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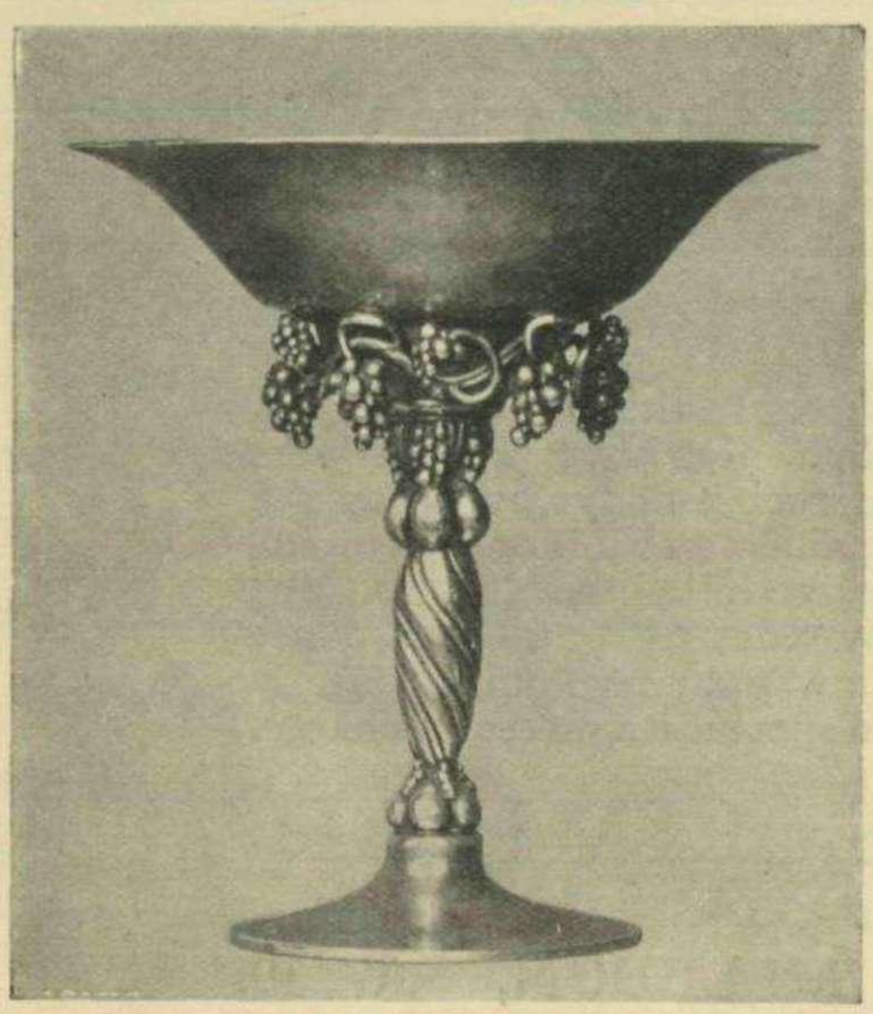
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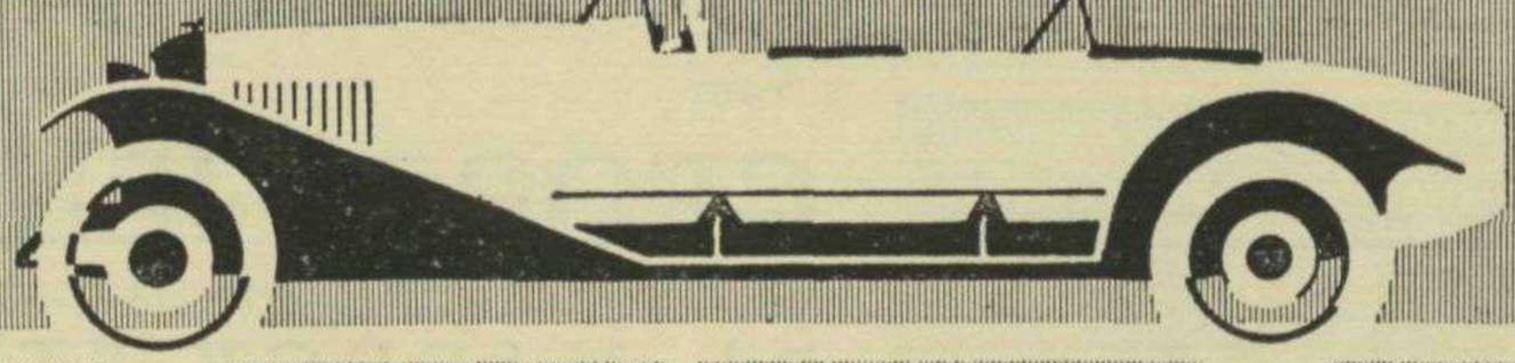
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JUNE, 1925.

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EDITORIAL NOTE.

New Roads and Old Methods.

In view of the rigid police activities on the new roads, the advantages of the arterial thoroughfares are very doubtful in some respects. One would imagine that one of the main ideas in spending vast amounts of money in highway construction is that of relieving congestion caused by slow moving traffic in thickly populated towns, but the police authorities appear to have missed the whole point of clearing traffic in such places by rigidly enforcing the antiquated twenty miles per hour limit by means of what they are pleased to term "controls," or, in other words, secret traps.

We are very much opposed to all forms of road-hogging, but it seems that when motorists are penalised for travelling at perfectly reasonable speeds on wide roads, with no side turnings or other elements of public danger, that the police are taking an unfair advantage of their legal rights for the purpose of swelling police court funds.

The worst feature of the trapping activity is to draw men away from cross-road duty, where they are very badly needed, to say nothing of protecting the public from the attentions of the burgling fraternity.

It would be a pity if motorists in general were to avoid these new roads, but unless the persecution ceases, it looks as if the congestion in areas supposed to be relieved by the arterial roads will become worse than ever in the future.



THE RELIABILITY FACTOR IN SPEED EVENTS.

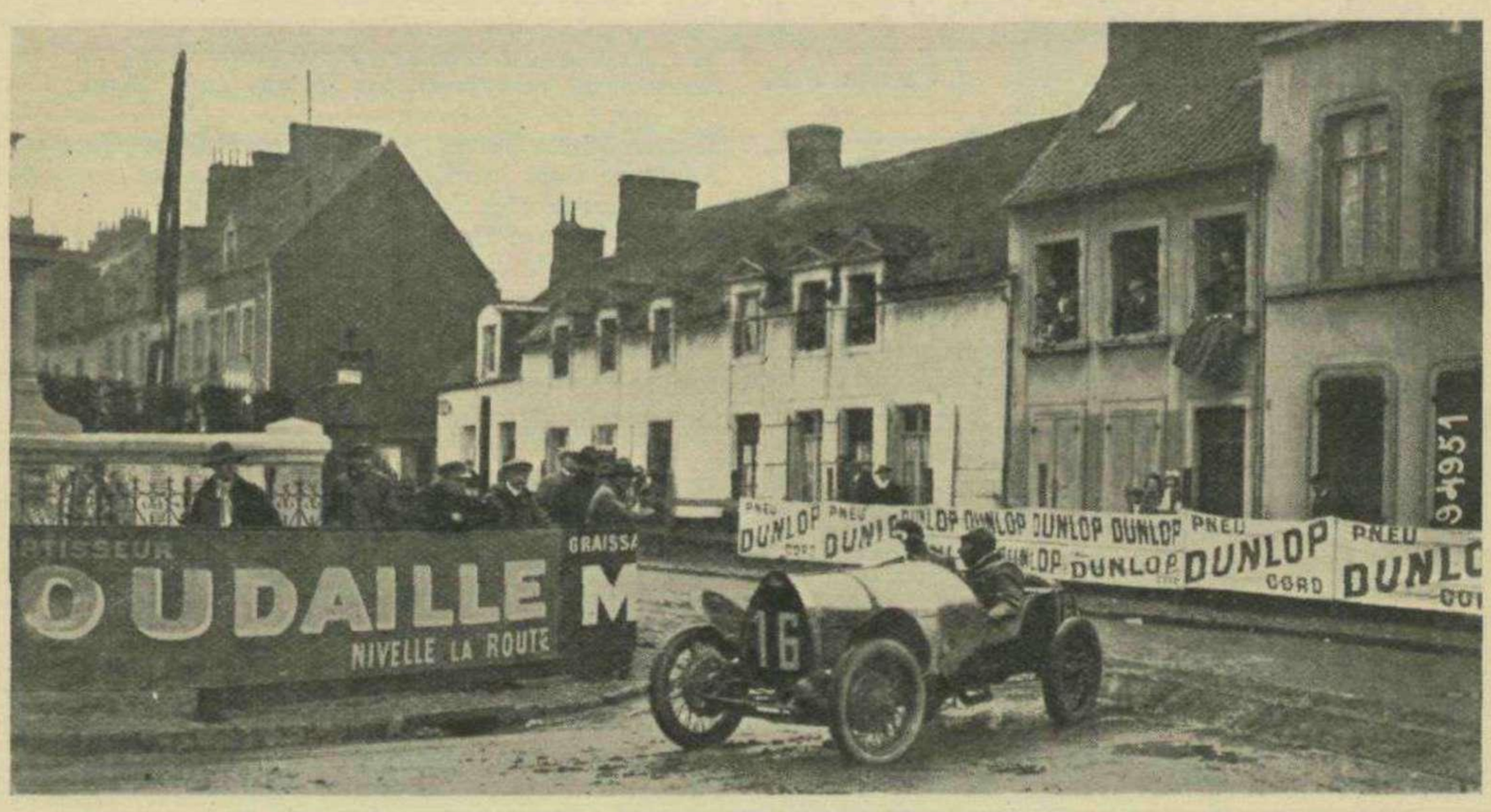
By B. S. MARSHALL.

IN my opinion the greatest value to be derived from motor racing can only be attained if the competing drivers and manufacturers pay every possible attention to the reliabilty of their cars ; a truth which, of course, applies equally in the case of motor cycles ; though, personally, the greater part of my experience has been with cars.

You observe, I have mentioned the driver before the manufacturer in speaking of racing reliabilty, because it is generally up to the former to see that everything about his car is dead right before going to the post for an important event. Modern team racing organisation has a wonderful influence upon road and track success, but it is not everybody who can afford the huge expenses connected with such an organisation, and in writing these notes I have in mind the " lone " racing man who, whilst ready to take a good deal of trouble, and to spend quite a lot of time in making various preparations, has to keep his racing costs within reasonable limits. Incidentally, this has been my position in the past, and most of my important races have been run with cars that have been prepared for the fray by my mechanic Munton and myself, in the small service shop connected with the business of B. S. Marshall, Ltd.

From a business point of view, it has always struck me that Reliability impresses the public in a more lasting manner than sheer speed, especially when the product raced is the same as can be bought by the public.

This, therefore, has been my aim, under whatever conditions the race has to be run, that the car must finish, and though it may not be quite so spectacular as the fast cars, it will demonstrate what the public asks for, that is, a car with a high performance but unquestionable reliability.



A Triumph of Reliability. B. S. Marshall (Bugatti), Wins the 1924 Grand Prix des Voiturettes.

Choosing a Racing Car.

Drivers of experience generally have some favourite make of car, and I think it is always advisable to keep to the same type of mount, as far as possible, in preference to racing all makes indiscriminately. In this way, one becomes accustomed not only to the peculiarities of a particular car, but also to inherent characteristics which seem to follow through all the designs and types turned out by certain manufacturers.

Thus, when a new machine comes along, one already feels formally introduced, and the process of becoming thoroughly familiar with the car, in a racing sense, is not a very protracted affair.

For some years past the masterpieces of Ettore Bugatti have impressed me most as small and handy racing machines, and incidentally some of my best performances have been on perfectly standard models, which have

THE RELIABILITY FACTOR IN SPEED EVENTS—continued.

been prepared for the gruelling tests of road and track by the methods I will now explain in detail.

Testing a Likely Chassis.

According to manufacturing theories, every chassis of a similar series is just as good as any other in its batch, but when one gets down to the finer points, it is often found that there are noticeable variations. If I were asked to describe these variations, I must confess it would be difficult, but there is something about the "feel" of certain cars, which makes one quite confident in embarking upon the lengthy job of tuning up, with absolute confidence of ultimate success. On the other hand, there are cars which one turns down, with no apparent reason other than the intuition which comes from long experience of handling high efficiency machines of all types.

With regard to the important question of reliability in racing, the governing factors cannot be gauged by any kind of preliminary testing, though the latter is necessary to find out whether the car selected possesses the other essential qualifications. The kind of reliability to which I refer is the product of painstaking efforts on the part of the racing owner, and it is a matter of months' instead of weeks' work to carry out the system I have used successfully in connection with road and track racing.

Looking for Hidden Defects.

If one's racing ambitions are likely to be satisfied by winning a few short events, then mere speed is more important than speed plus reliability ; but the combination of the two factors is essential for consistent long distance performance. The first step in search of reliability is to strip the entire chassis down to its two side members, dismantling every single unit for the closest examination. Any parts which show the least trace of wear must be ruthlessly scrapped, so that when the reassembling is completed, the car is in perfect mechanical condition. This done, it should be taken on the road and submitted to speed and hill climbing tests, in which acceleration and braking are carefully noted for future comparisons.

Assuming that the work done up to this point is satisfactory, we return to the workshop and the units are again dismantled for the second stage of the proceedings. This consists in tuning up the engine to get the best possible results, prior to making any alterations or deviations from standard practice, in the way of modified timing, though certain parts may be lightened to give extra speed.



CAREFUL PREPARATIONS GIVE CONFIDENCE AT THE START OF A BIG RACE.

The second road test will show what improvements have been effected, and if the results are satisfactory the engine should be taken down again in order to carry out further modifications.

There is no need for me to go into details of modified camshaft settings, for this subject has been dealt with already in BROOKLANDS GAZETTE, but I would point out the necessity for trying the car on the road after each alteration has been made. For example, if one has fitted a new camshaft and altered the compression ratio of the engine, it is impossible to say which of the two items has made an improvement unless separate trials are made of each, and the same thing applies to each of the many modifications that are possible in

THE RELIABILITY FACTOR IN SPEED EVENTS—continued.

tuning up an engine to give ultra efficiency—one thing at a time should be the tuner's motto.

It is a case of carrying out the improvements bit by bit, until one is satisfied with the ultimate results, as otherwise it is possible to overdo one individual operation to the detriment of another and thus lose some of the efficiency that might otherwise be gained.

Fining Down the Chassis.

When everything that can be done to improve the engine has been completed, work on the chassis may be commenced ; and here again, the tests must be made after each minor process.

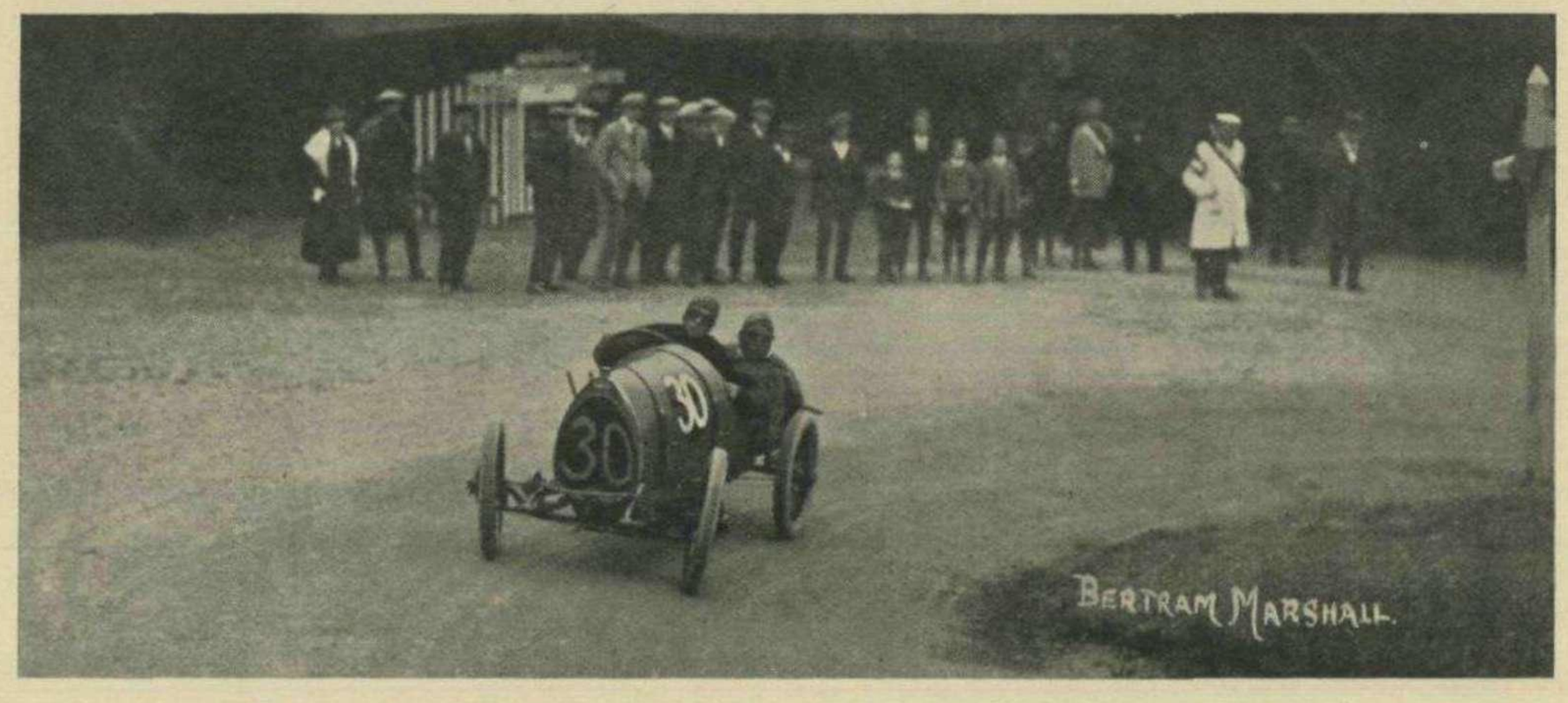
A really efficient chassis means additional horse power, and too much attention cannot be paid to obtaining all the possible horse power from the engine at the road wheels. The reduction in chassis weight is helpful, but care is necessary for many a race has been lost, and the lives of drivers endangered, by an excess of zeal in this direction. Then again the steering must be set and adjusted to give the last degree of accuracy and sensitiveness, whilst equal attention will be necessary for the brakes. Many racing drivers err on the side of getting a disproportionate acceleration—braking factor, with the result that valuable seconds are lost on corner work.

The final tests, to be of any real service, should extend from two to three hundred miles, and, if a road race is in view, the tests must be made on the road, as the conditions of track work are less arduous than those of the road, especially from the chassis point of view.

Short sprints at racing speed are of little value in preparing a car for any big event, and I find that one can do the necessary amount of road testing by getting up quite early on a Sunday morning, without making oneself a nuisance to other road users, whilst the guardians of the law are busy dreaming about the " controls " they will operate when the week-end motorists begin to throng the main thoroughfares.

As a rule, I have made a point of putting in at least a couple of months at serious practice work, going out on every Sunday morning during this period, prior to a big road race ; so that it will be seen that nothing is left to chance in order to avoid that bête-noir of all racing drivers—last minute alterations.

I can assure my readers that the Continental cracks are most assiduous in preparing for big events, and those who aspire to international honours cannot do better than to follow their example. The value of racing reliability has been brought home to me very forcibly during the last few years, and perhaps I may be permitted to remark that this aspect of racing has occupied my attention far more than mere speed work. Perhaps the methods I have suggested may appear a little elaborate to readers who hitherto have looked upon speed as little more than a burst of a few minutes duration on the track ; but in support of my system I may say that the long distance performances of my Bugatti's in the T.T., the Boulogne and the Two Hundred Miles races, lead me to think that painstaking efforts bring their own reward.



B. S. MARSHALL (BUGATTI) IN THE 1922 T.T., ROUNDING RAMSEY HAIRPIN.

TECALEMIT HIGH PRESSURE LUBRICATION.

Motorists may be divided into two main classes, *i.e.*, those who pay proper attention to the lubrication of their machines and those who do not. Probably the latter are in the overwhelming majority, which may be partly due to their own negligence and partly to the inconvenience of greasing the chassis.

Nowadays, however, manufacturers are fully alive to the importance of providing proper grease gun lubrication, the system known as the Tecalemit High Pressure Chassis Lubrication being one of the most useful. Even if a car is fitted with the now antiquated Stauffer lubricators, it is quite an easy matter for the private motorist to effect the conversion to the Tecalemit principle himself, and sets are supplied for all known makes of cars, whilst the needs of motor cyclists is now receiving the attention of the makers.



CAPT. A. W. PHILLIPS, M.C., OF THE A.C.U.

FACTS ABOUT THE T.T. RACES.

By Capt. A. W. PHILLIPS, M.C.,
of the Auto-Cycle Union.

AT this time of the year the interest of the entire motor cycling world is centred in the small island in the Irish Sea, which has added further to its illustrious history by providing the course for the Tourist Trophy Races.

Looking back to the year 1907, we find the original T.T. Race, for which the trophy was presented by the Marquis de Mouzilly St. Mars, and it is probable that at that time even the donor had no conception of the enormous benefits his generosity was conferring upon the motor-cyling community at large.

The original course only measured 158 miles in length, and the first race combined the elements of an ordinary trial with a speed event, insomuch as the regulations included a limited petrol consumption. There were two classes only, the entries being confined to single cylinder and twin-cylinder machines, without any restrictions as to the cubic capacity of the cylinders. Similar conditions governed the events of 1908 and 1909, but in the latter year pedalling was prohibited and the T.T. became a race pure and simple.

In the year 1911, the event was rendered far more strenuous than ever by being held over the famous "Four Inch" or "Mountain" course, and the event was divided into two classes, *i.e.* the Senior T.T. and the Junior T.T., whilst a year later it was decided to institute the present engine capacities for the two categories, viz. :—500 c.c. for the Senior event, and 350 c.c. for the Junior. The distance for the races was gradually increased as the competing machines became more and more reliable, until in the year 1914, the Senior and Junior competitor had to cover six and five laps respectively.

The absence of all good sportsmen during their service for King and Country abroad led to the cancellation of the T.T. until 1920 when the old course was again used ; save for the addition of the famous piece of road including the Governor's Bridge. The year 1922 saw the innovation of the lightweight race and in the following year further interest was aroused by including the Sidecar Race, which, with the new Ultra-lightweight category, extends the programme to include no fewer than five separate events.

The Influence of the T.T. Races upon Design.

Whatever may be the views of motorists in general as to the supposed superiority of foreign built automobiles, there is no possible shadow of doubt as to the predominant excellence of motor cycles of British origin and, furthermore, there is little question that the annual events in the Isle of Man have had a very remarkable influence in assisting manufacturers to develop their machines on the lines of the highest possible efficiency. The T.T. Races subject any competing machine to the most critical tests that have ever been inaugurated in the history of motor cycling, and the winning of the Trophy is a highly coveted honour, for the manufacturer and rider alike.

A machine which can stand up to the rigours of the course and possess the requisite amount of speed to get a place, must necessarily be a very high class production, for not only is the engine tested to the utmost limits of its capacity by the terrific speeds it is called upon to produce, but every other unit and component is stressed to the maximum degree, whilst the machine is being driven unsparingly by a daring rider.

It is perfectly obvious that machines which are submitted to what virtually amounts to a destruction test must be specially built for the race, but the experience gained during these races is of the utmost value to manufacturers in developing subsequent models for the general use of the public. It is the same story as motor racing with special cars and the truth of the saying "the racing car of to-day is the touring car of to-morrow" applies with equal emphasis in the case of motor cycles.

In a brief article of this description it is impossible to elaborate upon the various technical aspects of the great annual event of the motor cycle world, neither is it altogether necessary, for the call of Sport resounds with equal clearness to the call of Science on this occasion, and many thousands of spectators thronging the course are there to witness a most wonderful and thrilling sporting event, in which machines and men together are striving to gain the honours of the day.

FACTS ABOUT THE T.T. RACES—continued.

The conditions of the T.T. Races call for every essential feature of the ideal sporting event and the riders, whether they are successful or not, must possess courage, endurance, superb physique, perfect control of all their faculties, and excellent judgment. The successful T.T. rider must possess even more than these, for without technical knowledge his machine would be little more than an unresponsive mass of metal, with little chance of completing the course within the specified time.

A rider may be sufficiently daring, but lack the intimate knowledge of just how far his mount may be stressed without risk of breakdown, he may lack the subtle sympathy with his engine so necessary for success, and in a word he must be, as it were, a part of the mechanism during the arduous practice runs as well as on the day of the event.

To be a spectator of a T.T. Race is one of the most thrilling experiences of a life time. There is the breathless excitement as each successive machine swoops down the course, with its rider crouching low over the petrol tank, leaping the hump-backed bridges, twisting round the narrow mountain roads, taking corners at angles which seem to set all laws of gravity at defiance and jumping in the air when passing over bad parts of the road. The excited spectators watch a little cloud of dust in the distance and see it grow into the form of the favourite speeding on his way. In a flash he is past and as the other competitors follow close in his tracks, one wonders if his machine will stand up to the terrific pace for the remainder of the laps. Rumours of spills and crashes are whispered among the breathless onlookers and the whole event is a succession of thrills from beginning to end.

THE "STERNOL" £5 FLAG SCHEME.

A Selling Scheme that should appeal to the Sporting Instinct of every Motorist and Motor Cyclist.

IT would appear that the Manufacturers of what has now become generally known as the "Sternol" £5 Flag Oil were correct in their confidence that the quality of "Sternol" W.W. Oil would justify embarking upon the extensive and novel advertising scheme which has caused so much interest in the motoring world.

Last month, at Brooklands, seven World's records were broken, viz.: the 700 km., 800 km., 900 km., 600 miles, 8 hours, 11 hour and 12 hour world records on a "P. & P." Jap engined motor-cycle, and as we go to press we are advised that a further eight World's records have been secured by Messrs. E. S. Prestwich and J. J. Hall, using "Sternol" W.W. (the last mentioned records are, of course, subject to the usual official confirmation).

Messrs. Sterns, the manufacturers of "Sternol," are one of the oldest houses in the trade, and have been pioneers in the lubrication of internal combustion engines since their inception. Quality has always been the first consideration in the manufacture of "Sternol" products, and "Sternol" W.W. Oil was as famous in pre-war days on the racing track as on the private car, but during and since the war Messrs. Sterns have confined their activities to the private motorist. It is all the more interesting, therefore, to record the extraordinary success of "Sternol" immediately it reappears on the racing track.

For the benefit of those readers who are not conversant with the £5 Flag Scheme, we give below a few details.

The £5 Flag Scheme was inaugurated in April, with a view to further popularising "Sternol" W.W. Motor Oil, and at the same time as the manufacturers remarked "to provide a little extra amusement and interest to the season's motoring."

Every private motorist or motor cyclist is entitled to receive a £5 note provided he or she is carrying a 1-gallon decorated can of "Sternol" W.W. (motor-cyclists a quart decorated tin), and stops the £5 "Sternol" Flag.

At the present time there are some dozens of "Sternol" Flagmen on the road touring the whole of England, Scotland and Wales. At certain times during the day the Flagmen hoist the "Sternol" Flag, and the lucky motorist or motor-cyclist who is fortunate enough to spot the Flag and who has complied with the conditions, is a recipient at once of a £5 note, paid out by the Flagman.

We understand that so great has been the success of this scheme, that recently the "Sternol" Company have, in order to prevent disappointment to would-be purchasers of "Sternol" Oil at garages where stocks are exhausted, introduced a "safety" coupon, which is a signed order to the garage for the required amount of oil.

The slogan attached to "Sternol" W.W. was described by a lady enthusiast in the "delectable" phrase, "The oil which makes engines purr like pussies."

Our readers will doubtless remember the picturesque sandwich-men who paraded the streets around Olympia at Show time dressed as cats.

The small booklet recently published by Sterns, a copy of which is before us, entitled "First Aid for the Car," and which is distributed free to any motor-cyclist or motor car owner upon application and upon quoting THE BROOKLANDS GAZETTE, is one that should be in the possession of every motorist. It contains in a small space a volume of useful information. The booklet is neatly bound and conveniently fits the waistcoat pocket.

