. Some of the names chosen by writers on the motor danger are capable of being improved with a little alteration. Thus, one calls himself "The Narrow Road." Would not "The Narrow Mind" be a better nom-de-plume? It is curious to note how these writers differ between themselves as to what constitutes a safe speed. Thus, one says that the limit should be 10 miles an hour; another talks of cars "crawling" through police traps at 15; one suggests that a 10-mile limit would advance the cause of progress. It would be interesting to know whether any of them have any idea of what speeds actually are.
SYDNEY J. TAYLER.

Motorist's Opinion Suppressed.

In a recent issue of "THE MOTOR" I read with interest the article "Meeting Argument with Argument." One day, a week or so ago, I saw a letter in the "Daily Mail" (written by a very prejudiced anti-motorist), to which I replied to the best of my ability, endeavouring to refute every argument used in the letter in question. My letter was never published, so I wrote again asking the reason, to which I have received no reply. It seems to me extremely unfair that replies to feeble "anti-motorism" arguments should be kept back in this way. I must thank you for the use your paper has been to me. I have taken it regularly from a time previous to its change of title.
J. T. SPITTLE.

Motors in India.

I have read with much interest a letter from your Bombay correspondent on the subject of motor expansion in India in "THE MOTOR" of last mail, dated August 7th. Perhaps a few remarks from Calcutta may interest your readers. May I be allowed first of all flatly to contradict "R.E.G." in two points? He says that (1) horizontal engines and (2) "thermo-syphon" systems are failures in India. To take the latter point first, I have owned two cars in India, a Minervette and a small Wolseley, both with thermo-syphon and both absolutely efficient. I have once or twice boiled the water with the former, but with the latter never. To take an instance. On August 27th, 1906, I was driving my present car, a Wolseley, from Calcutta to Barrackpore. To do this one has to get through a certain defensible suburb called Chitpur, where the depot for the goods traffic on the E.B.S. Railway is situated. On getting out there I found the entire road blocked by bullock carts carrying jute. The full cars were going the same way as myself, and empties the other. The road was so narrow that the only way to get through was to take my place in a queue of loaded carts. In this way I had to go for nearly a mile, culminating in a long and steep raise over a railway bridge. My pace was not more than two miles an hour, yet the water did not boil, and that with a temperature of 90° in the shade. I can always run 35 miles to the gallon, and sometimes more with the despised thermo-syphon cooling. "R.E.G." also is unnecessarily down on horizontal engines—I should think because he has never used one. The Wolseley I find accessible in the extreme. Last week I took the piston out of the cylinder in 30 minutes. This, of course, is nothing very wonderful, but it plainly shows that the engine cannot be very inaccessible, especially as I was working by myself, with a very jungly syce, who cannot do anything except hand one spanners or screw-drivers or similar articles. With regard to magneto ignition, I have never used it, either with a car or motor-bicycle, nor felt the need of it. A primary battery is cheap and simple to manage. I ran the Minervette at Quetta, which is 500 miles from electric supplies, all last winter, charging up my batteries with three

"Motor Manual."

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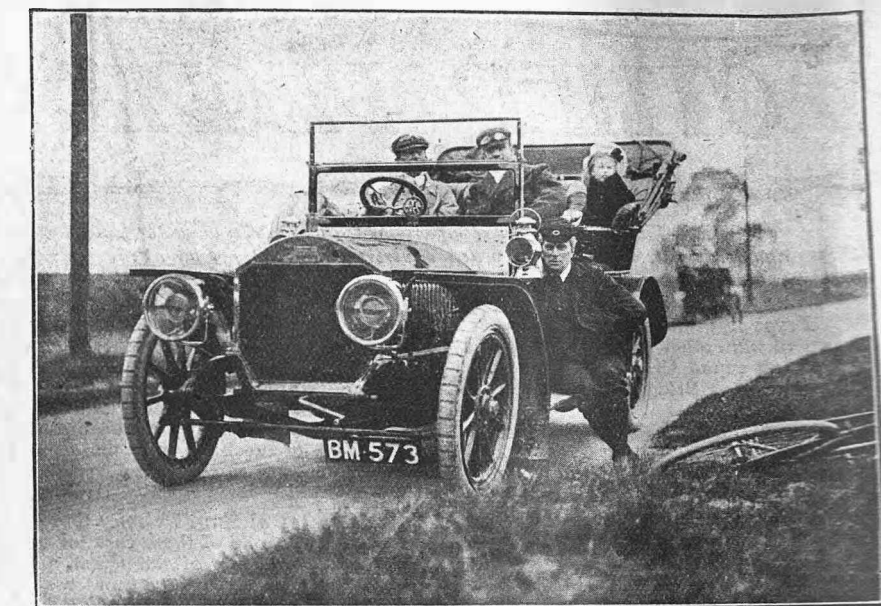
11/-

O.P.V.—Continued.