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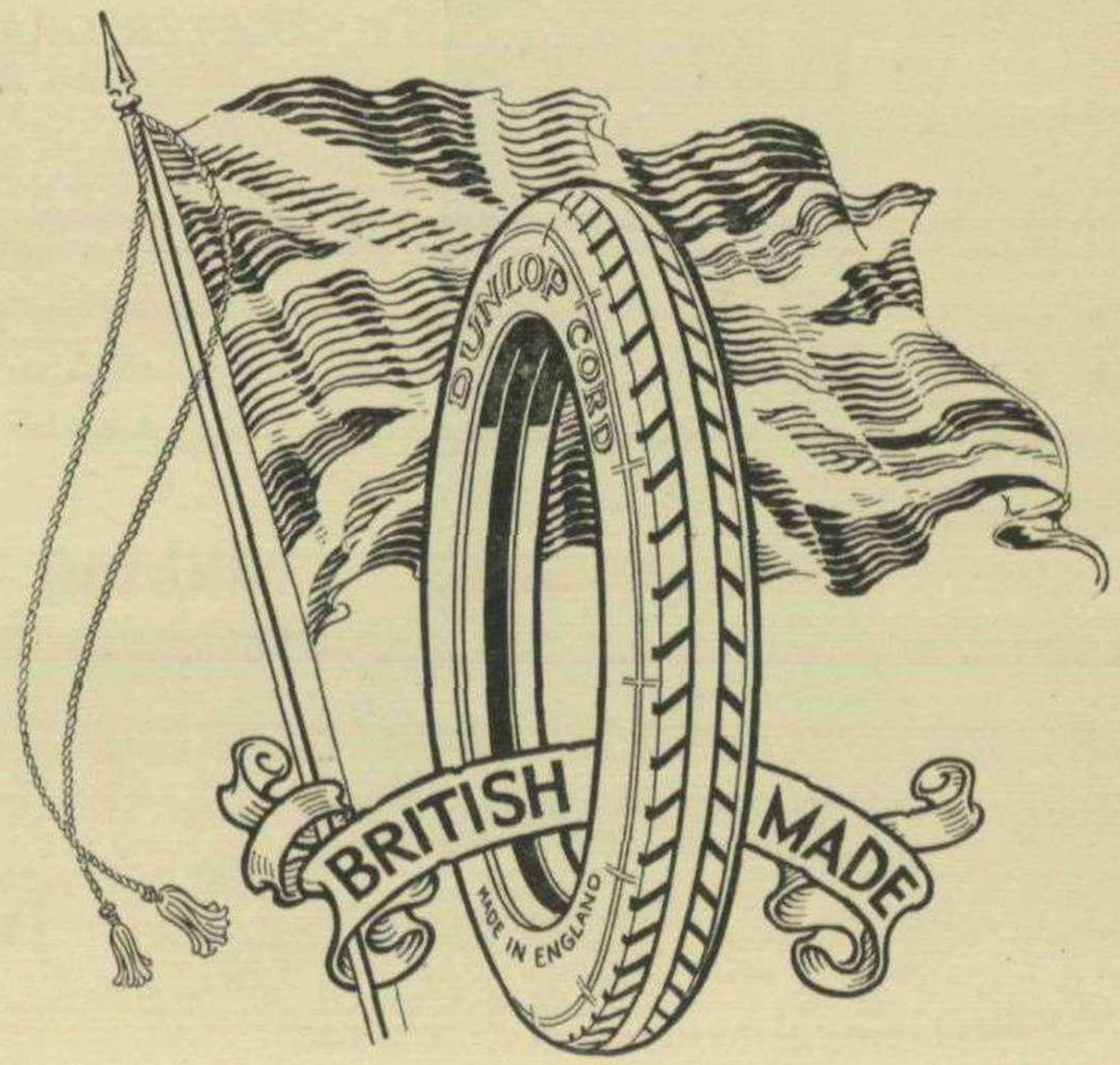
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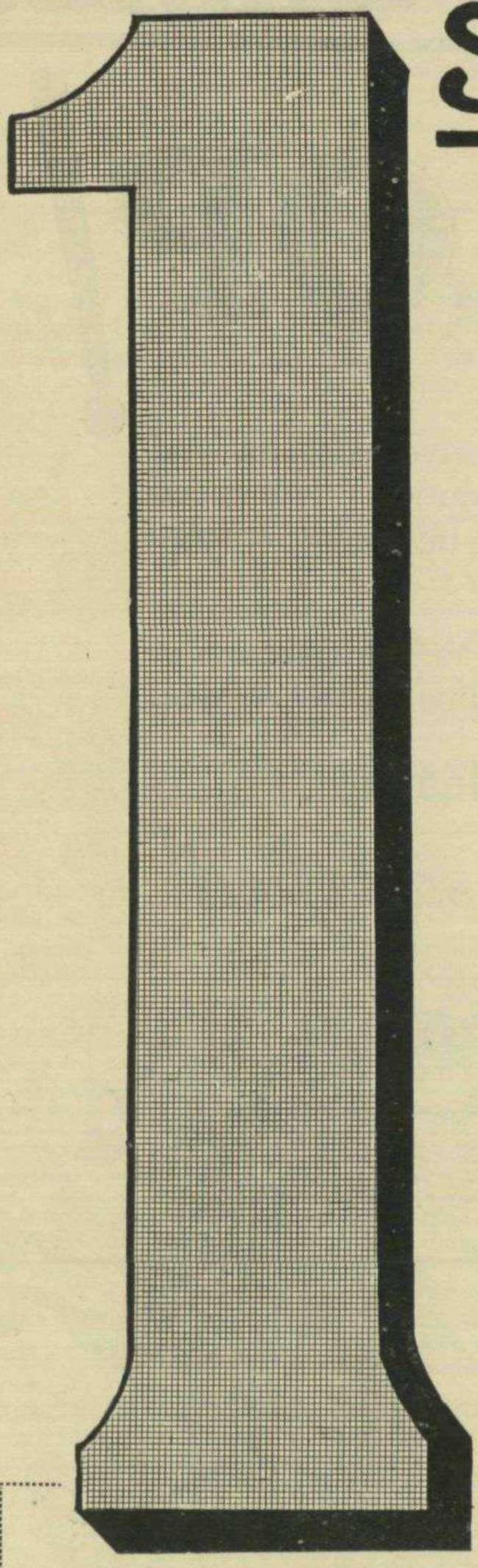
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T.T. RIDERS AND MAP OF THE COURSE.



F. DIXON (*Douglas*)



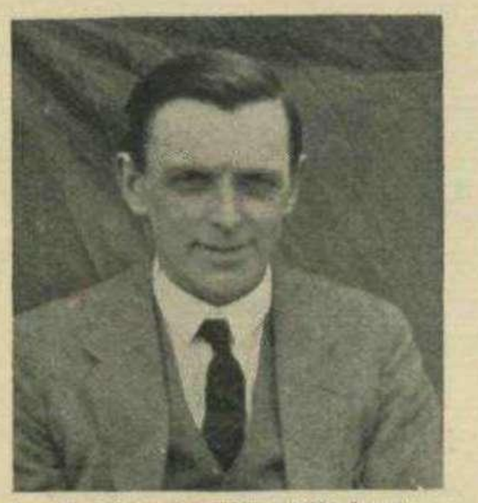
V. NAURE, B. SANTOS AND Z. MATEOS (*Douglas*)



A. J. ROBERTSON, (*A.J.S.*)



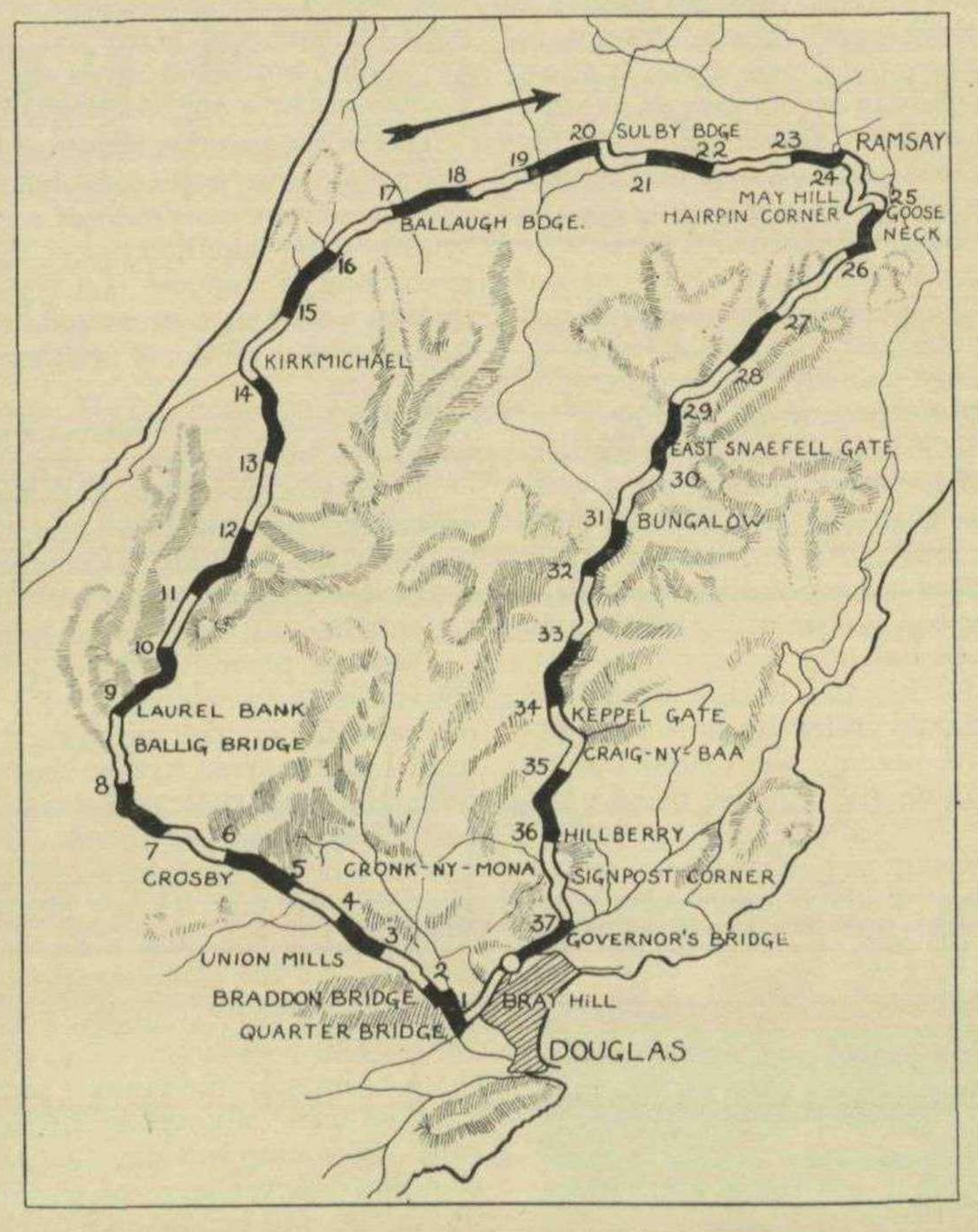
L. RANDLES (*Sunbeam*)



T. SHEARD (*New Hudson*)



F. A. LONGMAN (*A.J.S.*)





H. MERRIL (*Rex-Acme*)



T. MUNDY (*New Hudson*)



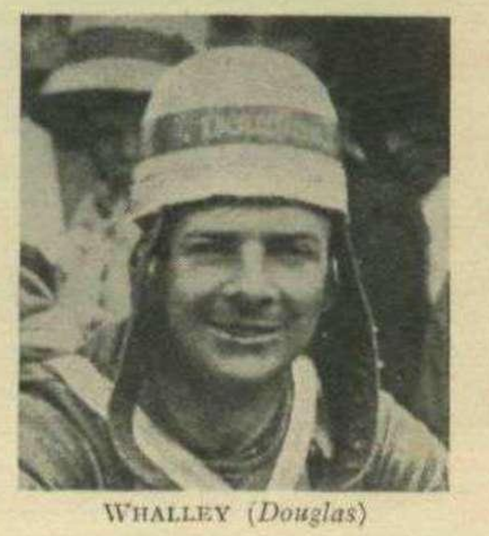
G. REYNARD (*Enfield*)



G. H. TUCKER (*Norton*)



E. ARCHIBALD (*New Imperial*)



WHALLEY (*Douglas*)

SPORTING MACHINES ON TEST.

350 c.c. Four-Valve "Rudge" and Sidecar.

By ARNOLD RADCLYFFE.

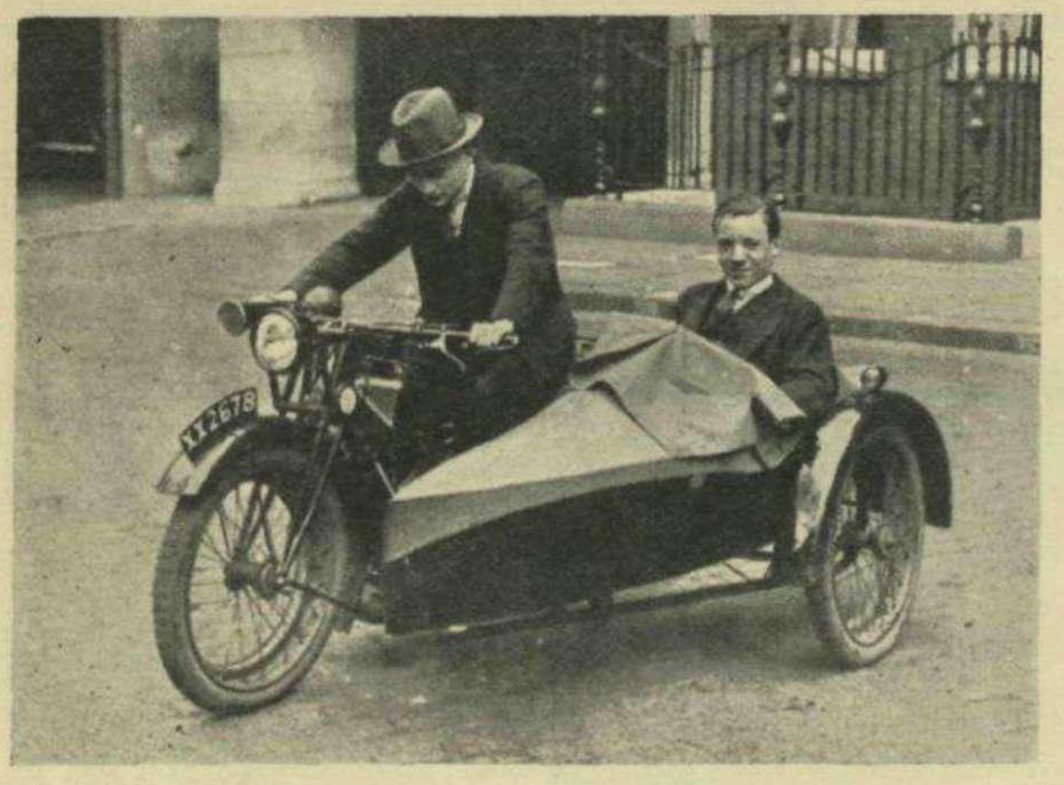
FIRST impressions are not always the best, and I must acknowledge that even with an empty sidecar the Rudge called for unfavourable comment several times within the first hour of my run. Wherefore I will unburden myself of all the bad points at the start.

Several times during my passage through London I missed the second and third gears in my attempt to make a quick change and for a long time I was at a loss to effect such a change as one can accomplish on another well-known four-speed machine. This inability on my part was due to the lack of a positive stop on the gear quadrant for any gear except top, when changing up, and bottom when changing down. Eventually, I came to the conclusion that it was impossible for any one not acquainted with the Rudge quadrant to obtain a fast and silent change during the first hundred miles or so.

Nevertheless a slow change, namely, one in which you *moved* the lever into position instead of *pushing* it in, was very easily accomplished, and a more delightful method of changing gear I have yet to find, but it does not enable one to overtake that lorry in front with quite as much celerity as one could wish for. At the same time, the four-speed box does not necessitate one getting into top gear before any speed is obtained. I estimated that 35 m.p.h. was obtained on third.

After a long week-end with the Rudge I am still wavering as to whether I should prefer the more orthodox type of quadrant: I think perhaps the manufacturers could compromise by making the notches deeper and more positive.

My next grouse is steering wobble with an empty sidecar; true enough this is quite common enough not to warrant mention, but as it is easily cured by the fitting of a small steering damper, I think it ought to be standardised, as a sidecar machine is driven nearly as much without a passenger as with one, and the wobble, which was so bad in this case as to necessitate both hands being used all the time at speeds of over 20 m.p.h. But here let me say that with a passenger it would be hard to imagine a better balanced outfit, and there was no "pull" noticeable, even when riding on the left hand camber of the road, and the wobble absolutely vanished.



THE BOAT-SHAPED SIDECAR IS ROOMY AND COMFORTABLE.

The riding position was correct and comfortable, but the saddle was hopelessly inadequate for anyone over about fourteen years old. It is, unfortunately, a growing tendency for manufacturers to fit undersized saddles, presuming, I suppose, that the purchaser will immediately invest in a super saddle of the Terry type, and that it would be waste for them to fit a good saddle to start with.

At the same time, one gets a lot of refinements for £42 when one buys a Rudge 350 c.c., and a saddle can be changed, whereas cheap hubs and such like fitments are absent on this machine, and it is better to get one's value *in* the machine rather than *on* it.

My last grumble is perhaps one against myself, but I relate it if only as a warning to others.

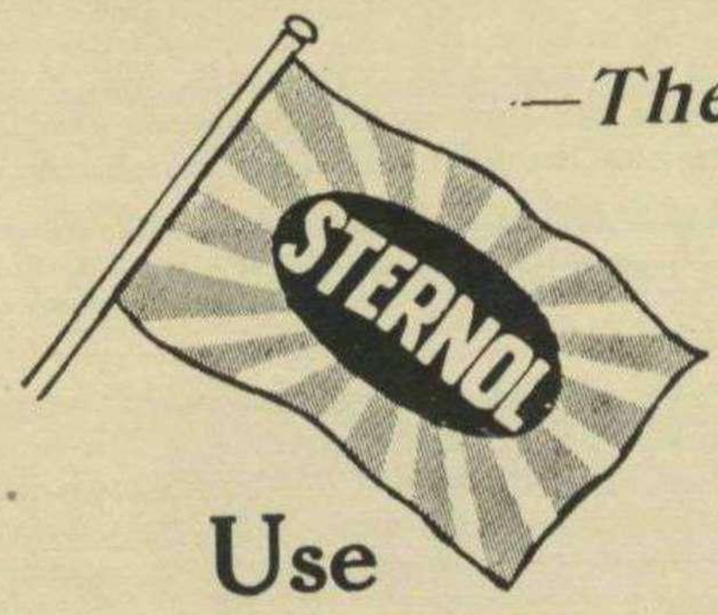
I was so preoccupied in threading traffic and getting the feel of the machine, that I had forgotten to watch the oil indicator on the mechanical pump, and it was not until I was nearing Byfleet that I remembered it. I had been thinking that there was too much noise down below, but I had put this down to the gear for the four valves, which I thought would naturally be a bit noisier than the ordinary o.h.v. This is noisy, but not excessively so, and the extra noise was occasioned, as I found out later, by the complete absence of oil, which resulted in a engine seizure, culminating in a skid of nearly forty yards dead straight.

On examining the pump I found that, although I had a full oil tank (situated by the way, aft of the rear down tube), the pump was dry, and this is where the warning comes in; never let your oil tanks go dry before filling up, as this will occasion an air block in the pipe, and it is a messy business filling the lead pipe with oil to start the pump functioning again. Putting the pump at maximum it soon started to work, and the difference in the engine was of course very marked; here I might mention that the above incident speaks well for the construction of the Rudge engine, and is, of course, a sound argument in favour of the roller bearing big end.

Having mastered the gears and the oil, the ensuing mileage traversed became an enjoyable ride, and I kept on forgetting that I was only mounted on a 350 c.c. machine. So much so, that when on returning to

8 more World's Records broken by Sternol WW

—The £5 Flag Super Motor Oil!



Use Sternol WW —the World's Record Motor Oil —and look for the £5 Flag!

If you see the £5 Flag, with its familiar red, white and blue design, and you have with you either a tin of Sternol WW or a receipt from your dealer for a 5- or 10-gallon drum, purchased on or after 1st January, 1925, hail the Sternol Car by giving six toots on your horn, and it will stop.

Show your tin or receipt to the Sternol representative and he will hand you a £5 note, and the dealer who sold you the Oil will receive £1.

Every day these Sternol Cars will be out on the road and every day they will show their Flags. You may see the Flag hoisted on a country road; you may see it in a busy thoroughfare; you may see it at a race meeting—all you have to do is to buy your Sternol WW and keep a good look-out on the cars that pass you.

IN addition to the 7 World's records broken last month on Sternol WW (officially confirmed by the A.C.U.), as recently announced in the Press, news has just come through of 8 *further* World's records broken by motor cyclists using Sternol WW—the £5 Flag Motor Oil! Particulars as follows:

BROOKLANDS, MAY 20th.

J. J. Hall and E. V. Prestwich, riding a 250 c.c. P. & P. Motor Cycle fitted with a J.A.P. engine, broke 8 World's records at Brooklands to-day. Sternol WW Oil was used throughout, and gave wonderful results.

Subject to official confirmation by the A.C.U.

MOTOR CYCLISTS! Use the Oil which has given such wonderful results under all kinds of arduous tests and conditions—and keep a good look-out on the road for the £5 Flagmen!

FOR if you spot the £5 Flag, sound six toots on your horn, produce your Sternol WW tin (or garage receipt as specified here) and accept your £5 note!

Get your STERNOL IN TWO GRADES **WW** HEAVY & MEDIUM **MOTOR OIL**

and look for the £5 Flag!

"Sternol WW makes engines purr like Pussies"

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E.W.8

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For all sporting events
SUNBEAMS
are supreme

SUNBEAMS are famous all over the world for their extreme reliability—without which a fast sporting machine is of little use. The long distance road-racing season has now started on the continent, and already Sunbeams have won the 1925 Italian Circuit of Brescia (350 c.c. and 500 c.c.), the French Circuit de l'Aisne (fastest time of all classes), the Grand Prix of Baden (Austria) and the Grand Prix of Styria.

ON May 17th, Sunbeam riders made a clean sweep of the Hungarian Tourist Trophy races, being first in the Junior race and for the second year running being first and second in the Senior race.

TWO amateurs on Sunbeams won seven firsts and two seconds in races from 1 to 25 miles in the Swansea Speed Trials. The Gibb Plaque for fastest amateur at the Hereford Speed Trials was won on a Sunbeam, and Sunbeam amateur riders have already in 1925 won a large number of other cups and trophies, including the Midland Cup, four special awards in the Travers Trophy Trial, and the Championships of the Eastern and the North-Western A.C.U. Centres.

FOR speed on the track a private owner, Mr. A. G. Williams, leads the way on his Sunbeam. At the members' meeting of the B.M.C.R.C., at Brooklands, on April 11th, he won the

500 c.c. scratch race at 88.62 m.p.h.

beating all comers.

IT is SUNBEAM QUALITY which makes possible such outstanding performances as these. This is the prime feature of every Sunbeam. It makes them *responsive* and enables their riders to take the maximum advantage of every atom of skill they possess, whether in tuning or handling. The Sunbeam is

THE MACHINE FOR THE AMATEUR

New 1925 complete illustrated catalogue post free from

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HARLEY-DAVIDSON
FOR
SPEED AND RELIABILITY

100 Miles Race for the "Hutchinson" Cup
Won by Mr. F. A. Longman on a standard design Harley-Davidson. Speed, 89·66 m.p.h.

1000 Miles Stock Machine Trial (A. C. U.)
A standard stock Harley-Davidson, ridden by R. E. Humphreys, completed this trial without loss of a single mark.

THE BIG TWIN WHICH SET THE LEAD IN 1915 AND HAS LED EVER SINCE

Harley-Davidson Motor Co., Ltd., 74, Newman Street, London, W.1

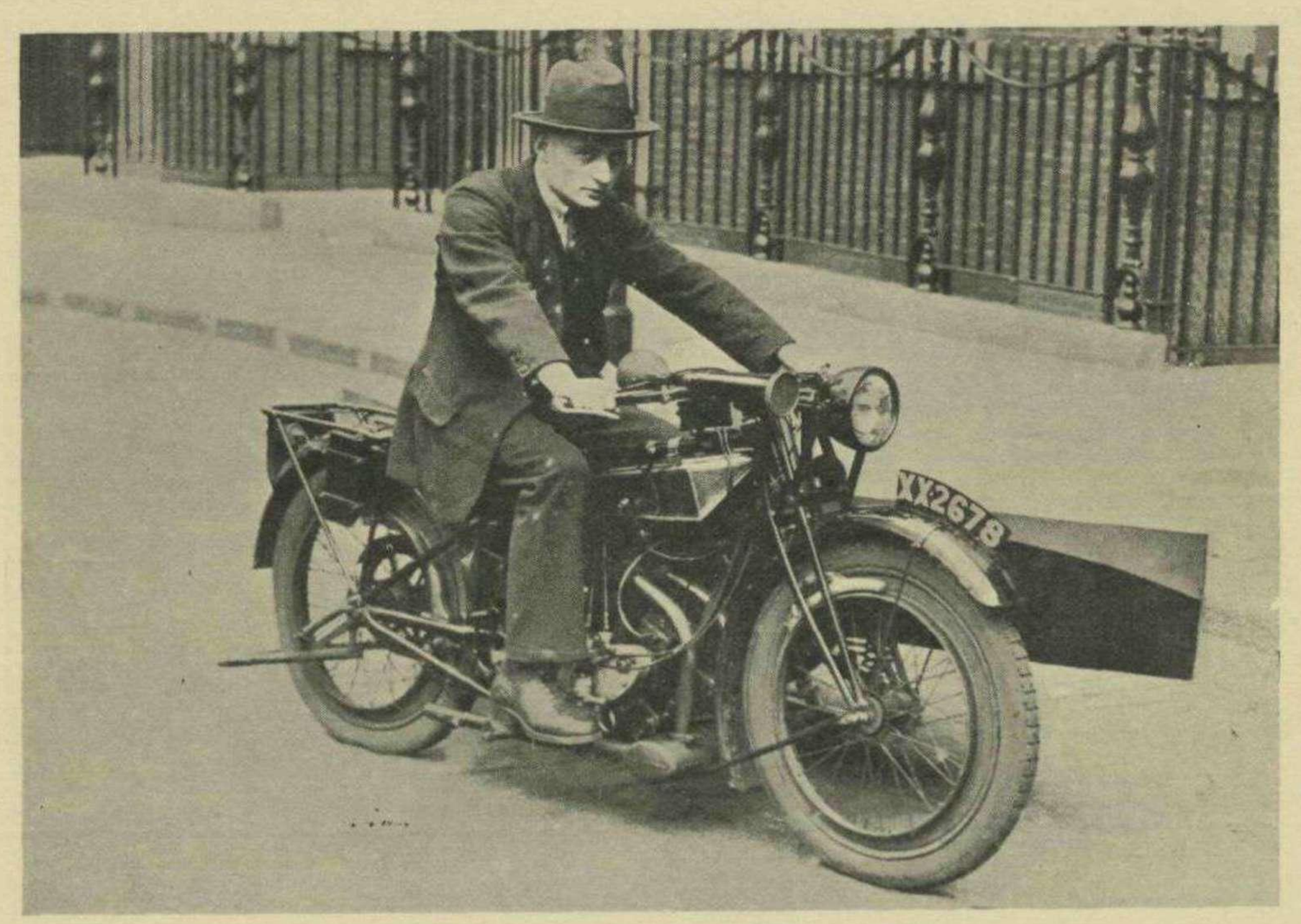
SPORTING MACHINES ON TEST—continued.

Staines from Brooklands, I heard a roar and saw a flash of white passing me, I quite naturally opened out and went after the fire-eating monster that had just stirred up the dust. I felt inclined to drop down to touring speed again for the white and polished brass leviathan was nothing less than the famous "Merc." I did not shut off, however, and with the little Rudge singing to me, now on top, now on third, I managed to keep the one time pet of Zborowski in sight until Runnymede was reached, a matter of some ten or twelve miles. Along this expanse the "Merc." just vanished, but I felt very proud of the little engine that for ten solid miles had been all out and had never murmured.

Before I turn to the engine details, I would mention that hills and "colonial sections" were both included in my test and bottom gear was hardly ever needed. The front forks with their enclosed spring acted silently and unobtrusively, bounce was absent, and for one I can say that shock absorbers would be a superfluity.

The brakes act on false rims on both wheels, and the shoes are of good dimensions, which should eliminate overheating. Braking efficiency was high and neither brake was pierce, both acting in as perfect a manner as one could desire. The front brake would not stop the machine dead, and could be applied with as much force as possible without using the back brake as well. This latter worked well: the whole outfit could be brought to a standstill without effort.