bichromate batteries when necessary. Here in Calcutta it is hard to say which is the most popular car. Putting them in alphabetical order, I think that Argylls, Darracqs, De Dions, Oldsmobiles, and Wolseleys are most used. About 300 car licenses have been issued, which is none so bad. We have no hills at all to think about, except a few bridges. High-powered cars are, in my opinion, not really wanted here. A 15h.p. Darracq is fast and powerful enough for anybody. There are very few tri-cars; I only know of one, in fact—a Riley—in regular running. A good quadcar would, I think, be a good machine for district work. The one thing needful here is really strong brakes for traffic work. The pious Hinou prefers to walk in the middle of the road. Being there, he unfurls his umbrella, and walks along apparently seeing and hearing nothing. If he wants to cross the road his method is to rush straight across without looking either way. The parents also look upon the middle of a crowded street as an excellent playground for their children from the age of one upwards. Prices both for complete cars and spares are coming down. People are beginning to know the prices of cars, and no longer will pay £150 added on to the London price of a car. Spares cost, for the most part, London price, with rupees substituted for shillings, i.e., a thing that costs you at home 10s., costs Rs.10 here. This is pretty well the rule with everything imported from home, so one can't grumble. Petrol costs the equivalent of 18 pence a gallon, which is not so very excessive. The petrol companies here have very sensibly stopped the tin-returning nuisance, sending out their petrols in cheap block-tin tins. The economical can sell their tins for an anna in the bazaar if so disposed. I trust I have not hurt "R.E.G.'s" feelings. FORTWALLAH.

"Influence of Design on Sideslip."

We read with interest Mr. Sturme's remarks in your issue of the 2nd inst. with special reference to the Pullcar cab and "Influence of Design on Sideslip." We may say that the Pullcar cab has been tested for sideslipping by a large number of experts, and especially did the Scotland Yard authorities subject it to a severe trial in this regard under ideal sideslipping weather conditions, but not the slightest tendency to slip was displayed. It must be admitted that the London asphalted streets, slightly wet, present the severest tests to be found. (1) We think that this immunity is the result, certainly, of more correct designs, but that not one, but a number of factors are auxiliary to the effect. The principal reason we assign is the fact that the power is always being transmitted strictly in the direction of driving, and, providing that the engine is pulling in the slightest degree, it is impossible for the rear part to slew round. In a rear-driven car the power is being exerted in a straight line at all times, so that, when the front wheels are deflected for the purpose of steering, given conditions (greasy road, camber of road, etc.), the rear-driven wheels will slew or sideslip to align themselves to such deflection, and endeavour to regain the straight line of driving. It is well known that a quick return of the steering wheels from a deflected angle will often counteract or check a sideslip in a rear-driven car. (2) The back wheels are quite free to revolve on their axle without the friction, however little, which must be set up in any differential gear. (3) The engine and bulk of the weight is carried fairly centrally in the chassis, a factor greatly reducing ten-



Arthur Brown, of Luton, is at the wheel of the car in this photo. It will be remembered that he had a terrible accident near Brighton last year, from the effects of which he has now happily recovered.

dency to sideslip, according to Mr. Sturme's experience of "American design of car." There may also be something in the question whether the centrifugal force set up by the flywheel and revolving parts in longitudinally-disposed engines exerts any influence in aiding sideslipping. This would not apply to the Pullcar design, where the engine is placed transversely to the frame.

PULLCAR MOTOR CO., LTD.

[The fly-wheel effect on stability of a car has never been adequately discussed. It is a matter deserving of more attention that it gets.—EDS.]

What Does He Want?

Amongst the flood of letters that have been rushed into the columns of the daily papers anent the motor danger, one, published in the "Telegraph" last week, seems to shine as the ultimate height and climax of illogical complaint. The correspondent, who signs himself "C.S.," says that in his village, on the main Brighton road, the inhabitants are kept in a state of perpetual terror by the passage of cars, all day and every day, driven by "cockney motorists" at speeds ranging from 30 to 50 miles an hour. Not only this, but when the parish council applied to the County Council for special police to control this traffic, the latter body replied that it would be of no use, as when this was done, a local motorist sent out scouts to warn others of the presence of the police. "So long as the police are there," wails "C.S.," "the motorists crawl by at 10 or 15 miles an hour; as soon as the police are withdrawn, they resume their normal speed of 30 to 50 miles an hour." Seeing that the presence of the police seems to have the effect of keeping down the speed, it certainly appears that the aggrieved inhabitants should be satisfied, and should keep the special police there, with or without scouts to give warning; if they expect the scorching to go on just the same, it is obviously of no use to station police there, as this has the effect of stopping it. One feels strongly inclined to the opinion that what "C.S." and others of his kidney desire is, not the prevention of high speeds through their villages, but the capture of offending motorists. In other words, "Not caution, but convictions."

SYDNEY J. TAYLER.

Details of Canopy Top.

I should be very glad to avail myself of Mr. McGrath's generous offer to give more details for making a canopy top, as per his letter in "O.P.V." in issue No. 1231 "The Motor."

H. PARKER.

Hereford Villa,
Waltham Cross.

Why Alcohol?