Starting was easy when the right mixture was ascertained. The clutch—dry plate—was sweet, but quite positive, and gear changing could be effected without touching the throttle. Talking of the throttle, would that every machine was fitted with the Senspray carburettor; with this instrument it is possible to obtain any conceivable mixture that is necessary under changing conditions of weather, quality of petrol, acceleration and load. During the whole of my test I was unable to find any signs of a "dead spot," and the carburation appeared perfect from the minimum speed to the maximum. It is now, however, a ridiculously easy instrument to control at first acquaintance and yet it can, with suitable setting of either lever, be converted for traffic purposes into a one-lever carburettor; but here again this should not be acted on too much, as it would undoubtedly influence the petrol consumption. This, by the way, worked out satisfactorily, and the petrol tank (of sensible proportions and holding two gallons) was not empty when I finished my run of about 120 miles.



THE 350 C.C. FOUR-VALVE RUDGE AND SIDECAR COMBINATION.

General Details.

ENGINE.—70 mm. by 90 mm. stroke: develops 10 b.h.p. The four-valve mechanism is neat but inclined to be noisy. This is only noticeable at very low engine speeds: at higher speeds it merges into the general hum and virtually disappears.

The magneto (or in this case the magneto unit) is sensibly mounted high up, and positively driven; the oil pump being driven from an extension of the main gear wheel in the timing case.

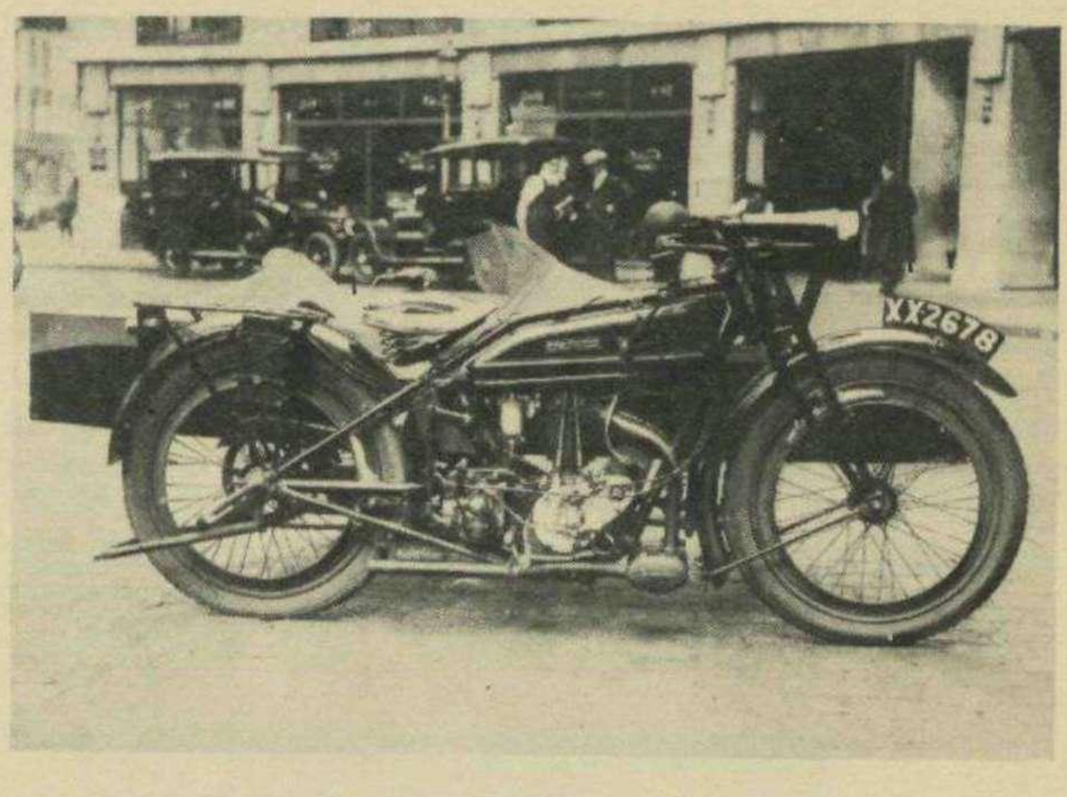
SPORTING MACHINES ON TEST—continued.

Silencing arrangements are efficient culminating in a pleasant note, hardly audible by the rider.

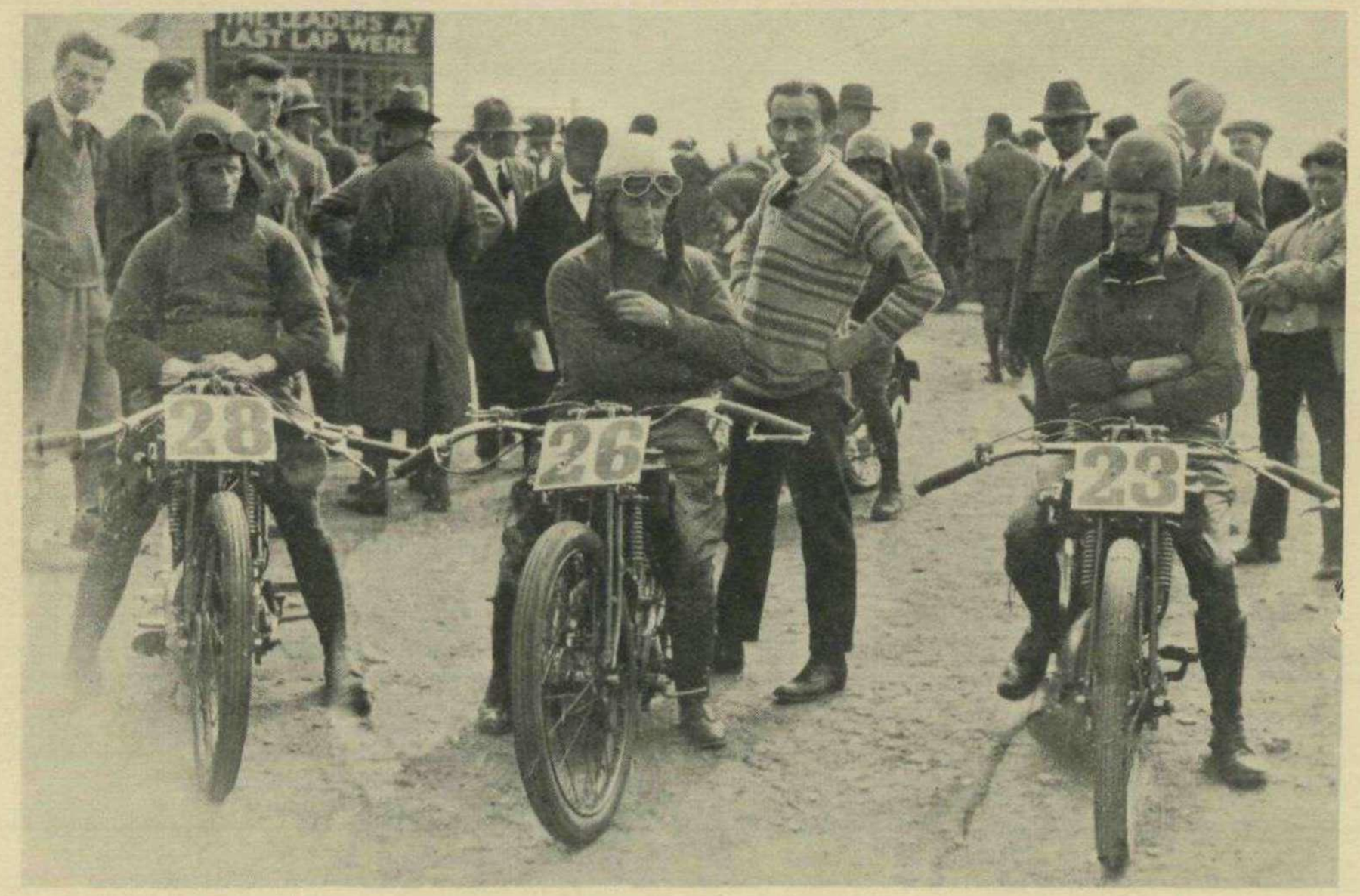
The gear box has double helical teeth always in mesh, which tends to and does produce a slight hum ; this is only just noticeable and is not unpleasant.

The sidecar chassis is interesting, embodying a flat-spring steel axle with underslung Cee springs at the back and coils in front. The body itself is comfortable, and a tall person is easily accommodated, but a small adjustable " stretcher " should be provided for the feet. The windscreen is mounted in a really sensible position, so that the passenger gets the benefit of it and not the draught caused by it, as is usually the case, nevertheless it mitigates against easy entrance and exit ; perhaps a quick clip on the near side of the detachable covering would be a suggestion worth adopting.

To the man with a small pocket and a desire for something reliable *and* speedy, this little outfit should appeal immensely, especially as the price has now dropped to £42, without the sidecar, which is listed at £17 10s.



THE RUDGE FOUR-VALVE SHOWING LAY-OUT OF ENGINE.



THE NEW HUDSON T.T. TEAM. L. to R.—KERSHAW, SHEARD AND MUNDY.

A German Sports Machine.

A photograph reproduced on page 453 represents the B.M.W. Sports machine, which is built by the Bavarian Motor Works, near Munich. The rider, Herbert Gumprecht, is an amateur, who graduated at Oxford University since the war, and intends taking part in competitions in this country.

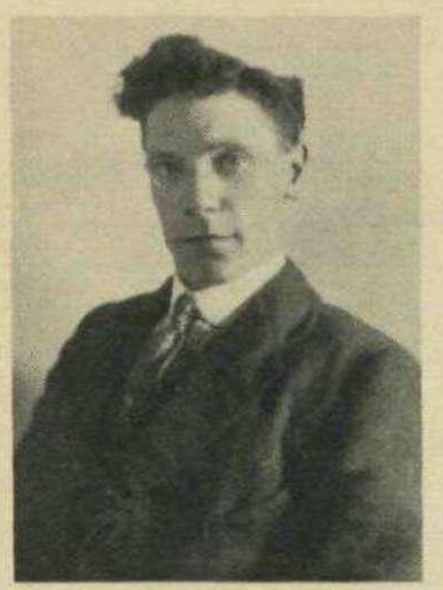
The engine is rated at 16 b.h.p., and has horizontally opposed cylinders, unit construction with a three-speed gear-box and shaft drive. The triangulated frame is also of interest and in all respects the design is of a very advanced character.

Another Darracq Win.

George Duller, on a Darracq, won the 300 Mile Race for the Grand Prix—reserved for cars of 1,500 c.c.—covering the distance in 3 hours 11 minutes 45 seconds.

Count Conelli, on a similar machine, was second, and Major Segrave, also on a Darracq was third.

At the end of the race Count Conelli attempted to pass Duller, who, however, swerved, and Conelli's car overturned. The driver was dragged a distance of fifty yards, but he was able to get up without assistance, having only received superficial injuries.



STREAMLINE BODYWORK FOR SPORTS AND RACING CARS.

By A. P. COMPTON,

Manager, Coachwork Department, Messrs. Jarvis & Sons, Ltd., Wimbledon.

FOR centuries past, coachbuilders have been regarded as amongst the most conservative of folk, and in some cases this conservatism is found in the methods of those who have taken up the design and construction of bodies for motor vehicles.

Perhaps one of the greatest hindrances to the progress of the motor car has been the lack of co-ordination between the coach-building and engineering industries. Engineers took little pains to consider the essential requirements in a chassis to make it easy for the coach-builder to fit a good body, and in his turn the coach-builder often did most extraordinary things when carrying out his part of the job. For instance, it used to be a favourite practice for the bodymaker to secrete the petrol tank under large and heavy members of the body frame, another being that of driving nails or fixing screws with a total disregard for such things as electric wires or lubricating pipes. Happily all that is now a matter of the past and the two branches of the great automobile industry now work happily together, and we find consequent improvements in the completed vehicles.

Progress in Body-building.

Perhaps it is no exaggeration of the position if I state that almost up to the War period, the same methods of body-frame construction were employed as had been used on the original horse-drawn vehicles; but, as in the case of engine and chassis design, racing and competition work have had an enormous influence in bringing about the drastic changes that have taken place during recent years.

Indeed, it may be asserted without fear of contradiction, that the modern lightweight body is the direct result of the experience gained in the construction of racing bodies for use on the road and track.

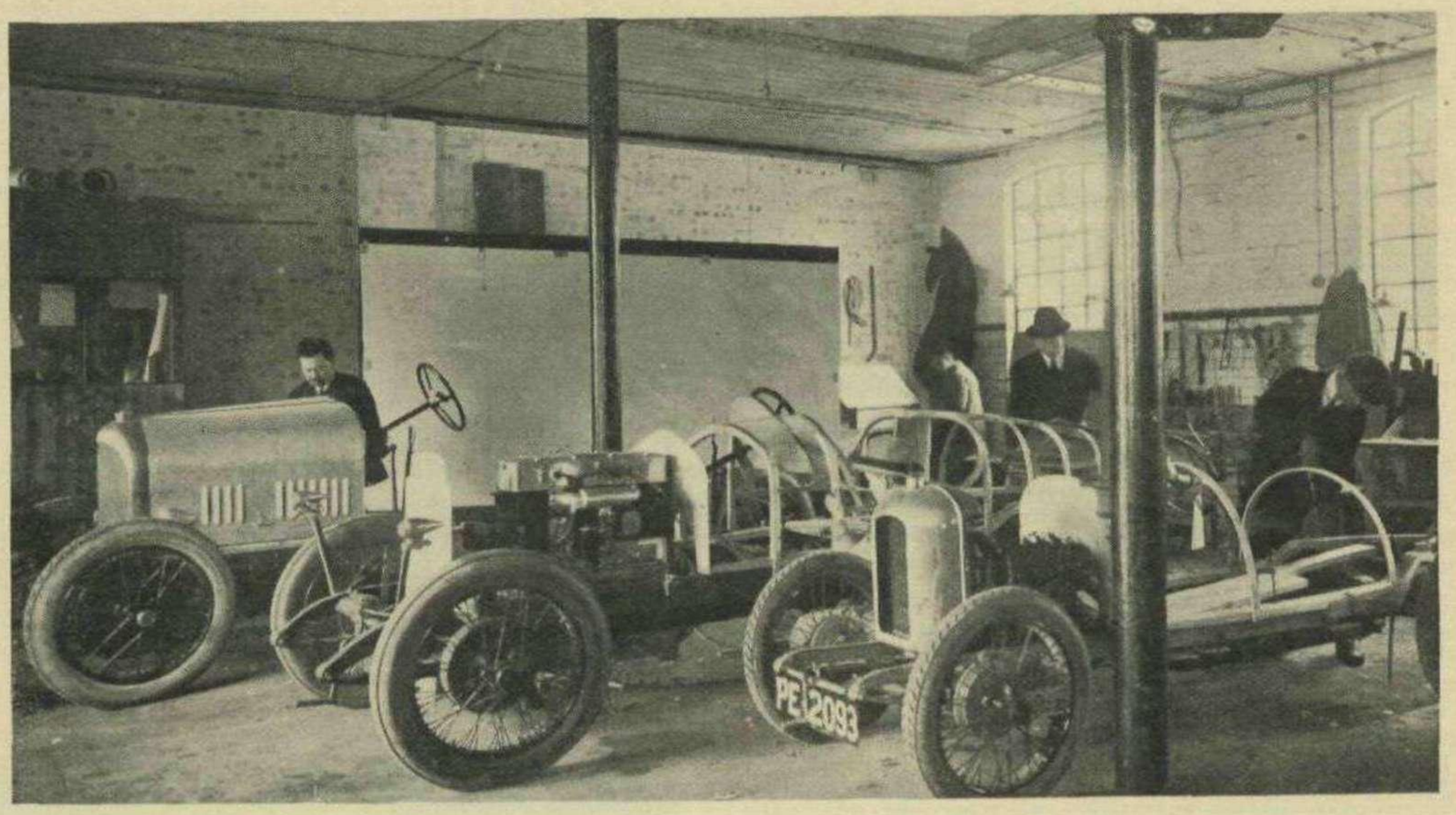


FIG. 1. SPORTS BODIES IN CONSTRUCTION, SHOWING DRAWING BOARD AT REAR OF SHOP.

At the same time, much useful information concerning lightness and true streamlining has been derived from a study of aircraft construction, and those coachbuilders who have followed aircraft principles have found that it is now possible to make motor-car bodies, which though about *one-third of the weight* of those built on the old principles, are able to withstand far greater stresses, owing to their scientific construction and to the careful selection of materials.

Readers will remember that only a comparatively few years ago, it was the practice of car builders to supply naked chassis, and it was largely left to the purchaser to decide what sort of body he would have fitted. Some customers, who in changing over from horse-drawn vehicles to motor cars, would hear of nothing else but to

STREAMLINE BODYWORK—continued.

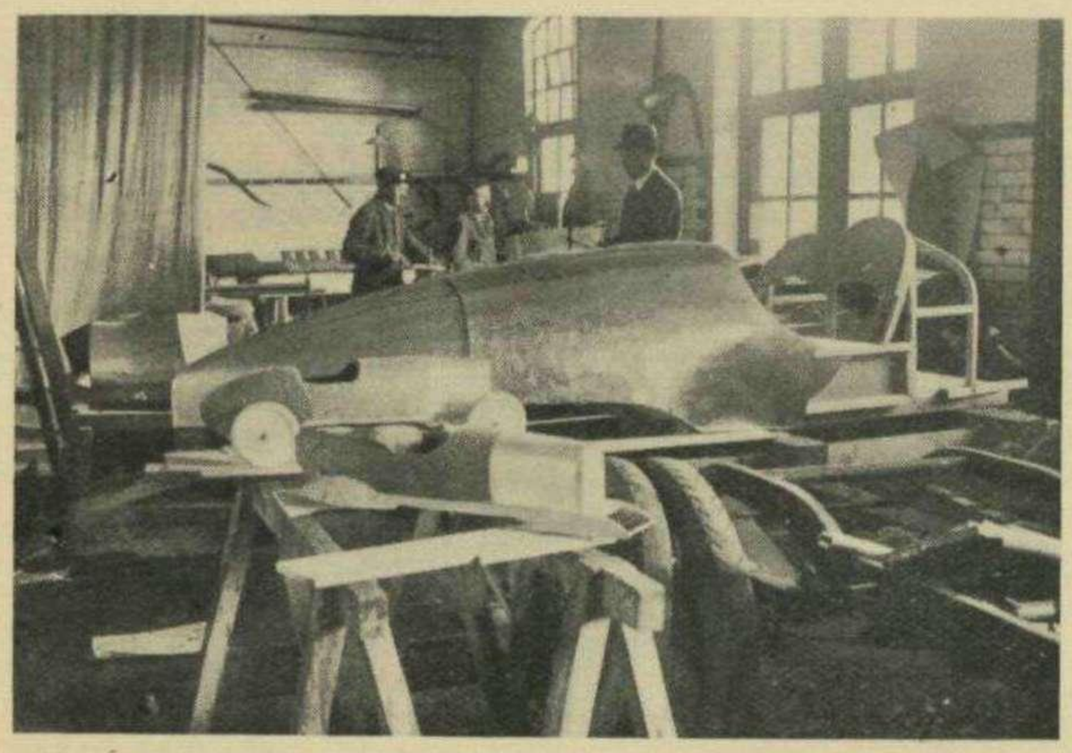


FIG. 2. TWO "PLASTICINE" MODELS OF STREAMLINE BODIES.

have their motor car bodies built by the firm who had made their family broughams for generations past, so the body-builder became a kind of local despot, and did very much what he liked with regard to design and construction. I am merely stating these facts to draw a comparison between the conditions which had so much influence on the design of bodywork in the past and those under which the modern ultra-light streamline bodies are made.

Nowadays, it is the custom for high class chassis manufacturers to stipulate a definite weight limit for the bodywork, and more than one motor firm issues a very comprehensive instruction booklet as to the points to be observed by the body-builder, in order to make the coachwork conform with certain characteristics of the chassis. The reasons for such precautions are obvious, for the lighter the body, the better the performance of the car generally, especially with regard to speed and acceleration, with the further advantages of improved petrol consumption and increased tyre durability.

How a Sports Body is designed.

The secret of a successful body for sporting car work is a scientific interpretation of the laws of streamlining, which naturally involves an enormous amount of study. As may be observed from the frequent attempts of racing car manufacturers in bringing out modified forms or bodies, we have not yet got to the bottom of this most interesting problem, though for all practical purposes, the advanced designs of to-day are as near perfect as the general lay-out of the chassis will permit. At the same time, car owners will not sacrifice everything to the possession of theoretically perfect streamlining, for the question of appearance is important with the sporting motorist of to-day, so part of the business of the practical body-builder is to combine scientific construction with a pleasing outline, which will look smart and speedy without contravening the laws of wind resistance.

In one of the photographs reproduced herewith (Fig. 1), the method of designing racing bodies at the works of Messrs. Jarvis & Sons, Ltd., of Wimbledon, is to be seen. At the back of the shop, a large drawing board will be noticed, upon which the full size chassis is drawn out and the actual lines of the body are actually drawn in the presence of the customer, which besides eliminating the usual drawing office delay, affords the prospective buyer an opportunity of forming an idea of what his car will look like and also enable him to make any alterations to the lines which he may desire.

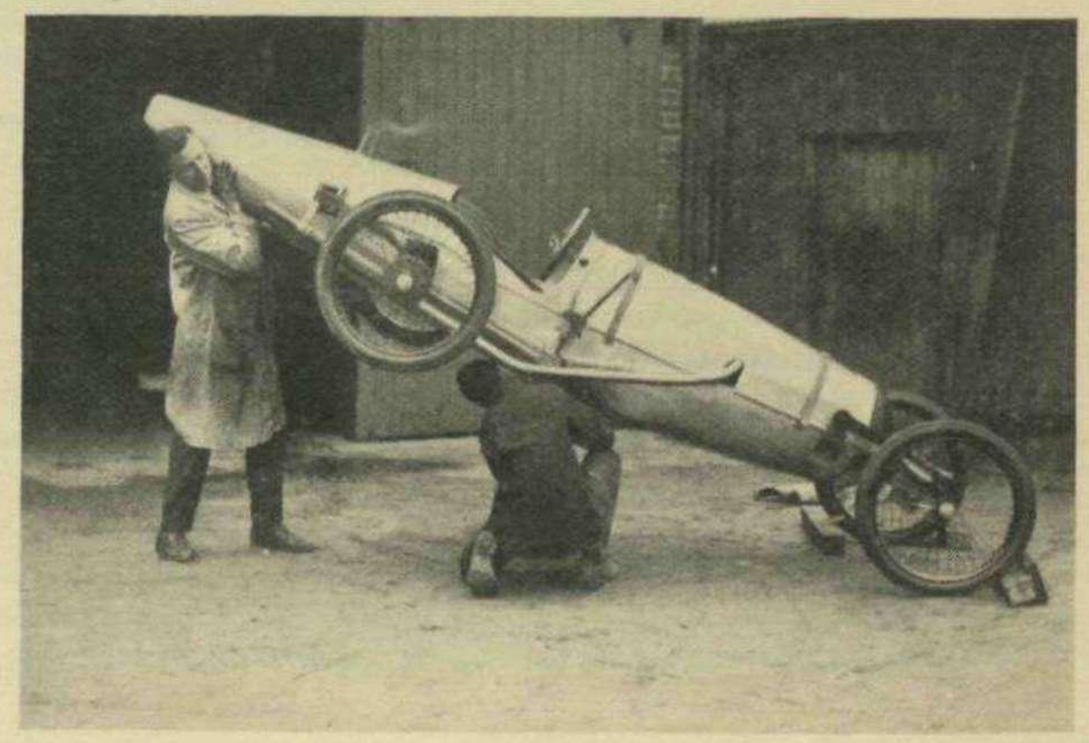
As a rule, customers who own sporting chassis have very definite ideas on the question of streamlining, though naturally these have sometimes to be controlled by practical constructional details, in order to make the finished article capable of withstanding the stresses of the road or track.

The use of "Plasticine" Models.

Long experience of bodywork has proved that lines drawn upon a flat surface, though they may be perfectly accurate, do not always give an exact impression of the appearance of the finished body, and this drawback can be overcome by constructing scale models in Plasticine. Two of these models may be seen in the photograph reproduced as Fig. 2, and the nature of the material permits of alteration to any required degree by pressure of the fingers. Besides affording an ocular demonstration of the real shape of the proposed body, these models, which are one-fifth actual size, serve as a guide for the panel beaters and wood workers, so that in conjunction with the full-sized drawing these useful little models facilitate the constructional work in numerous ways.

Constructional Features.

Having determined the actual shape of the body with regard to streamlining and appearance, we now have to consider the constructional details, for in this department the whole secret of successful racing bodywork lies. The system employed in producing an ultra-lightweight body embodies a framework constructed of very light ash members, strengthened by ash cross-struts and



THE "JAPPIC" IS A STRIKING EXAMPLE OF MODERN BODYWORK FOR RACING CARS.

STREAMLINE BODYWORK—continued.

straining wires. Whereas, in the older methods of construction, the rigidity of the whole body was provided by the use of heavy bottom runners, the modern sports body relies upon light but very rigid box girders, and the heavy body irons originally adopted are now substituted by light angle steel, which is actually much stronger.

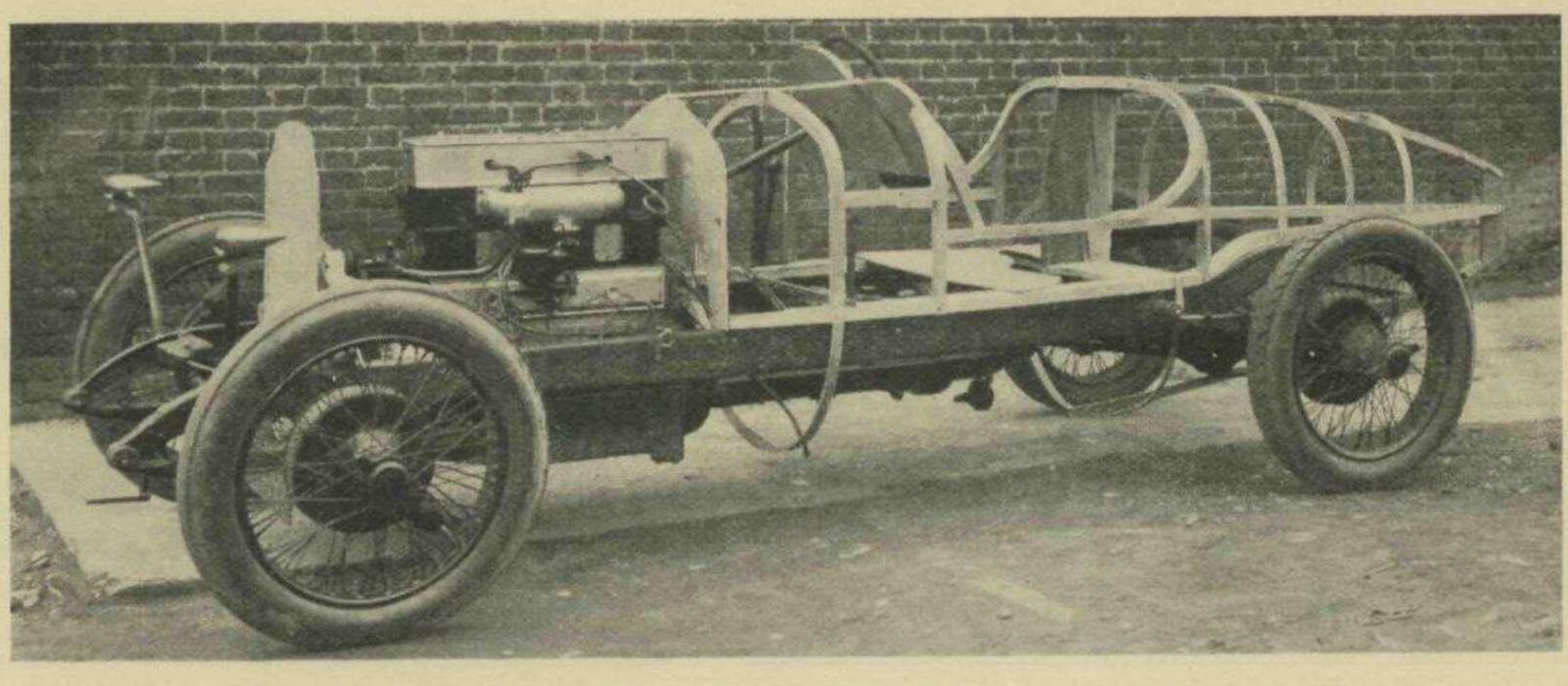
The streamline body is usually constructed of an *extremely* light framework of English ash, the longitudinal members and cross hoops being cut and spliced to obtain the curves, instead of being bent in the usual way. Where angles occur in the framework, the body is strengthened by corner chocks and by three-ply where curves exist. This forms a very rigid construction in readiness for the panelling, which in its turn gives additional strength, 20 S.W.G. aluminium usually being employed for the purpose. A body so constructed is exceedingly light and strong, and possesses the quality known as "liveliness," which means that if the chassis whips, the body whips also and returns to its normal position with the chassis. The shell, or all-metal body is liable to become distorted and strained, developing breaks and cracks after a very short life, when run at high speeds.

It is desirable to arrange the seating position in relation to the height of the scuttle dash, so that the top of the latter is almost at the level of the driver's eyes, and as close as possible to the steering wheel. This means that it is necessary to scoop out the last few inches of the scuttle, which has the effect of deflecting air currents over the driver's head and down the head fairing, thus eliminating irritating " back neck " draught. The cut-away of the cockpit should be as small as the leg length of the driver will permit, and the sides cut to the shape of the arm when the steering wheel is held. It is important that this will allow a rest for the right arm of the driver, and allow easy access for the gear and brake levers. The staggering of the passengers seat is another point, and this should allow the passenger to sit nine inches behind the driver, so that his right shoulder is immediately behind the left shoulder of the driver.

Streamlining is not solely concerned with the bodywork proper, and the term " streamlining " as applied to sports cars is frequently a misnomer. " Streamlining " is quite a speciality and calls for accurate study not only of bodywork, but also of chassis details. This study happens to be a particularly pet subject of mine, and as the result of a somewhat extensive experience with racing bodies, I have found that big improvements have been obtained by extending the streamline effects to the undershield, front axle and wings. The results of fitting an undershield from the front to rear of a racing car give a most remarkable increase in all out speed, which could hardly be credited unless the tests were observed by the aid of a stop watch.

With regard to wing design, the Continental pattern of " flaired " wing appears to give the best results, but at the same time, one has to bear in mind the necessity of keeping the occupants of the car normally clean. An alternative from the " flaired " pattern is the very narrow wing, having a distinct reverse curve at the back, which is now becoming very popular with certain types of sporting cars.

These are only a few of the many features of the modern ultra-lightweight body, and can be employed with equal success for all types of body, from the single seater racing shell to the full-sized Pullman limousine. Thus it is possible for the sporting owner to improve the performance of his car to a remarkable degree by investing in a new body of modern design, which practice is frequently adopted by owners who have reached the zenith of tuning, and yet want a little more speed.

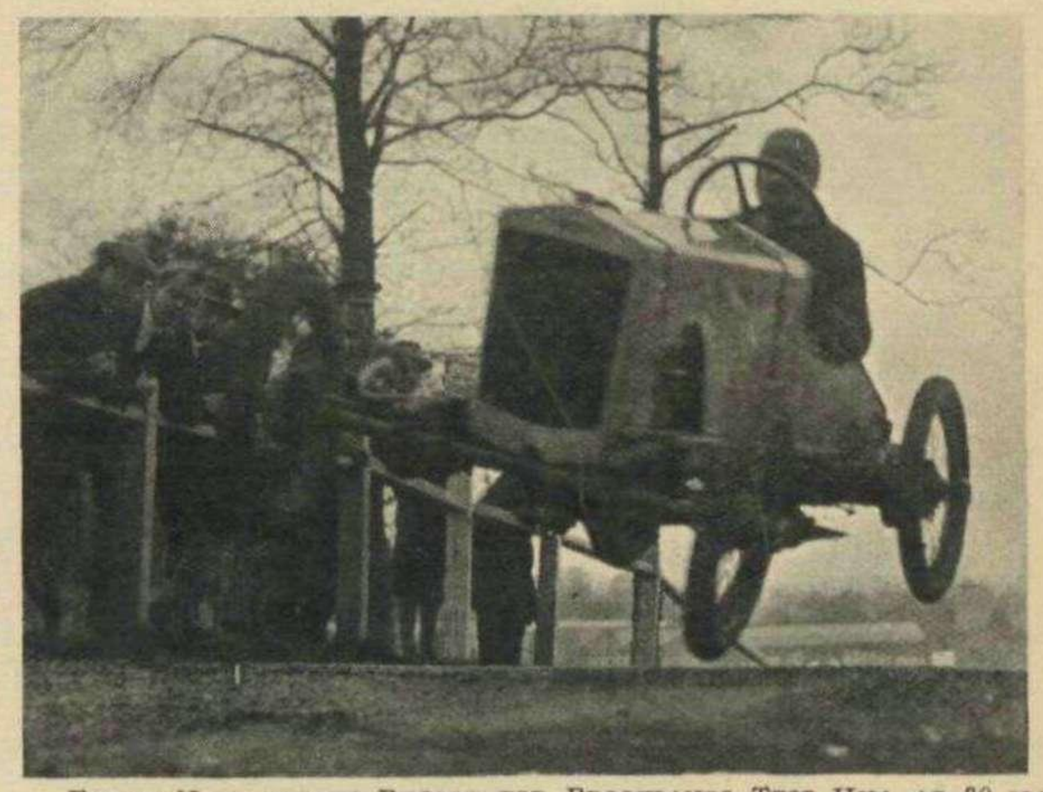


MAJOR COE'S VAUXHALL CAR WITH BODY IN COURSE OF CONSTRUCTION.

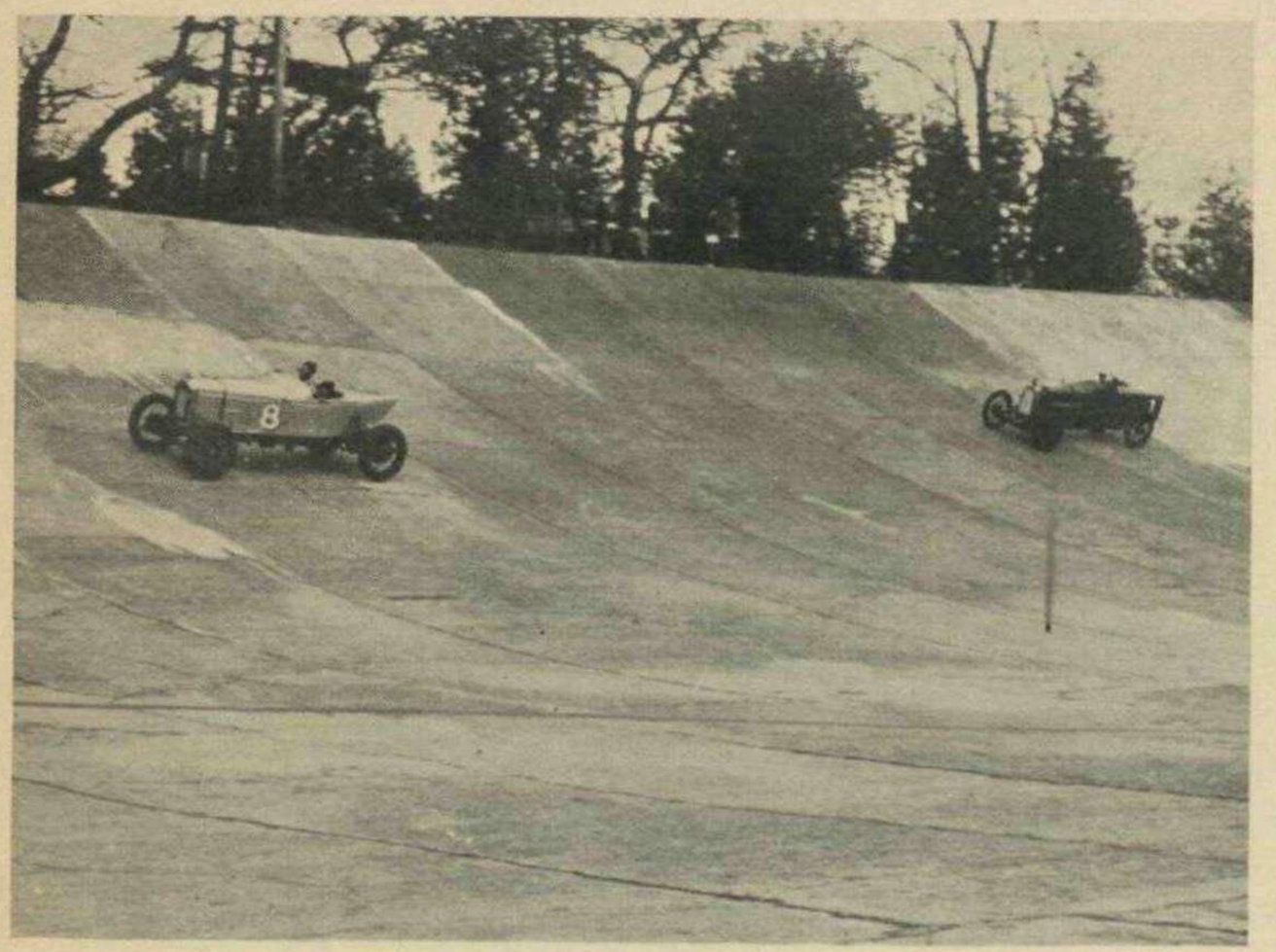
Recent Motor Car an



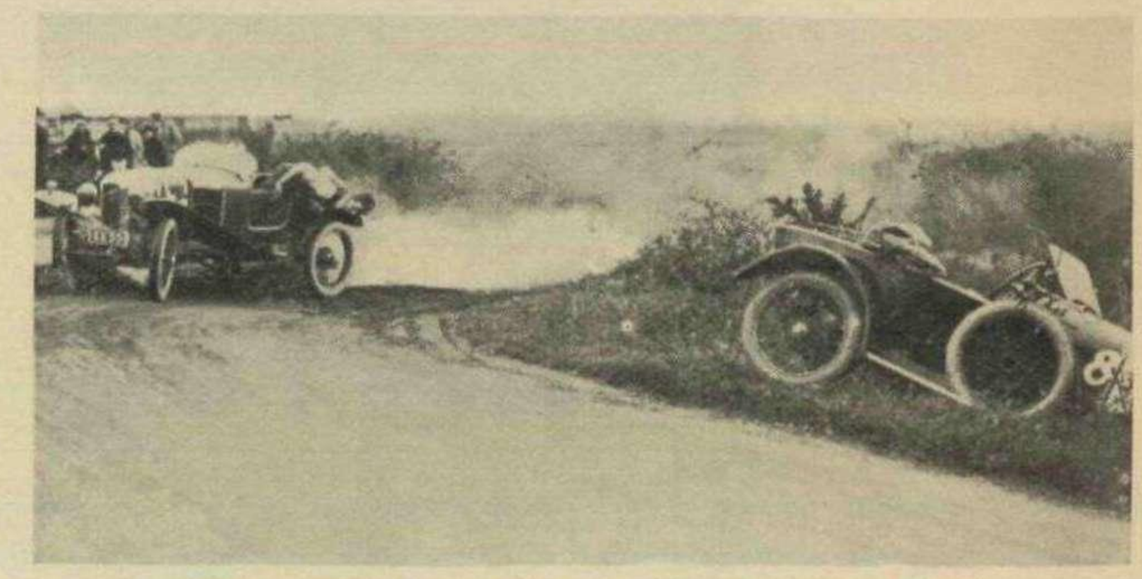
J.C.C. Trial at Brooklands: Cars Lined Up for the Start.



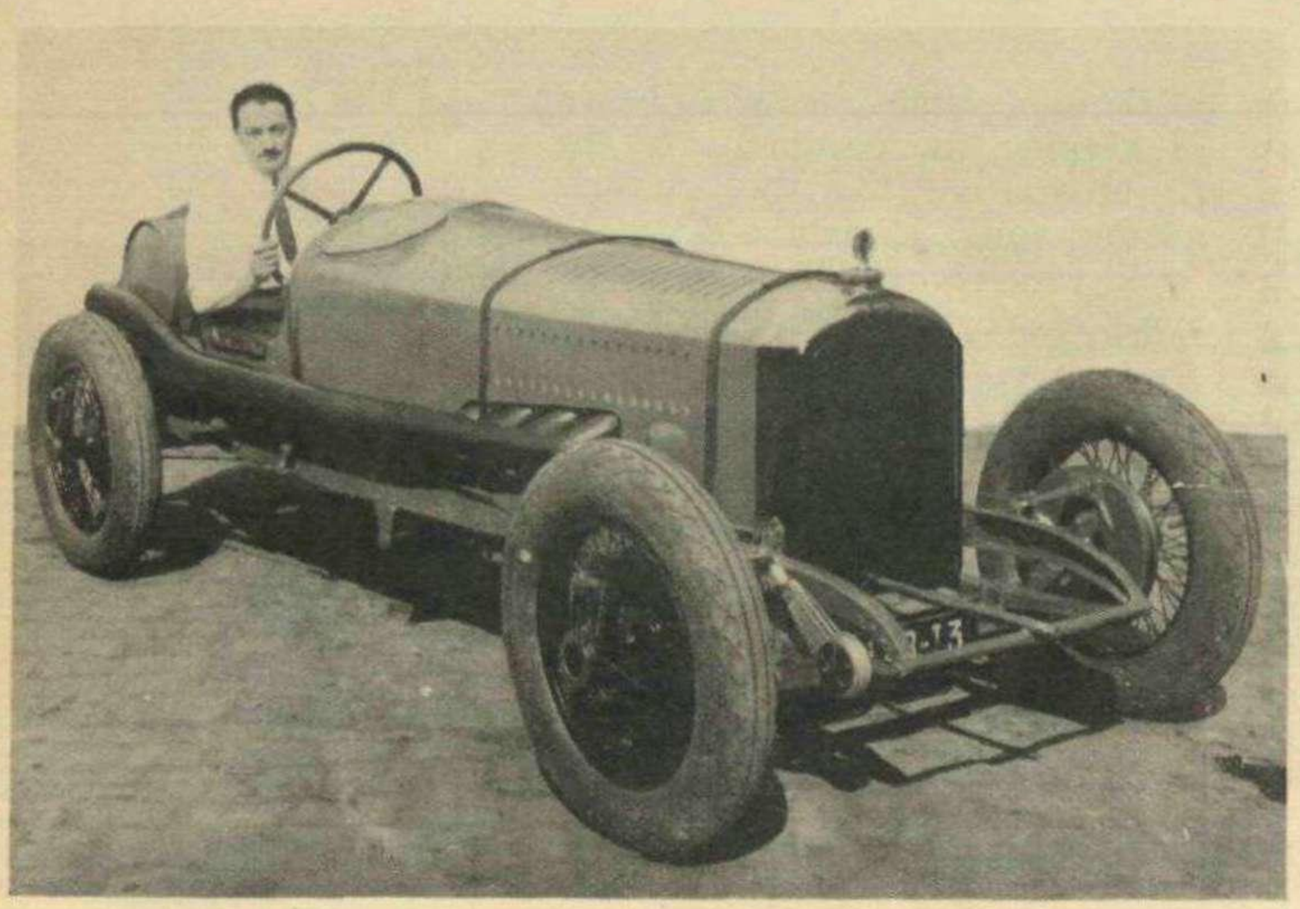
Frazer-Nash breaks Record for Brooklands Test Hill at 30 m.p.h.



Essex M.C. 100 Miles Handicap: Purdy (Alvis) and Douglas (Aston-Martin).



Vernon Balls cornering in J.C.C. Brooklands Trial.

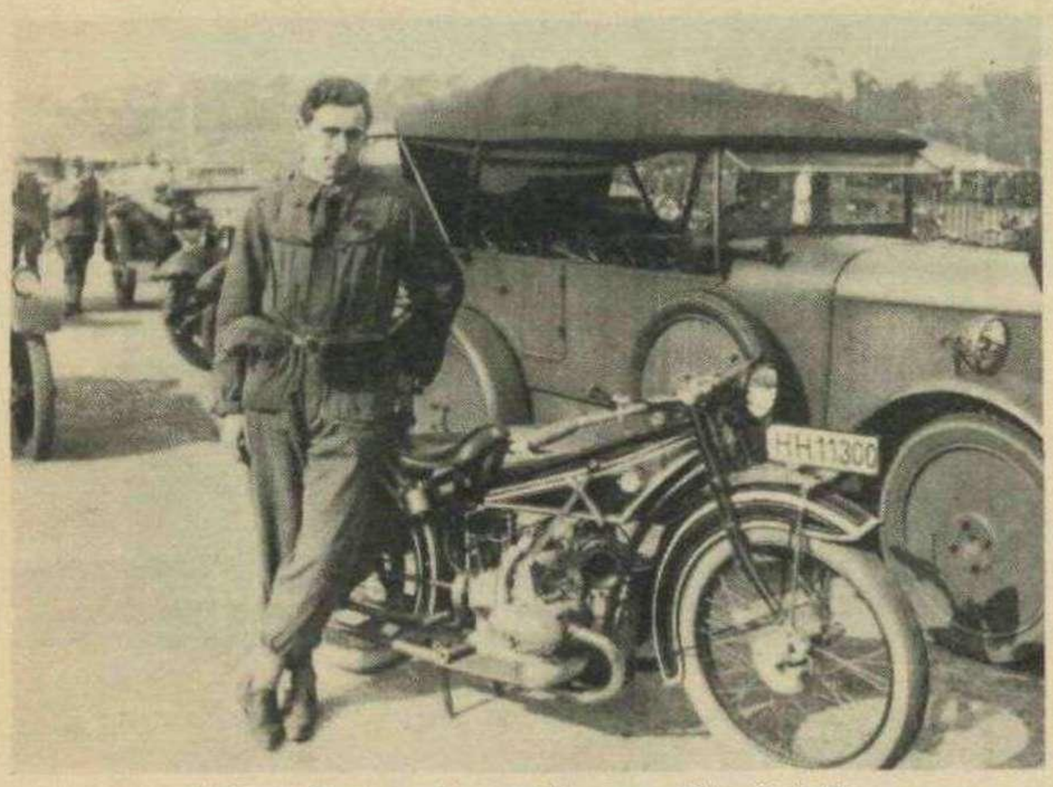


Boillot on his Peugeot: Winner of the Coupe Florio.



G. Reynard comes down when Cornering in N. Liverpool Trials.

d Motor Cycle Events



A New German Sports Model: The B.M.W.

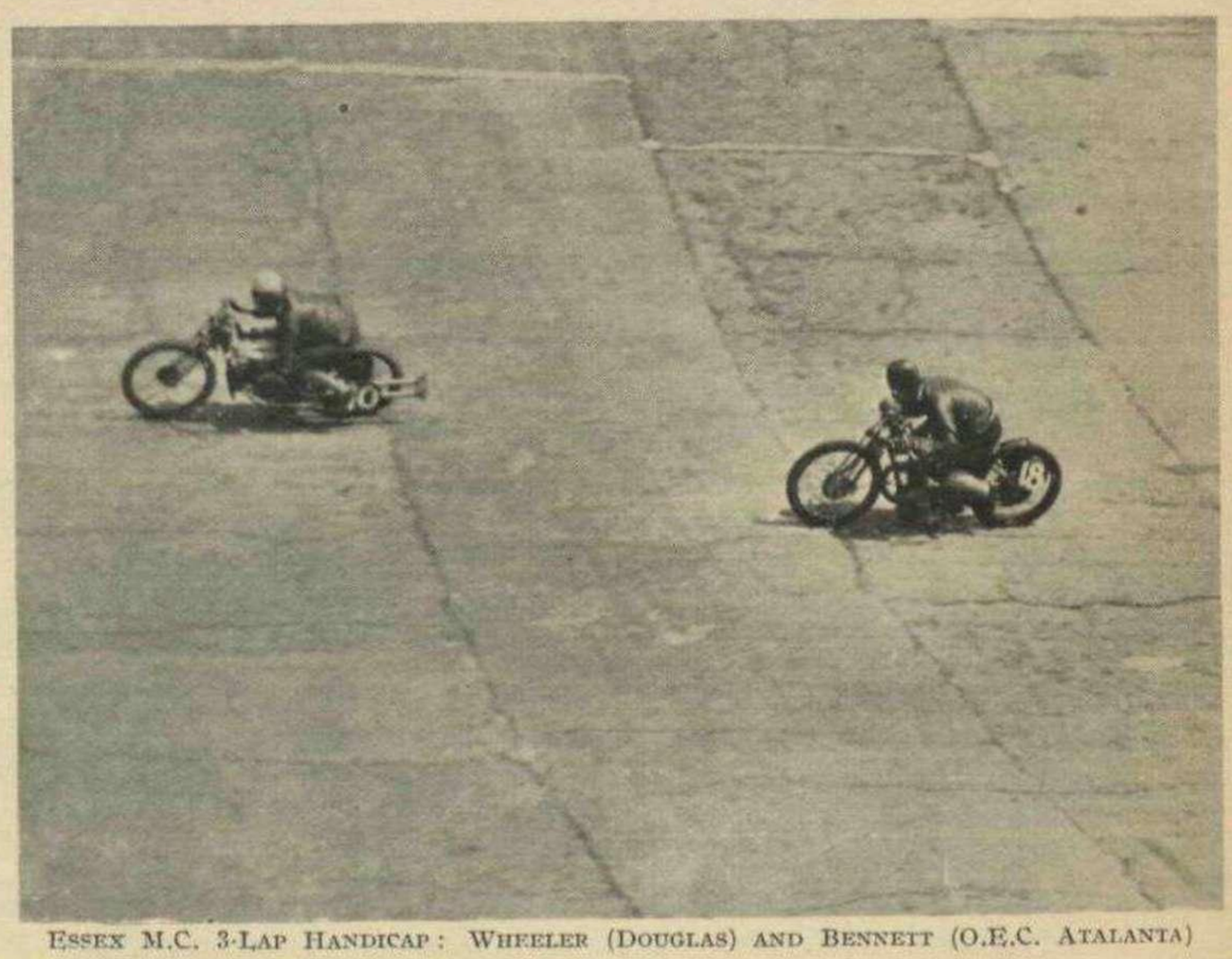


Capt. Twelvetrees on the Super Sports Alvis: J.C.C. Trial.

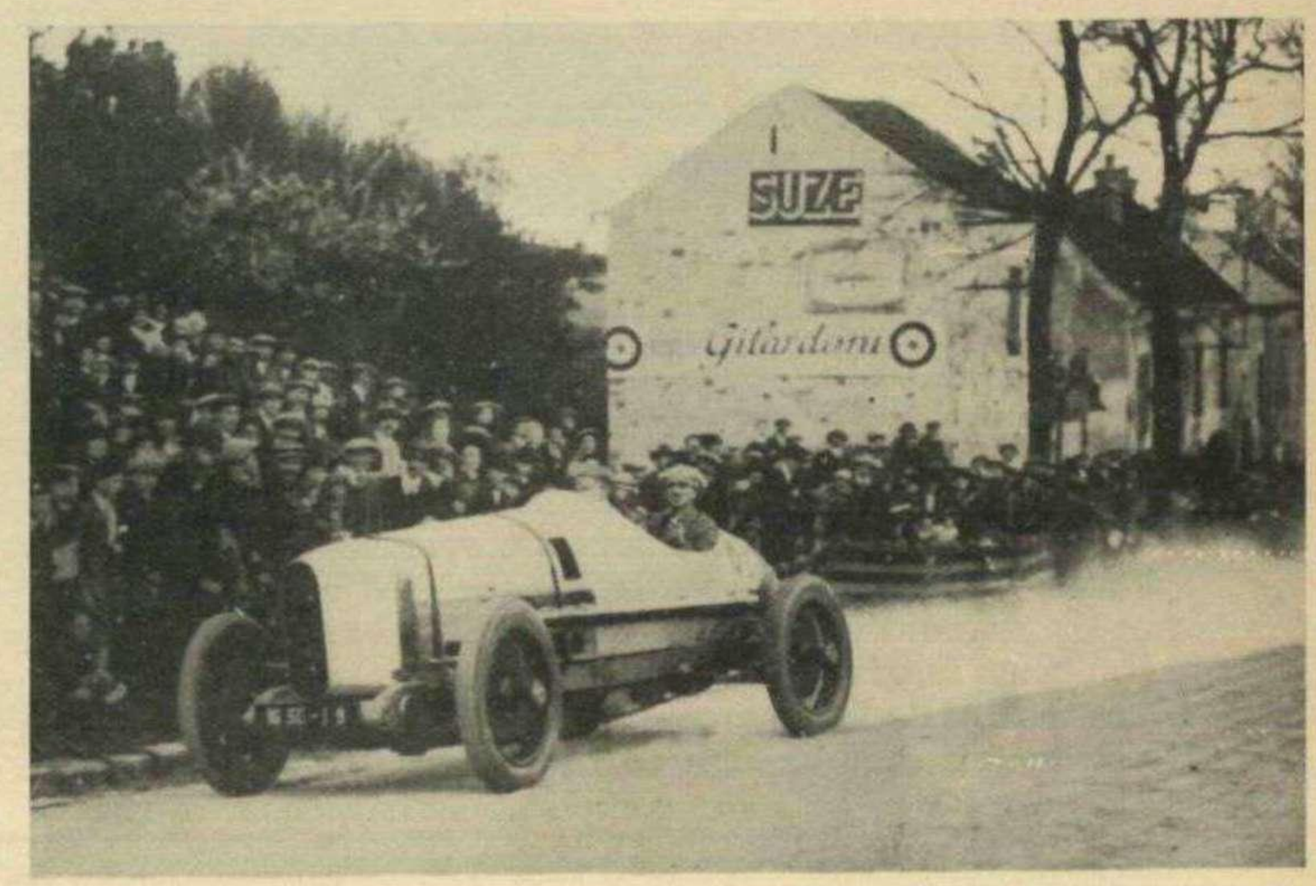
Three Norton Riders at N. Liverpool M.C.C. Trials.



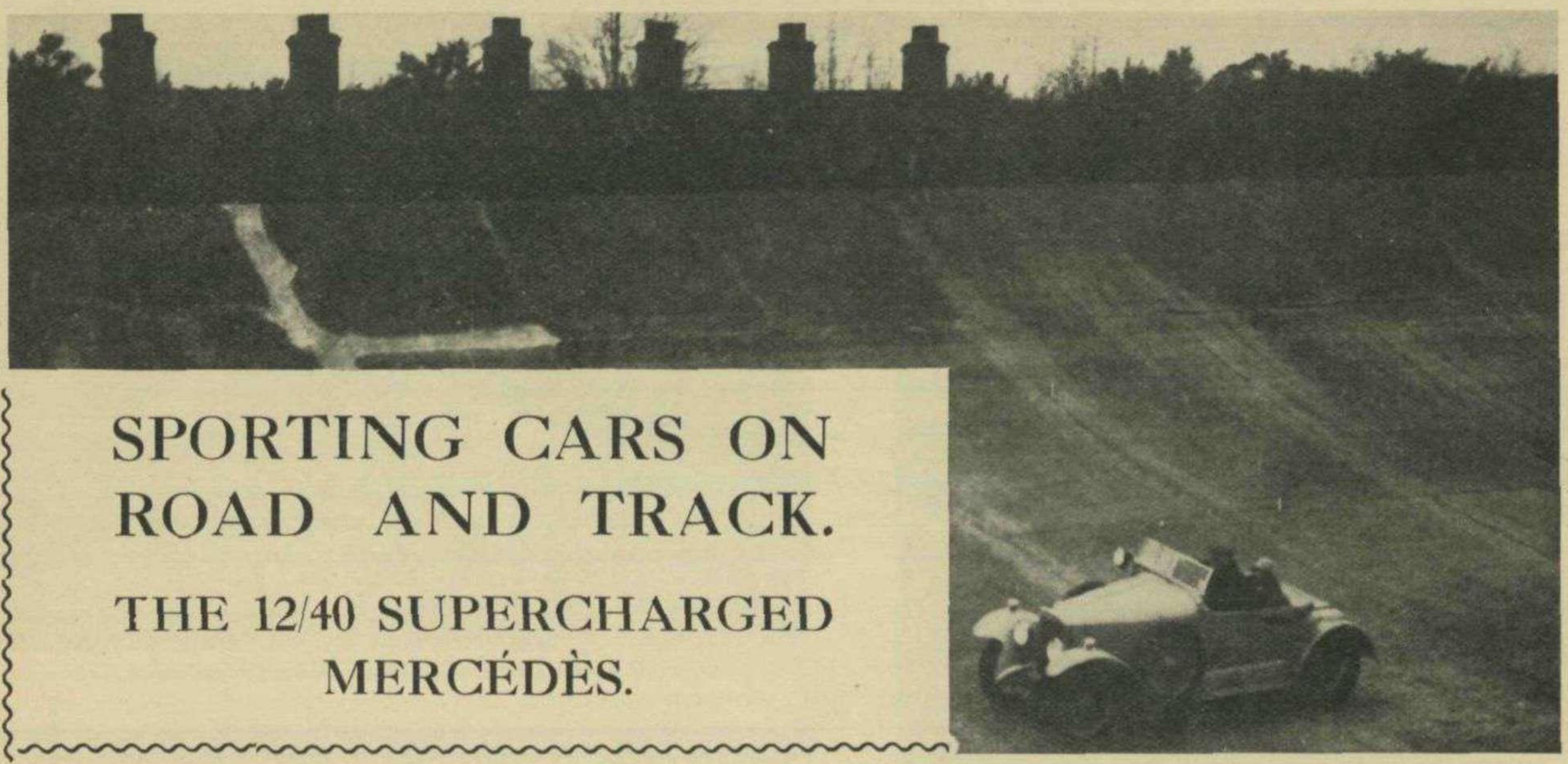
Alvis Sports and Mathis passing under Tunnel at J.C.C. Trial.