It appears to me that a few remarks concerning the article "Why Alcohol?" appearing in a recent "Motor" will not be out of place. There is, of course, every reason why investigation should be made to discover cheap substitutes for petrol, but I venture to say that the suggestions placed before us as to the use of acetylene gas are impracticable. Even assuming that an absolutely perfect mechanical contrivance is made for generating acetylene from calcium carbide and water, we are brought face to face with the fact that the weight of these materials will be more than three and a half times the weight of the petrol now carried. I will not trouble you with details of the proof of my statement, for I do not know that it would be of sufficient general interest. The suggested use of the so-called "dry" system of generation would still further add to the weight. The use of compressed acetylene is even still wider of the mark, for the weight of the necessary containing vessels must be far greater than that of the contents. Similarly, it can be shown that considerations of cost of production of acetylene bars its use. Another suggestion is to employ solid hydrocarbon. Evidently the reference is to naphthalene. The price of this substance is already sufficiently high, and since it is produced in the manufacture of gas, its use in power production would at once advance the price still further beyond reasonable limit. There is a great difficulty in using it for the purpose, provided a carburetter of, say, 20 cubic feet is used, and so long as none of the pipes get choked up. Naphthalene can, of course, be liquefied by heat, and rendered more volatile, but the difficulties in the way of designing a suitable carburetter are even greater than in the case of a heavy oil carburetter. The question to my mind is "Why not Alcohol?"

M.Sc.

O.P.V.—Continued.**Improving the Petrol Consumption.**

Re "Norby's" enquiry in "THE MOTOR," I should recommend the fitting of an extra automatic inlet valve to his 4th.p. De Dion. My 4th.p. (engine at back) has averaged 46 miles to the gallon over a 100-miles run with three up. Engine runs well with full air in addition to extra air valve. **4½ DE DION.**

Tyres and Non-Skid Bands.

After much hesitation I decided to try a somewhat unknown make of non-skid band on my back wheels, 22h.p. car. I ran, roughly, 1,500 miles, and the studs being considerably worn, and a good number of them gone, I removed the bands. The tyres were perfectly good. There were marks made by the studs, but no damage to cover whatever. I attribute my success chiefly to keeping the tyre well inflated, and also the band being a good fit. The bands were not of the vulcanised order, but very easily attached and detached. I have had these bands re-studded, and hope to do another 1,500 miles with them. **H. R. HANDS.**

Popping in the Carburettor.

I wrote you recently concerning "Popping in the Carburettor," stating, incidentally, that I did not know why the liability to "popping" should be greater, as it is, with an over-weak mixture than with an over-strong mixture. I now think I have the explanation. Certain experiments with "gasoline" have shown that explosion takes place between the limits of 5 and 12.5 per cent. of gasoline vapour in the mixture. The most violent explosion is produced with 11 per cent. of the vapour. Clearly the range of explosibility is very much greater on the side of a weak mixture than if the mixture is strong, and we are far more likely to have a slow burning gas if the mixture is weak than if it is strong. **M.S.C.**

Non-Skid Experiences.

My early experience with non-skids was very similar to that of "Manchester's." After running 400 miles with a pair of chrome leather non-skids on my back covers, I found the studs very much worn, cutting into the rubber of the Michelin covers, and generating such great heat that the inner tubes were fast perishing. They were so hot that once when starting to mend a puncture on the road, we had to wait for the tube to cool before we could touch it. Enquiries led me to try De Fournier protectors. I ran over 2,500 miles with these on my back covers, and when I took them off the covers were as good as when I put them on, and no heating. They have since gone another 500 miles, and have now been re-treaded. **H. Nye.**

Tyres and Non-Skid Bands.

I have been much interested in reading "Manchester's" account of his experience with the non-skid bands, as my experience has been almost identical. I had leather non-skid bands put on Dunlop tyres, and after running only about 2,000 miles I have had to take both back tyres off and replace them with Dunlop tyres. The canvas lining of one tyre with the non-skid band on is cracked and full of holes, and has spoilt one inner tube. The other back tyre is almost as bad, and is going wrong like the other one. I am much disappointed after the expense of having non-skids, which I was told would preserve my tyres for a long time; but have, on the contrary, spoilt them, that I should be put to the expense of renewing both outer covers and inner tubes on both wheels (rear). The Dunlops were new, on a 10-12h.p. Humber car, when I bought it. **CHELMSFORD.**

Experiences with Non-Skid Bands.

In reply to one of your correspondents, I had a pair of non-skids cemented on a pair of new Dunlop tyres, 760 by 90mm., for my 9h.p. car. After running 5,000 miles the non-skids were entirely worn out, and on removing same I found the non-skid people had scratched all the rubber off the tread, and in some places had gone through the first layer of canvas. This, of course, necessitated having the tyres re-treaded. Thinking that a pair of detachable bands would be better, and also allow of new studs being fitted, I bought a pair by a well-known maker, and fitted them on a new pair of Dunlops. I have scarcely done 500 miles, and find that even now in several places I have rubbed down to canvas. What is one to do? Will any reader tell me if Parsons' chains wear the tyres?