Essex M.C. 3-Lap Handicap: Wheeler (Douglas) and Bennett (O.E.C. Atalanta)



Benoist (Delage) winning the Chateau Thierry Hill Climb.



SPORTING CARS ON ROAD AND TRACK.

THE 12/40 SUPERCHARGED MERCÉDÈS.

ABRIDGED SPECIFICATION.

ENGINE: Four-cylinder monobloc. O.H.V. 68 mm. by 108 mm. Fitted with Mercédès Patent Supercharger.

CLUTCH: Single Cone, leather faced.

GEAR BOX: Four speeds and reverse.

SUSPENSION: Semi-elliptic front; full cantilever rear.

REAR AXLE: Final drive by double bevel and pinion.

WHEELS: Detachable wire for 765 mm. by 105 mm. tyres. Two spare wheels.

WEIGHT OF CHASSIS: 13 cwt.

PRICE: Two-seater £775.

CONCESSIONAIRES: British Mercédès Ltd., 127-130, Long Acre, W.C.2.

READERS who perused the recent article on "Supercharging in Theory and Practice" may be specially interested in the following review of the 12/40 h.p. Mercédès Semi-sports two-seater, as for some time past all the models of this famous make have been fitted with the Mercédès patent Supercharger, which has been developed with the object of rendering the apparatus suitable for everyday use. Before giving details of the series of tests to which the car was submitted, we will depart from our usual practice by describing the principal features of the chassis, as from its first introduction in the early days of motoring, the Mercédès has been the most extensively copied of all cars.

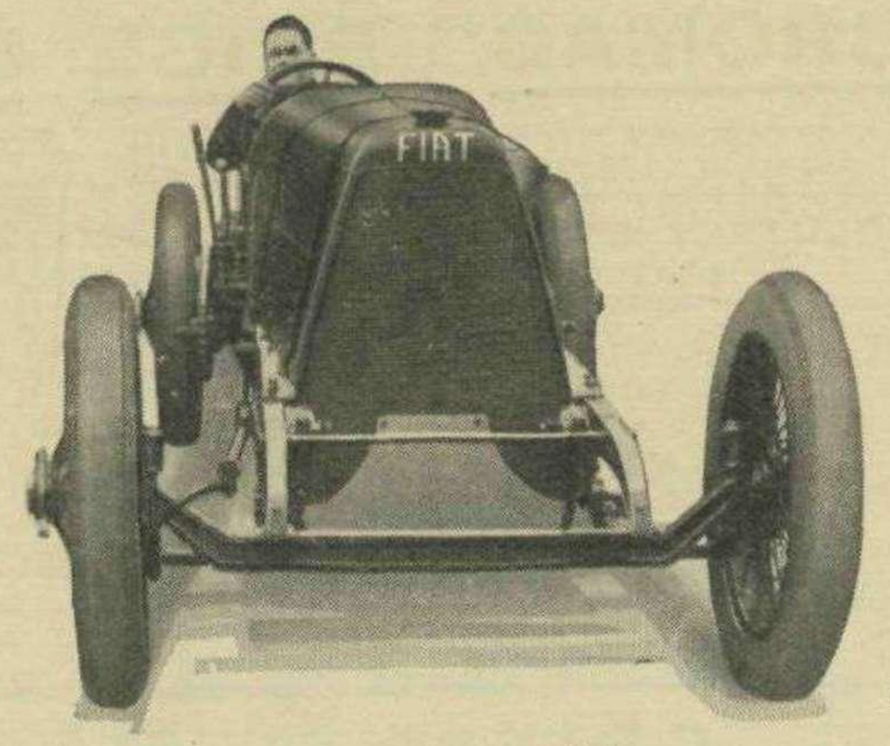
Engine and Chassis Details.

The engine, which is rated for taxation purposes as 11.5 h.p., is of the four-cylinder monobloc type, with a bore and stroke of 68 mm. and 108 mm. respectively, these dimensions giving a cubic capacity of 1,568 c.c., which of course place it just outside the light car category. The inclined overhead valves are operated by a single camshaft, which is driven by an enclosed vertical shaft at the rear of the engine, the whole of the valve mechanism being neatly enclosed and well lubricated. Extreme neatness of design characterises the entire lay-out of the power unit, and though to the uninitiated the engine may appear to be more complicated than those of the usual type, a close inspection of the many refinements included shows that the whole design has been worked out with due consideration to the important matter of accessibility.

The clutch is of the single cone type with a leather face, and the gear ratios are as follows:—First speed 20 to 1; second speed 10 to 1; third speed 6 to 1; and top speed 4 to 1. Thus it will be seen with the engine turning over at a fair number of revolutions per minute good maximum speeds are possible without any difficulty. With regard to the final drive, the arrangement calls for special comment by reason of the unique arrangement of two driving pinions and two bevels, which it is claimed obviates practically all wheel spin, when taking up the drive on difficult ground.

Arrangement of the Supercharger.

The most interesting feature of the Mercédès chassis is the arrangement of the supercharging apparatus, of which the blower, a comparatively small unit, is located at the front of the engine and is connected with the forward end of the crankshaft by means of a multiple disc clutch. The plates of the latter are caused to engage as the accelerator pedal is fully depressed, thus bringing the supercharger into action as the maximum engine revolutions are reached. In the Mercédès arrangement the carburettor is located between the engine and the blower, which obviates the usual difficulty of lubricating the internal parts of the latter, as in cases where the blower has to work in a petrol mist. Though the engine works admirably with the supercharger, as will be described later, the apparatus is somewhat on the small size compared with those used for racing purposes. This, as a matter of fact, is a very wise precaution, for it is admittedly risky to carry the supercharging effect to too high a point, especially in the case of cars intended for use by the general public, and when absolute reliability is more essential than for racing cars habitually handled by experts and where mechanical attentions are not regarded as a serious drawback.



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Three Famous "BP" Users

During the 1924 racing season, Mr. Eldridge on his Fiat, Major Harvey with the Alvis and Mr. Gordon England of Austin Seven fame all used "BP," the British Petrol, exclusively.

At Arpajon, last July, Mr. Eldridge set up the World's Fastest Mile—147.69 miles per hour, and later at Montlhéry captured several world's records, all on "BP."

Major Harvey was the first driver of a British car, the Alvis, to win the 200 miles race—which he did in 1923 on "BP" at a speed of 93.29 m.p.h.—which for a non-supercharged car still stands as a record.

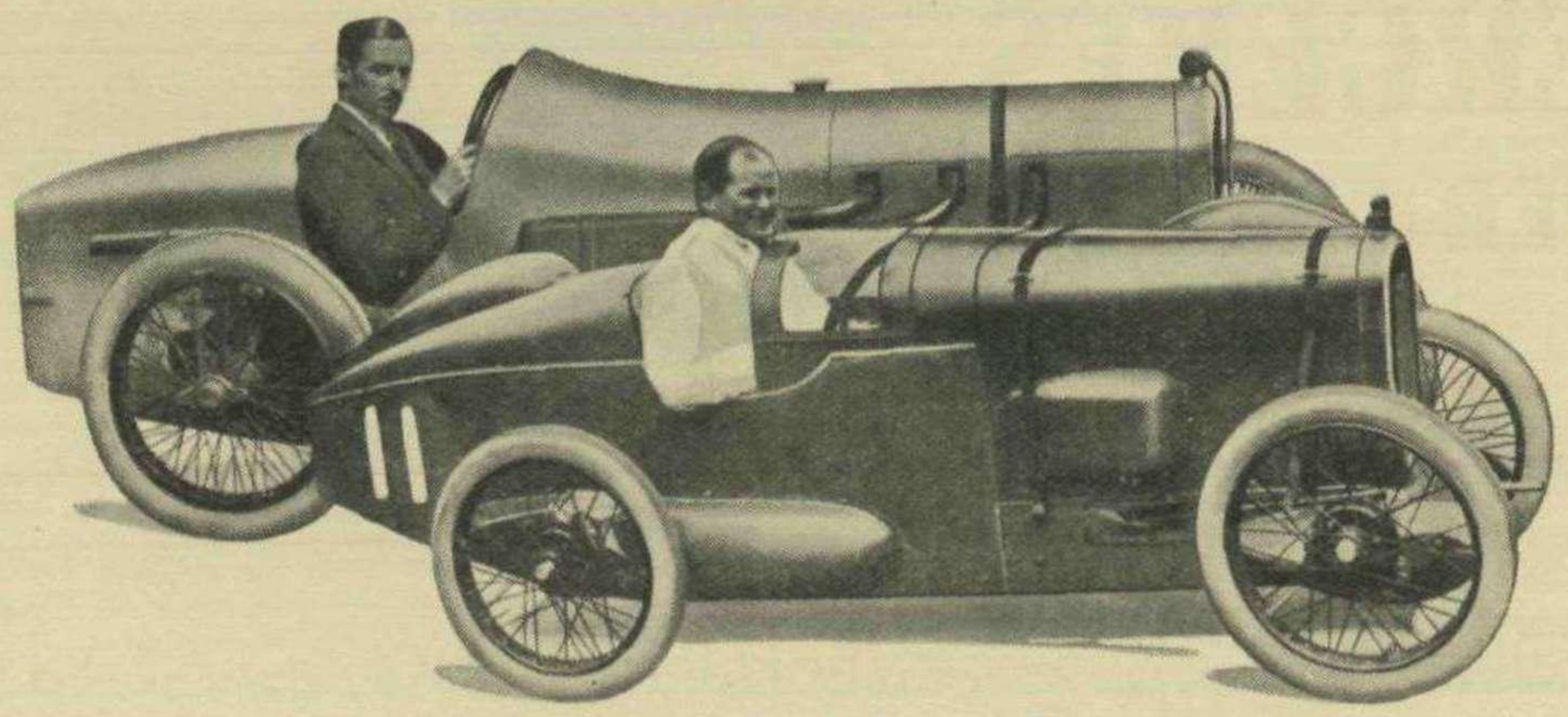
Last October he was successful in breaking 39 records in one day, when he covered 700 miles in under 8 hours—a speed of over 88 m.p.h.

Mr. Gordon England with his Austin Seven, apart from his other successes, won the Grand Prix de France at Montlhéry, and set up no fewer than 21 records—all at a speed of over 80 m.p.h.

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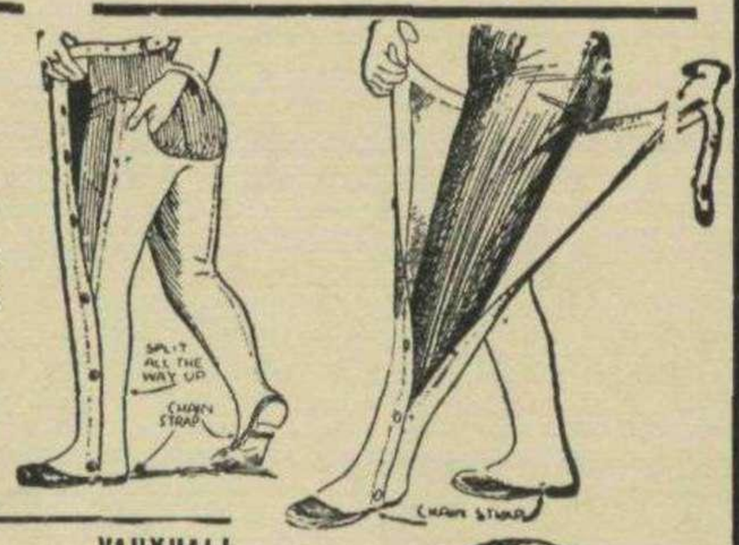
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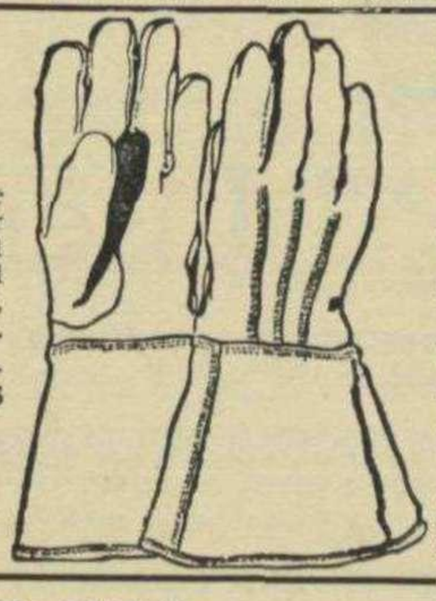
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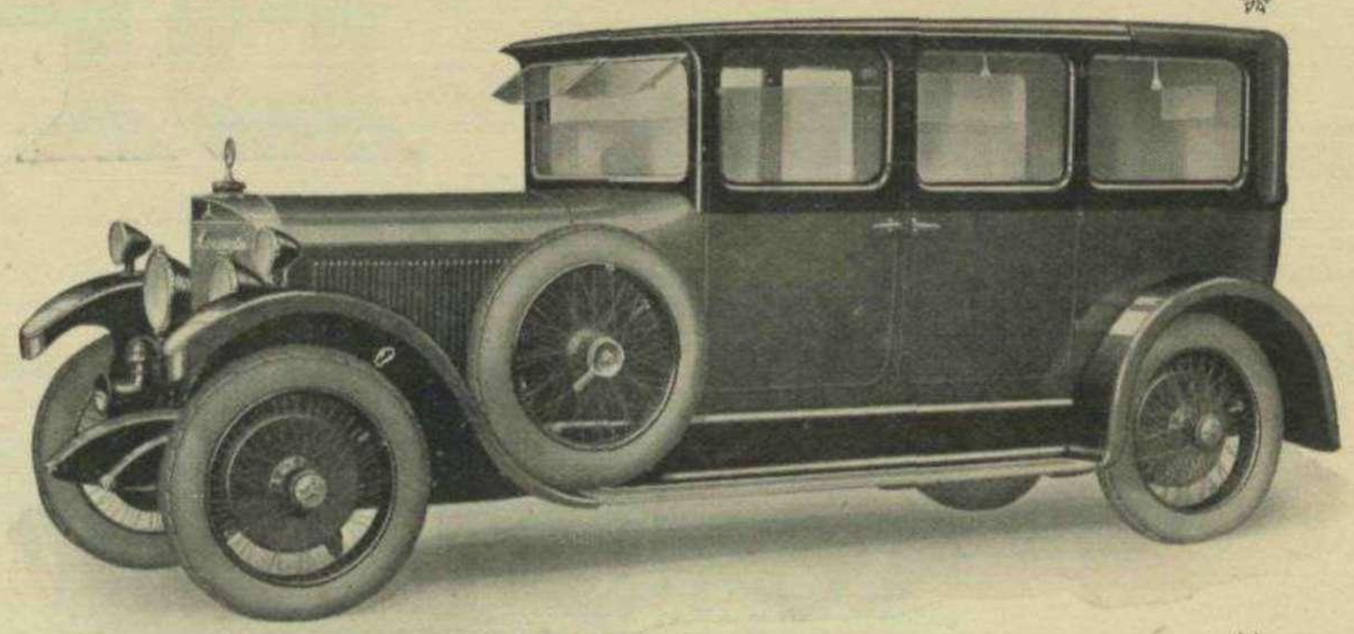
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THE 12/40 SUPERCHARGED MERCÉDÈS—continued.

The Use of the Supercharger in Traffic.

Before taking the car on our test, we did a sort of preliminary canter in company with an expert from Mercédès House, who explained the various little points connected with the use of the supercharger, and thus instructed, we set off to make our own observations about the car, which are recorded as follows.

We found that while the gears could be engaged with comparative ease at almost any speed, the best changes were effected by pausing for a fraction of a second on the "double clutch," and in all cases the act of changing is very similar to that which characterised the Mercédès of many years ago. In fact, there is something—a certain indefinable similarity—about the car that is strongly reminiscent of the old 60 h.p. "Merc." chassis.

Contrary to what might be imagined, it is possible and even convenient to use the supercharger for town driving, though it is not suggested that novices should try the experiment before becoming accustomed to the astounding acceleration, which follows the full depression of the accelerator pedal.

Directly the first gear is engaged and the car is moving, the second gear should be introduced, and then if the road is clear, one may indulge in the new experience of allowing the engine to supercharge. On pushing the accelerator pedal right home, the clutch of the blower comes into action with a peculiar little whine, and in the same second the car leaps forward with a high-pitched but not unmusical scream.

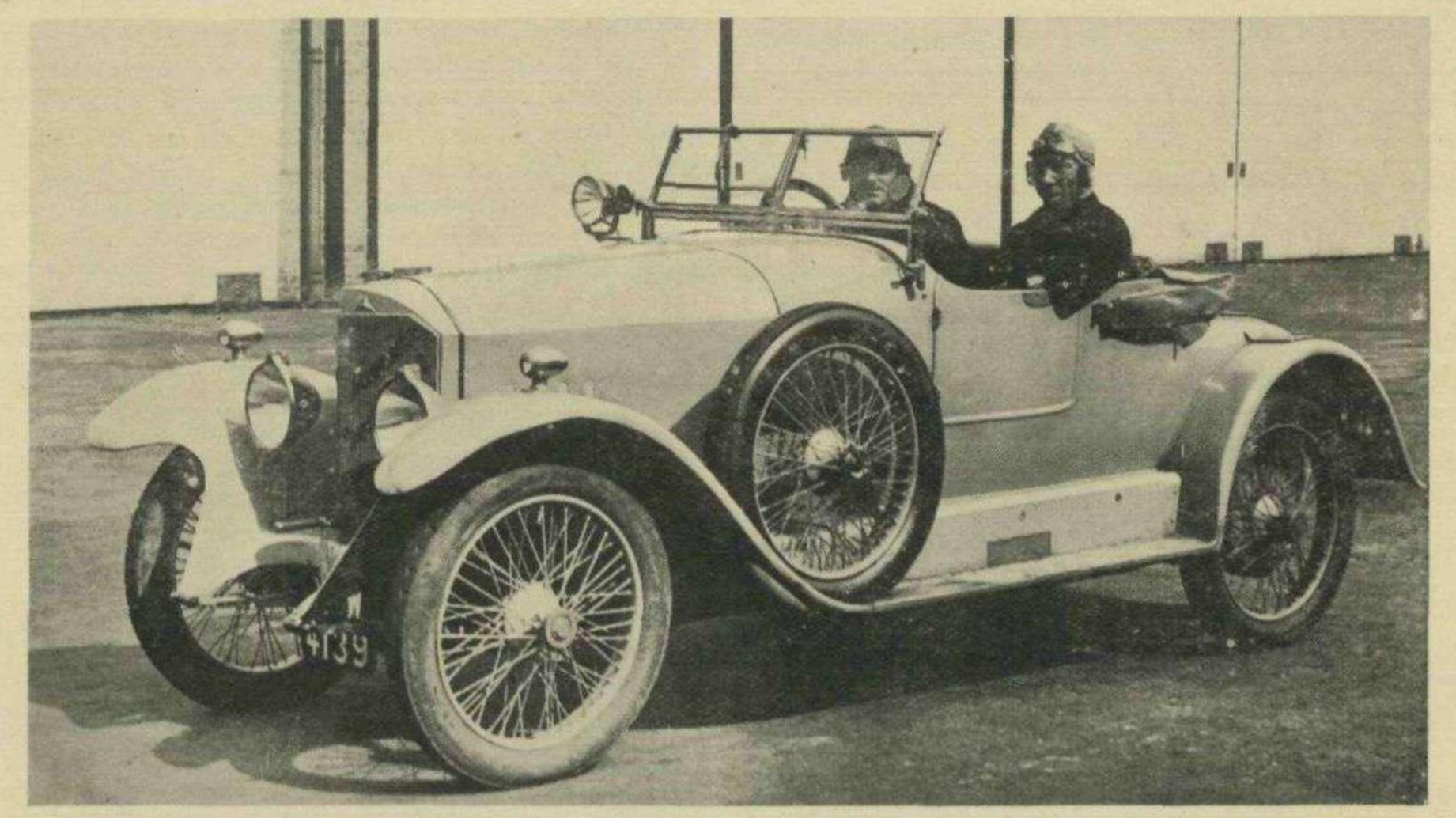
When about to change into third speed, the release of the accelerator in throwing the supercharger out of action causes the engine to give forth a prolonged "O-o-o-o-oh!" which almost becomes an appeal to the driver for a further spell of the supercharging exhilaration.

Top gear work on the 12/40 Mercédès is delightfully smooth, even at London traffic speeds. The short wheel base and the good driving position, coupled with the wonderful acceleration (one may be permitted to use the word "wonderful" in this case) make the car so easy to handle in traffic that one can take liberties with the London taxi-driver and generally beat him at his own game of dodging 'buses and newspaper vans.

A Test on Brooklands.

If one is out to try any car with the turn of speed possessed by the Mercédès, Brooklands is the only place near London where the test can be carried out without falling foul of police vigilance, so to Brooklands we went.

As a matter of fact our pride suffered a distinct reverse, when trying the Supercharged Mercédès on the track for the first time, as attempts to get the speedometer needle over to the 80 m.p.h. mark proved unavailing. But the spell on the track showed us the knack of using the supercharger, which was used to better effect somewhere else later on, when the needle went hard over for more than half a mile.

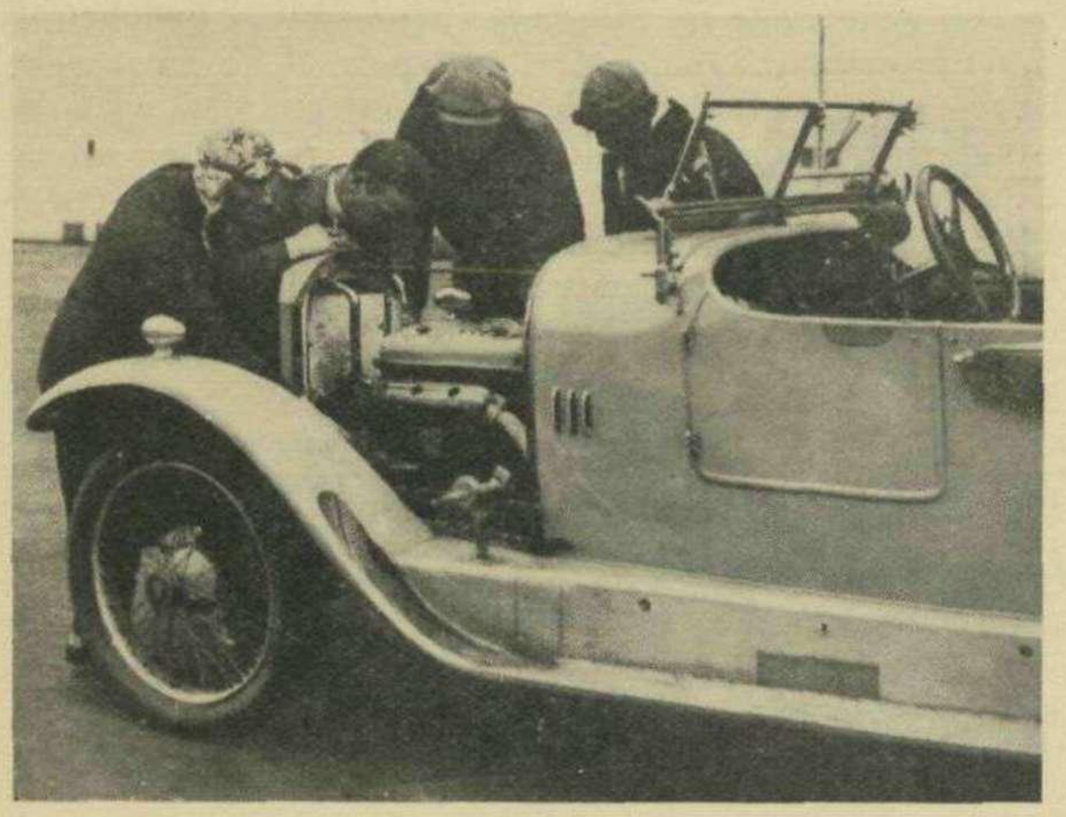


THE 12/40 SUPERCHARGED MERCÉDÈS, WITH MR. GEORGE DULLER BESIDE THE DRIVER.

To get the best results from the engine, one must get up to a fairly high speed on third gear, then change into top and allow the car to pick up speed still further before the supercharger is brought into engagement. In these conditions the benefits are apparent at once, but otherwise the engine is handicapped by having to operate the blower, which is not working fast enough to exert any useful pressure on the carburettor.

We kept the car hard at work for an hour on the track, to discover if it would develop any signs of distress or overheating, but the longer it ran the more it seemed to enjoy itself, so we eventually turned south for Bournemouth, after the engine had been submitted to a critical

THE 12/40 SUPERCHARGED MERCÉDÈS—continued.



MESSRS. DULLER, THOMAS, GEDGE AND OUR TESTER EXAMINE THE MERCÉDÈS SUPERCHARGER.

examination by the group of racing experts shown in the photograph

Touring Impressions of the Mercédès.

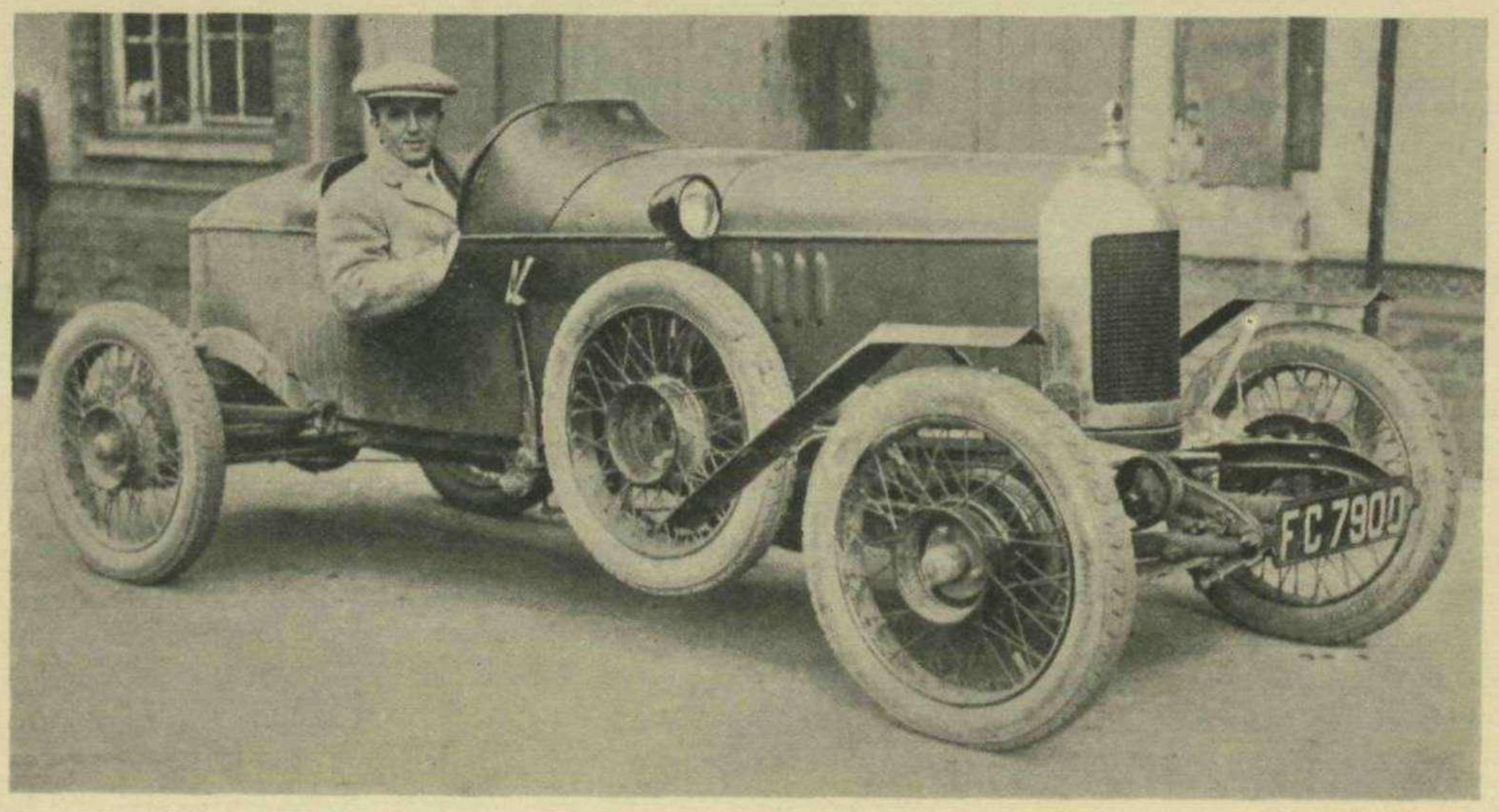
Except for the run up the Hog's Back, the Guildford-Winchester Road does not offer many opportunities for running such a car as the Mercédès on full throttle, but on the other hand, there is a good chance of observing the general touring qualities of a machine on such a route, and it should be remembered that the 12/40 Mercédès is put on the market as a chassis for fast touring rather than for sports purposes pure and simple. At high road speeds the car runs rock steady, though personally we should prefer to have shock absorbers fitted to take off some of the bounce which occurs on really bad examples of our excellent roads. The car will corner fast without any tail wag, even on greasy surfaces.

Our trial trip of some two hundred miles under touring conditions emphasised some of the minor details we should like to have altered for our own use. Our first comment concerns the brakes, which are excellent for all ordinary purposes, but as soon as one begins to get above 70 m.p.h., the car does take rather a long time to slow down. The addition of four-wheel brakes would enable one to indulge in higher touring averages than at present, with the same degree of comfort and safety as is now possible up to speeds say of 55 m.p.h.

On the standard two-seater body as turned out by the makers the leg room has been rather overdone, with the result that there is quite a stretch to reach the clutch pedal when fully depressed.

The instrument board is very complete, but the lay-out is capable of improvement, for example, the speedometer is located on the extreme left of the driver, who cannot gauge the speed without turning his head. It may be mentioned that many Mercédès owners appear to get over the craving for four-wheel brakes, even though they express the intention of having them fitted when buying their cars. Perhaps it is that they content themselves with 50 m.p.h. as a touring speed, and unlike ourselves are not obliged to drive all out to discover the merits and demerits of different cars for strictly business purposes.

Notwithstanding the few minor criticisms mentioned above, we were very much impressed by the general qualities of the Mercédès in its latest form, and the makers have managed to retain the excellent characteristics of the pre-war models, besides demonstrating the value of supercharging for touring cars in no uncertain manner.

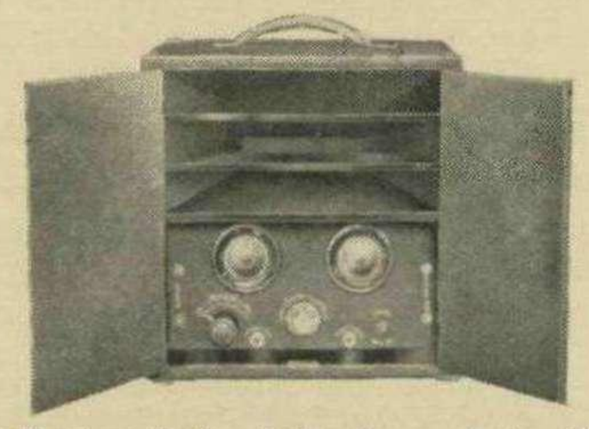


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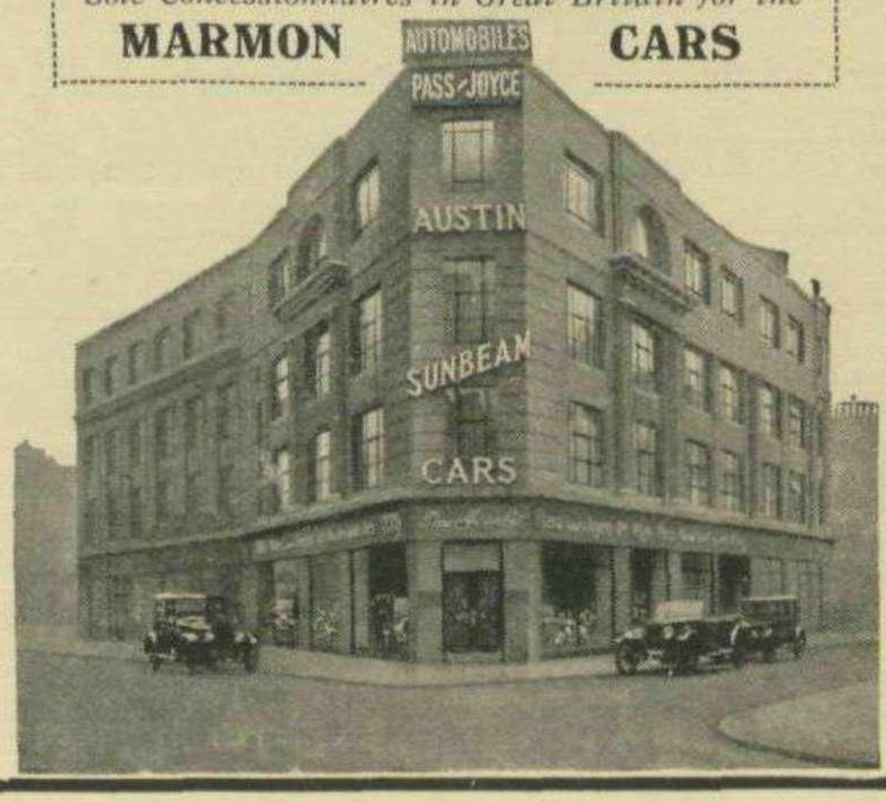
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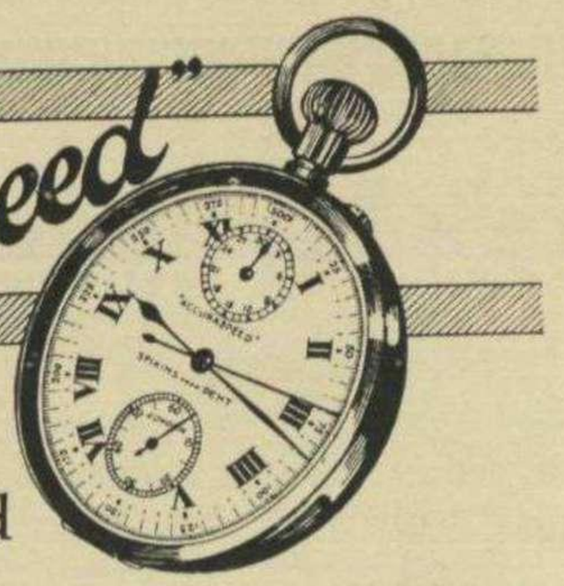
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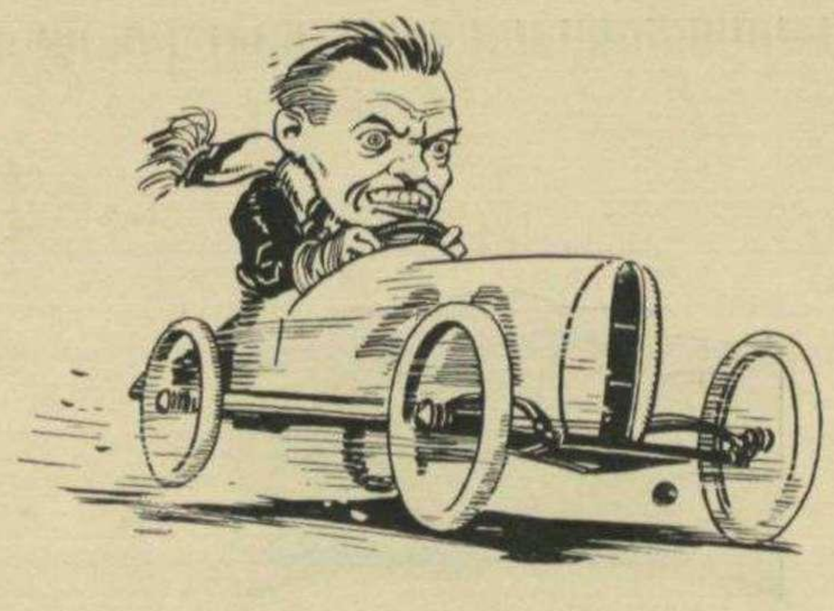
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Heard yells that made him take the grass
Between the road and a gaping quarry,
And miss by a hair a four-ton lorry.

Telamite Teddy swung his car round,
Lit a cigar, and then at a bound
Went after the runaway lorry like deuce.
Could he scrape past it or was it no use?
Doing eighty, it swerved; Teddy passed, mudguards gone.
Then, his tail to its bonnet, he put his brakes on!
In twenty-two seconds they came to a stand—
And—Teddy drove off with a wave of his hand.

This rescue still further enhanced Teddy's name
But honour where honour is due all the same.
And Teddy owns he'd have had a fright
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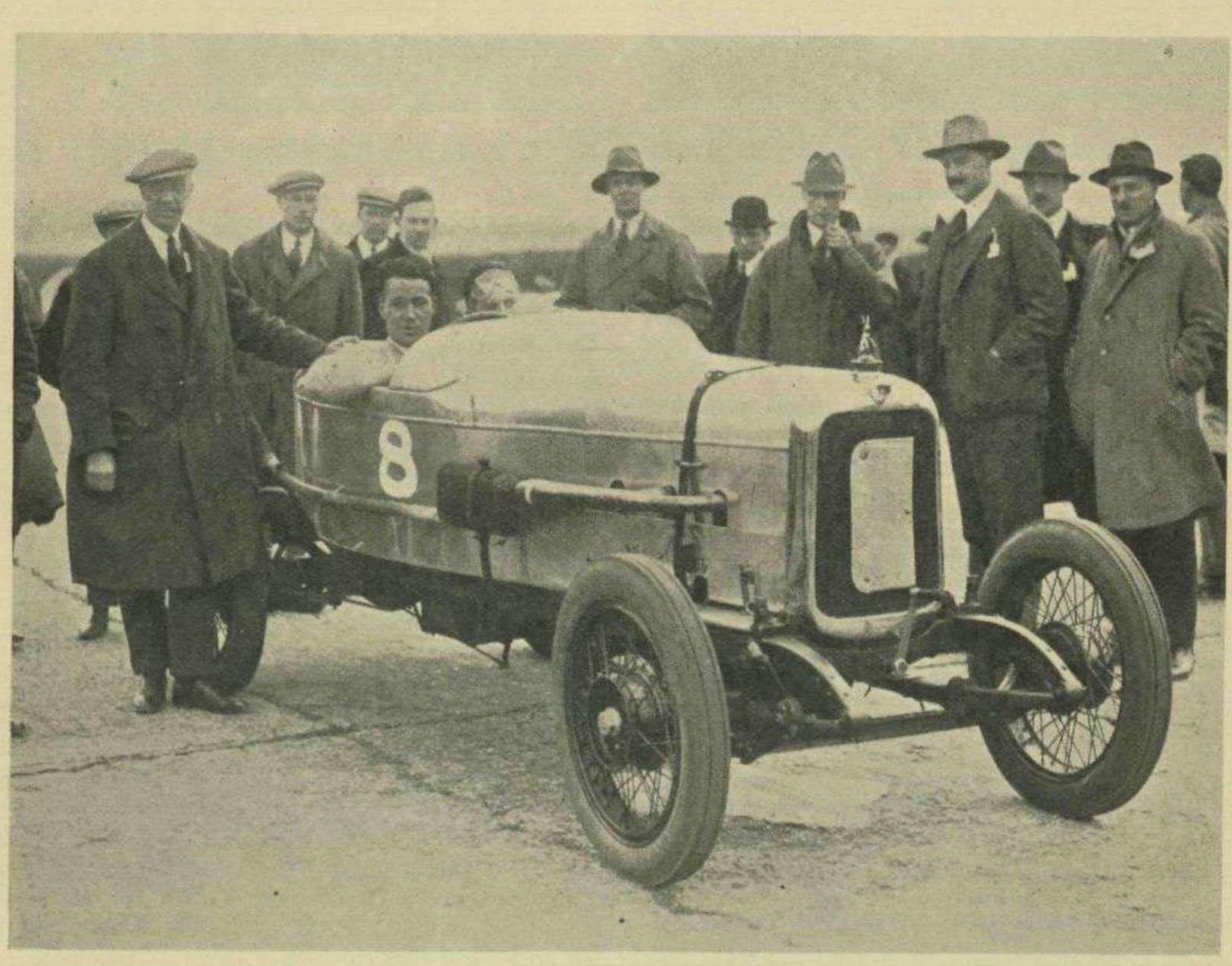
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MEETING OF THE ESSEX MOTOR CLUB AT BROOKLANDS.

Excellent Racing in the 100 Miles Handicap.

THE patient Brooklands habituées, who have recently become quite used to bad weather, were rewarded by a fine day's sport on Saturday the 9th May, when the Essex Motor Club provided a short but extremely interesting programme.

Of the five races, three were devoted to motor cycles and sidecars, these being very well supported by representative entries ; but perhaps the greatest interest was aroused by the two car races, if the number of car owners present at the event can be taken as any criterion.



H. W. Purdy (Alvis) Wins the Essex Motor Club Hundred at Brooklands.

The Essex Junior Long Handicap.

This race, over a distance of about five and a half miles, started and finished at the Fork, and, as usual, the entire length of the finishing straight was crowded with spectators cars. In these days, the racing at Brooklands seems more popular than it has ever been, due to some extent to the R.A.C. ban on road events, which is causing the advantages of the track to be fully realised at last.

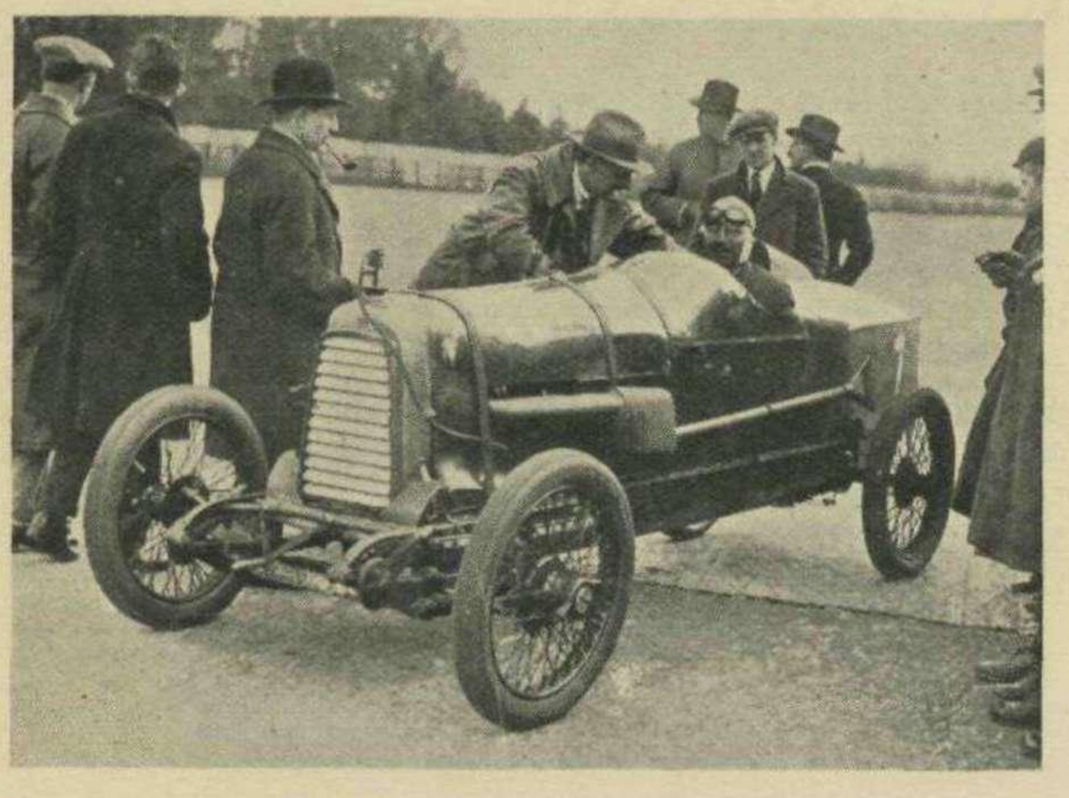
Mr. Vernon Balls' " Amilcar " was sent off with 1 minute 15 seconds start, and got away very well for the first lap, but retired very shortly after, owing to a slipping clutch. The driver wisely decided not to continue, in order to avoid further trouble which might have spoiled his chances for the big race of the meeting. Miss Lister handled her Aston-Martin with great skill, but did not show the speed of the other lady driver, Mrs. O. S. Menzies. The Itala, driven by the latter, however, developed trouble and failed. As the cars emerged from the Railway straight, it became obvious that the Alvis, owned and driven by Mr. R. M. V. Sutton, was in for an easy thing, and romped home first at the speed of 76.62 m.p.h. without being challenged. Miss H. M. Lister (Aston-Martin) was second, and Mr. Aldridge's Alvis followed closely into the third place.

The Essex Open 100 Miles Handicap.

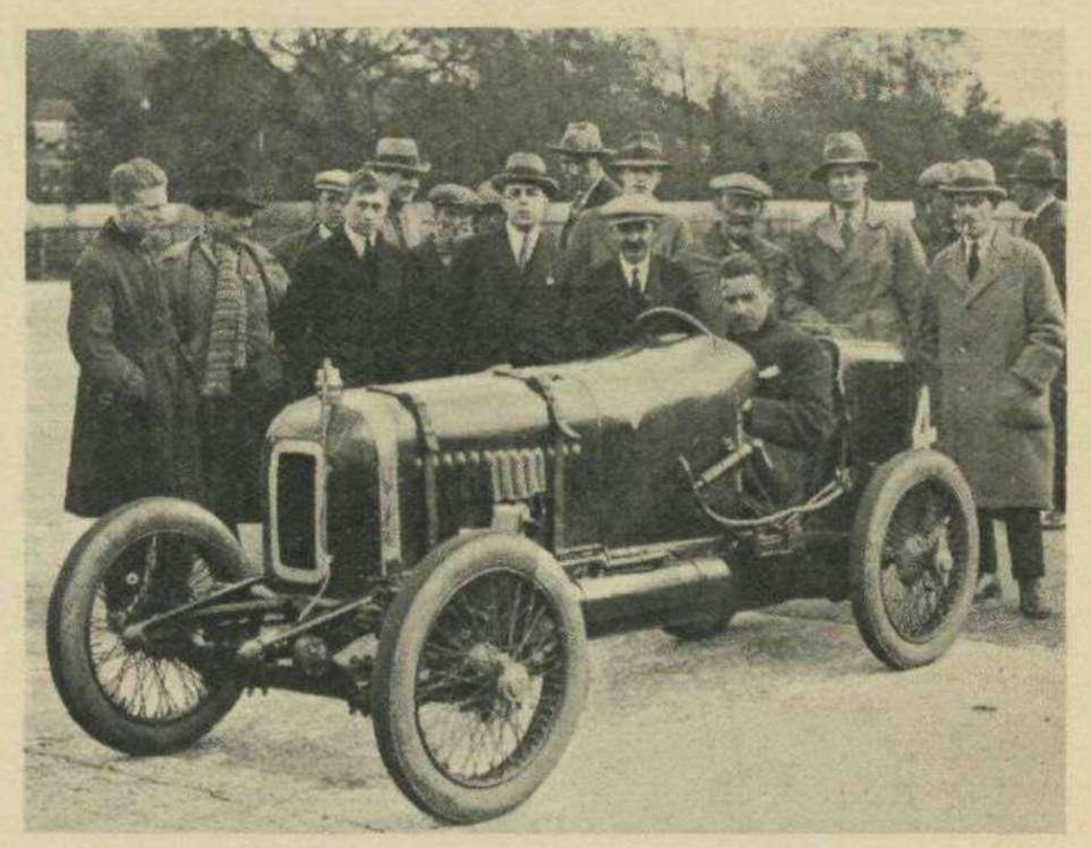
Whilst the Three-Lap Passenger Handicap for motorcycles was in progress, the attention of the greater part of the crowd was directed to the line of cars drawn up in readiness for the 100 Miles Handicap, and some excitement was caused by an outbreak of fire from Major Harvey's single seater Alvis. Fortunately the flames were subdued before any damage resulted, and in a few minutes the engine was running again without hesitation.

The race attracted twelve entries, the only absentee being the Thomas-Special, though Lieut. Kidston's

MEETING OF THE ESSEX MOTOR CLUB—continued.



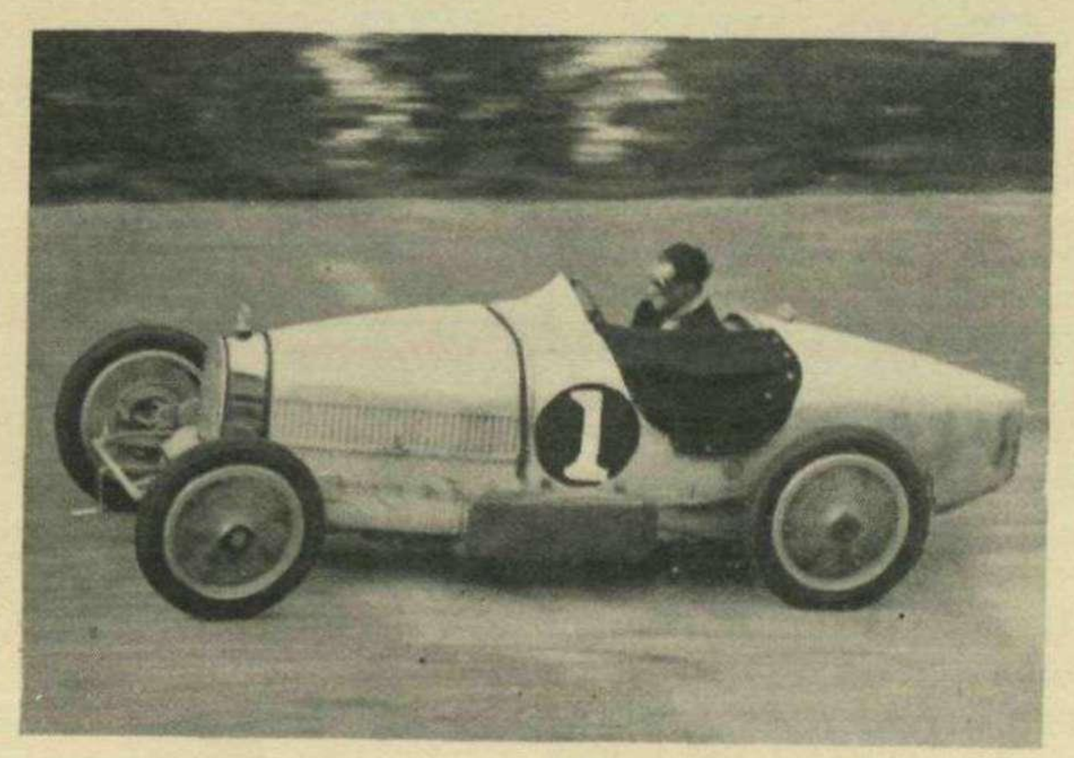
CAPT. DOUGLAS (ASTON-MARTIN) GAINS THE SECOND PLACE.



MAJ. C. M. HARVEY GAINS THIRD PLACE IN THE ESSEX M.C. 100.

Bugatti was posted up as a non-starter, but he turned up in time to take his position as scratch man.

The event had all the characteristics of the J.C.C. Two Hundred Miles Race, including the lap scoring arrangements, the replenishment pits, to say nothing of the activities of the bookmakers. Vernon Ball's "Amilcar," having recovered from its attack of clutch slipping, started off with the generous allowance of 22 minutes 50 seconds, and made more than a complete circuit of the track before the next car, a Frazer-Nash, driven by E. Ringwood, was released. The latter car ran with remarkable consistence, and put up a very fine show. The Aston-Martin and Miller's Wolseley started off together, the former showing the latter a clean pair of heels long before the Members' Bridge was reached. Malcolm Campbell was the next to get away, his blue Itala looking very smart. Looking at this car before the start we noticed the elaborate arrangements for keeping the oil cool, which consisted in a large coil of copper pipe located behind the radiator. Though the Itala ran most regularly, it appeared to be deficient in speed, and was not regarded as a serious rival for premier honours.



LIEUT. KIDSTONE, R.N. (BUGATTI), AT 108 M.P.H.

Peacock's Frazer-Nash and Purdy's Alvis followed the Itala, with Douglas' Aston-Martin a couple of minutes later.

Then with the slower cars well started on their journey, the speedy machines began to face the starter. A. Lanfranchi's Alfa-Romeo was rather fancied, and began to overhaul the field, but its success was short lived, and after covering eleven laps was towed in, owing to an oil pipe breakage.

After waiting patiently for the signal to go, Harvey tried to engage his first speed, but evidently the clutch would not stop, so after a frantic effort with his grinding gears, he had the car pushed back, and was pushed up to the line with the gear in, just in time to get off the mark as the flag dropped.

W. Barnato, on the Bugatti, got away at a fine speed, and after 2 minutes 20 seconds pause J. D. Barclay set his red Vauxhall going with a roar, and hurried off in pursuit of the others. The Bugatti, handled with admirable skill and daring by Lieut. Kidston, was much admired, and began to lap at a terrific speed, but its chances were spoiled by tyre trouble, one of the rear tyres tearing a tread completely off in the seventeenth lap, and the other back tyre disappeared completely at a later stage of the race.

Miller's Wolseley was the first car in trouble, and pulled in to the pits. The driver did not seem to know quite what had happened, and after looking at the valve gear appeared to have given up hopes of continuing. Several minutes later he fitted a new set of plugs and got going again, after having lost much valuable time.

By this time the cars were spreading themselves all round the course, but the spectators watched with interest the continuous duel between the Aston-Martin and the sports Alvis, which hung on to each other throughout the race.

Barclay was the next to pull in to the pits, and examination showed that the cylinder head of the Vauxhall had cracked, but the driver pluckily continued, until compelled to retire with the same trouble a few laps later.

MEETING OF THE ESSEX MOTOR CLUB—continued.

The bumps on the track caused the oil pipe of Barnato's Bugatti to fracture, and this put him out of the race, as was the case with the Alfa-Romeo.

Harvey, on the single-seater Alvis, was getting faster and faster each lap, and was doing his 97 m.p.h. without turning a hair. At one time it looked as if he would have been well advised to call in for a fresh supply of water, but he continued without a stop, keeping his engine soused with oil from the extra tank.

Purdy's Alvis was running well for the first place, and it became a matter of conjecture whether Harvey could catch him by reason of his somewhat heavy handicap. As it turned out the standard Sports Alvis, which Purdy had recently bought second-hand, won fairly easily at a speed of 86.77 m.p.h., with the Aston-Martin second, and C. M. Harvey, on the single-seater Alvis, third.

WHY YOU SHOULD CHANGE SPARK PLUGS EVERY YEAR.

By O. C. RHODE, Chief Engineer, Champion Spark Plug Co.