A.F.C.**Experiences with 10h.p. Alldays Car.**

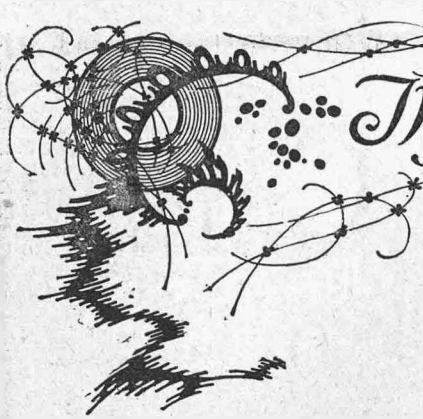
I have read with great interest the experiences of owners of motorcars, especially with regard to the running costs. I have now gone into my own expenses, and herewith append the result:— Mileage, 5,147; total cost, £27 19s. 5d., equivalent to a little over 1½d. per mile. This, of course, does not allow for depreciation or insurance, but includes all petrol, oil, grease, repairs, re-treading one tyre, one inner tube, and all replacements. This is, I think, most satisfactory, as I do not keep a chauffeur. This car is a 10h.p. Alldays, and has won for me two cups this season. I am in no way interested in the firm of Alldays and Onions, but am writing this for the information of my fellow motorists. I may add that my Dunlop non-slipping tyres, though only 700 by 85mm., have worn exceedingly well. **W. FRANK YOUNG.**

Repairers and Customers.

Mr. Sturme, in his article on "Charges for Repairs," very tersely puts the whole matter before your readers, emphasising and proving the necessity of a small proprietor charging about 2s. per hour for time, and also bringing before the customers the necessity of consideration for his invoices. In many cases he only charges them 2s., and does not alter it even for time on machining or overtime. Mr. Sturme in many cases has under-estimated the expenses, but does not mention the little profits likely to accrue from new materials ordered from the manufacturers, but even this is likely to be nullified by his having to pay carriage; also cost of telegrams, calls, etc., and often he has to pay for them before the manufacturers will despatch. Somehow or other most people like "W.N.C." think that 1s. per hour will cover and be sufficient profit for the proprietor. It is hard to say where they get this idea from, but it is fairly general, and needs dispelling as early as possible. Taking a typical case of a customer who brings his car into the garage, saying that it is not pulling anywhere near so well as it ought to do, misfiring a lot, and requiring it put right immediately. In many cases men are put on the job without loss of time, and often they are required to work through the dinner hour in order to oblige the customer as much as possible, but it so happens that after most of the ordinary things have been tried there is no better result, and perhaps two or three hours are in a sense wasted. Finally the cause is located, remedied, and after a trial run all is ready for the customer taking the car away, but he is astounded at receiving a bill for, say, 30s., noting that the car had only been in the garage a few hours, and that he considers the trouble should have been located earlier. The reason of its not being so he considers due to inexperienced men. One will readily see this is a most unreasonable view to take of the case. The time at 2s. per hour, together with a few sundry parts, petrol, oil, cleaning the car down, etc., brings the amount up to 30s. Possibly all this has to be explained to the customer, who thereupon pays under protest. Manufacturers who produce a guarantee car often have similar difficulties with respect to customers like "W.N.C." After having the car, say, some two to three months, they will bring it back to the manufacturer, saying that there has been a loss of power lately, will not pull up the hills as it used to do, various things want adjusting, brakes perhaps nearly worn out, and so forth. Upon careful examination they find that possibly the magneto is very dirty, the

condition of the plugs prohibit their sparking properly, water circulation has got obstructed by accumulation of dirt, etc., or clutch and steering may not have had much attention from the time the car left the works. In many cases they will write to the owner saying that all these adjustments are rendered necessary through the ordinary running of the car, and it will be necessary for their dealing with this in the light of a chargeable repair, as they cannot possibly see their way clear to do adjustments under guarantee. One regrets to note that very often the owner of the car views the firm, after this letter, with less respect than previously, but it is perfectly clear that the manufacturers cannot guarantee to keep the car in running adjustments. At the same time manufacturers have not the least idea in departing from their guarantee, and, in fact, in many cases are prepared to do considerably more than that in order that the client may have entire satisfaction from the car. One would, therefore, endeavour to ask for further consideration on the part of customers, from the point of view that they use the car, and it requires constant attention uniformly. There is another point which one might mention, i.e., the difficulty of estimating the amount that a repair will cost. Even to the experienced mind there is a great danger of under-estimating this amount; much more so, then, is the owner of the car likely to under-estimate and not prepare himself for the full amount. The hours seem to go by very rapidly, and if only one man was working on the car there would not appear a great amount of work done; but in many cases there are two or three men working, and each hour costs 4s. to 6s. In many cases car manufacturers have their various agents situated up and down the country. Through these the client will order his car, but when any repairs are required, he is sometimes at a loss to know which is the better plan to do, whether to deal direct with the firm, or place his order through an agent. Sometimes the former may possibly be the less expensive, but surely the customer cannot expect to have his repair done at trade price or for the same amount as would be done for the agent? At the same time he is giving his instructions direct, and there is every possibility of their being implicitly carried out. Sometimes when dealing through the agent the repair might be expedited somewhat on account of the firm desiring to meet the agent in every possible manner, and he could bring his influence to bear upon a satisfactory repair.