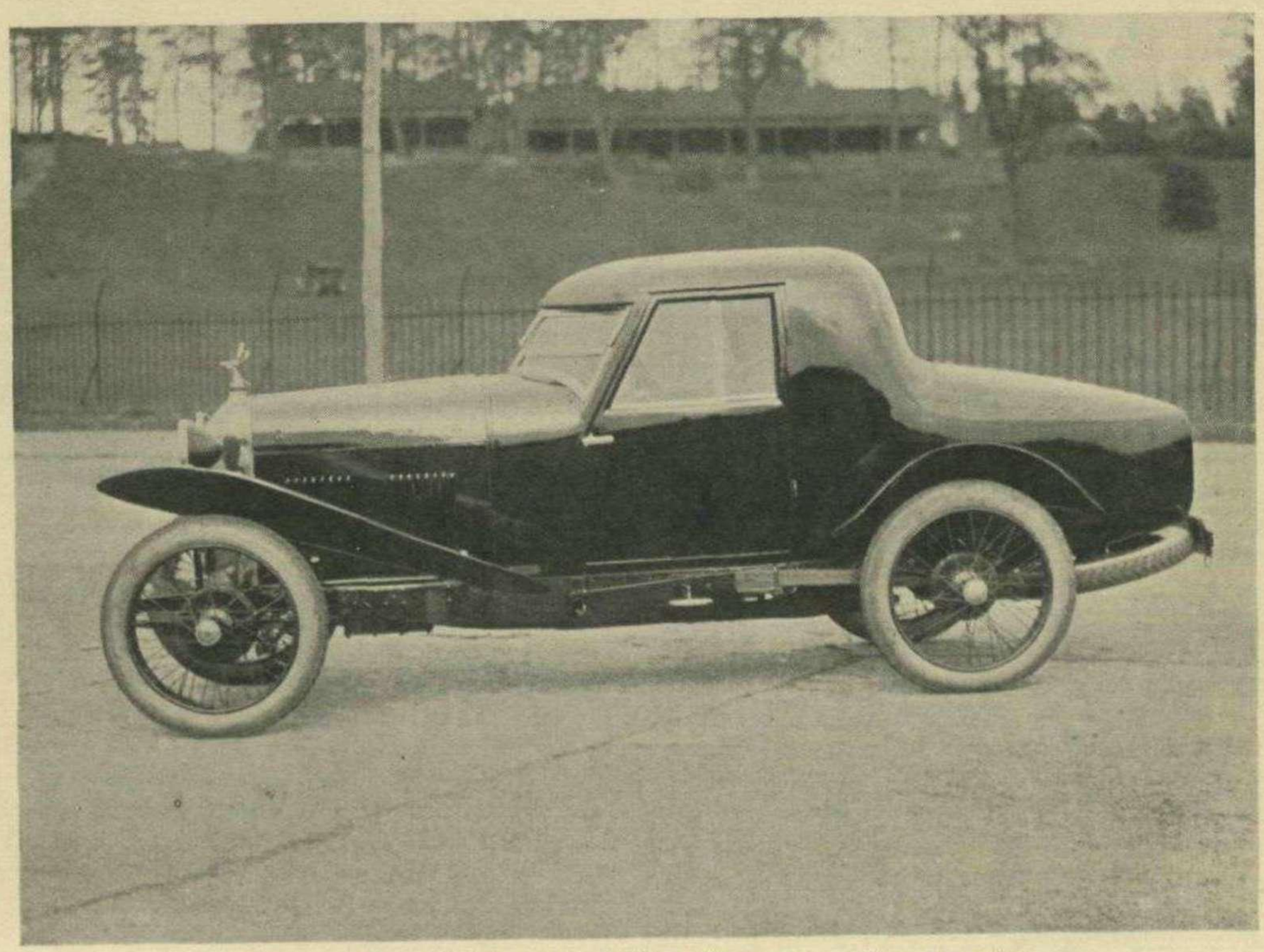
If you, a car owner, could visualize clearly the difference that old and new spark plugs cause in the combustion chamber of your engine, there would be no question in your mind concerning the advisability and actual economy of installing a complete new set of spark plugs in your car every 10,000 miles, or at least once a year.

With a new set you would see a hot, intense spark applied to the gas mixture, causing complete combustion and leaving only the burned gas to escape through the exhaust. Such a spark and such combustion mean that your engine is developing its maximum power from the fuel used—that it is performing as it was designed and intended to perform.

With a set used for a year, or 10,000 miles, you would see a weak spark delivered to the gas mixture. This results in only partial combustion of the charge, and the final ejection, through the exhaust valve, of a large part of that still unburned gas. You see good power being shot into the air, a sluggishness in your engine, greater oil consumption, slower speed, rapid carbon formation on the pistons and valves, and an actual loss in fuel.

This lesser performance is bound to occur with any make of spark plugs, even those with two-piece, gas-tight construction, special alloy electrodes, sillimanite core and semi-petticoat tip, which withstands the tremendous engine stress and retards carbon formation.

That is why it is real economy to install a complete set of new spark plugs at least once a year. They pay for themselves in oil and gasoline saved, without considering at all the improved general engine performance.



MR. VERNON BALLS' AMILCAR: A FINE EXAMPLE OF SPORTING SALOON.

THE J.C.C. HIGH SPEED RELIABILITY TRIAL.

Notes on the Performance of Competitors.

By the ASSISTANT EDITOR.

(See illustrations on centre page.)

FROM the spectator's point of view—which was excellent as to position—the staging of the trial does great credit to the organizers. It was possible to watch the performances of the cars at every bend in comfort and a variety of sensations was obtainable by moving from point to point. The hairpin could be viewed from above and in safety, or one could walk to the other side of the tunnel and again in safety view some splendid cornering on a vile surface; by going a few yards further one came to a continuation of the same corner, and this could be watched so closely that one could almost touch the cars; once more one moved to the bottom of the test hill and a vision of violent acceleration greeted one.

Although the race (pardon the word, if not correct in theory it certainly was in practice) was not easy to follow without a good memory or a note-book, nobody seemed to mind, and the general impression formed was that everyone enjoyed the "show."

Certain it was that some of the competitors themselves had a very hazy idea as to what lap they were on, so the onlookers could hardly be expected to follow the movements of some fifty odd cars, which were continually passing and repassing in one long kaleidoscopic line. The only snag was that if you had visited Long Tom at the start, you were in considerable doubt as to what you had lost or won at the finish. Talking of Long Tom it may interest our readers to know that the Editor of the BROOKLANDS GAZETTE started favourite at the short price of 3 to 1. We imagine that the yellow jumper did it, because previously he had been quoted at 8's, and Long Tom was not far wrong (as usual), for had it not been for a burst tyre on his fifth lap, Capt. Twelvetrees would have easily made the best time.

After their trial "tour" of the course the cars were started from the usual finish of the circuit and sent off at 5 secs. interval. There were 11 touring cars under 1,100 c.c., 21 touring cars between 1,100 c.c. and 1,500 c.c., and 17 standard sports cars not exceeding 1,500 c.c. These latter were composed of three Alvis, four Amilcars, one Aston-Martin, one Frazer-Nash and G.N., a Mathis, four Rileys and two Salmsons.

The first round was No. 1, A. Simmons on an 8-18 Talbot, followed by No. 6, a Salmson piloted by S. H. Newsome, then Nos. 3 and 2, and then came a surprise by the appearance of Harvey on the touring two-seater Alvis whose number was 19. Not content with this, he overhauled everyone on the second lap and was the first down the test hill.

The first car to occasion undue interest was J. Macdonald's Alvis, whose magneto failed on the hairpin, and he drove straight through the hedge into the field beyond. To balance matters, G. Simkins' Salmson broke its nearside wheel, with the result that the car collapsed into the ditch, but no further damage was occasioned, and the occupants stepped out unhurt.

On the first two laps, Hornsted, whom we were glad to see at the wheel again, seemed to be going badly on the Mathis, and his cornering was not as brilliant as we expected. Doubtless this was due to the fact that one must get used to the balloon-tyred racer gradually. As the trial progressed his cornering rapidly improved and he showed us all that, balloon tyres or not, the old Hornsted was back again and his driving was good to watch.

On the third lap Laffan (G.N.) and Twelvetrees (Alvis) were both well ahead, as was also the Ceirano. On the fourth lap Harvey, in descending the test hill, very nearly took away the timekeeper's box which was stationed at the foot. Throughout, Harvey was the model of a good driver and the Alvis never gave him a second's worry. His passenger seemed to be an expert in cigarette smoking and lighting, and did both at all speeds. While on this subject we may say that nothing could damp the ardour of Davis's pipe. He was driving a four-seater Talbot, which was lapping excellently, and yet its three inmates never ceased smoking and talking, apparently thoroughly enjoying the run.

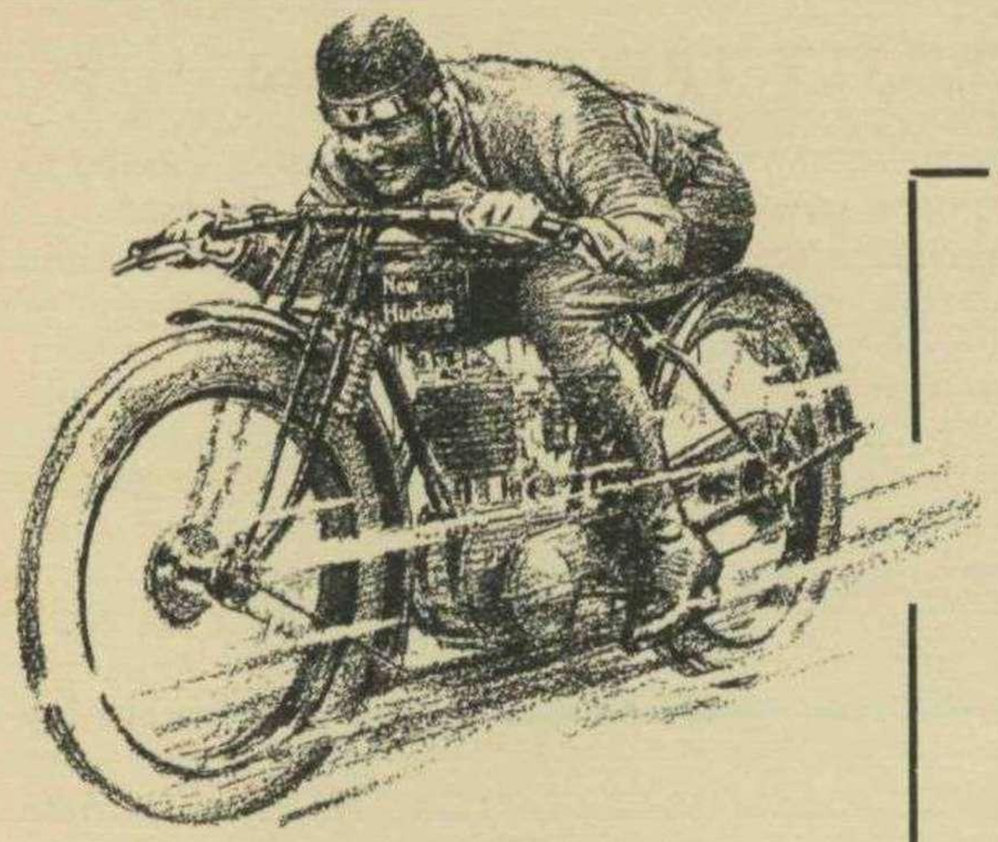
Twelvetrees was timed to exceed 85 m.p.h. over a short distance, and his laps were often in the region of 4 minutes. Undoubtedly his was the fastest car competing that afternoon.

Humphreys, driving an Amilcar, was going excellently, but was inclined to be too fast down the hill and very often was baulked by preceding cars. He managed in several cases to give us an excellent piece of driving.

As a contrast, Twelvetrees very cannily seemed to under-estimate his ten miles an hour stretch, which of course left him a good get-away at the foot of the hill: this get-away was quite one of the most spectacular bits of work of the day, and no matter where one was on the course (not the track part) one could always tell the Alvis as it shot away from the gates. Very good gear work was in evidence here, but there are not many cars made that would have stood up to it, but lap after lap the high note of the Alvis was in evidence, always starting at the same place and the same strength and merging into a lower note as Twelvetrees changed up.

While mentioning Alvises, Harvey's did a lap in $4\frac{1}{4}$ minutes, which was unbeaten by any of his class and only by one or two of the sporting class. W. Trigonis was disqualified for passing another competitor in the ten mile limit.

With the exception of the Amilcars, Twelvetrees' Alvis was again to the fore by making the fastest descent of the hill. This was a tremendous test for the front springs and a complete report on the action of the springs of all the cars would be interesting especially if they all took it at the same speed. Curiously enough, some of the springs seemed less strained when the bump was taken fast, whereas others simply would *not* stand a fast descent; yet again I am sure one or two of the



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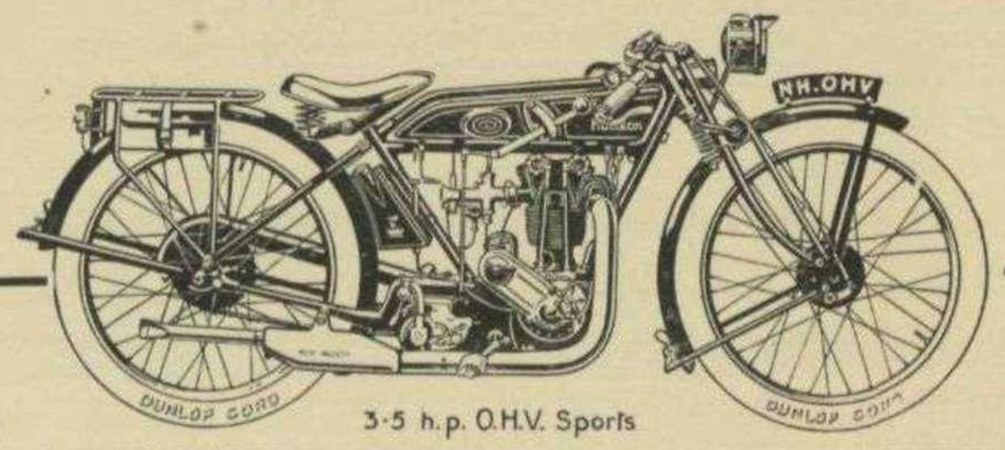
ULSTER MOTOR CYCLE SPEED CHAMPIONSHIPS.

MAGILLIGAN STRAND.

Saturday, May 9th, 1925.

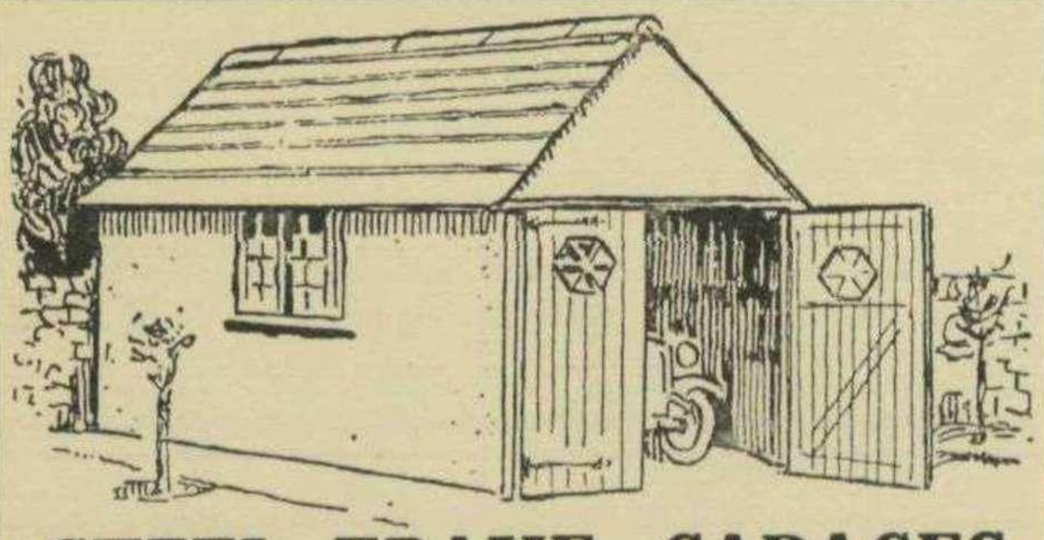
Mile Scratch Race, 3½ h.p. ... ... WON AT A SPEED OF 90 miles per hour.	**FIRST!**
50 Miles Speed Championship Race ...	**FIRST!**
50 Miles Handicap Race ... ... (For Motor Cycles of any Power.)	**FIRST!**
Mile Scratch Race, 2¾ h.p. ... ... (85 miles per hour.	**SECOND!**

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THE J.C.C. HIGH SPEED RELIABILITY TRIAL—continued.

cautious ones would have done better to have spurted a bit.

About this time we took a few observations on the behaviour of the springing when cars hit the angle at the bottom of the test hill. Tabulated below are some of the results.

Car	*Driver*	*How taken*	*Effect on Springs*
Salmson	...Newsome	...Slow	...Unnoticeable
N. Gwynne	...Myers	...Slow	...Unnoticeable
Talbot ...	...Davis...	...Slow ...	...Unnoticeable
Amilcar ...	...Ball; ...	...Fairly Fast	...Good Action
Surrey ...	...Watson	...Very Slow	...Bad Action
Lagonda	...Oates	...Fast ...	...Excellent Action, Best of all
Amilcar ...	...Olive ...	...Fast ...	...Bounced, tail too heavy
Windsor	...Glazier	...Fairly	...Bad Action
Alvis ...	...Twelvetrees	...Fast ...	...Unnoticeable
Alvis ...	...Hordern	...Fast ...	...Unnoticeable
Alvis (4-seater)		...Fast ...	...Good Action
Aston-Martin	...Pollard	...Too fast	...Not Good
Riley ...	...		Not Good
Riley ...	...		Not Good
A.B.C. ...	...Hopcraft	...Fast ...	...Very good considering
Amilcar ...	...Pemberton	...Fast ...	...Good Action

On the corner following the tunnel much good cornering was to be seen and although Kaye Don handled his Bayliss-Thomas in great style, Wallsgrove without doubt was the *chef* of this part of the course ; his cornering and gear changing too, were excellent on the hairpin, except on one lap when he very nearly capsized.

On the next bend, which was very sensibly strewn with sand, Hornsted showed that the angle was just right for the Mathis and he came round at faster speed every time. Vernon Balls delighted everyone with a marvellous skid, and both Don and Hordern showed us how touring cars and four-seaters could be cornered.

The Frazer-Nash, which in the hands of Aldington and Hillary, were both lapping consistently, took all the bends well, yet without wasting effort on too fast a turn. The four-seater Rileys, driven by Cooper and Wallsgrove, kept together for a long time, and they changed gear at the same spot in nearly every case, Cooper holding on perhaps a little too long for the peace of mind of his engine.

Newsome (Salmson), who was first in from his class, was almost clocklike, as also was his lap companion Myers (Gwynne) whom he did not shake till his last lap or two.

An unfortunate incident occurred when Hordern (Alvis) bent his selector rod, and, of course, jammed his gears, in the middle of the hairpin bend ; luckily there was enough room for the field to pass, but not at speed, which was perhaps the reason for the " one extra lap " cards issued on the last round to competitors.

The yellow Frazer-Nash driven by Lewis, which had been speeding up Harvey's Alvis, suddenly commenced misfiring. He finished and in time for a gold we believe.

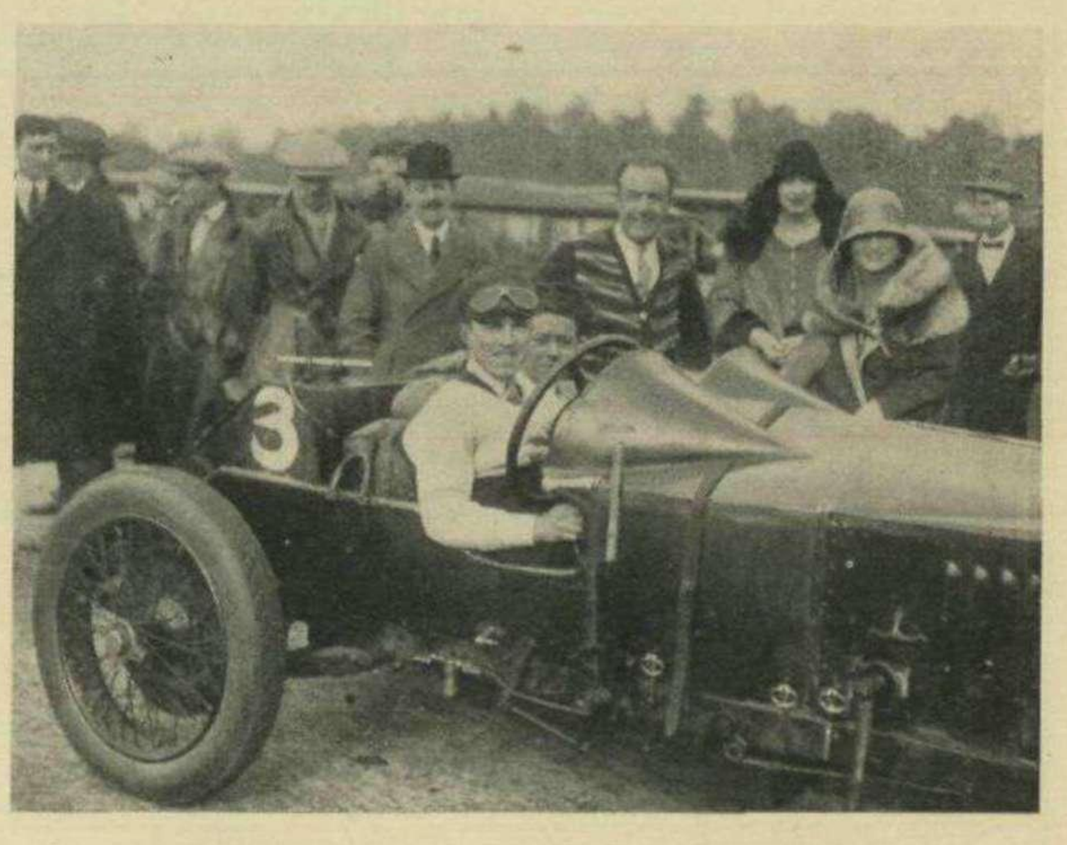
Retirements were numerically small and amongst them were Ball's Amilcar, Wallsgrove's Riley, the A.B.C., and Newsome's Salmson.

Hillary had the misfortune on his last lap to crash his Frazer-Nash *in* the tunnel ; the steering gear broke and the car shot from side to side, but luckily without injury to either occupant.

A. Pemberton (Amilcar), the son of the famous author by the way, was unlucky with his silencer, the fishtail of which fell off towards the end of the trial. His performance up till then had been very good, one of the best in fact, but this misfortune caused his retirement by virtue of the silencer law.

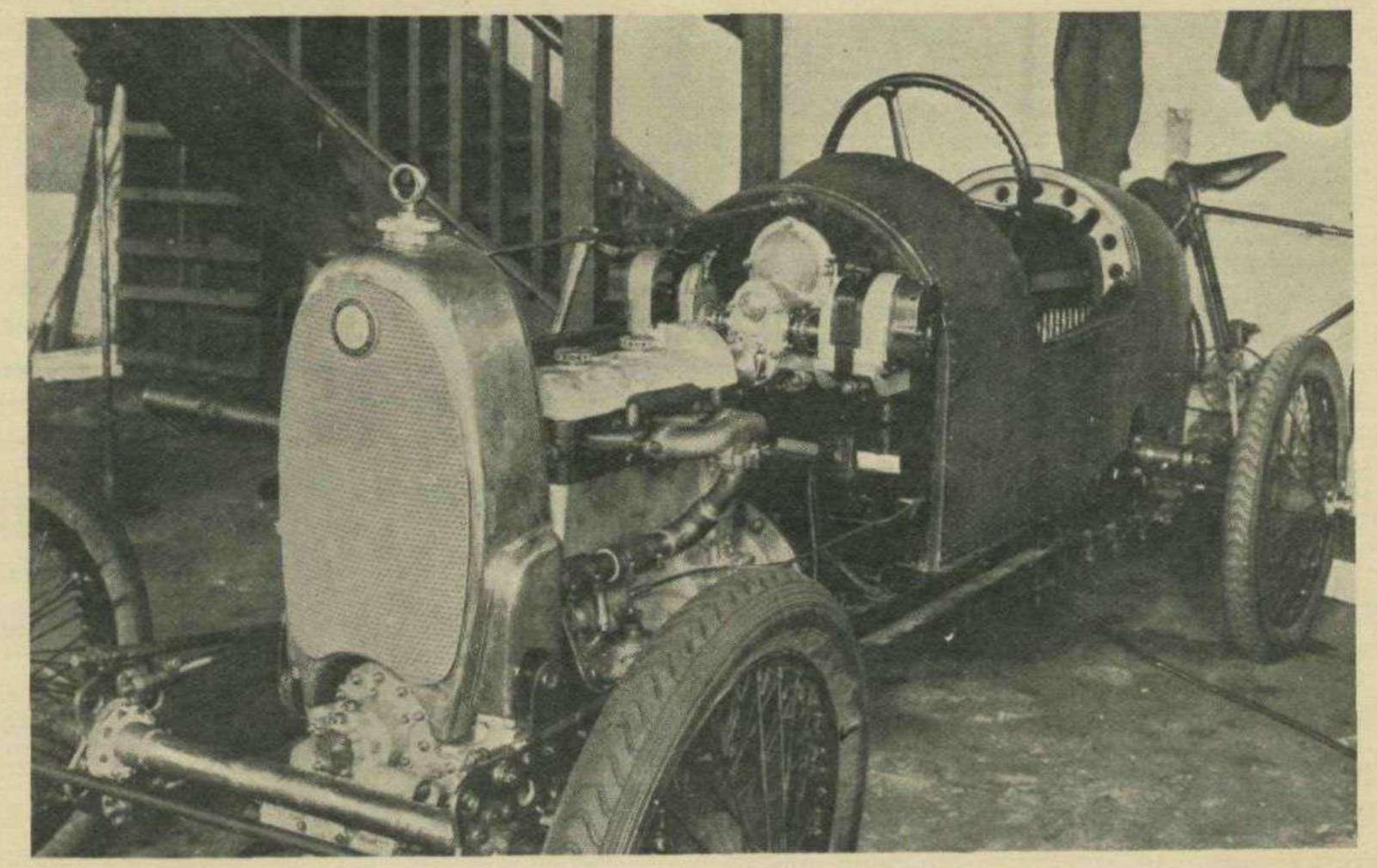
MR. M. GARNIER JOINS THE MEMINI CARBURETTOR CO., LTD.

The Memini Carburettor Co., Ltd., of 70 Salusbury Road, Kilburn, inform us that they have secured the services of the well-known racing car expert, Mr. M. Garnier. This young London firm, which is rapidly extending, will, in due course, open a department specially for the overhauling and preparation of racing Bugattis and other high efficiency engines, viz. : racing and sports models. In this direction the Company invites enquiries from those who are desirous of having the assurance of the highest standard of workmanship, backed up by the Company's own technical staff and experienced testers. In passing we might mention that Mr. Giveen's Bugatti " Cordon Bleu," which made such a sensational ascent at Kop Hill Climb, was originally overhauled by Mr. Garnier, who rebuilt also Mr. F. B. Taylor's Bugatti " Cordon Rouge," which secured best time in the Economy Car trial of March 14th. At the present moment Mr. Garnier is busy assembling Mr. Raymond Mays' new supercharged AC. All these cars are Memini fitted.

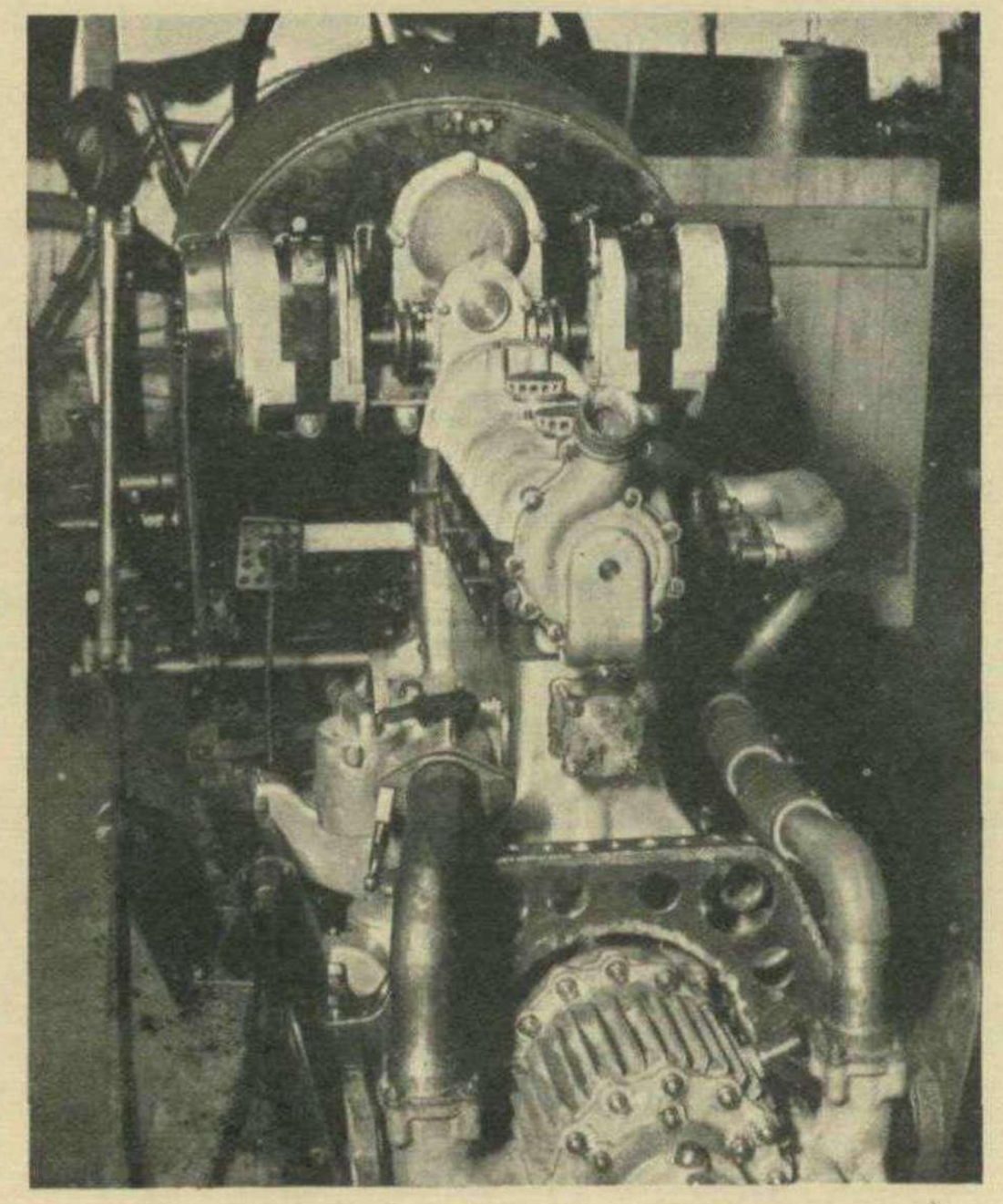


Mr. Jack Barclay on his Vauxhall with which he won the Surbiton M.C. Long Handicap at 99·01 m.p.h. He was also second in the Short Handicap. (Report of the Meeting will be found in Round the Clubs).