**K.N.S.
E29**



Information Bureau

General Information.

The Following Questions and Answers Embody Points of General Utility.

SPECIAL NOTICE.

We are at all times pleased to answer any queries put to us by the readers, or to receive correspondence from readers upon any motor topic. In consequence of the large number of letters received, however, we must insist upon the following simple rules being adhered to:—

1. Plain writing. Type-writing for preference.
2. All letters to be written on one side of the paper only.
3. Questions to be clear, terse, and to the point, without tedious preamble or needless flattery.
4. Should an immediate reply be required, an envelope must be enclosed bearing a penny stamp, and the name and full address of the sender. NOT a stamped undirected envelope.

H.S.B. would be glad if any reader could tell him if it is now possible to get spare parts (other than for the engine) of the Croxted car, 16-20h.p.

New Reader.—The clearance at the exhaust valve stem should be very small. If there is sufficient to allow a visiting card to be slipped in this may be considered ample to allow for expansion.

G. van Bommel (Holland).—There is a safety petrol tank device of the kind you mention known as the Nonex, which, we believe, was handled by the Cadogan Motor Garage Co., Chelsea, London, S.W., at one time. We cannot say definitely if they are still connected with it.

II. P. Gregory.—The gearing of your car is certainly too high. The low speed should be at least as low as 1 to 12 to climb the hills in the Sheffield district. The engine being, as you say, a genuine De Dion, there is not likely to be much amiss with it. The carburation does not seem to be uniformly good. An automatic air valve might be an improvement.

H. H. Gibson.—(1) The 6h.p. Rover would be the car at the price you are limited to. The vibration is reduced as far as it can be in practice by the use of extra large fly-wheels. No single or double-cylinder engine can be made vibrationless in the strict sense. (2) Look up our advertisement pages for schools of instruction in driving. (3) Such carburettors are obsolete and extinct for all practical purposes.

G.M.—It is not very probable that an internal defect has developed in the coil, unless you have been treating it unfairly, such, for instance, as sending 8 volts through it. All tremblers require some adjustment from time to time. How far they will run without having to re-adjust them depends largely on the quality and design of the coil. It is not unusual to run 1,000 miles without touching the adjusting screw of a good coil.

Defective Accumulator.

M.E.C.—Q.—I have for some time charged up two sets of accumulators belonging to my car from the house lighting supply, which is 110 volts. Till now I have not experienced any difficulty. One of the cells, however, will not charge up, apparently, even when left on much longer than usual. The lamps glow very faintly, and at times go out altogether. I cannot see anything amiss with the plates, and the terminals are clean. The acid is of the correct strength. Could you suggest what is likely to be at fault?

A.—The indications point strongly to a break in the circuit, most probably at one of the lugs connecting up to the plates. It is very probable that you would not see the fracture unless you examine the plates very carefully. Such fractures do sometimes occur, and the only course is to have a new plate fitted in the cell by the makers.

Difficulty with Dog Clutches.

F.J.—Q.—I should be much obliged if you would tell me what is the cause of my car, when driven on top speed, making a noise just as if one of the low gears were partly in mesh. I do not get the noise until car is going 25 or 30 miles an hour. I have taken gear-box down, and I cannot see how to prevent it. I may say it is direct drive on top speed by dog clutch. When the dogs press opposite one another, the spring forces them slightly back. I thought of making the dogs longer on the sliding shaft. I don't know if that would do. If I push the change-speed lever forward, it stops the noise for a minute or so.

A.—It is very probable that, owing to some wear and backlash in the sleeve shifting device, the sleeve gradually works back on the shaft, and brings some of the wheels on countershaft into partial engagement again. If you have the gearing re-adjusted, and any wear taken up, the trouble should cease. It is not really advisable to make any structural alterations to the clutches unless they are of defective design, and there is no actual proof of this.

Sparking Plug Joint.

Washer.—Q.—Would you explain if the copper and asbestos washer supplied with sparking plugs is actually necessary? I find a difficulty in making a gas-tight joint. If the two surfaces are true, could not the washer be dispensed with?

A.—The idea of the washer is to assist in making a good joint. There is a certain amount of "give" in a copper and asbestos washer which adapts itself to any small irregularities on the surface. If the plug and cylinder surfaces were actually dead true—they would require to be something like a ground fit—the plug could be screwed in direct without any intervening washer. It is doubtful, however, whether they would keep true enough for any length of time.

Petrol Stoppage.

F.C.—Q.—Recently I drove 10-12h.p. Coventry-Humber car to Shrewsbury, and it went splendidly well for four up, taking the banks on top speed without faltering. On my return, however, it stopped four times. After running well for one to three miles it would begin to flag and almost stop, then pick up again once or twice, and presently fail finally though each time it restarted readily enough. The accumulators were properly "up," so I suspect the fuel supply. But as the disconnecting of the various parts and cleaning out the petrol tank is a serious matter, I should be much obliged for your opinion before trying it.

A.—It looks very like petrol failure, as you suggest. Easiest course would be to disconnect the union at carburettor. There is a gauze in the supply connection. This may want cleaning. In any case this will show if the petrol is flowing properly from the tank. You get somewhat similar symptoms with an exhausted accumulator, so, if you find no fault with the petrol supply, you had better investigate the ignition.

Overheating.

H.—Q.—I have a 10-12h.p. Wolseley car, which has run very well indeed until this last few months, but of late it has been running very weak. I have thoroughly overhauled it, ground in the valves, and rewired it, but it appears to make no difference whatever, not doing more than 15 miles on a gallon of spirit, but the most serious trouble is a knocking in the engine the moment the car reaches a gradient, even of the very slightest, on top speed. The knocking is not quite so severe when on lower gear, but I dare not advance the spark more than half-way. The knocking does not take place when running on level road. I have ground in the engine bearing and examined all connections.

A.—From consideration of your letter we think that the trouble results from over-rich carburation, and perhaps, also, defective water circulation, causing overheating. If neither of these matters is at fault, better have the cylinder off and examine piston for carbon deposits. If you look up some recent letters bearing on the same subject you will be able to get some further details.

"C.M."

"The
COMMERCIAL
MOTOR"

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**Special Great Van Number,
Thursday, October 18th.**

BUREAU.—Continued.

H. V. Stiles.—The paragraph you refer to re sparklets is, in the main, correct, because there is no free oxygen in carbon dioxide, hence it cannot have any injurious action on rubber.

S. R. Connor.—(1) Yes, it is a good tyre, and considered by many to have special hard wearing qualities, but we cannot undertake to make invidious comparisons. (2) In the larger size we should say it would be satisfactory.

T. E.—There is no hard-and-fast rule as to the amount of lubrication required for any type of engine. If the necessary particulars are not given in the maker's catalogue, it is always best to enquire what adjustment of the lubricator is found to give good results.

P. A. E.—The difficulty with your De Dion clutch is doubtless due to the fibre shrinking. If you fill up the gear-box with lubricating oil and let it stand for a few days the fibre will come right again. Some practical hints on the subject appeared in recent back issues in "O.P.V."

A. G.—Strictly speaking, a dry accumulator is not a practical article. There is such a thing as a semi-dry cell, in which a paste is used instead of liquid electrolyte. The jelly-filled cells, which are not much used now, were charged with a preparation of sodium silicate and sulphuric acid.

Learner.—Yes, the clutch must necessarily be left in if you wish to use the engine as a brake. The idea, of course, is that the car, with its acquired momentum, has to drive the engine, and the lower the gear you have in action the greater the braking effect owing to the high rate of speed at which the engine tends to be driven. The higher the speed the greater the retarding effect, mainly due to the friction of moving parts.

Jas. Harland.—(1) Magnetic low-tension plugs are not used to any extent. To make the working of them clear, we should have to go into a lengthy explanation with diagrams, which we cannot do here. In the 9th edition of the "Manual" we shall illustrate and describe one of these plugs. (2) The Panhard Co., Kimberley Road, Willesden, would, no doubt, supply you with the complete diagram of connections required. There are two or three arrangements adopted.

G. E. Watts (Durban).—The idea you mention is not new. Its chances of success we should estimate as very small, as existing systems have become practically standard. Speaking generally, no one can predict with any degree of certainty whether a new idea would be a commercial success or not. We get innumerable letters asking us to state, on the strength of a few detail particulars given, what amount of success the idea will achieve and what its commercial value is.

Roffen.—(1) The lubrication trouble you mention is not very easy to follow from the description, but you would certainly be on the safe side in fitting a hand pump supply to the crankcase. It is hardly probable that you get any pressure from cylinders back through the oil pipes, as this would soon make its presence felt. The best plan would be to clean out all the pipes and see that there is no pressure leak at the lubricator. There is a suggestion in details given that there is too much exhaust pressure. (2) Better send a diagram of the trembler arrangement you refer to. If it is the Carpentier double-blade principle there is no doubt that this is one of the best. (3) Steel guards are more durable than wood. The other part of your query is not clear.

T. T.—(1) The Halle spring wheel might meet your requirements. Write Halle Spring Wheel Syndicate, Tunnel Avenue, E. Greenwich. (2) There is the Hedge-land patent axle, which may possibly be put on the market shortly, but we cannot speak definitely.

P1809.—(1) There are two possible reasons for the knocking either you are getting pre-ignition, due to a foul combustion chamber, or one of the gudgeon screws from the piston has dropped down into the crank case, and the end of the connecting rod strikes it every revolution. If this is the cause you would detect the knock when pulling the engine round. (2) Too extensive a matter to deal with here. You will find an elementary description of a planetary gear in "The Motor Manual." The fact that the gear is based on the old "sun and planet" principle gives it the name of planetary gearing.