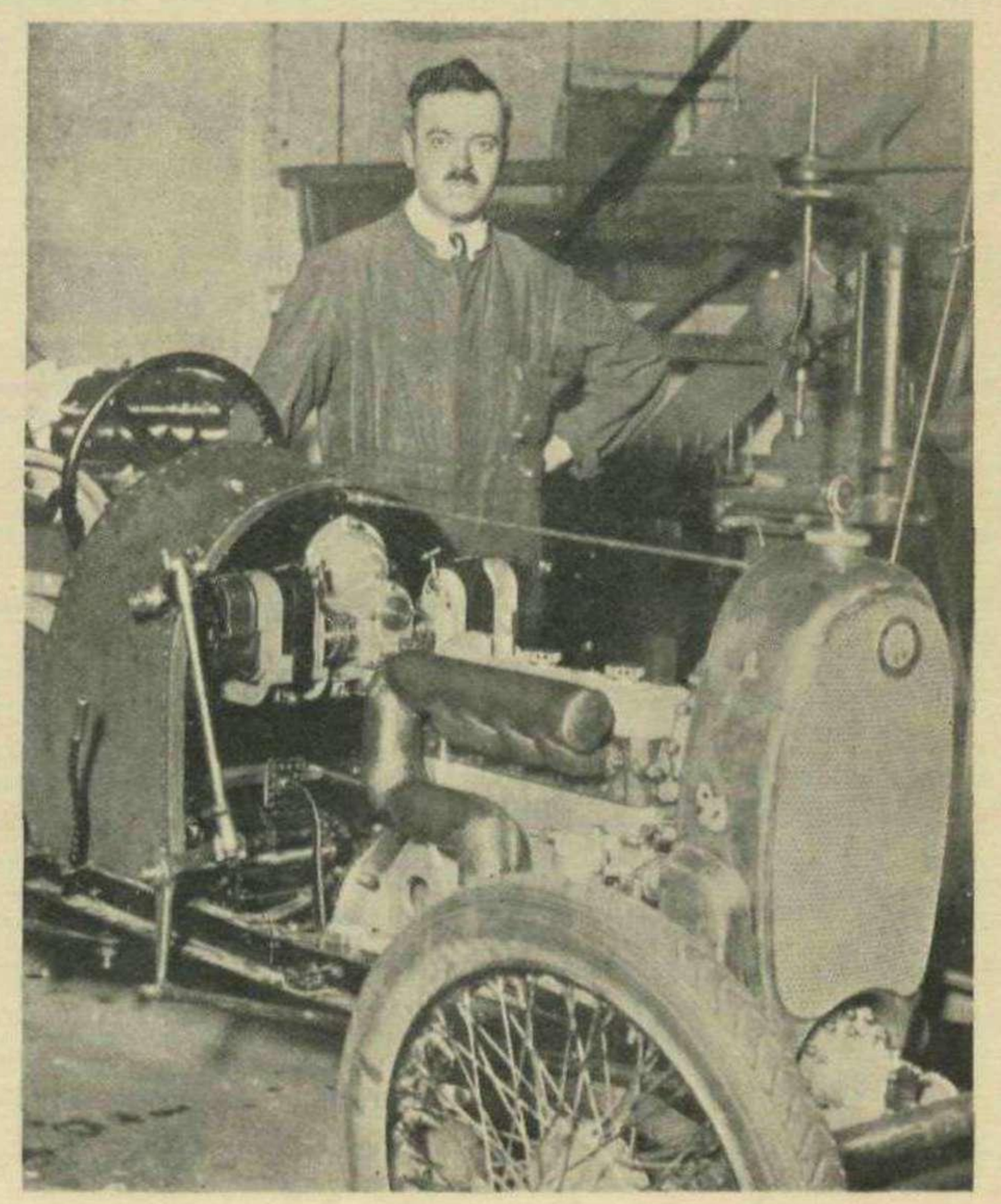
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MR. GARNIER MAKING THE FINAL ADJUSTMENTS.

THE ACCURASPEED WATCH.

Sporting motorists who take part in competition work soon realise the absolute necessity for a very accurate timepiece, not only for gauging the performance of their own motor cycles or cars, but also for checking the times of other competitors, or for observing speed trials.

During the recent J.C.C. Reliability Trial at Brooklands we had the opportunity of testing the Accuraspeed watch, which was carried throughout the trial and proved most useful for the purpose of checking the famous Ten Mile Limit on that occasion.

The instrument is very well finished, and has a strong case, so that it is not likely to become easily damaged, even if submitted to rough usage and quite apart from the remarkable accuracy of the stop watch, the timepiece keeps splendid time for ordinary purposes.

Among its many uses may be mentioned that of checking the speedometer of a car or motor cycle, over a measured distance, and as the stop watch hand moves over the dial graduated in one-fifth seconds most accurate results can be recorded.

The Accuraspeed Watch is obtainable from Spikins from Dent, at 29 The Broadway, Ealing, and Mr. Spikins, it will be remembered, is well-known for his keenness in motor competitions.

SPANISH REPRESENTATIVES IN THE T.T. RACES.

The following riders are representing Spain in the T.T. Races, and are riding Douglas machines in the great international event :—

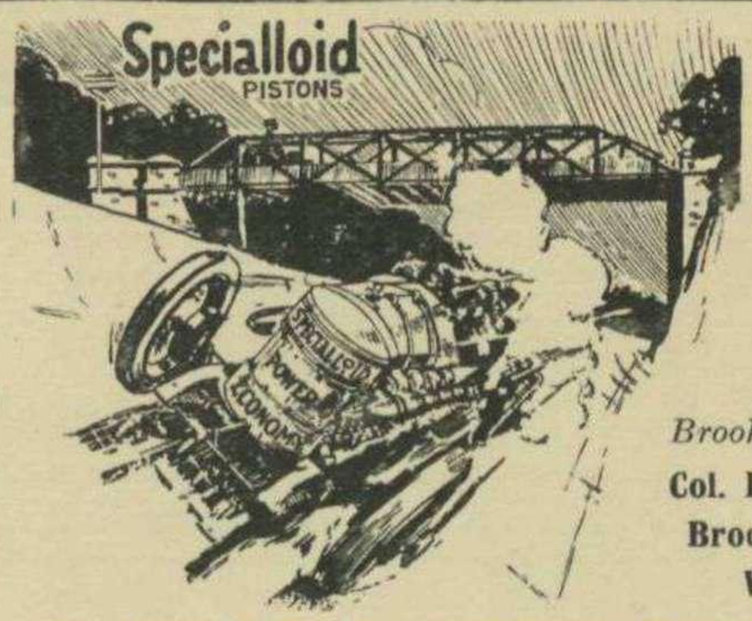
ZACARIAS MATEOS, who won the 1,000 kilometre race from Madrid to Avila and back on a 3½ h.p. Douglas, beating all makes, including one with eight valves. The course was over exceptionally rough roads.

This rider also won at San Sebastien, in which the first, second, third, fourth and fifth places were also gained on Douglas machines.

VICENTE NAURE, who finished fourth in the latter event.

BALTAZAR SANTOS, who was second in the Madrid-Avila-Madrid event, in spite of a bad spill during the course of the race. Santos finished fifth at San Sebastien.

These three riders have achieved numerous other successes on Douglas machines in their own country, and their performance in the Isle of Man will be watched with great interest.



The Late Count L. ZBOROWSKI wrote :—"In every case they have been a marked improvement on the original pistons, under the most stressed conditions, and have never given any trouble."

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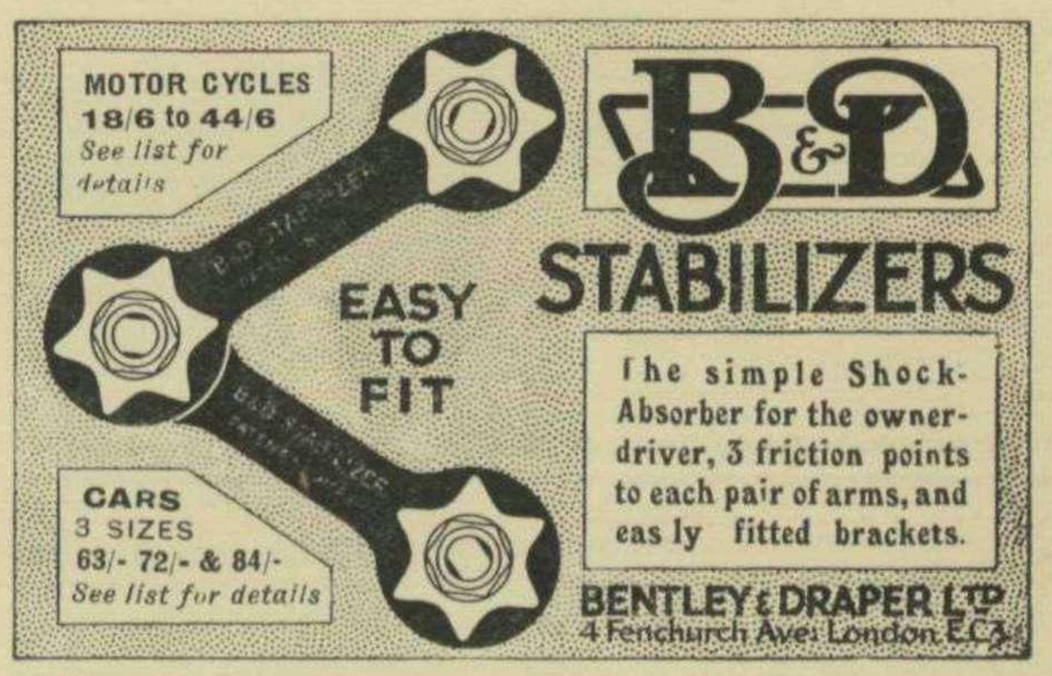
BEACH RACING AT SOUTHPORT.

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1 Mile Sprints for Solos, Sidecars & Cars.
50 Mile Races for Solos.
10 Mile Races for Sidecars & Cars.
Special Classes for Single Seater Racers, also Touring Cars.

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FUTURE MEETINGS See "Brooklands Gazette" Events List.



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Round the Clubs



OXFORD MOTOR CLUB.

Mr. L. A. Welch, a member of this Club, gained a Gold Medal in the recent A.C.U. 1,000 Miles Six Days Standard Stock Motor Cycle Trial. He was also awarded a Gold Medal for his performance in the recent London-Land's End Reliability Trial. Mr. Welch rides a 2.92 O.K. Junior. Mr. Cecil Kimber was also awarded a Gold Medal for his performance in the London—Land's End Trial, driving a Morris Super Sports.

The Club entered a team in the Surbiton Reliability Trial for the Maudes' Challenge Shield. They did not experience any mechanical stop, but owing to the indifferent marking of the route, unfortunately a good many of the competitors in this Trial lost their way, therefore not arriving at the stated check at the time required.

In the recent Reliability Trial held by this Club an excellent route was arranged by the Trials Secretary, Mr. E. A. Pudsey Dawson, around the Berkshire Downs, and the awards were as follows :—

Silver Medal.	L. A. Welch.	O.K. Junior.
Bronze Medal.	T. A. Barrett.	348 c.c. Cotton.
Bronze Medal.	E. T. Alden.	Sports Triumph Car.

Mr. L. A. Welch was awarded a special Silver Cup for the best performance, kindly presented by Dr. Sankey.

Hon. Secretary, Wilfrid Mathews.

NEWCASTLE & NORTHERN MOTOR CLUB.

The First Reliability Trial of the above Club was held on Sunday, the 3rd of May, for the Club's Bronze Trophy. There was quite a large number of entries, and the day could not have been better for the purpose. Additional interest was added to the competition as the holder of this beautiful trophy had held it for two years and was anxious to retain it.

The course of the trial was from Newcastle to Morpeth, through by Weldon Bridge to Wooler, Wooler to Berwick, and Berwick by the main road back to Newcastle. There were two secret checks and two non-stop sections.

Going outward, the competitor who was running well on to time through the secret check was J. J. Oxley with his "Hillman Sports," with G. Dowsett on a "Scott's Combination," standing a good second. After the non-stop section and final check at Berwick, however, G. W. Green on his "Dene Combination," G. C. Urwin on his "B.S.A." and W. Milne, Junr., on his B.S.A., had all done good time. On the return journey there was very consistent running by J. J. Oxley on his "Hillman," G. C. Urwin on his "B.S.A." and N. Moore on his "Dene."

The final check, however, showed that Mr. G. C. Urwin on his "B.S.A." was first, Mr. J. J. Oxley with his "Hillman" Sports second, Mr. Norman Moore, the holder, with his "Dene" Combination," third, with Mr. McCullagh with his "Buick," Mr. Jennings with his "Darracq," and Mr. Leatherland with his "Morris," taking Bronze Medals, fourth, fifth and sixth. These results, of course, are provisional and subject to confirmation by the Sports Committee of the Club.

Hon. Secretary, Ernest Willan, 42, Gray Street, Newcastle.

WEST KENT MOTOR CLUB.

There was unprecedented excitement at Dymchurch recently, when the acrobatic section of the West Kent Motor Club performed meritorious feats on the sands. The attendance was about 30 and the "flying squad" lived up to its name, by arriving well ahead of its time, after losing its way and thirty minutes of running time. A crowd of 300 enjoyed the numerous displays of ability, agility and trickery. Jeff Bull on his Norton "Amphibion" combination was too optimistic; he was describing huge circles at speed, when he entered the sea and was lost to view; he and his partner returned like dejected mermaids.

"Tiny" Blackman just showed the world how to ride a combination with the sidecar wheel three feet in the air, at the same time Wilson-Smith was testing to the utmost his Zenith outfit, by accelerating to 35 m.p.h. and turning round in his own length; he was lucky, the frame won! There are limits to trick riding; Cook (o.h.v., B.S.A.) was trying his throttle when he disappeared in a cloud of spray; investigation proved that he, unknowingly, had jumped a river in the sand twelve feet wide and *three* feet deep, he very skilfully kept his seat, landing on dry sand, wetter and wiser. The final turn was agreed by all the most spectacular, when a mystery combination looped the loop in convincing style; unfortunately the driver and passenger omitted to strap themselves in, this spoilt the effect. Rain terminated a most enjoyable day.

THE SPEN VALLEY MOTOR CYCLE & LIGHT CAR CLUB.

The above Club organised a Handicap Reliability Trial on Sunday, April 26th, the route consisting of all main roads, and the total mileage was 104. There were no secret checks, and to do away with the monotony of continuous riding to time at all controls there was no margin allowed, seconds early or late being debited. Twenty competitors took part, and the results were as follows :—

1. (Oak Striking Clock). H. A. Davison. 4½ h.p. P. & M. and Sidecar. Error 132.
2. S. Hirst. 3½ h.p. P. & M. Panther and Sidecar. Error 97 + 50 Handicap.
3. J. W. Mortimer. 3½ h.p. P. & M. Error 104 + 50 Handicap.

ROUND THE CLUBS—continued.

OXFORD MOTOR CLUB.

The " Follow My Leader " Run fixed for Saturday, March 21st, was duly carried out. This was the first event of the Season, and was well supported.

The start was made at Abingdon, and the route embraced some of the most picturesque parts of the Berkshire Downs, the same being planned by Mr. D. Edwards, of Abingdon, who knows the district well, and thanks are due to him for not only arranging a very sporting course, but taking competitors into almost unexplored parts of the Berkshire Downs.

Mr. E. T. Alden started seven minutes before the competitors, and in the main the competitors followed the trail throughout, although many delays occurred owing to false trails cleverly arranged. About 35 miles from the start the " hare " was caught by Messrs. A. T. Barrett and R. W. Walker, both on Cotton machines, and they are to be congratulated on their experienced riding.

The winner of the Sidecars was Mr. J. U. Thorburn, on a Rudge Combination, and the Car award was won by Mr. W. A. Mathews, on a Morris Oxford, after rather an exciting duel with Mr. E. N. Knowles, on his Wolseley car.

Mr. E. A. Pudsey Dawson, the Trials Hon. Secretary, is to be congratulated as Organizer of the event.

About 60 competitors and friends sat down to tea at the Bear Hotel, Wantage, and a general wish was expressed that a similar competition be repeated as soon as possible. Such competitions are intended as semi-sporting social events ; also it gives members an excellent opportunity of getting into unexplored country which they would never be able to plan from a guide-book or map.

NORTH LONDON M.C.C. N.W. LONDON M.C.C. ENFIELD M.C.C. CITY OF LONDON M.A.

A very good entry of 44 competitors was received for the Invitation Cup Trial open to members of the above clubs, which was organised by the North London M.C.C. The course, starting from the Red Lion Hotel, Hatfield, was not difficult in view of the perfect weather conditions, although the organisers' expressions were noticed to become decidedly more cheery whenever a threatening cloudbank appeared. Their wishes were, however, not granted.

Following some lanes, interspersed with main road section, for about 10 miles, the competitors reached a point beyond Ware, where a circuit 21 miles in length and which had to be covered twice began. Just when one was inclined to admire the scenery, a lady marshal in a very determined manner waved one round a right hand hairpin, through a gate, and on to a track of the three rut variety known as the Farm section. If one rode in the right rut a fairly safe passage was assured, otherwise— Well, seven falls were recorded among the motor cycle competitors. A little further, another proof of the organizers' superlative cunning was forcibly brought home to the competitors when they discovered that what looked like innocent straw was really camouflage for more ruts. A greasy section further on, made even more difficult by awkward bends and the close proximity of hedges and fences, called for very skilful driving. More lanes led to Barwick Ford where, although the water was only three inches deep (in places), quite a number of clean sheets were spoilt, no fewer than 16 failures being recorded on the first circuit, and seven on the second. High Cross Hill was the most severe acclivity, but in spite of a very loose hairpin on the worst gradient which caused some very anxious expressions, no failures were recorded. A secret check taken during the first circuit had to be taken into consideration in order to find the winner of the premier awards, and a known check at the end of the first circuit disclosed several competitors early or late.

The course was excellently marked and the success of the trial was due in no small measure to the efforts of Mr. H. R. Harveyson and those ladies and gentlemen who so ably assisted as marshals and observers. As an inter-club trial the results were most gratifying, and it has been decided to hold another event of this nature in the near future.

A party 78 strong sat down to tea at the conclusion of the events and the winners of the premier awards were announced (provisionally and subject to protests).

FIXTURES FOR JUNE.

Mon., June 1st	...	5th London Rally of Motorists, Alexandra Palace.
Sat., June 6th...	...	Harveyson Cup Trial. (Invitations to this event have been extended to Wood Green and District M.C., North-West London M.C.C., B.S.A.M.C.C. and City of London M.A.)

	Marks Lost.
INVITATION AND STALEY CUP RESULTS.	
L. P. Walter, North London M.C.C., 976 Matchless S.C.	1
RUNNER UP SILVER MINIATURE CUP.	
*H. B. Shutes, North London M.C.C. 3139 Buick ...	1
SILVER MEDALS.	
R. T. Bowen, North London M.C.C., 346 New Hudson	2
H. A. Farmer, North-West London M.C.C., 976 Enfield S.C.	2
G. J. Burton, North-West London M.C.C., 1496 Alvis ...	2
H. W. Bostock, North London M.C.C., 348 Beardmore Precision	8
T. W. Sullivan, North London M.C.C., 532 Scott ...	4
F. Lindsey White, City of London M.A., 1100 Eric Campbell	8
A. Pollard, North London M.C.C., 748 Austin... ...	6
S. B. Harris, North-West London M.C.C., 2120 Sunbeam	4
E. M. Meeson, North-West London M.C.C., 2385 Bean	5

*Lost two marks at secret check.

SURBITON M.C. MEETING.

This meet of the South Eastern Centre really deserves a very full report, but as space is limited and, to be paradoxical, the news is old, a short notice will be the extent of the review.

Despite a rush of last minute entries and the usual other difficulties which assail the organizers of such meetings, the events were run off smoothly, and the fact that car and motor-cycle classes were alternatively " put over " did much to keep the general interest from flagging.

ROUND THE CLUBS—continued.

There were several new appearances on the track among the motor-cycle entrants. For instance, Kaye Don was seen back with a bronzed O.E.C. Atlanta, which, however, did not come up to expectations. Capt. C. Bennett was handling another of the same breed.

In the first race Marchant appeared with a new O.H. Camshaft Chater-Lea which had a speed of somewhere near 80 m.p.h.

Ashby's P. & M. was again seen, and was certainly running better than it did when it made its bow at the previous meeting. He managed to get a good fourth in the second race. In this same event Jack Emerson returned to the track on Riddoch's Zenith-Blackburne (1,000 c.c.), and got well away from the McEvoy Temple, albeit the latter was still troubled with carburation and succeeded in running in first with a good lead. A. G. Williams made a gallant attempt which placed him second, with Wheeler, on a Douglas, third. Emerson's speed was 100.4 average.

In the private owner's handicap, C. S. Staniland (588 c.c. Norton sc.) won by about 25 yards, and in the last race ran second to Baragwanath's S.S. 100 outfit which with Le Vack as godfather had it all its own way.

C. W. Lacey, riding his Cotton Jap, which was a masterpiece of paint and polish (not all outside either), finished fifth in the five lap race, and we mention him because he steadily pulled himself up from a heavy handicap, and he really deserved a place. He will have great difficulty in doing so, however, until his handicap is enlarged. Unfortunately his machine is so consistent as to give the handicappers an easy task *at present*.

Coming to the car entries, we find in contrast to the motor cycles, a small number but of good vintage.

All the events were won at over 90 m.p.h., which gave the spectators, of whom we would have seen a larger number by the way, all the excitement they wished for.

Dr. Benjafield's Bentley won a good race overtaking the Vauxhall driven by Barclay and the G.N. in the hands of the Champion. J. G. P. Thomas finished fourth in the 1½ litre Thomas Special. Mrs. Duller driving her Amilcar, with a good start, gradually dropped to the last place.

In the second race, Woolf Barnato on an Indianapolis-Bugatti was well away from the Isotta Maybach driven by L. Champion, and Gedge in the smallest Thomas Special.

The Vauxhall obtained its revenge in the next car race by beating the Bentley, while Mrs. Duller was beaten by half a wheel by her husband's car (scratch), a Bugatti.

Le Champion's Isotta Maybach won the last race by about 50 yards from the Leyland Thomas and the Lanchester with Howey up. The latter was carrying a small infant round for a " trial run."

THE STALYBRIDGE & DISTRICT MOTOR CLUB

The Speed Trials held by this Club on Saturday, April 25th, were very successful, and an almost record entry was received.

In the Car Classes, G. Pemberton with a 30-98 h.p. Vauxhall put up fastest time, winning both his classes. C. Dodson, 1,100 c.c. G.N., won both classes for machines under 1,600 c.c., and also obtained second place in the unlimited classes. The special award for the fastest amateur in each car class went to J. Jackson, Amilcar, in all classes entered.

In the motor cycle classes great interest was taken in the times of F. T. Hatton, 733 c.c. Douglas, and E. Searle, 490 c.c. Norton, Searle winning both the 550 c.c. solo classes, but had to take second place to Hatton in the following classes. In the flying start classes, however, it was only by a margin of 1/16 second that Hatton managed to beat Searle and thus gain fastest time of the day. Searle won all eight sidecar classes in nice style, second place being secured by L. Slater on another Norton. N. Houlding won the 350 c.c. Sidecar Classes with a 348 c.c. Toreador. A Saville made a brilliant showing in running into third place in the standing start classes for machines over 350 c.c. and securing all Special Amateur Awards in the classes entered, this for his first attempt on the Stalybridge Course was, in the writer's opinion, one of if not the best performance of the day. C. Waterhouse, 493 c.c. Sunbeam, secured several places, but was not quite fast enough to secure anything higher up than a second place. His consistent running is however very good as in all Club events he is seldom far away from first place. As soon as the meeting was over rain fell heavily.

The Club will be holding Speed Trials on May 23rd, and although this date will clash with 200 miles Sidecar Race, it is not expected that it will be to any disadvantage in that very few Northern riders will be competing at Brooklands. For this event a Silver Cup will be awarded for the competitor making fastest time of the day, car or motor cycle. A Special Award will be made in every class for the fastest Amateur. A Gold Medal will be awarded to the competitor who creates a new record for the course. Present record is 16⅜ secs. Distance one-third mile. An additional class is being included in the car section for cars not exceeding 1,100 c.c.

The course is the one used last year, *e.g.* a Private Road with an ideal concrete surface, fast and safe. Electrical timing is used in conjunction with a Stop Watch timing to 1/16 sec. Standing and flying starts are given, and the entry fees are very reasonable.

THE LIVERPOOL MOTOR CLUB.

The opening event of the Liverpool Motor Club's 1925 Season attracted a larger entry than any previous fixture—a fact worth recording as reflecting the increasing public interest taken in the activities of Lancashire's premier motor club.

The Queensferry and Chester cross-roads presented an animated appearance when close on 200 cars and motor-cycles of every description—from a super-sports Rolls-Royce to a 1½ h.p. Excelsior Junior—were marshalled outside the Two Mills Garage for the start of a simple 30-mile paperchase in Cheshire. A feature of the event was the presence of over twenty lady competitors, on machines ranging from 1½ h.p. two-strokes to four-seater cars. One was also pleased to note that the hon. secretaries of other clubs were amongst the competitors.

ROUND THE CLUBS—continued.

On such a simple course stirring incidents were not to be expected. Nevertheless the various hedges held a subtle attraction for many, including N. C. Sclater, Junr. (350 Rudge sidecar) and Miss Bell (1.47 Excelsior), who put their machines through "without intent," whilst a Douglas rider simply crashed. Another competitor, on an A.J.S., riding abreast R. Leicester (3.98 Raleigh), locked handlebars, with the usual result. In no case was damage done, and all resumed. *En route* for the start the sidecar of M. Baxter's 3.50 P. & P.—intended for the Pressman, but fortunately empty—shot off its chassis, the rider continuing—solo. One or two 1925 model productions were observed, but none of startling design, and no one tried to enter on a push-bike. The weather was very favourable to the event, and the organization was excellent. The big entry of 178 augurs well for the success of the Club's other interesting fixtures. Though there were a very large number of car-owners competing, all the awards were won by motor-cyclists. In view of the ease with which a car may be run in to a check dead slow, this reflects to the credit and skill of the successful motor-cycle competitors. It is worthy of note that novices swept the board, mostly on A.J.S. machines, and this should encourage others to try their luck—and machines. Full details of coming events may be obtained from the Hon. Secretary or other officials of the Club.

RESULTS.

THE COOPLAND CUP.

B. McWhannall, Rock Ferry (2¾ A.J.S.).

THE BAXTER CUP.

S. Waller, Liverpool (7 A.J.S. sidecar).

LADIES' PRIZE.

Miss Sylvia Williams (2¾ A.J.S.).

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F. Smith, Liverpool (2¾ A.J.S.).
E. W. Taylor, Liverpool (3½ B.S.A.).
R. W. Fry, Wallasey (2¾ A.J.S.).

J. Jameson Green, Junr., Hon. Press Secretary, 6, Bentley Road, Oxton, Birkenhead.

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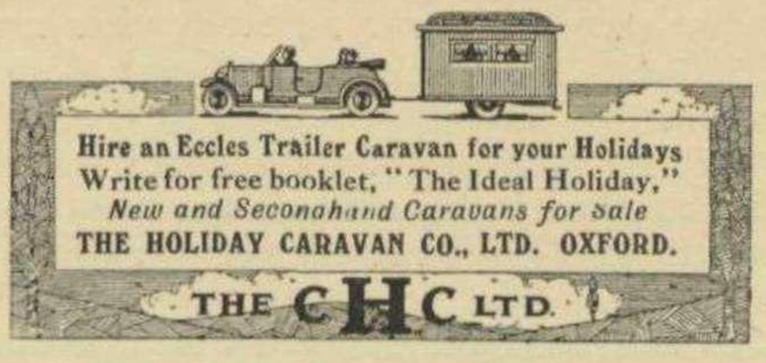
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