G. C. Williams (Maritzburg).—The address you require is the Holsman Automobile Co., Monadnock Block, Chicago, U.S.A.

M. M.—The steering fitted to your car is evidently constructed on the rack and pinion principle, and this is not irreversible in the sense that a worm and quadrant action steering is. The wheels can be deflected by irregularities in the road, and this has to be counteracted by pressure or grip of the steering wheel. It would not pay you to alter it however.

J. F. J.—The tyres you have on the car now are the smallest, viz., 2 1/2 in. or 65 mm. The same rims, however, will take a tyre 3 in. diameter, so that it would pay you to get these, at any rate for the driving wheels. The increased diameter will make a marked improvement in the running.

General Information.**The Following Questions and Answers Embody Points of General Utility.**

Exhaust Valve.—Q.—The guide in which the exhaust valve on my engine works seems to be very considerably worn, and the bore is slightly oval, so that even a new valve fits loosely, and the stem in a short time becomes bent, which is a nuisance. What can I do to remedy the trouble?

A.—You could have the guide hole reamed out true, which, however, would necessitate using a valve with a larger diameter stem, and you might have to get the valve specially made. Another plan, if there was sufficient thickness of metal available, would be to bore out the guide and have a hard steel or bronze bush fitted.

Dimensions.

Novice.—Q.—Would you please explain the terms used in giving the dimensions of a car, including width of tread, wheel base, track, overall dimensions, as I am having a motorhouse made to accommodate a car?

A.—The overall dimensions are the most important to know in preparing accommodation for a car. This includes the extreme length and width over everything, say, from starting handle to end of rear springs, and from axle cap to axle cap. The width of tread or track is the running track of the tyres, measuring from a centre line from either pair of tyres to the road, the tyres being looked at end on. Wheel base is measured between vertical lines through centres of front and rear axles, or distance between wheel centres.

Measuring Speed of Engine.

S. O.—Q.—(1) How can I verify the speed of the engine of my car runs? It is stated to be 1,200 normal and accelerating to 1,400; but I doubt if it is as much as this. (2) Am I correct in supposing that if the speed is considerably below rated figure the engine is not working at its best efficiency?

A.—(1) The best method is to obtain an ordinary revolution counter, as sold at most tool shops. This is applied to the end of either the crankshaft or 2 to 1 shaft, and time taken by an ordinary stop watch. Of course, if the speed is measured from the 2 to 1 shaft the result must be multiplied by two to get the correct figure. (2) Yes; speaking generally, an engine should run up to its rated speed, but it is not an accurate test to run the engine without load, as it might be in poor condition as regards compression, and, at the same time, it could easily be raced up to its rated speed by increasing the gas. A true test should be made with a full load.

A Short Circuit.

G. Farmer.—Q.—I have a coil which continues to buzz after current is switched off, and also when contact breaker is in "off" position. One day I found the platinum points on coil fused, and the accumulator quite exhausted. Please explain why this occurred and remedy.

A.—You have undoubtedly had a short circuit on the wiring, very probably between the coil and contact maker on engine, and between negative terminal of accumulator and frame, thus cutting both the switch and contact maker out of action. The current would then be permanently on till all the charge had gone out of the battery. The fusing of contacts is also what you would expect to occur in these circumstances.

Loss of Power.

A. J.—Q.—Would you kindly give me your opinion of the cause, from the following description, of the behaviour of my car? I have just had a new crankshaft and half-time gear fitted to the engine, which is 4 1/2 h.p. The engine runs all right when the car is standing, and in climbing hills it runs very well for a time, but then starts pulling up and nearly stopping, then picking up again, sometimes stopping altogether in the middle of a hill. In changing gear from the low to the top (I have only two speeds), the engine does not pick up very well unless the road is level or just on the fall, in which case it goes all right. Hills I have been able to take on top before crank broke have now to go on low gear.

A.—The most likely fault is in the setting of the timing, and the engine is not working at full power. We advise you to carefully check this. The exhaust valve should just begin to open when piston is within 3/16 in. of the end of firing stroke, and shut 3/16 in. before completion of exhaust. Also see that the crankcase gets ample lubrication, as the fitting of a new shaft may have caused the engine to run rather stiffly for a time, and you will require to use plenty of oil to work the bearings into easy running order.

In addition to the foregoing, a large number of replies are unavoidably crowded out. We are always pleased to reply, almost by return of post, to inquiries, when a stamped addressed envelope is enclosed. During the past week we have posted replies to 90 readers.

Miscellanea

The 'second annual dinner of the British Empire Motor Trades' Alliance, Ltd., will be held at the Hotel Russell, Russell Square, London, W.C., on Monday, December 3rd next.

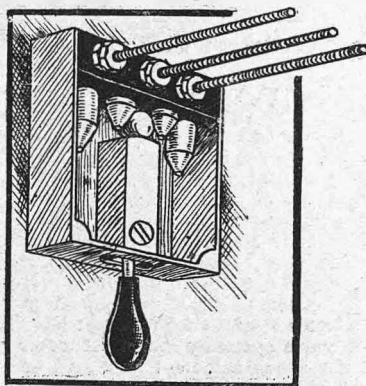
As original models of the Daimler car have met with such success, the Daimler Company ran out of stock in a very short time. Further supplies, however, have been received, and applications for copies should be sent in as soon as possible.

At the close of the German manoeuvres in Silesia the German Emperor personally expressed to Baron Brandenstein his satisfaction with the valuable services rendered by the Volunteer Corps, of which the Baron is chief of the staff. As a further token of his appreciation he conferred upon Baron Brandenstein the Crown Order of the 3rd Class.

Hans Rosenberg, a clerk at Boxhagen-Rummelsburg, in the neighbourhood of Berlin, must surely be the "world's champion" informer against motorists. This individual makes it his chief business to play the "sneak" in this line, and his record for one year stands at 3,000! He is too good for this world. So great an expenditure of virtue at no charge whatever to the community makes one feel desperately wicked and selfish by the side of Rosenberg. On October 10th he gave evidence at Charlottenburg, and Berlin motorists were invited in their own interests to attend at the court to make the bounder's personal acquaintance.

A Clever New Switch.

A two-way switch of quite a novel type is illustrated herewith. The negative wires from two accumulators are brought to the two outer terminals, the central one being the "earth" or wire connection to engine. Inside the switch two short cone-shaped pieces are in direct metallic contact with the central terminal and two longer, similarly-shaped pieces are joined to the outer terminals. The handle is pivoted to the casing, and the business end is finished off by a small steel ball, held in the broadened portion of that end and pushed forward by a hidden spiral spring. As the handle is moved to left or right, the ball slides up one side of one



Novel two-way switch.

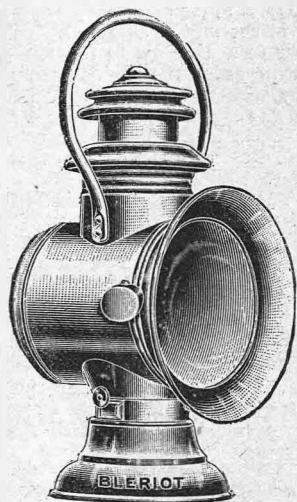
of the shorter cones, and as soon as it has passed over the blunt tip, the spring pushes the ball forward and thus completes the circuit. Perfect metallic contact is bound to be made, as the ball rubs and cleans the cones every time it moves over them, and the angle at which the handle is moved makes it self-locking in any position. It should wear indefinitely as the spring is at just sufficient tension to make the ball automatically take up play. The illustration shows the back of the switch, which fits up against the dashboard. The long threaded terminals pass through the board and are secured by nuts. It is manufactured by Messrs J. C. Fuller and Son, Wick Lane, Bow, E.

In order to prevent robberies from the big garage at Westminster, or the removal of any car except by the person authorised by the owner, the Wolseley Company has brought a new system into operation which is absolute perfection. Under this the owner can learn whether his chauffeur has utilised the car for his own purposes without permission.

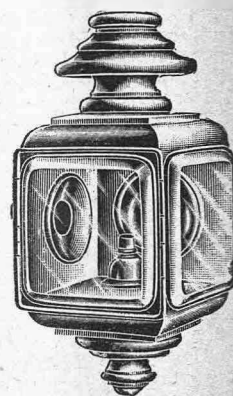
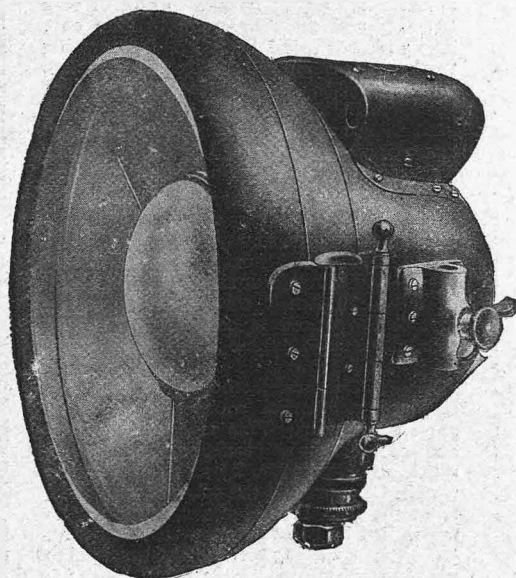
Motor Trials at Christmas.

Provided sufficient entries are received the South Indian Motor Union has decided to hold reliability trials during the coming Christmas holidays—viz., December 27th, 28th, and 29th. The trials will be open to all motorists, and will take the form of a run from Mysore to Madras, divided into three stages. First day, Mysore to Bangalore, 87 miles; second day, Bangalore to Katpadi, 120 miles; and third and last day, Katpadi to Madras, a distance of 90 miles. It is proposed to divide entries into two classes—amateur and professional, subdivided into classes for large and small cars. There will also be a class for motorcycles, with a run from Katpadi to Madras, on the last day of the trials.

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